

Topic

Interoperability, Procedures, and Standards

Title

“The Contribution of Command and Control to Unity of Effort”

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The Contribution of Command and Control to Unity of Effort

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While joint and multi-national operations are not a new phenomenon, achieving unity of effort in their conduct has generally proved elusive. Through much of history, whatever unity that had been achieved was the result of mutual cooperation between the commanders involved. Towards the end of the Great War it was becoming apparent that mutual cooperation alone was not sufficient and that a unified command system was needed. The Western Allies during World War II achieved levels of unified command that have probably not been exceeded since. This paper examines the function that command and control performs, through the medium of command arrangements, in achieving unity of command so as to attain unity of effort. By studying historical examples of joint and multi-national military operations, the importance of command arrangements as a means to achieving unity of effort will be established. This leads to an approach not only for establishing the effectiveness of command arrangements, but of establishing the effectiveness of the other entities that are embraced by the umbrella term of ‘Command and Control’.

Command arrangements...during the Vietnam War did not promote unity of effort

(The History of the Unified Command Plan 1946 – 1993, Joint History Office)

1 Introduction

Over the past few decades there has been a growing interest in the conduct of joint and multi-national military operations yet they are not a new phenomenon. Ever since the appearance of nation states, warfare has regularly been undertaken on a joint or multi-national basis. It has also long been recognised that it makes good sense to cooperate so as to achieve unity of effort in the conduct of such operations because this will optimise the military power of the force. Unfortunately, this has not always been achieved in spite of the many examples in military history that show what can be accomplished through carefully coordinated action among all elements of the force.

During WWII the Allied forces were, on the whole, quite successful in achieving unity of effort through unified command for both combined and joint operations. While this commitment to unity waned rapidly once the war was over, the past few decades have seen a renaissance of interest in achieving unity of command for both joint and multi-national forces. This is evident, *inter alia*, in the establishment of joint and multi-national headquarters, the whole purpose of which is to achieve unity of effort through unity of command. Advances in communications and in the lethality of modern weapons, along with the political implications of squandering resources and opportunities, have made the achievement of unity of effort an imperative.

Experience has shown that while reliance on voluntary cooperation may once have been sufficient, there is now a need to institute a more formal approach to achieving unity of effort. The best known means of achieving this is by establishing a unified command structure along with addressing other issues such as joint doctrine and cultural change.

Command arrangements, which are included in the generic meaning of command and control (C2), are the formal basis for establishing the minimum level of cooperation to be achieved in the pursuit of unity of effort between a commander and subordinate commanders of a joint or multinational force. Of the several activities considered to be part of the C2 process, much interest is focussed on command support systems, somewhat less on command, and even less still on command arrangements. This paper will serve to redress this imbalance by demonstrating that command arrangements are a significant element of C2. It will examine the need to achieve unity of effort and why it is being sought through unity of command. The role that C2 has in achieving unity of command by formalising cooperative activities, through command arrangements, will be discussed and will be supported by historical examples. This leads to the insight that 'Unity of Effort' provides a basis for establishing the effectiveness of command arrangements and that a similar approach to the determining the effectiveness of the other elements of C2 is possible. As this paper arose from an interest in the establishment of a joint theatre level headquarters, the emphasis throughout will be placed on the operational level of war.

2 Command Arrangements

2.1 Relationship to command and control

Use of the term 'Command and Control' generally leads to a great deal of confusion as those using the term often have a different understanding of what it means. This is brought about by the existence of three possible meanings that can be attributed to 'Command and Control' and that these meanings are variously used either singly or in combination (Sproles, 2001). These meanings are: Command arrangements; Command itself; and Command Support Systems where;

- 'Command arrangements' provide the operational and administrative arrangements that must be established in order that a commander may exercise command of assigned forces;
- Command, as understood in the context of C2, refers to the commander and involves such matters as quality of decision making, situational awareness, commander's intent; communication of decision; timeliness; decision making under stress; and dealing with uncertainty; and
- Command Support Systems represents the most common meaning given to C2 and refers to items such as the equipment, staff, and doctrine used to support the commander in the command process.

Of these three meanings, this paper is concerned with command arrangements. They establish the operational and administrative constraints or boundaries placed on the commander's authority. For theatre commanders, command arrangements are established by the appropriate military and national strategic level authorities

2.2 *Origins*

Up to the early part of the 20th century, senior commanders were accustomed to having extensive command authority over their largely single-service subordinate forces. Today we would categorise this as the commanders exercising command arrangements such as Full Command (NATO), Combatant Command (US), or Theatre Command (Australia). However there was no real need to coin such terms prior to the introduction of air forces as a third service and the increased occurrence of joint and multi-national operations that came about in the 1940s. While it may not be possible to definitely establish the claim, there is evidence that the term ‘Command and Control’ itself originated in this period amongst the Western Allies to describe those command arrangements necessary to achieve unity of effort through unity of command.

The advent of large scale multi-national and joint operations in WWII established the need to limit a commander’s command authority especially when the subordinate force comprised elements from different sovereign nations. Thus, while General Eisenhower may have had full command of US troops in Europe in his capacity as Commanding General European Theater of Operations (ETO), he was constrained in his command authority over other Allied troops in his capacity as Supreme Allied Commander Europe.

A representative definition of command is ‘The authority vested in an individual of the armed forces for the direction, coordination, and control of military forces’ (JCS Pub 1, 1988). The ‘military force’ referred to may be considered an organisation established to perform a task or mission. While it may appear to be a homogenous organisation from the outside, it is most often made up of elements from different organisations all of which have some form of allegiance to these other organisations. For example, the force may be made up of elements from different uniformed services or from different nations. In order to ensure that the commander’s force is capable of carrying out its mission, these other organisations must delegate some of their authority to the commander. With joint and multinational forces the commander uses this delegated authority to exercise command ‘...across organisational boundaries’ (Ashworth, 1987, p. 34) and this is seen in the force’s ‘Command arrangements’. By agreeing on definitions of types of arrangements, all parties concerned are able to establish a common understanding of what are the limits to the commander’s authority. Such Command arrangements may be referred to as ‘Combatant Command’(US), ‘Theatre Command’ (Australia), ‘operational command’, ‘operational control’, or ‘tactical control’. By these means, the degree of command allowed a commander is able to be prescribed by the Command arrangements.

3 *Unity of Effort*

3.1 *Purpose*

Unity of effort uses the synergy obtainable from every element of the force when acting in unison to maximise the capabilities of a military force. It is an idea as old as war and is seen in the use by the Romans of the fascine as a symbol of strength through unity. Sun Tzu advised that when an enemy is united, it is necessary to divide him as a prelude to defeating him (Griffith, 1971, p. 69). General Eisenhower (1948, p. 230) noted that ‘...there is no separate land, air, or naval war’. He stated that unless all three are united against a common objective ‘...their maximum potential power cannot be realized’. Unity of effort ‘...ensures all means are

directed to a common purpose' (JP 3-07, 1995, II-3). Winnefeld and Johnson (1993, p.4) describe unity of effort in terms of solidarity of purpose, effort, and command. They refer to it as the means to direct all '...energies, assets, and activities, physical and mental, towards desired ends'. Historically, unity of effort has been achieved through either mutual cooperation or by unity of command.

3.2 Mutual Cooperation

Military forces are comprised of components and this has traditionally been along the service lines of naval, ground, and air forces. Cooperation amongst component commanders engaged in joint operations can work as seen with Wolfe and Saunders at Quebec in 1759 and Grant and Porter at Vicksburg in 1862 - 63. 'The victory of Wolfe was a successful "forlorn hope" only rendered possible by the steadiness of the British infantry and by the co-operation of the fleet, which distracted and misled the enemy'(Leadam, 1912, p. 467). General Grant, when speaking of Admiral Porter at Vicksburg, noted that 'I had no more authority to command Porter than he had to command me (Allard, 1990, p. 62). But this was no bar for the two commanders cooperating with each other to capture Vicksburg.

Grant was the first important commander in the Civil War to recognize the potential for army – navy cooperation...simply because someone does not report to you in the chain of command doesn't mean you can't do business together for mutual benefit. (Barnes, 2001, p. 85).

However, such high levels of cooperation in joint operations were probably the exception rather than the rule due to inter-service rivalry and mistrust. For instance, in the North Pacific area during the early stages of World War II, the different service commanders '...showed no disposition to subordinate their individual convictions for the common good' (Morton, 1961). This lack of cooperation was not restricted to the Allies as the Axis powers during WWII also demonstrated a seemingly suicidal disregard for the common good. 'Inter-service rivalry was worse in Japan than it was in America, and with a general as Prime Minister (of Japan), the Army was in the ascendancy' (Gallaway, 2000, p. 84).

The failure of Nazi Germany and Imperial Japan to develop the mechanisms to control theatre war and provide effective cooperation among the branches of their armed forces is considered an Achilles' heel...which contributed to their final defeat' (Boomer, 1998, p. 2).

Despite such experiences, cooperation has been the traditional means of achieving a level of unity of effort in multi-national operations. Generally this cooperation has been closer the more imminent the common danger. When speaking of the coalition established to oppose Napoleon, Craig (1965) records that 'The divisive factors were always held in restraint by the common danger, and the allied war plan was enabled to achieve its objective'. It was the perilous position of the Allied armies on the Western Front in 1918 that eventually brought the Allies to attempt to replace reliance on cooperation with that of a unified command. Long (1973) when describing Australia's reaction to the Japanese advance south through the Pacific in 1941-2 noted 'The Japanese advance southwards produced a threat so evident that the country was prepared to accept almost any government action intended to combat it.' The result of this was the speedy granting of operational control of all Australia's combat forces to General MacArthur on his arrival in Melbourne in 1942.

The impact of a lack of cooperation on attempts to achieve unity of effort are illustrated by Finch(1998), who in describing the performance of Russia's military forces during the 1990s Chechnya campaign, states that:

...the single, overriding cause behind the Russian defeat in Chechnya was the dissension among the various levels and branches of command. This lack of unity plagued the Russian effort from day one. Discord existed at every level; from the halls of the Kremlin down to the trenches surrounding Grozny.

He further states that 'There appears to be no concept of professional solidarity within its ranks' as a result of the deep divisions within the Russian armed forces, the bureaucracies supporting them and the dissension between the services and senior commanders. Morton (1961) when discussing the command arrangements in the Pacific towards the end of WWII, expresses the opinion that perhaps '...true unity of command can be only on the field of battle'. This is probably too pessimistic a view as there are many examples where unified command for both joint and multi-national operations has been achieved. The level of unity achieved has been largely influenced by the nature of the command arrangements employed and the manner in which they were adhered to.

3.3 Unity of command

While mutual cooperation can result in great successes such as Quebec in 1759 and Vicksburg in 1863, reliance on it can also lead to some notable failures such as at Gallipoli in 1915. The difficulty with mutual cooperation is that '...success often was due not so much to goodwill and common sense as to chance' (Allard, 1990, p. 62). The chance element is having commanders who have both the goodwill and the common sense to cooperate with each other. The human element involved necessitates that there will always be a need for cooperation but unity of command puts a formal structure in place making unity of effort more likely. Recognition of the need for the imposition of such structures is not new. Leadam (1912, p. 470) when discussing the British campaigns that led to the capture of Louisberg and Quebec in the mid 18th century, noted that William Pitt, the British Prime Minister had, '...organised the co-operation of the service...and given their orders to generals, admirals, and ambassadors alike'. However, such actions by strong national authorities were the exception rather than the rule but the events of 1918 on the Western Front brought about the realisation that more needed to be done in establishing unity of command not only at a national but even at an international level. The two separate efforts at achieving unity in command between the Allies on the Western Front in World War I represent an early attempt at international agreements to establish command arrangements for multi-national operations.

3.3.1 World War I

Up to the end of 1917, the British and French armies in France cooperated with each other under a system of 'parallel command'. Rice (1997) explains the situation as:

The command arrangements for much of the war were extremely loose, at best relying on cooperation and coordination among the Allies, with nations pursuing their own national goals much of the time. Today such arrangements are described as parallel command, which "exists when nations retain control of their deployed forces. If a nation within the coalition elects to exercise autonomous control of its force, a parallel command structure exists" It was only in 1918, when the Allies on the Western Front were staring defeat in the face, that a more thoroughly integrated command system was adopted.

The attitude prevalent during much of this war can be seen in a directive from Field Marshall Kitchener to General Sir John French, the British Expeditionary Force (BEF) commander, in December 1915 prior to the Battle of the Somme. 'I should like you to know that your command is completely independent, and that in no case will you be placed under the orders of an Allied General' (Joffre *et al.*, 1927, p. 152). In November 1917 the British, French, and Italian national leaders met at Rapallo and established '...a supreme authority above all the commanders-in-chief of the Western Allies' (Bean, 1968, p 395). The political leaders would form a Supreme War Council with a staff to '...initiate the Allies' main strategy and determine to which part of the front the final reserves of troops should be sent' (Bean, 1968, p. 395). For a brief period, the British forces were placed under French command but this soon reverted to the system of 'voluntary agreement' between the British and French commanders (Bean, 1968, p 398).

It was only when the Allies were facing defeat in 1918 that General Haig, by now BEF commander, petitioned the British government to establish a unified command under General Foch of France. Even still, Foch's position was one of persuasion and coordination rather than of command. Mutual cooperation was still a necessity as the command arrangements were such that he was not delegated the authority to command General Haig and his only real source of power was his command over the Allies' theatre reserves. However, the lessons of this period were remembered several decades later when officers such as General Brooke of Britain and General Marshall of the US were raising and organising the Western Allies' forces in opposition to the Axis powers.

3.3.2 World War II - Western Allies.

During WWII the Western Allies were more successful in achieving unity of command. From the outset, the British and French agreed on the appointment of a French officer as Supreme Commander during the Battle for France in 1939-40. However, it was the later efforts of the US and UK that achieved the highest levels of unified command yet to be seen in multi-national operations in what Montgomery (1958, p. 361) described as '...an unparalleled experience in international co-operation and understanding'. Britannica (1959, p. 277) describes how the system of the Combined Chiefs of Staff and Supreme Commanders established in 1941-42 achieved the controlling organisations '...needed to encompass both inter-service and inter-Allied coordination' and solved the problem of '...coordination and direction'. The Combined Chiefs of Staff were located in Washington and comprised the US and UK Chiefs of Staff with the intention of acting as '...the supreme military body for strategic direction of the Anglo-American war effort' (DTIC). They achieved unity of command of Allied forces through the appointment of Allied Supreme Commanders to command in the Mediterranean Theatre, the European Theatre, in the South West Pacific Area (SWPA), in South East Asia Command (SEAC), and even in the battle against the U boats in the Atlantic.

The Allies did not achieve the level of unity that they did achieve without encountering initial difficulties. Some of these difficulties involved command arrangements, one of which was the different approach to unity of command taken by the British and the US. Ambrose (1969, p. 25) describes how the British used single service Commanders-in-Chief to direct the war subject to close supervision from London. He gives as an advantage the fact that it avoided a general giving an order to an admiral and vice versa but also notes that it suffered from the inherent

disadvantage of any committee in a crisis situation. Rice (1997, p. 4) also notes how the British ‘...regarded service chiefs within a theatre as co-equals (a committee) and Churchill required close supervision of his commanders...’. On the other hand, the US favoured ‘...delegation of responsibility and authority to a commander, on the principle that he should be assigned a job, given the means to do it, and held responsible for its fulfilment without scrutiny of the measures employed’ (Rice, 1997, p. 4). This view supports ‘unity of command’ as command being vested in one commander as opposed to the British view of a unified commander relying on the cooperation of semi-independent Commanders-in-Chief at the theatre level. In the American view, any subordinate component commanders were just that – subordinates and not co-equals. Thompson (1969, pp 15-16), in discussing the command arrangements in Europe in 1944-45, noted that the US view that the Supreme Commander ‘should in some way control the assaulting army...’. On the other hand, the British considered that a Supreme Commander would have his hands full with strategic and political matters and with coordinating the land, sea, and air forces. As Admiral Cunningham¹ stated in 1943, in reference to command of combined operations ‘...the American conception of a Supreme Commander is very different to ours; in their view he is really a Commander’ (Ziegler, 1985, p. 239). General Marshall explained this to Admiral Pound² at the Arcadia conference when he said:

... it would be impossible to choose anyone for supreme command who would have full technical knowledge of all services. He felt, however, that the matter of appointing a supreme commander would be bound up in the assumption that a man of good judgment would be selected; otherwise the whole project would be a failure. He felt that a man with good judgment and unity of command has a distinct advantage over a man with brilliant judgment who must rely on cooperation.(FDR, 1941).

Even when a unified command was established in Europe, General Eisenhower still had his occasional difficulties with establishing suitable command arrangements as evidenced by the struggle to gain command of the strategic air forces to support the Normandy invasion forces. His aim was to ‘...win control by SHAEF (Supreme Headquarters Allied Expeditionary Force) of all aviation...of whatever nationality, so that all would be operating at SHAEF’s bidding, according to SHAEF’s plans, to accomplish SHAEF’s goals’(Lyon, 1974, p. 271) but before this could be achieved ‘the structure of air command had to be firmly established’. The British agreed that the Supreme Commander have ‘supervision’ of the strategic air forces which the Americans queried as they thought it should be ‘command’. The disagreement and confusion reached such a stage that Eisenhower threatened to resign ‘...unless a word be adopted that leaves no doubt in anybody’s mind of my authority and responsibility for controlling air operations...during the critical period of Overlord (Ferrel, 1981, p.115). The word ‘direction’ was finally accepted by everyone concerned.

The acceptance of the boundaries established by the command arrangements is evidenced by the reaction when a multi-national commander happened to overstep the limits of his authority. On 25 April 1945 General Kenney³’s headquarters issued a general order appointing Air Vice Marshall Bostock of the Royal Australian Air Force (RAAF) to the position of Air Officer Commanding-in-Chief of RAAF Command. This was an administrative matter and was outside

¹ Admiral of the Fleet Sir Andrew Cunningham became First Sea Lord in 1943 following Pound’s death.

² Admiral of the Fleet, Sir Dudley Pound, British First Sea Lord from 1939 until his death in 1943

³ Lieutenant General George Kenney, of the US Army Air Corps, was General MacArthur’s air commander

of the operational control vested in General MacArthur by the Australian government. This prompted a formal response from the Australian government drawing General MacArthur's attention to the matter and a request for the withdrawal of the general order. This incident, albeit of a minor nature in the context of a world war, does however illustrate the clear understanding and appreciation that delegated authority placed clear constraints on commanders (Odgers, 1957, p. 439).

3.3.3 *World War II - Hitler's Germany*

The Allies in WWII managed to agree on the command arrangements needed to achieve unity of effort in the difficult area of multi-national operations whereas the Germans had the seemingly simpler task of achieving unity of effort for joint operations. That the Germans failed to achieve this at the operational level was brought about by the command arrangements that concentrated command at the political strategic level. Unlike the Allies, the command arrangements adopted did not allow a delegation of authority from the strategic to the operational levels.

Adolf Hitler assumed Supreme Command of the German military (*Wehrmacht*) in 1938. He initially commanded through the high command (OKW) under which were the high commands of the Navy (OKM), Army (OKH), and the Air Force (*Luftwaffe*) which was designated OKL in 1944 (US Government, 1946, p.2). In 1941 Hitler took direct command of the Army. Herman Goering was appointed the Commander-in-Chief of the *Luftwaffe* and Admirals Raeder and Doenitz were successively appointed as the Commanders-in-Chief of the Navy throughout WWII. As the war progressed, Hitler made OKW responsible for Western Europe and OKH responsible for the Eastern Front. OKW thus lost any chance of being able to coordinate the overall German military effort along joint lines. Not only was it stripped of its authority for the large forces committed to the Eastern Front, the Commanders-in-Chief of the Navy and Luftwaffe continued to report directly to Hitler as the Supreme Commander-in-Chief. Indeed Goering not only outranked Keitel, the Commander-in-Chief of OKW, but he was also a minister in the government. As a result of this command structure the Supreme Commander, Adolf Hitler, was the only entity capable of exercising unified command but who, by the time of the Normandy invasion '...had no adequate machinery through which to exercise it' (Harrison, 1951, p. 135). Wilmot (1952, p. 465) referred to this as '...an outrageous system of command' and observes how the delays caused meant that '...by the time the Fuhrer's instructions reached the front, the facts upon which they were based had changed beyond recognition'.

'There was during World War II no unified General Staff such as the Great General Staff which operated in World War I' (US Government, 1946, p. 5). Guderian (2000, p. 459) explains that it was Hitler's aim to keep each element of government machinery in a separate compartment and only allow the passage between elements of that which was truly essential. 'He (Hitler) regarded it as his unique privilege to be in a position where he might form a comprehensive picture...'. In 1943 General Guderian made an unsuccessful attempt to convince senior Nazi party members that the Supreme Command should be reorganized with a view to lessening '...Hitler's direct influence on military operations' (Guderian, 2000, p. 325).

4 Contributing to Unity of Effort

4.1 *A comparison*

Evidence of the contribution or otherwise of command arrangements to unity of effort can be found by a study of both multi-national and joint operations. The German and Soviet theatre command structures, provide a useful insight into how joint operations can be managed for better and for worse. The Allies were faced with the more difficult problem of establishing theatre level command arrangements for multi-national operations. This difficulty was not alleviated by having to develop models whilst actually engaged in operations against the enemy. In some instances, the models developed worked out well but in others it did not. The following examples will discuss the command arrangements for theatre level operations both for multi-national and joint operations from both WWII and from more recent times.

4.2 *Soviet Union – Eastern European Theatre*

The day following the German invasion of the Soviet Union in 1942, Stalin created the *Stavka*, for the command of the Soviet armed forces. *Stavka* was a subordinate organisation to the State Committee of Defence (GKO) which was responsible to the political, economic, and broader military aspects of the campaign (Seaton, 1971, p. 83) but Stalin retained the chairmanship of both organisations. Boomer (1998, p. 2) describes the *Stavka* of WWII as a unified headquarters coordinating naval, land, and air components in a theatre of operations. Seaton (1971, p. 85) also notes how *Stavka* was both a joint service and a centralised organisation. Wilson (1999) provides an organisational chart showing *Stavka* as the ‘HQ of the Supreme High Command’ headed by Stalin under which are four fronts each with its own Commander-in-Chief plus a reserve force under Stalin. Each front was equivalent to an army group, the number of which varied throughout the war (Glantz and House, 1995).

Unlike Hitler, Stalin delegated operational matters to his commanders and concentrated on the political situation and matters of the highest war strategy. ‘...German officers blamed Hitler’s interference and rigid control for all manner of evils, but few of them recognized that their opponents (the Soviets) were developing the very command procedures that had once made the Wehrmacht supreme’ as ‘...Stalin himself had come to trust his subordinates to an unprecedented degree’ (Glantz et al, 1995, p. 156). Under Stalin, the Soviet armed forces from 1943 until the end of WWII, achieved a degree of unity in command and unity of effort that surpassed even the Western Allies. Contributing to this was the complete integration of the air arm into the army. ‘The Red Army aviator ‘...was a soldier, whose main task, together with the artillery, was to provide fire support for the ground forces. He was under army command...he wore army uniform’ (Seaton, 1971, p. 86). ‘Right from the start the Russian Air Force had not been intended to fulfil any strategic purpose: it concentrated entirely on supporting the Army’.(Galland, 1955, p. 115) This compares with the Allied arrangement in Europe where tactical air force formations, such as the 2nd Tactical Air Force, were only ‘in support of’⁴ the land forces and remained under the control of the Allied Air Forces Commander.

⁴ ‘In support of’ is a command arrangement ‘...designating the support provided to another unit, formation or organization while remaining under the initial command’ (NATO Military Agency for Standardization, http://www.dtic.mil/doctrine/jel/other_pubs/aap_6v.pdf).

4.3 *Nazi Germany – West European Theatre*

The lack of a unified command for the German *Wehrmacht* during WWII has been noted in paragraph 3.3.3. Pipes (2001, p.1) notes that this lack of unified command was the most serious weakness in the German defences of the West. An examination of the command arrangements established for the German forces in France in 1944 reflect this lack of unified command and will serve to illustrate the corresponding adverse affect it had on unity of effort for the *Wehrmacht*.

The German Western European theatre was established in 1941 to control and defend Western Europe and it was this theatre against which the Allied invasion of Europe was directed in 1944. The theatre was commanded by *Oberbefehlshaber West*, (OB West) or Commander-in-Chief West who, at the time of the Normandy invasion in June 1944 was Field Marshal von Rundstedt.

While von Rundstedt was charged with the full responsibility for the defence of the West, he did not have the authority associated with that responsibility. Although he reported to Hitler through OKW, that organisation did not have the authority to effect true joint cooperation. Unlike his opponent, General Eisenhower, von Rundstedt was far from being a Supreme Commander. His naval and air forces did not report to him and those Waffen SS units in his theatre did not even report to OB West but directly to Himmler. His anti-aircraft defences reported to OKL and not to OB West. Many of his coastal batteries reported to the navy and jurisdiction did not pass to OB West until the land battle commenced ie. after the Allies had landed! In essence, this put responsibility for the vital coastal batteries in the hands of local commanders (Pipes,2001, p. 1). Von Rundstedt was in disagreement with his subordinate, Rommel, over the manner to deploy his defences. ‘...the chain of command between von Rundstedt and Rommel was muddled by the quasi-independent nature of Rommel’s command and by their fundamental disagreement over the appropriate strategy to repel the expected invasion’ (Pierce, 1996). However Rommel was of equal rank to von Rundstedt and on occasions, exercised his right as a Field Marshal to by pass von Rundstedt and deal directly with Hitler. The theatre reserves of four panzer divisions were placed under command of OKW, thus removing from the theatre commander the discretion as to how and when they would be employed.

This lack of unified command meant that there was an emphasis on informal co-operation and liaison between, generally, local commanders. There was no effort to coordinate the various elements of the German fighting machine into a cohesive fighting force under a Joint Commander.

While the German experience is an extreme example, it demonstrates the need for robust command arrangements that enable command authority to be delegated through the various levels of command. Sufficient authority must be delegated down from the national and military strategic areas to enable the operational and tactical level commanders to do their jobs. There are several manners in which this can be achieved. In the current US system of combatant commands, this delegated power flows directly from the national strategic (President) and bypasses the military strategic (Chairman Joint Chiefs of Staff). In Australia, the delegated authority passes from the national strategic level to the operational level commander

(Commander Australian Theatre) via the military strategic level (Chief of the Defence Force). The authority provided the operational commander in the US and Australian cases are combatant command and theatre command respectively. The scope of this delegated authority differs significantly one from the other. The amount of authority delegated down through these chains needs to be carefully judged to strike a balance between what is necessary to achieve unity of effort and what is appropriate to delegate.

4.4 Allied models for theatre level operations

In the absence of precedent in conducting joint and combined operations at theatre level, the Allies developed several different models during WWII. Each theatre commander developed a different approach to establishing either a joint or multi-national organisation as there were no historic models to use as a guide and as a result the organisation reflected the commander's personality to a large degree. Probably the most successful was that established by General Eisenhower as Supreme Allied Commander in Europe. Hufford(1973) notes that the primary objective of the SHAEF staff was to '...utilize the resources of two great nations...with the decisiveness of a single authority' and that:

The Supreme Allied Command in Europe would never have worked without Eisenhower for he virtually invented the concept of Allied unity of command and persuaded the British to accept it in lieu of the committee system to which they were accustomed.

General Eisenhower commanded the theatre using British officers as Commanders-in-Chief for the air and naval forces while directly commanding the Army Group commanders. Apart from the period of the Normandy landings he did not employ a separate overall land commander. Admiral Mountbatten in SEAC employed a similar system but did use a Land Force commander although he was tempted at one stage to command the army group directly. General MacArthur in SWPA, despite repeated requests from General Marshall, avoided setting up a truly allied or integrated headquarters. While he did appoint an Allied Land Force Commander, he deliberately avoided using the Australian appointee in this role. The air and naval forces were commanded by US officers and General MacArthur directly commanded the ground forces using task forces tailored for each operation.

Admiral Nimitz, whose Pacific Area command was a joint as against a combined command, based his operations solely on task forces whose commanders reported directly to him. For example, he used two task forces built around his aircraft carriers to operate north of Midway in the decisive battle between the Japanese and American fleets in late 1942. A similar approach using joint amphibious task forces was used in the capture of the islands in the Central Pacific area. He was forced by circumstances to use a subordinate commander, Admiral Halsey, in the South Pacific early in the war but did not make any efforts to repeat this model in his later campaigns.

The superior authority for each theatre commander varied. General Eisenhower was responsible to the Combined Chiefs of Staff whereas Admiral Mountbatten in SEAC reported to the British Chiefs of Staff. General MacArthur and Admiral Nimitz were answerable to the US Army Chief of Staff and the US Chief of Naval Operations respectively. These arrangements notwithstanding, General MacArthur had indirect access to the Combined Chiefs through the Australian political strategic level of command due to his close personal relations with the

Australian political leadership. He was able to use this access to his advantage to exert pressure for the allocation of resources to his theatre command.

Establishing these organisations, training and developing the required ethos amongst the staff, and resolving the various disputes that arose while engaging in operations against the enemy only detracted from the commander's ability to concentrate on the main issue at hand – engaging with and defeating the enemy. This is in contrast to the Soviet experience where a strictly centralised command system, using *Stavka* representatives to coordinate operations on the fronts where air, land, and sea components were integrated ‘...provided a command system adapted to the scale of warfare on the Eastern Front’ (Boomer, 1998, p. 2).

4.5 Pacific Ocean area theatres - A lost opportunity

Morton (1961) provides a detailed description of the development of the command structures in the Pacific region during WWII. In spite of the desires of both President Roosevelt and General Marshall for a unified command, inter-service rivalries between the US Army and the US Navy prevented this. It was the Navy view that the Pacific was sensibly a naval war and that this should be recognised just as they recognised without dissension that the European theatre was an army war. There had been antipathy towards General MacArthur dating back to the time when he was Army Chief of Staff. In any event the Navy was not going to agree on an Army officer having any control over the Pacific Fleet. Complicating the choice was the fact that General MacArthur was both well known and the most senior officer in the Pacific region while none of the naval officers, such as Admirals Nimitz, Halsey, or Spruance had yet become household names. ‘The Navy thought that MacArthur “would probably use his naval force...in the wrong manner, since he had shown clear unfamiliarity with proper naval and air functions” in the past’ (Barlow, 1994, p. 78). Galloway (2000, p. 140) notes that, although President Roosevelt had the authority to ensure a unified command in the Pacific, General MacArthur's public profile was such that Roosevelt did not have the political will to make an issue of it.

The decision reached by 30 March 1942 was to divide the Pacific into the SWPA and the Pacific Oceans Area under General MacArthur and Admiral Nimitz respectively. The Pacific Oceans Area was subdivided into three areas for the North, Central, and South Pacific with Admiral Nimitz directly commanding the North and Central Pacific and commanding the South Pacific through a subordinate component commander. As well as being a theatre commander and commander of two subordinate areas, Admiral Nimitz was also Pacific Fleet commander. His position was probably little different from that of General Stilwell in Burma who ‘...held so many appointments that at times he was able to solve problems by issuing orders to himself!’ (Odgers, 1957, p. 272).

These command arrangements led to several disputes during the progress of the Pacific campaign especially when forces from both areas were needed to cooperate during operations on the fringes of their areas of operations. This occurred when plans were being drawn up for the capture of Rabaul, and at the Philippine landings at Leyte and Lingayen Gulf. They are suggested to be factors for General MacArthur's pre-emptive strike (a ‘reconnaissance in force’) in the Admiralties so as to prevent Admiral Nimitz's forces achieving a political advantage. The arrangements also forced the Joint Chiefs to be involved in matters that they need not have been involved in. Odgers (1957, p. 234) in describing the need to interchange assets between General

MacArthur's and Admiral Nimitz's commands, describes how the Joint Chiefs '...retained control of the shipping which supported both commanders to ensure that the maximum interchange was achieved'. Winnefeld et al (1991, p 78) also notes how the divided command arrangements led to duplication of effort and competition for resources. As a result, the Joint Chiefs became '...the directing headquarters for operations in the Pacific' forcing the Joint Chiefs in making decisions '...that could well have been resolved by lesser officials'

Command arrangements for the Pacific region had to be made in haste and there was no time to experiment and to negotiate an effective organisation. The happenstance of a major military commander being present in the region at the outbreak of hostilities forced a compromise set of command arrangements tailored to fit personalities rather than a more considered and robust set of arrangements. This is a dangerous situation as '...political and personal differences can paralyse even a disciplined organization. The problem is worse when command arrangements are ill-defined or inept' (Dahl, 1996, p. 12). The Soviet experience of developing and refining theatre command arrangements through exercises in peace time proved their worth in WWII. Boomer (2001, p. 2) notes that:

...the major successes of the Soviet Armed Forces were due in good measure to the system of command and control for ground, air, and naval forces which had been worked out in theory prior to the war and modified by the hard tests of praxis during the struggle.

4.6 Falklands – 1991. Room for improvement

Other essentials of command arrangements, such as the definition of terms, often are made in haste as well. Ferrell (1981, p. 115) describes how weeks of argument ensued on the definition of 'command' when General Eisenhower proposed that the strategic air forces be placed under his operational control for the preparation of the Normandy invasion. The eventual resolution of this argument involved the Combined Chiefs of Staff no less and brought about Eisenhower's threat of resignation only weeks before D Day. Along with other activities, command arrangements must be carefully thought out, along with clear definitions, and be practiced and rehearsed well before operations commence. During Operation Corporate, the British operations to reclaim South Georgia and the Falklands in 1982, the difference in usage of terms between the Navy and the Army in establishing command arrangements caused confusion and bickering.

In this campaign, the UK '...integrated nearly every tool in the kit bag to mount their operation rapidly and win at the knife's edge of culmination' (Ballard, 2001, p. 5). To achieve this, a Joint Operations Commander was established at Northwood in the UK. He had reporting to him five tactical commanders, one each for the:

1. Carrier Battle Task Group;
2. Amphibious Task Group;
3. Landing Force Task Group;
4. South Georgia Task Group; and
5. Submarine Task Group.

This functionally grouped force was designated Task Force 317 and Admiral Fieldhouse was appointed its commander (CTF). Several components of this force were joint in nature eg. The

carrier force had both air force and navy elements. Once ashore, the landing force also became a joint force, eventually comprising army, Royal Marines, and Special Forces .

The plans for Operation Corporate called for the retaking of the Falkland Islands and South Georgia Island as separate missions. As well, the submarine forces did not operate directly with the land and other sea forces. Thompson⁵ (1992, pps. 16-17) puts a case for a senior officer to be placed between the CTF and the three groups (those previously listed) involved in the regaining of the Falkland Islands. He points out that the commander of the Carrier Task Group, Admiral Woodward, was ‘...often incorrectly described as the Task Force Commander’ who took upon himself ‘...as senior naval officer present, the job of being in overall command’. All group commanders reported directly back to CTF in the UK but this action by Admiral Woodward as a ‘*primus inter pares*’ caused friction. It was Thompson’s view that this could have been avoided by the appointment of a senior operational commander responsible to the CTF for all three groups. The situation as it stood was ‘...an uncomfortable compromise, leaving much to personalities, requiring a degree of tolerance and understanding all round; two characteristics which are often in short supply under stress’. Such an operational commander would be able to maintain a presence in the operational area, decided on priorities, removed the friction, and ‘...most useful of all, he could have taken the responsibility for speaking direct to Northwood off the backs of the busy group commanders’.

Clapp *et al* (1996), offer a chronology of events that may have led Thompson to believe that Woodward was attempting to assume command of the amphibious and land forces. The initial command arrangements (pps. 31-2) show Admiral Woodward as commanding a Task Group, under which there are three Task Units comprised of the carrier battle group, the amphibious, and the land forces. In Navy parlance, a Group is superior to a unit. The hierarchy is Force-Group-Unit-Element. Clapp *et al* (1996, p.38) notes that the command structure placed both Thompson and Clapp under Woodward and that it was a command structure ‘...based on rank rather than role...’ Later, a new command structure is issued making each of the five commanders of equal status as Group commanders (Clapp *et al*, 1996, p. 50 and Thompson 1992, p. 16) Subsequent to this Clapp *et al* (1996, p. 60) observe how Woodward gives the impression that he is still acting under the original command structure much to Thompson’s discomfort and ‘As though to emphasize our perceived position in the command chain, I found it extremely difficult to have an interview with CTF’. Despite reassurances that the five commanders held equal status, including a statement to that effect from CTF (Clapp *et al*, 1996, p. 50) an ‘outline plan’ for the landing of forces on the Falklands seemingly reverted to the original command structure by giving operational control of the force back to Woodward as ‘Commander Combined Task Force’ (Clapp *et al*, 1996, p. 74). It would seem that this confusion could have been brought about by Admiral Fieldhouse’s use of the naval practice of working direct to a flotilla commander (Admiral Woodward) as the overall commander for a maritime operation. The lack of adherence to joint doctrine referred to in Clapp *et al* (1996) supports this view.

⁵ Brigadier Thompson RM commanded 3 Commando Brigade (which was reinforced with two Parachute Regiment battalions) during the Falklands campaign.

The conclusion is that there was considerable confusion amongst not only the staff concerned but also the senior commanders concerned as to the command arrangements for the operation. It is possible that this could be put down to the speed at which this operation was put together.

5 Effectiveness of Command and Control

Establishing the effectiveness of C2 is a perennial question, the answer to which seems to be elusive. It is suggested that the root of the problem lies in considering C2 as a single entity instead of recognising that what is referred to as 'C2' is really the separate entities of Command Arrangements, Command, and Command Support Systems. Recognition of this and the subsequent adoption of a reductionist approach to C2 effectiveness will enable the underlying need to be matched to the solution as explained in Sproles (2002). The need for unity of effort, and the use of Command Arrangements as a solution to this need, is a case in point.

It has been shown that command arrangements are attempting to achieve unity of effort through the formalities of unity of command. This is achieved by providing the structures to enable coordination between the various elements of the force; by avoiding internal conflict; by maximising available resources; by fostering good working relationships; and even by establishing standardised terminology. History has shown that well constructed command arrangements can promote unity of effort while poor command arrangements only hinder unity of effort. This insight enables Measure(s) of Effectiveness (MOE) to be established for command arrangements.

For example, an obvious candidate as an MOE for command arrangements is 'Degree of unity of effort achieved'. This MOE expresses the underlying need to be satisfied and provides a guide to those who need to establish suitable test and evaluation programmes to establish the effectiveness of the command arrangements. Recognition is given to command arrangements as being separate from command and command support systems which are established to meet needs different from that of achieving unity of effort. The scope of the problem is thus limited to what command arrangements are meant to achieve and does not impose on them expectations that are the province of these other elements of C2. It is able to be tested, albeit by reliance on behavioural science techniques rather than by those of the hard sciences such as engineering.

6 Conclusion

Command arrangements, along with command and command support systems, form the components of an abstract system that is usually identified by use of the umbrella term of 'Command and Control'. The purpose of establishing command arrangements is to achieve unity of effort either within a multi-national or a joint force. Up until relatively recent times, reliance has been placed upon mutual cooperation between commanders as the means to achieve such unity. While this informal approach of mutual cooperation has achieved some significant successes in the past in achieving unity of effort, it has been shown to be an approach that is more often unreliable.

Since WWI, there has been an ever accelerating move to achieve unity of effort by imposing unity of command using formal arrangements that are commonly called command arrangements.

An historical review shows how good command arrangements will assist the achievement of unity of effort and how, conversely, poor command arrangements can hinder unity of effort. This recognition that command arrangements have been developed as a solution to the problem of attempting to achieve unity of effort offers an answer to the question of how to establish the effectiveness of C2. 'Degree of unity of effort achieved' is suggested as an MOE for command arrangements.

It is suggested that this approach to establishing the effectiveness of C2 by regarding C2 as being several entities instead of one abstract entity can be applied to all aspects of what is generally called C2. This is an area worthy of further research.

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