

The Impact of Air Power on Navies:

The United Kingdom, 1945 – 1957

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Edwin Williams, 1896-1986 (Private, Duke of Cornwall Light Infantry; First Lieutenant, Seventh Worcestershire Regiment; Pilot Officer, Royal Flying Corps)

John Ernest Benbow, 1910- (Staff Sergeant, Royal Engineers; Warrant Officer, Royal Electrical and Mechanical Engineers; seconded to 7th Indian Cavalry)

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Abstract

The Impact of Air Power on Navies: The United Kingdom, 1945-57

This thesis examines how air power has affected navies using the case of the United Kingdom between 1945 and 1957. Air power has given rise to numerous theories about its effect on the use of force, in which its impact on navies has been a particular theme. Many thinkers have interpreted air power as a strategic, operational and tactical challenge to navies, which would render them redundant and obsolete. Such ideas originated between the two World Wars but have continually reappeared since 1945 and were often influential in the British debate.

During the period under consideration, the Royal Navy was challenged in a series of defence reviews. Although these serious and repeated attacks were generally motivated by financial considerations, they were justified primarily by claims relating to air power. It was argued that nuclear-armed air power would be sufficient to win wars, while any nuclear war would leave little role for navies. Later, this argument shifted to an emphasis on deterrence of war and it was suggested that naval forces were not vital to this deterrent. Although the Admiralty continued to justify a capability to defend sea communications as both a deterrent to war and vital in it, this case did not find favour with the government. During the mid-1950s, however, an alternative focus for the Navy emerged in the form of policing and limited wars, east of Suez. Conflicts in Korea and the Suez demonstrated that such conflicts could occur and that mobile naval forces, particularly carrier aviation, were well suited to intervention in them.

It was also argued that land-based aircraft could take over some of the roles traditionally performed by naval forces, notably that of strike (against warships and shore targets) but also that of protecting shipping. These arguments were successfully defeated by the Admiralty. Land-based aircraft proved a useful complement to warships and naval aviation in protecting shipping but could only replace them in very limited areas. The Royal Navy differed from the US Navy in its conception of power projection against the land. Its capability for this task was thrown increasingly into doubt by growing Soviet submarine and air power and came to be justified by east of Suez commitments.

Abbreviations

AA or A/A	anti-aircraft
AAA	anti-aircraft artillery
ACAS	Assistant Chief of the Air Staff
ACNS	Assistant Chief of the Naval Staff
A/D	air direction
AEW	airborne early warning
A/S	anti-submarine
ASW	anti-submarine warfare
AW	all-weather (as opposed to day) fighter
BAOR	British Army on the Rhine
BW	biological weapons
CAP	combat air patrol
CAS	Chief of the Air Staff
CIGS	Chief of the Imperial General Staff
COS	Chiefs of Staff
CV	fleet aircraft carrier
CVE	escort aircraft carrier
CVL	light fleet aircraft carrier
CW	chemical weapons
D. of P.	(Admiralty) Director of Plans
DAOT	(Admiralty) Director of Air Organisation and Training
DAW	(Admiralty) Director of Naval Air Warfare
DCNS	Deputy Chief of the Naval Staff
DGD	(Admiralty) Director of Gunnery and Anti-Aircraft Warfare Division
DNC	(Admiralty) Director of Naval Construction
DNI	Director of Naval Intelligence
DOD	(Admiralty) Director of Operations
DOR	(Admiralty) Director of Operational Research
DTASW	(Admiralty) Director of Torpedo, Anti-Submarine and Mine Warfare
DTSD	(Admiralty) Director of Tactical and Staff Duties

ESM	electronic support measures (a.k.a. RCM)
FAA	Fleet Air Arm
FAC	fast attack craft
GAP	guided anti-aircraft projectile (a.k.a. SAGW, SAM)
GW	guided weapon(s)
JIC	Joint Intelligence Committee
JPS	Joint Planning Staff
MCM	mine counter-measures
MGB	motor gun boat
MTB	motor torpedo boat
PR	photo reconnaissance
PUS	Permanent Under-Secretary of State (or Permanent Secretary)
RCM	radio counter-measures (a.k.a. ESM)
RFA	Royal Fleet Auxiliary
SACEUR	(NATO) Supreme Allied Commander, Europe
SACLANT	(NATO) Supreme Allied Commander, Atlantic
SAGW	Surface-to-Air Guided Weapon (a.k.a. SAM, GAP)
SAM	Surface-to-Air Missile (a.k.a. SAGW, GAP)
SHAPE	Supreme Headquarters Allied Powers Europe
UNC	United Nations Command (Korean War)
VCAS	Vice Chief of the Air Staff
VCNS	Vice Chief of the Naval Staff
WMD	Weapons of Mass Destruction

Introduction

Major changes in technology have a crucial effect on the use of force. Yet the precise consequences of a particular innovation are usually far from clear and may be the subject of intense disagreement. This process is illustrated by the debates surrounding the submarine, the tank and nuclear weapons: in each case, numerous theories emerged regarding how warfare would be affected, some of which proved accurate while others turned out to be very wide of the mark. The clichéd image of military conservatism might foster the expectation that innovations tend to be underestimated and resisted. Yet the record is in fact more varied and the impact of new weapons has often been exaggerated, which can lead to errors in policy and strategy just as grave as those stemming from disregarding an invention.

The introduction of air power (which may basically be defined as the ability to use the air for military purposes), ranks among the most significant developments in military technology and gave rise to a profusion of ideas about its effect on warfare. Some theories portrayed aircraft as not merely a useful additional weapon but as an entirely new means of waging war. Such ideas had particularly serious implications for navies, which some thinkers dismissed as obsolete, rendered fatally vulnerable and strategically irrelevant. Air power has fundamentally changed warfare, yet navies plainly remain immensely significant. Evidently, many of the air power theories erred. What was the true effect of aviation and how did the process play out in practice? This thesis explores this issue by examining the impact of air power on the Royal Navy since 1945.

Importance of the subject

This thesis relates to fundamental issues in International Relations and Strategic Studies, particularly the effect of technological change on the role, strategies and instruments of the use of force. It covers an important period in international history and in British foreign and defence policy.

It also relates to the evolving nature of warfare, the conduct of different types of conflicts and the utility in them of air and naval power.

Air power is an important example of technological change which has given rise to a number of identifiable and competing theories about its effect. It is a significant issue in strategic thought, with important implications for defence policy and hence for foreign policy and military intervention. The debate is interesting not only because of its intensity, the significance of the issues involved or its influence on policy, but also because of its durability. Arguments still appear in the 1990s which are remarkably similar to those of the 1920s and the relationship of air and naval power continues to be a contentious issue. Furthermore, ideas about air power have shown a tendency to misinterpret and exaggerate the impact of technological change. The study of this case should therefore suggest why the theories were wrong and shed some light on the true course of technological change.

The United Kingdom is an interesting case for an examination of this issue because in addition to having long possessed the world's largest or second largest navy, Britain was a pioneer of both air power (as the first state to form an independent air force) and naval aviation (as the first state to construct a purpose-designed aircraft carrier, and with a plethora of other 'firsts'). During the cold war, the UK was not only centrally involved in the confrontation with the USSR but also conducted a global foreign and defence policy. The period selected is significant because it contained a series of noteworthy debates and decisions in British defence policy which had major implications for the Royal Navy and which were influenced to a considerable extent by arguments relating to the impact of air power on navies. Whilst the decisions of the 1960s regarding the Navy have received far more attention than those of the 1950s, the latter were of immense significance. The role and utility of the Royal Navy in general, and of naval aviation in particular, came under serious attack on a number of occasions during the 1950s, based largely on claims about power. These years therefore laid the foundations for the later, better known debates.

Numerous works exist about air power and about navies but none covers the interaction between the two in the same way as this thesis. Many deal in general with either navies or air power but give only passing mention to their interaction. Several books deal with naval aviation in particular conflicts. The work that comes closest to this thesis in subject matter is Vice Admiral Sir Arthur Hezlet's *Aircraft and Seapower* (London, Peter Davies, 1970), though its approach is very different, dealing broadly with the issue rather than studying the British policy debate in detail. A book covering a similar issue to this thesis, though with less attention to the conceptual aspects and for a different period, is Geoffrey Till's *Air Power and the Royal Navy 1914-1945* (London, Janes, 1979). There are a number of existing works on British defence policy in the post-1945 period, including general works on the Royal Navy and on naval aviation. Few of them use primary sources and none examines the specific issue of the impact of air power. The most detailed account of the Royal Navy since 1945 is Eric Grove's *Vanguard to Trident: British Naval Policy Since World War II* (London, Bodley Head, 1987). This thesis differs in its narrower coverage of subject and period and its attention to strategic thought relating to air power. Its primary material is based more exclusively but more broadly than Grove's book on Public Record Office files. It also uses documents which were not released at the time that he was writing, including some from 1957 which have since been opened under the thirty-year rule and earlier papers which were initially held back but have subsequently been placed in the PRO (one of which was declassified for use in this study).¹ Two other useful works, based on interviews and secondary rather than primary sources, are Admiral William Crowe's *The Policy Roots of the Modern Royal Navy 1946-1963* (Princeton University Ph.D. thesis, 1965) and Phillip Darby's *British Defence Policy East of Suez 1947-1968* (London, OUP for RIIA, 1973). Both of these touch on matters covered in this thesis and, like Grove's work, are cited in the text.

¹ C (54) 249, 'UK Defence Policy', 31 May 1954, CAB 129/69, released in 1999

This thesis investigates a question which has not been examined for the period under consideration, on the basis of primary material, much of which has not hitherto been used in an academic study. It therefore seeks both to analyse an important but neglected conceptual issue and also to draw upon new historical material.

Method and Sources

This thesis analyses the evolving role and shape of the Royal Navy within British defence policy between 1945 and 1957. It concentrates on official deliberations but also refers to the more public debate, including Parliamentary opinion. The central question is: how did air power affect the Royal Navy and its place in UK strategy between 1945 and 1957? Subordinate questions include:

- What arguments were proposed regarding the effect of air power on the Navy? How significant were they in the policy debate?
- How did air power affect British defence policy and strategy, and the role of the Navy in them?
- How did air power affect the roles and shape of the Navy and the way in which it performed its tasks?
- What was the relative importance of air power in the evolution of the Navy? What other factors were significant?
- What lessons were taken from conflicts and interventions that occurred in this period? What roles did naval and air power play? Did they match expectations?

The subject is the impact of air power on navies, so although naval aviation is the most important issue, it is not the only one. This thesis also encompasses broader questions including how air power affected the overall place of the Navy in British strategy and the effect of air power on elements of the Fleet other than aircraft carriers.

The sources used were mainly primary ones, concentrating on material available at the Public Record Office. The files consulted were from the ADM, AIR, AVIA, CAB, DEFE and PREM series (the bibliography includes a full list of classes). The principal concentration was on memoranda and minutes of the Cabinet, the Cabinet Defence Committee and various Ministerial Committees; memoranda, planning papers and minutes of the Chiefs of Staff Committee and Board of Admiralty; and Cabinet, Ministry of Defence, Admiralty, Air Ministry and Ministry of Supply correspondence, papers and briefs.

During the period covered by this thesis, defence policy was formally made in the full Cabinet but decisions tended to be taken in the Defence Committee (on which the Prime Minister, Foreign Secretary and Chancellor sat, as well as the Minister of Defence and Service Department Ministers). Other Ministerial committees with varying composition were set up on an ad hoc basis. The role of the Minister of Defence (who pre-existed the Ministry of Defence, established in 1946) was initially a coordinating one with substantial autonomy resting in the individual Service departments, the Admiralty, the War Office and the Air Ministry. Each Service had a political head (First Lord of the Admiralty, Secretary of State for War and Secretary of State for Air respectively) and a professional head (First Sea Lord, Chief of the Imperial General Staff and Chief of the Air Staff), who sat on the Defence Committee and attended Cabinet as required. The professional heads of the Services met as the Chiefs of Staff Committee, which the Minister of Defence and Prime Minister sometimes attended, and which was served by the Joint Planners (the Director of Plans of each Service) and a Joint Staff. The other department with a significant interest in defence policy (other than the Treasury and the Foreign, Colonial and Commonwealth Offices) was the Ministry of Supply, which conducted all of the research and development for the Army and the RAF and much of it for the Admiralty. The Minister of Supply also sat on the Defence Committee.²

² For the organisation of UK defence policy-making, see Johnson, F.A. *Defence by Ministry: The British Ministry of Defence* (London, Duckworth, 1980); Snyder, W.P. *The Politics of British Defense Policy 1945-62* (Columbus, Ohio University Press, 1964); Jackson, W. and Bramall, Lord *The Chiefs: The Story of the United Kingdom Chiefs of Staff* (London, Brassey's, 1992)

Other official sources used include the annual defence, Admiralty and Air Ministry statements. The public debate and presentation of government policy were covered using official Parliamentary reports and contemporary writing in books and periodicals. Additional perspectives were obtained using memoirs of some of the principal actors. Theoretical works consulted include analyses of air and naval power, as well as broader works about military strategy and the effect of technological change. Secondary sources included biographies, general works about British defence policy and the Royal Navy, studies of specific conflicts, and Service journals and publications.

The remainder of this Introduction provides an overview of the interaction of air and naval power before 1945, after which the chapter structure is chronological. Chapter One covers the period from the close of World War II to the eve of the Korean War, paying particular attention to the lessons drawn from the War and emerging conceptions of British strategy. Chapter Two explains the role played in Korea by air and naval power and then examines the effects of this conflict, the intensifying cold war and the emergence of nuclear weapons on British defence policy to 1952. Chapter Three investigates the first 'Radical Review' of 1953-54 when the Royal Navy and its aviation came under a direct and sustained attack, justified mainly by the arguments of air power proponents. Chapter Four continues with the second Radical Review of 1954-55, when the challenge to the Navy continued on a different basis. The Royal Navy was remarkably successful in repelling these assaults but unremitting financial pressures fostered a continuing review process in which the role of the Navy in total war was once again challenged. Chapter Five carries this account forward from 1955 to just before the Suez crisis of 1956, showing how the Admiralty fought to retain its total war role yet also gradually accepted greater concentration on limited war. Chapter Six examines the experience of the Suez operation and the effect it had on the on-going defence review, culminating in the 1957 Sandys Defence White Paper and its immediate aftermath.

Air Power and Navies before 1945

Thinking about air power predated the First World War. The *Arabian Nights* contains the story of Sinbad's ship being sunk by rocks dropped by giant birds. A retired RAF Air Marshal comments: 'This incident, which is the earliest known reference to air bombardment, has set the pattern for almost every air-sea battle since.'³ The 18th and 19th centuries saw some use of balloons for observation and even transportation but the real beginning of air power can be traced to the first powered flight in 1903. This soon led to attempts to explore just what the new dimension of movement might portend. One of the most interesting accounts is H.G. Wells' *The War in the Air* (1908) in which the hero finds himself on a German airship heading for the United States. After an inconclusive clash between the rival battlefleets, the airships and the aircraft they carry are called up by radio to destroy the American Fleet:

So it was that Bert Smallways saw the first fight of the airships and the final fight of those strangest things in the history of war: the ironclad battleships ... And the cheap things of gas and basket-work made an end of them altogether, smiting out of the sky!⁴

An ominous development for Britain occurred on 25 July 1909, when Louis Blériot flew across the Channel. Contemporary opinion was quite aware that this was no mere novelty and that it had immense strategic implications. The next day's *Daily Graphic* noted that he had passed over 'the strip of water which makes England an island' and commented:

What M. Blériot can do in 1909, a hundred, nay a thousand aeroplanes may be able to do in five years' time. When Mr. Farman flew a mile, it was possible to say that an ingenious toy had been invented. But a machine which can fly from Calais to Dover is not a toy, but an instrument of warfare of which soldiers and statesmen must take account.⁵

³ Saundby, R. (Air Marshal) *Air Bombardment: The Story of its Development* (London, Chatto and Windus, 1961), 3

⁴ Wells, H.G. *The War in the Air* (London, George Bell and Sons, 1908), 145-68

⁵ Quoted in Till, G. *Air Power and the Royal Navy 1914-1945* (London, Jane, 1979), 7

Aircraft were used to some effect by Italy in Libya in 1911, mainly for reconnaissance but also for some improvised bombardment with grenades, which inflicted little material damage but had a great though diminishing effect on morale.

Air power made its major debut in the First World War. The initial use of aircraft was tactical, that is, in direct support of land and sea forces, using the advantage of elevation for reconnaissance over the battlefield and at sea (proving particularly useful for spotting surfaced U-boats). This naturally developed to observing and correcting land and ship artillery fire, and then to aerial combat as each side sought to deny the skies to the other. Aircraft could also drop bombs on enemy positions, and during the war specialised bomber aircraft appeared and became steadily larger and capable of carrying heavier loads. The target set evolved from enemy forces on the front line to air bases and other more distant objectives. At sea, aircraft conducted attacks upon ships and targets ashore. In the Cuxhaven raid of Christmas Day 1914, seven British seaplanes operating from three converted Channel steamers attacked Zeppelin sheds near the German coast, well beyond the range of allied land-based aircraft. This pioneering operation was the first naval air attack on shore targets and fostered interest in aircraft carriers, which developed steadily thereafter. The war even saw the first 'strategic' attacks – that is, the use of aircraft as an independent means to bring pressure to bear on the enemy – with the German bombardment of London by Zeppelins and Gotha bombers, which one historian termed 'The First Battle of Britain' and 'the first systematic strategic air campaign in history'.⁶ This experience led to the British government forming a committee to investigate the use of air power which, according to the resulting Smuts Report of July 1917, was unique:

Unlike artillery an air fleet can conduct extensive operations far from, and independently of, both Army and Navy. As far as can at present be foreseen there is absolutely no limit to the scale of its future independent war use. And the day may not be far off when aerial operations with their devastation of enemy lands and destruction of industrial and populous centres on a vast scale may become the principal operations of war, to which the older forms of military and naval operations may become secondary and subordinate.⁷

⁶ Fredette, R.H. *The First Battle of Britain, 1917-1918, and the Birth of the Royal Air Force* (London, Cassell, 1966), 7

⁷ Quoted in Quester, G. *Deterrence Before Hiroshima: The Airpower Background of Modern Strategy* (New York, John Wiley and Sons, 1966), 38

As a result of this report, on 1 April 1918 Britain unified the Royal Flying Corps and the Royal Naval Air Service to form the Royal Air Force. It was to play a central part in a major strategic air campaign against German industry which was planned for 1919 but was forestalled by the armistice.

The war set the stage for subsequent theorising about air power, first, by establishing the need for new approaches to warfare; second, by offering a tantalising glimpse of what the nascent air arm could achieve; and third, by providing institutional foundations for its proponents. Yet there was still ample room for doubt and the interwar debates were hindered by the paucity of experience, which was exacerbated by speed of technological advance. Analyses had to be based on speculation and extrapolation, together with the hotly disputed results of inconclusive peacetime tests and exercises.

Interwar Theories

The interwar years were a remarkably fertile period for strategic thought and air power was one of the principal subjects of debate. Some thinkers (including B.H. Liddell Hart and J.F.C. Fuller, as well as naval strategists including Herbert Richmond and Hector Bywater) believed that aviation would be added to the traditional means of warfare to create a new synthesis.⁸ Such ideas paved the way for blitzkrieg and carrier task forces in the Second World War. For a more radical and vocal school of thinkers, however, air power was a strategic weapon. Rather than win by helping the other services to batter the enemy's army and battlefleet prior to invasion or blockade, they reasoned, it would be far more effective to use air power's enormous advantage of operating in a third dimension to fly over enemy armed forces and attack directly the areas they were defending. Doing so would obviate the need to defeat the hostile army or navy before being able to apply pressure on the enemy; rather, air power permitted his sources of power to be hit from the outset of war. The air force would

⁸ Bywater, H.C. *Navies and Nations: A Review of Naval Developments Since the Great War* (London, Constable, 1927); Fuller, J.F.C. *On Future Warfare* (London, Sifton Praed, 1928); Liddell Hart, B.H. *Paris: The Future of Warfare*

wage its own separate war, which would alone be sufficient for victory. Previous innovations in military technology had greatly changed armed forces. Air power, its advocates argued, was a development of a different order of magnitude which would revolutionise the way in which wars were fought.

Giulio Douhet (1869-1930)

The most famous air theorist was the Italian general, Giulio Douhet. In the age of aviation, he argued, national defence required an air force capable of winning command of the air, that is, 'to be in a position to prevent the enemy from flying while retaining the ability to fly oneself'. The speed of aircraft and the vastness of their medium made it impossible to intercept attackers, so the only defence lay in offence, destroying the opponent's air power by bombing his bases and industry. Doing so would rapidly confer command of the air, which should then be exploited by attacking cities and factories with high explosive, incendiary and gas bombs, to destroy his *ability* and *will* to continue fighting. Targets would include 'certain designated areas of civilian population' and 'peacetime industry and commercial establishments; important buildings, private and public; transportation arteries and centres'. The effect of this onslaught would be decisive: 'To have command of the air means to be in a position to wield offensive power so great that it defies human imagination. ... In short, it means to be in a position *to win*.' Defence resources should be allocated to the strategic air force: land and naval forces had a minor role and even that would wither away. Douhet derided 'auxiliary' air power – his term for aviation acting in cooperation with armies or navies – as 'worthless, superfluous, harmful' – worthless, because it could not operate without command of the air; superfluous, because with command of the air, the independent air force would quickly bring victory; and harmful, because it represented a diversion of effort.⁹

(London, Kegan Paul, Trench, Trubner & Co, 1925); Richmond, H.W. *Sea Power in the Modern World* (London, G. Bell and Sons, 1934)

Douhet wrote little about naval power explicitly but the implications of his theory for navies were grim. An air force could simply fly over armies and navies, which offered no protection against it; navies therefore lost their role of defending the homeland. Worse, they would be unable to operate at all if the enemy had command of the air, since air power would cut off a navy from its bases and simultaneously destroy the physical and moral resistance of the population behind it: 'What could a navy do when it could no longer take refuge in its own ports, when its bases were burned or blown up, its arsenals and auxiliaries destroyed?' It was not only supporting infrastructure that would be threatened but also the warships themselves; in a direct dual between battleship and bomber, the former would always lose because its heavy guns could not fire straight upwards and even if they could, it would be 'almost impossible' to hit a fast-moving aircraft diving almost vertically.¹⁰

Billy Mitchell (1879-1936)

Billy Mitchell, an officer in the US Army Air Corps, paid more attention than Douhet to air defence and predicted aerial battles between fighter aircraft, and between fighters and bombers. His fundamental ideas about the role of air power, however, were similar to those of the Italian.¹¹ Mitchell dismissed ground-based air defence, insisting that the only counter to air attack was other aircraft to contest air supremacy. The principal task of Mitchell's autonomous air force would be the independent strategic bombing mission advocated by Douhet:

The advent of air power, which can go straight to the vital centers and either neutralise or destroy them, has put a completely new complexion on the old system of making war. It is now realised that the hostile main army in the field is a false objective, and the real objectives are the vital centers. ... The results of warfare by air will be to bring about quick decisions. Superior air power will cause such havoc or the threat of such havoc in the opposing country that a long drawn-out campaign will be impossible.¹²

⁹ Douhet, G. *Command of the Air* (Trans. Ferrari, D.: London, Faber and Faber, 1943 - original 1921), 15-19, 24-26, 81; original emphasis

¹⁰ Ibid., 13-14, 24-26

Mitchell foresaw a strategic role for long-range air power similar to that of Douhet's theory, but his principal challenge to navies lay elsewhere. Although Douhet believed that warships would prove vulnerable to air attack, establishing this was not for him the major concern it was for Mitchell, for whom it was the basis of his case against navies. He argued that 'nothing can stop the attack of aircraft except other aircraft' and that warships were so vulnerable to air attack that they had become redundant:

Surface units have entirely lost their mission of defending a coast because aircraft can destroy or sink any seacraft coming within their radius of operation. In fact, aircraft today are the only effective means of coast protection. Consequently, navies have been pushed out on the high seas. The menace of submarines from below and aircraft from above constitutes such a condition that the surface ship as an element of war is disappearing.

Warships could not effectively oppose aircraft: the war had demonstrated that 'anti-aircraft artillery and any means of defence from the ground against the air is futile', while 'a battleship's capacity for carrying anti-aircraft machine guns and cannons is quite limited'. Conversely, the destruction of warships by aircraft was a simple matter. Aircraft could easily locate warships, even in cloudy weather and: 'A boat is one of the most vulnerable objects known for air attack'.¹³

Mitchell recognised the continuing importance of sea transportation and of attacking the enemy's commerce, but he expected these roles to be performed by merchant ships, submarines and aircraft rather than by surface ships. The army and navy 'will take a position second to that of air power, and will act principally as aids to it'. He remarked that aircraft carriers 'have made all the present battleships as obsolete as when the original Dreadnought appeared and made all the others obsolete.' Yet although these carriers would be useful in actions between fleets they could be of no use within range of land-based aircraft:

¹¹ *Winged Defense: The Development and Possibilities of Modern Air Power - Economic and Military* (New York, Putnams, 1925); *Skyways* (Philadelphia, Lippincott, 1930)

¹² *Skyways*, 255-56

¹³ *Winged Defense*, xvi, 4-5, 64; *Skyways*, 264-67

a superior air power will dominate all sea areas when they act from land bases and no seacraft, whether carrying aircraft or not, is able to contest their aerial supremacy. ... Floating bases or aircraft carriers cannot compete with aircraft acting from land bases.

In common with other interwar air theorists, Mitchell insisted that carrier-based aircraft would necessarily be inferior to land-based aircraft. They needed special modifications to allow carrier operation and the limited capacity of ships resulted in carrier-borne aircraft being smaller than land-based aircraft, which therefore tended to have superior speed, range and load. Carriers might be useful for battles between fleets, 'but these tremendously costly structures are completely at the mercy of air forces acting from shore bases', because they could only carry small numbers of aircraft (and could not operate all of these simultaneously) while land bases could operate several thousand aircraft.¹⁴

Alexander de Seversky (1894-1974)

Seversky was a Russian naval pilot during the First World War before emigrating to the US. He was well known between the wars and was described by Bernard Brodie as 'the most distinguished of the air advocates as well as the most extreme'.¹⁵ His central argument was similar to those of Douhet and Mitchell: air power properly used could be an independent means of fighting wars, which would ensure quick and relatively cheap victory by attacking directly the centres of the enemy's power and his will to fight.¹⁶ Air power would be the principal means of war whether the objective were to possess the enemy country (which air power could greatly facilitate) or merely its elimination as a political and economic factor (which air power could do directly). One difference from the other two was that Seversky was writing after the London blitz and admitted that civilian morale had stood up to bombing better than had been predicted. He therefore expected bombing to be

¹⁴ *Winged Defense*, 11-12, 18, 102, 115, 123; *Skyways*, 268-69

¹⁵ Brodie, B. *A Layman's Guide to Naval Strategy* (London, OUP, 1943), 138

¹⁶ Seversky, A.P. *Victory Through Air Power* (New York, Simon and Schuster, 1942); see also *Air Power: Key to Survival* (New York, Simon and Schuster, 1950), which offers an idiosyncratic view of World War II. One reason for his fame was

targeted more selectively against electrical power generation, aviation industries, docks and public utilities. Bombing of cities would continue, but with the tactical aim of forcing the enemy air force to give battle rather than to target morale specifically.¹⁷

Seversky offered little more comfort for navies than Mitchell. He accepted that it would be feasible for the Allies to opt for a strategy based on large land and naval forces with air support. This could succeed under certain conditions but would at best be much more costly in lives and resources than his preferred alternative. The 'strategy of unchained air power' would disarm the enemy from the air, then starve and beat him into submission or turn him over to the army and navy for handcuffing. Seversky accepted that these Services would continue to be necessary for secondary purposes and that they would have their own auxiliary aviation, just as the navy had marines and the army had sea transports. Such cooperation with other Services was a secondary task of air power, though: its primary role was to control the skies and strike the enemy directly. No land or sea operations would be possible without first winning command of the air.¹⁸ Air power could destroy naval docks and shore bases, hold or deny sea lanes, destroy shipping at sea or in port, blockade the enemy nation and defend the shores of the country against naval attack. It had therefore usurped many of the traditional functions of navies, which might survive for use beyond the range of air power or against states that lacked effective air power – though areas outside the reach of aircraft were shrinking and would soon disappear. Navies could not defend themselves against air attack because they could not destroy aircraft, and warships were easily hit by aircraft and highly vulnerable to the damage that such attacks would inflict:

The most modern Dreadnoughts are impotent against overhead attacks: airplanes can attack ships but ships cannot attack airplanes: only air power can effectively overcome air power.

that *Victory Through Air Power* so impressed Walt Disney that he made it into a film, to advance its advocacy of strategic bombing.

¹⁷ *Victory Through Air Power*, 100-01, 143-46, 311-15

¹⁸ *Ibid.*, 24, 258-59, 264, 306-07

According to Seversky, the idea that ships could defend themselves against air attack 'is no longer defended except by the stubborn or biased.'¹⁹

If air power could be defeated only by air power, could fleets defend themselves by taking air power to sea with them? Seversky acknowledged that aircraft carriers could be of some use to fleets and that naval aircraft were as integral to navies as submarines or gunnery. Like Mitchell, though, he insisted that they could never oppose land-based air forces:

Except in limited stretches of ocean as yet beyond the reach of land-based aviation, ship-borne aircraft is [sic] a most hazardous substitute for true air power: first, because it is inferior to the enemy's land-based planes, and second, because the carriers themselves are perfect targets for enemy aviation, being among the most vulnerable ships afloat. ... carrier-based planes would be like so many clay pigeons for land-based air power.

Carriers would be hopelessly vulnerable and their aircraft inevitably outclassed. Fleets could only approach hostile shores under the protection of friendly land-based air power strong enough to repel opposing air forces. Navies could operate only under the aegis of land-based air power but it would be unnecessary and illogical to use aircraft to protect a fleet, since that would represent a diversion from air power's fundamental role of attacking the heart of the enemy. This implied a fundamental change in national strategy:

Clearly the time is approaching when even the phrase 'sea power' will lose all real meaning. All military issues will be settled by relative strength in the skies. Whoever has preponderant air power will automatically hold mastery of the seas, so that the concept of air power will, by definition, include sea power and land power.²⁰

Even in the twilight years of naval forces, they would have little use if states built long-range aircraft, which would eliminate the need for bases outside the continental US (or Britain); hence there would

¹⁹ Ibid., 25, 79, 123-31, 154-56. On Seversky's first combat mission, on the night of 2 July 1915, he was shot down by anti-aircraft fire from a German destroyer: his observer was killed and he lost a leg. With such personal experience, one might have expected more respect for air defence.

²⁰ Ibid., 25, 35, 127, 182, 273-74

be no need for campaigns to capture or defend overseas air bases and adjacent territory, and wartime shipping needs would decline.

The air case

Douhet believed that the battleship was fatally vulnerable to air attack but his main challenge to navies lay on the levels of grand and military strategy (that is, concerning the nature, purpose and broad conduct of warfare). Regardless of whether individual ships could defend themselves, the war would be fought and won by direct attacks on the heart of the enemy country. Command of the air would be quickly achieved, because defence was impossible, and would then have a decisive effect in breaking the enemy's will and ability to fight. Properly used, air power could constitute an independent means of winning wars, leaving navies at best superfluous and at worst a dangerous diversion of resources. Mitchell and, to some extent, Seversky, concurred but their challenge to navies rested more on the operational and tactical levels (that is, relating to particular campaigns and engagements). Warships were easy targets for air attack and fleets would prove irredeemably vulnerable and incapable of operating within the ever increasing range of aircraft. This did not matter, however, since their roles were usurped by long-range aircraft. The air enthusiasts contemptuously dismissed aircraft carriers as easily sinkable and their aircraft as inevitably inferior in number and capability to the larger aircraft that could operate from shore bases.

The result of the air enthusiasts' challenge was that navies were proclaimed to be irrelevant and obsolete. Strategically, the alternative offered by one's own air force made them redundant as it would become the dominant if not the only means by which wars would be fought. Operationally, maritime tasks which were still necessary could be performed more economically and efficiently by land-based aircraft than by warships. Tactically, the threat posed by the enemy air force made surface vessels too vulnerable to perform their accustomed roles and hence impotent. These arguments were

pressed with great vigour during the interwar period, during which they had a significant effect on the policies of the major powers, and were maintained thereafter. The debate has been characterised by peaks and troughs but has shown no signs of abating since 1945 and many ideas about air and nuclear strategy have been heavily reliant on interwar air power thought. Indeed, Brodie wrote in 1954, 'the fact is that air strategists have moved very little beyond or away from' Douhet.²¹ When he and Seversky are cited in support of claims of air power in the 1990s, their enduring influence is plain.²²

Air power in practice

The claims of air power were taken very seriously in some countries, particularly Britain. In times of restricted defence expenditure, the young RAF feared being split up and parcelled off to the older Services; the doctrine of strategic bombing provided a distinctive rationale and became the overwhelming focus of Air Ministry attention. The British Air Staff were interested in strategic bombing before Douhet, largely because of their wartime experience. However, as Yool noted, if Douhet had little influence there, it was because he was preaching to the converted, and his 'ideas on strategic bombing were closely in line with those of the post-1918 Air Staff.'²³ With so much of the Air Ministry's limited budget going into long-range bombers, maritime aircraft were a very low priority. It was inattentive to naval needs yet fought fiercely to retain control of maritime aviation. This gave rise to a long-running controversy and a great deal of inter-Service bitterness, temporarily resolved in 1938 by the 'Inskip decision', which allowed the RAF to retain control of land-based maritime aircraft but returned the Fleet Air Arm to the Admiralty.²⁴ By then, however, the damage had been done. Britain entered the Second World War with several impressive carriers but obsolescent aircraft. In the stunning 1940 Taranto raid, when the Fleet Air Arm crippled the Italian

²¹ Brodie, B. 'Some notes on the evolution of air doctrine', *World Politics*, April 1954, 350

²² For example, Jones, J.F. (Lt. Col., USAF) 'Giulio Douhet Vindicated: Desert Storm 1991', *Naval War College Review*, Autumn 1992; Luttwak, E. 'Victory through air power', *Commentary*, August 1991

²³ Yool, W.M. (Air Vice Marshal) 'The Evolution of Strategic Bombing', *Brassey's Annual* 1957, 97

²⁴ For the Royal Navy between the wars, see Till; Roskill, S.W. *Naval Policy Between the Wars, Volume I: The Period of Anglo-American Antagonism 1919-1929* (London, Collins, 1968) and *Volume II: The Period of Reluctant Rearmament 1930-39* (London, Collins, 1976)

battlefleet in port (giving Japan a model on which it would elaborate in December 1941), the damage was caused by a small force of biplanes. It would be harsh to blame the Air Ministry entirely for such shortcomings, since it was operating under severe financial constraints and the Admiralty itself was insufficiently insistent on better aircraft. However, it is significant that the Royal Navy's air power lagged so far behind that of the US and Japanese navies, which controlled their own aviation.

World War II provided so much data that almost any argument could find some support. One conclusion which would be difficult to dispute was that strategic bombing alone failed to win the war. The possibilities of defence were grossly underestimated and the material and psychological impact of bombing vastly exaggerated. Command of the air could not be achieved as rapidly as Douhet had assumed but rather had to be fought for over a prolonged period. Air superiority or even supremacy proved far less rapidly effective than predicted and was best used not for levelling cities but rather for attacking target sets, such as oil and communications, which furthered the overall strategy. Perhaps the most important contributions of the strategic air campaign in Europe were in gaining air supremacy, which was essential for Overlord, and the broad attrition of Axis power. Not only were the other Services still needed but their efforts and those of the strategic bombers were mutually reinforcing. Sea power remained essential for many reasons, not least to seize, defend and supply air bases. At the strategic level, navies were still needed.

Air power also failed to justify the operational- and tactical-level claims of the interwar air thinkers. Land-based air power was used directly in maritime operations (with such 'diversions' bitterly opposed by Bomber Command) and proved immensely useful. However, land-based aircraft could replace warships only in limited areas and in specific circumstances. More often they were either unable to operate or were complementary to surface vessels. As a direct threat, land-based air power in some cases proved to be a considerable constraint on the operation of naval forces but there were also many cases where naval forces proved to be elusive and well-defended targets and

succeeded in their missions: the result was certainly not the foregone conclusion suggested by Mitchell and Seversky. Ships were sometimes sunk by air attack but this possibility was not seriously in doubt;²⁵ soldiers could be killed and aircraft could be shot down but this did not make them obsolete. Individual warships were protected by improved construction and the addition of anti-aircraft guns (which eventually were aimed by radar and fired proximity shells), while fleets were provided with air cover either from shore bases in the limited areas where they were in range of operations, or from aircraft carriers (the aircraft of which at times proved superior to shore-based aircraft). Moreover, in addition to providing a means of defence against air attack, naval aviation provided a new response to the submarine threat and a new means of fighting enemy warships. It also offered a whole new dimension of capability in the projection of military power ashore, both in bombardment and in supporting amphibious operations, which had been in doubt since Gallipoli but were now reestablished as a viable strategic option. Much of this rested on carrier-based air power, since 'unsinkable' land bases showed an awkward tendency either not to exist in the right places or to be vulnerable to enemy air and land attack.

The main reason for these analytical errors was that the air theorists misunderstood technological change. They conceived it as a one-off, revolutionary event rather than as a dynamic and evolutionary *process*. Every innovation in technology, organisation or doctrine sparks a series of reactions, particularly if it offers significant benefits. Reactions may take the form of imitation (e.g. the enemy acquiring a matching strategic air capability) or counters at various levels (e.g. anti-aircraft guns, fighter cover, changes in task force tactics). Thus, at the end of the 19th century it had been claimed that the battleship was obsolete because of the threat posed by torpedo boats, which were too small and fast for the heavy guns of the capital ships to engage. The obvious response was to give battleships a secondary armament of smaller calibre guns and to build 'torpedo-boat destroyers' to accompany them. The operations of such forces were in some cases constrained but the platform still

²⁵ Some statements suggested the contrary, such as a 1939 memorandum from Churchill to Chamberlain which boldly predicted that 'an air attack on British warships, armed and protected as they now are, will not prevent full exercise of their

had a mission which other units could not perform. A similar process has been evident with tanks and with bomber aircraft. This is not to say that weapons systems are never out-dated but rather to point out that the process by which this occurs tends to be more subtle and of longer duration than is often supposed.

A navy could survive if it was sufficiently important to the country concerned. The actual impact of air power on navies can therefore best be examined by the detailed analysis of decision-making in an individual state.

superior sea power'. Roskill, *Volume II*, 456.

Chapter 1

Post-war Reorientation, 1945-50

The most immediate naval problems Britain faced after the war were demobilisation and reshaping the Fleet for peacetime. This endeavour was complicated by the needs to digest and apply the lessons of wartime experience and to keep up with rapidly advancing technology. Such issues faced all navies after the war but in the case of the UK they were complicated by economic factors which were a growing constraint on defence policy. These difficulties were exacerbated by the failure of international ambitions and overseas commitments to be reduced in step with the defence budget. Like its sister Services, the Navy was usually both too small to perform the various roles the government set for it and too large to be properly maintained and adequately equipped with improving technology.

Technological Advances

World War II saw great strides in various areas of military technology. In June 1945, a committee chaired by Sir Henry Tizard (the government's chief scientific advisor) produced a report on 'Future Developments in Weapons and Methods of War', which provides an overview of how the major innovations were interpreted. The report stated that, given an adequate means of delivery, nuclear or biological weapons:

might achieve decisive results with relatively small effort against the civilian population of a nation without a clash between the major military forces and too rapidly to permit either the build-up of military forces or the exercise of sea power.

Yet this apparent reprise of interwar fears of a knock-out blow was qualified by the suggestion that even hundreds of such weapons might fail to produce the collapse of 'a country suitably organised

physically and psychologically, and morally reinforced by adequate military power in being'.²¹ Such faith in the stiff upper lip would later be shaken more seriously by the advent of thermonuclear weapons, which left no room for doubt about their destructive potential.

The role of the Navy in a nuclear conflict was discussed within the Admiralty in autumn 1945. Some saw the future as stark. Enemy attacks on ports rather than shipping could end the Navy's role of protecting sea communications, or attacks on industry and civilians might decide the war before the Navy could mobilise. Others thought it possible that nuclear weapons might never be used: 'Retaliation by the same class of weapon provides the best deterrent and may neutralise it altogether (c.f. poison gas)'. Setting aside global war, there would be 'conflicts between small nations (in which we may be involved)', and threats to British territory which might be met without use of atomic bombs 'and in which a more or less normal Navy would play its usual part'. On the tactical level, it was suggested that 'no fleet of surface ships could remain afloat within the sphere of action of land based aircraft carrying atomic bombs'. Alternatively, since aircraft were vulnerable to air defences, nuclear delivery could become a naval task, 'by rockets launched from specialised vessels, either surface or, even better, submersible'.²² In February 1946 Rear Admiral C.S. Daniel, Controller of the Navy, predicted that 'with the advent of the atomic bomb, a future war would be the "end of civilisation"'. A short war could see the function of the Navy shift from the protection of sea communications to attacking the enemy from the sea. If the war were prolonged, however, the country would need sea communications and the Navy would have to protect them.²³ Hence, although the impact of nuclear weapons remained uncertain, possible roles remained for the Navy in limited wars, in delivering nuclear weapons or even in conventional operations in a nuclear war.

The Tizard committee report saw a continuing important role for sea power in spite of various technological challenges: 'The defence of sea communications, and the strength of the Royal Navy,

²¹ DO (46) 89, 8 July 1946, CAB 131/3

²² ACNS (W), 15 August 1945; DNOR, 4 September 1945; DTSD, 11 October 1945; all in ADM 1/17259

reinforced, but not replaced by aircraft will remain the supreme necessity.’ However, the threat to these communications was no longer primarily from surface ships, but rather from air attack (using homing or guided weapons) and underwater. High-performance fighters would be needed to protect shipping against air attack and since land-based fighter cover would be insufficient outside 500 miles of land (and even within that range it would be uneconomic), there would be a need for carriers operating ‘a large number of supersonic speed fighter aircraft’. A combination of land- and shore-based aircraft would be needed against submarines, backed by fighters to shoot down hostile reconnaissance aircraft and sensors including radar and ‘devices of the sono buoy type’. Interestingly for a report written during the war, it attached little importance to strategic bombing against bases and manufacturing plants, because of improving air defences and because ‘submarine bases can be made almost impregnable to aircraft attack’.²⁴ One of the priorities established for research was guided weapons, both as possible replacements for existing anti-ship armaments (which could allow the reduction in size of capital ships below that of battleships) and as Guided Anti-aircraft Projectiles. The latter were seen as particularly vital and the report suggested that they might eventually replace manned aircraft, though it also warned against placing too much faith in them and predicted that air defence would continue to rest upon a combination of guns, missiles and fighters.²⁵ The section of the report on the war at sea concluded the recent developments:

may be assumed by some to support the extreme view that the supreme importance of the Navy is giving way to that of the Air. We wish to record our view that though this may happen in the distant future, it will not be in our life-time. The need is no longer to concentrate mainly on the defeat of surface forces by surface forces, but primarily to counter the threat from the air and from under the water. Most thought should therefore be given to the defeat of the air and submarine menace and to participation in combined operations. The Navy alone is no longer our sure defence and the scientific development that we foresee forces us to the conclusion that the air and sea war are indivisible.²⁶

²³ Controller of the Navy, ‘Consideration of Future Naval Development’, 18 February 1946, ADM 205/64

²⁴ DO (46) 89, Annex II, Part II, The War at Sea, paras. 7, 25; Annex I: Latest Developments in the Technique of Warfare

²⁵ Ibid., paras. 7, 8; Annex I, para. 41; Annex II, Part II, paras. 33-34

²⁶ DO (46) 89, paras. 42-50

The Role of the Battleship

The interwar years had seen fierce debate over the extent to which air power posed a threat to battleships. There was every sign that this controversy would continue. Two authors writing later concluded that after the war, all the British battleships 'were regarded as obsolete'.²⁷ This view was certainly held by some. Trenchard described battleships as 'absolutely unnecessary' and 'a terrific liability'. He continued: 'They are dead, just as dead as archers were at Waterloo, or cavalry were in the 1939-45 war. Air power has shown that it can sink anything that sails the seas.'²⁸ However, the Admiralty was of a different opinion.

The spectrum of experience in World War II provided 'lessons' to support either side and the controversy continued. In December 1944, Lord Cherwell, the Paymaster-General and Churchill's scientific adviser, wrote a memorandum entitled 'Battleships *versus* Aircraft' in which he questioned the continuing need for battleships given the threat posed by aerial weapons and the ability of aircraft to perform the tasks of capital ships. While accepting the importance of seaborne trade and of naval vessels to protect it, he doubted 'whether battleships will be able to hold their own against aircraft attack', particularly high-altitude strikes using homing weapons. Carrier fighters could not destroy all attacking aircraft, especially at night, and the relative manpower and cost between aircraft and battleships made the future of the latter yet more dubious. Moreover, 'what is the object of having a battleship at all if it always has to be escorted by a carrier? What is there which a battleship can do which the carrier cannot?' Aircraft could counter capital ships more effectively and cheaply than battleships, their range was increasing and their limitations in bad weather declining; the case for battleships therefore 'becomes largely a matter of sentiment.' Cherwell concluded:

The handicaps of the battleships are fundamental and inevitable. Its main advantage is its heavy armour. All military history has surely shown that the ability to strike

²⁷ Simpson, J. & Gregory, F. 'The evolution of British naval equipment, 1945-1970', in Gregory, F., Imber, M. & Simpson, J. (eds.) *Perspectives upon British Defence Policy, 1945-1970* (Southampton, University of Southampton, 1978), 244

²⁸ Trenchard, draft paper, 'Some thoughts on air policy and the choice of the right tools by all three Services', 28 October 1946, AIR 75/17, 4-5

blows is more important than the power to survive them. In the struggle for existence, the tortoise has achieved but a relatively humble niche; it is only in fable that it carries off the prize.²⁹

The Admiralty reply characterised Cherwell as arguing 'that the battleship is not unsinkable and is therefore useless'. It acknowledged that the battleship could be sunk like any vessel but insisted that although it could withstand damage better than any other ship (especially the carrier), this was not its main advantage. The Navy had to be able to destroy heavy forces threatening shipping and hence needed the battleship because 'she can strike the heaviest blows, and keep on striking these blows under any conditions of geographical position, weather or light'; Cherwell was quite correct to say that this ability was more important than merely absorbing damage. Bombers could be countered by fighters, 'but there is no counter to the heavy ship adequately protected by fighters, except that from suitable surface forces':

Modern war experience has shown that the battleship is just as much required to give the aircraft-carrier heavy cover as the aircraft-carrier may be required to give fighter protection to the heavy ship. In short the two types are complementary.³⁰

The other role of the battleship was to provide anti-aircraft guns, of which it carried more than any other vessel. The Admiralty accepted that the design of the battleship would change in time, especially if rockets replaced guns for use against enemy heavy vessels. In the meantime, however, Britain could not afford 'to fail to provide the best which can at present be devised for this purpose'. The paper suggested that Cherwell underestimated advances in guided weapons for air defence. It also questioned whether long-range aircraft could guarantee the safety of merchant shipping from enemy ships, since to do so they would need a world-wide network of bases for bombers and escorting fighters, plus men, aircraft and aerodromes. Alternatively, the UK could rely upon 'mobile striking forces (i.e. ships) which can be concentrated in any threatened area and will be immediately operative on the outbreak of war.'³¹ What is interesting about the Admiralty's paper is not the fact

²⁹ WP (44) 764, 29 December 1944, ADM 205/53

³⁰ In ADM 205/53: paras. 4-7

³¹ Ibid., paras. 8-11

that it defended battleships but rather the grounds on which it did so. It did not deny that they could be sunk but rather argued that there was a necessary role for them which nothing else could perform, although it recognised that guided weapons might alter this. It did not support battleships 'against' carriers but rather took account of the latter's limitations.

The Emerging Post-War Navy

The growing centrality of naval aviation was recognised in the February 1945 report of a committee chaired by Mr. Justice Raymond Evershed. It strongly rejected transferring the Fleet Air Arm to the RAF, an idea it described as 'calamitous' because it was based on the premise 'that the operation of aircraft was not a naval function' and hence that naval functions were those that were independent of air support: 'In present circumstances it must be doubted whether there can be any such operations.' The Fleet Air Arm should therefore be 'a part of, and not an appendage to, the Royal Navy', and must be second to no other naval air service.³² The Tizard report downgraded the role of the battleship – 'We assume that it will be impossible to operate heavy surface forces without carrier support in any area where heavy enemy air activity is expected' – and increased that of the carrier: 'The aircraft carrier is at present essential, both for the protection of trade, and for offensive action against the enemy fleet.' Despite the Admiralty's insistence that battleships were needed, the carrier was clearly perceived as central to the Fleet by the end of the war; it was the battleship that was intended to support the carrier and not vice versa.

Towards the end of the war, the Admiralty Plans Division produced a paper on 'The Post War Navy and the Policy Governing its Composition'. The importance attached to air power is clear:

Naval forces alone cannot control sea communications; they require the cooperation of air forces and must also rely on the Army and Air Force for the holding or gaining of base areas necessary for the conduct of sea operations. The inter-dependence of the three fighting Services is the basis of Imperial strategy.³³

³² 'Report on the Internal Organisation of Naval Aviation ("Fleet Air Arm")', February 1945, ADM 205/61

³³ Memorandum B424, 17 July 1945, ADM 167/123, section I

The peacetime functions of the Navy were, first, to 'keep the peace and support British policy', and second, to ensure readiness for war and the strength to deter any aggressor. In war, the Navy would have to destroy enemy sea and air forces, defend Imperial sea communications (with surface ships and both carrier- and shore-based aircraft), attack enemy sea communications, and cooperate with other services in amphibious operations. The Fleet should include: 'Fighting units to counter the enemy's heavy surface forces', including 'a proper proportion' of capital ships, aircraft carriers, cruisers and destroyers; escort squadrons for shipping (anti-aircraft cruisers, light carriers, destroyers and frigates); shore-based aircraft 'for reconnaissance, striking and defence'; minesweeping forces; fast submarines, minelayers and coastal craft to attack enemy communications and coastal traffic; forces for amphibious operations; bases, shore organisation and afloat support. All of these elements were needed: 'None has yet been rendered obsolete by scientific development, though their characteristics and relative numbers will undoubtedly change as new weapons and tactics are evolved.'³⁴ The emphasis of the Royal Navy had shifted towards carriers, yet 'until it is proved that Battleships have outlived their usefulness, it is considered that they must continue, in small numbers, to form part of the Main Fleet.'³⁵

The change in priorities became evident in construction plans. The 1945 programme included the battleships HMS *Lion* and HMS *Temeraire*, because Britain needed to 'maintain our effective strength in Capital Units' and losses were possible in the Far East.³⁶ However, the revised construction programme later in the year stated that with the end of the war against Japan, the priority had changed to merchant ships, so nearly all construction should be slowed or deferred (which would also allow time to take advantage of the lessons of the war). Preliminary work on *Lion* and *Temeraire* ceased, and two large fleet, two fleet and four light carriers were cancelled (in a programme that

³⁴ Ibid., sections III-V

³⁵ Memorandum B435, 'Composition of the Post War Navy', 12 September 1945, ADM 167/123. See also the comments of J.P.L. Thomas (Financial Secretary to the Admiralty), 408 HC DEB, 7 March 1945, cc. 2125-26

³⁶ CP (45) 53, 'The New Construction Programme, 1945', June 1945, ADM 167/123

included three battleships, seven fleet and 17 light fleet carriers).³⁷ This left six fleet carriers (*Implacable*, *Indefatigable*, *Indomitable*, *Illustrious*, *Formidable* and *Victorious*) with two building (*Eagle* and *Ark Royal*), and five light carriers (*Glory*, *Ocean*, *Theseus*, *Triumph* and *Warrior*) with four *Hermes*-class (*Albion*, *Bulwark*, *Centaur* and *Hermes*) and several smaller *Majestic*-class light carriers building. By late 1946 Rear Admiral C.E. Lambe, ACNS, described naval aviation as 'now the largest single component of the Navy's offensive and defensive power'. The same paper stated that the Navy would need as a basis for expansion six fleet and 24 light carriers – a strength which was acknowledged to be at once 'woefully weak' and probably unattainable.³⁸ The 1947 Admiralty statement noted the increasing role of naval aviation, which took up one man in four in the Navy, and asserted that the carrier was 'second to none among the fighting ships of the Royal Navy'.³⁹ The only arm of the Navy with a separate section devoted to it in such statements was Naval Aviation.

If the importance of naval aviation was not in doubt, the effectiveness of the Royal Navy's air arm was. Grove describes autumn 1946 as 'perhaps the all-time low point of Naval Aviation', since many wartime aircraft had simply been dumped and new models were either cancelled or were poor in performance.⁴⁰ While the war had left the Royal Navy with several carriers, to retain their utility they needed modern jet aircraft.⁴¹ These were slow to come into service and then caused problems for the existing carriers, being too heavy for their lifts and arrestor gear and too wide and too high for their hangars. Rear Admiral Sir Thomas Troubridge, Fifth Sea Lord, explained that 'the development of naval aircraft tends to outrun the capacity of Aircraft Carriers to operate them' because aircraft changed almost completely every five years and carriers only every 20 years. In response to the criticism that the Admiralty should have anticipated larger and faster aircraft when building the carriers, he argued that when HMS *Implacable* was designed in 1937-38, anyone suggesting that they

³⁷ CP (45) 291, 'New Construction (Revised) Programme 1945', 22 November 1945, CAB 129/4. The programme was approved by the Admiralty Board: Minute 4046, 7 November 1945, ADM 167/124

³⁸ ACNS, 'The Future of Naval Aviation', 21 September 1946, ADM 205/64

³⁹ *Statement of First Lord of the Admiralty Explanatory of the Naval Estimates 1947-48*, Cmd. 7054 (1947), 8-9

⁴⁰ Grove, E.J. *Vanguard to Trident: British Naval Policy Since World War II* (London, Bodley Head, 1987), 15-18

⁴¹ The first carrier landing by a jet aircraft was in December 1945, when a Vampire fighter landed on HMS *Ocean*. Kemp, P.K. *The Fleet Air Arm* (London, Herbert and Jenkins, 1954), 216

plan for a 20,000-pound strike aircraft or a 500 m.p.h. fighter 'would probably have been invited to consult a psychiatrist'.⁴² The problem was that new aircraft 'by reason of their increased size, weight and landing-on speed, will be unable to operate from the carriers we now possess unless the carriers are modernised'. The option of making do with current vessels was implausible: 'It would be totally unsound to restrict aircraft design to fit our existing fleet carriers. This would so penalise the aircraft in performance as to make them valueless in modern warfare.'⁴³ Without modernisation, three fleet and ten light carriers would be unable to operate *any* new aircraft, while three more fleet carriers would be unable to operate modern fighters and possibly anti-submarine aircraft.⁴⁴ Some tasks of naval aviation were less demanding and could be performed by the less capable aircraft which could be operated from small carriers. These vessels could, for example, be given a simple fighter 'which would look after them so long as they kept to their anti-submarine duties in the ocean spaces and did not take on modern shore-based fighters', while converted merchant ships could operate anti-submarine aircraft (though they would need the backing of a proper carrier for fighters).⁴⁵ Some unmodernised carriers therefore might be of use but the increasingly sophisticated enemy threat would require new aircraft and hence more modern carriers. These new aircraft were eventually forthcoming, as was carrier modernisation. This would be an expensive and time-consuming task but would enable wartime carriers to continue in active service for several decades.⁴⁶

Financial Constraints and Uncertain Role

The principal reason for the problems in naval aviation and other elements of the Fleet was the growing need to save money. Britain was attempting to fund an extensive global role on the basis of an economy suffering numerous problems. As early as February 1946, the Chiefs of Staff expressed concern that planned cuts would force commitments to be abandoned and would reduce the

⁴² Fifth Sea Lord to First Sea Lord, 9 January 1946, ADM 205/64; for details of the limitations of each of the current carriers in operating new aircraft, see ACNS (A) 27/45, ADM 205/64

⁴³ Memorandum B560, 'New Construction and Modernisation of Aircraft Carriers', 13 July 1948, ADM 167/131

⁴⁴ Director of Plans, 'The Future of Naval Aviation', 17 February 1947, ADM 205/67

⁴⁵ Memorandum B533, 'Carrier Modernisation Policy', 17 November 1947, ADM 167/127

efficiency of the armed forces, particularly the Navy and Air Force, 'which will make it impossible for the services to deal with any major emergency'.⁴⁷ However, the government saw little maritime threat and hence questioned the Navy's requested force levels and manpower. The Defence Committee agreed the assumption that there was no risk of a major war within the next two or three years and that no hostile fleet would threaten Britain. The Navy warned that a Russian threat could not be ruled out, especially with her Fleet strengthened by captured German vessels. A.V. Alexander, First Lord of the Admiralty, told the Cabinet that 'it was clear that the Soviet Government were seeking to build up a powerful Navy', and that he 'felt considerable doubt about the assumption' that no fleet would exist which could threaten British security.⁴⁸

In June 1946, Clement Attlee, the Prime Minister, pointed out that before the war, when Britain was facing the German, Italian and Japanese Fleets, the Navy had 112,000 men in 1937 and 119,000 men in 1938. Given that these threats no longer existed and that there was no possibility of war with the only major naval power, why, he wished to know, did the Admiralty see a need for a minimum of 182,000 men?⁴⁹ The Admiralty reply stressed the value of the Navy as the most mobile British force available as a deterrent or a 'steadying influence' anywhere in the world, and noted that there were far fewer ships in commission than before the war in 'all combatant classes except aircraft carriers and escorts'. It also insisted that the strength of the Navy should not be calculated solely according to the most likely enemy but also according to its tasks, and reminded Attlee that defending sea communications required far more forces than attacking them. In a future war, the Admiralty stated, Britain would probably also need to keep enemy forces in their bases, protect shipping against any surface forces that escaped, transport assault forces and (interestingly) conduct: 'Aircraft strikes from what may be the only airfields available, namely aircraft carriers.' The minute also noted that the pre-war Fleet had been far from adequate to counter the threats it faced. Regarding manpower, it

⁴⁶ Several British wartime light carriers were sold or loaned to other countries, including the Netherlands, France, Australia, Canada, Argentina, Brazil and India (in which HMS *Hermes*, laid down in 1944, is planned to serve until at least 2005).

⁴⁷ DO (46) 20, 'The Size of the Armed Forces', 13 February 1946

explained that a large number of personnel were taken up by the Reserves, training (especially in technical fields) and the Naval Air Arm, which had not been a naval responsibility in 1938.⁵⁰

The lack of a plausible threat was one difficulty which soon showed signs of change. When Hugh Dalton, the Chancellor, took up the theme of manpower levels in January 1947, he mentioned that the German, Italian and Japanese Fleets of that period no longer existed, but added that 'no one claims that the Russians have, as yet, a fleet as strong as any one of these in 1938.'⁵¹ The fact that he mentioned them as a potential threat is significant. In response to his criticism, Viscount Hall (First Lord since August 1946) explained that Naval Aviation accounted for 63,000 men, whereas before the war the figure was around 8,000 due to 'the services then rendered by the RAF'. Admiral Sir John Cunningham, First Sea Lord, added that whilst Germany had had 65 submarines on the outbreak of war, the Russians currently had 230, as well as 17 cruisers and 69 destroyers, many of which were new.⁵² Russia was therefore looming larger as a maritime threat, yet the Admiralty took the view that the Navy's role was misunderstood, particularly in activities other than major wars. In the Defence Committee, Hall 'emphasised the importance of the role of the Navy in preserving law and order (e.g. in the West Indies) and in maintaining the prestige of the United Kingdom in foreign countries', while A.V. Alexander (now Minister of Defence) deemed it necessary to remind his colleagues that:

The tasks which might fall to the Navy cannot be judged by reference solely to the strength of potential enemy fleets. For example, it might well become necessary to make a display of force in the Persian Gulf or on the Dalmatian Coast and the Navy would be called upon for this purpose.⁵³

The operational deployments of the Navy in 1947 illustrated this broad role, with commitments including Germany, Italy, the Sicilian Channel, the Balkans, the Adriatic, Greece, Palestine, the North

⁴⁸ DO (46) 5th, 15 February 1946, CAB 131/1; CP (46) 65, Prime Minister and Minister of Defence, 'Defence Policy in 1946', 15 February 1946, CAB 129/7; CM (46) 16th Conclusions, 18 February 1946, CAB 128/5

⁴⁹ Minute M195/46, 4 June 1946, Annex I, DO (46) 97, CAB 131/3

⁵⁰ First Lord to PM, 24 July 1946, Annex II, DO (46) 97, CAB 131/3

⁵¹ DO (47) 9, Chancellor of the Exchequer, 'Defence Estimates for 1947-48', 13 January 1947, CAB 131/4. He identified the budgets for the Fleet Air Arm and the RAF as being 'considerably in excess of any reasonable requirements', but continued, 'I express no view on how these two elements should be adjusted to give greater economy'!

⁵² DO (47) 2nd, 14 January 1947, CAB 131/4

African Mediterranean coast, Egypt, Japan, Indonesia, Singapore, Hong Kong, Indochina, Malaya, North Borneo, Burma, the Denmark Straits, the North Sea and UK waters.⁵⁴

Financial pressures increased during 1947 and left the planned forces way beyond British means. Alexander felt that all three Service plans were too expensive and therefore set new assumptions, ruling out war for five years, with a gradual increase in the risk up to 1957. The Navy was to postpone new construction and concentrate on building experimental vessels and modernising the existing Fleet (especially to enable carriers to operate modern aircraft). Naval plans would be scaled down, especially for large capital ships, in favour of 'concentration on the Naval Air Arm and retention of cruisers and below in adequate numbers'.⁵⁵ Although there was a need for this sort of prioritisation, it would give rise to future problems as wartime vessels fell behind technologically, and the serious problem of block obsolescence would eventually loom. Alexander acknowledged that there would be no new naval construction except for a single carrier and prototype vessels, and other reductions would be necessary: *'The naval aircraft programme will be severely cut and all modernisation of aircraft carriers will be deferred.'*⁵⁶ Admiralty plans therefore had to be revised sharply downwards to take account of the poor state of the nation's finances. A more fundamental debate was underway concerning the nature of war and the general approach of British strategy, the outcome of which would inevitably affect the Navy.

Emerging British strategy

In the event of war with the USSR, the principal threat facing Britain would be the Soviet strategic air force. However, the Chiefs of Staff acknowledged that Soviet numerical superiority in land forces would allow the USSR to sweep through Western Europe in a few months. It could then

⁵³ DO (47) 20th, 18 September 1947, CAB 131/4

⁵⁴ *Statement of First Lord of the Admiralty Explanatory of the Naval Estimates 1948-49*, Cmd. 7337 (1948)

⁵⁵ COS (47) 173 (O), Minute from Minister, 23 August 1947, DEFE 5/5; COS (47) 106th, 20 August 1947, DEFE 4/6; Memorandum B526, 'Future Defence Policy', 28 August 1947, ADM 167/129; DO (48) 2, Minister of Defence, 'Shape and Size of the Armed Forces', 5 January 1948, CAB 131/6

⁵⁶ DO (47) 68, Minister of Defence, 'Defence Requirements', 15 September 1947, CAB 131/4: original emphasis

turn its tactical air forces and rockets against Britain, perhaps defeating it without using weapons of mass destruction. Soviet conventional superiority meant that the West would have to use nuclear weapons since conventional air power alone would be inadequate. The inherent disadvantage in such a strategy, though, was that it would bring down nuclear retaliation on the UK. With its 'dense and concentrated population and industries', even a small number of nuclear weapons could inflict such great damage 'that the area might become useless as an air offensive air base and the country might never recover'. One report baldly stated that there was a military case for the allies as a whole to use nuclear weapons though it would risk the UK and even Western Europe suffering 'fatal damage'.⁵⁷ Britain could not fight without nuclear weapons, nor could she survive a war which saw them used. Her strategy would therefore have to rest on using the threat of military means to avoid war:

The plain fact is that if a war with weapons of mass destruction starts it is virtually certain that this country is finished as a military factor, whatever the final outcome of the war. We cannot too strongly emphasise that all our efforts must be bent on producing a deterrent that prevents war.⁵⁸

The awesome new destructive potential of nuclear weapons would therefore be at least partially neutralised by the potential enemy acquiring a matching capability.

Aside from the likely outcome of a nuclear exchange, a second problem with relying on nuclear weapons was that they would not be sufficient by themselves. The Joint Intelligence Committee explained that an offensive against the USSR would require bases in the Middle East and perhaps Pakistan. Yet if Russia could knock out the UK in a week (as she would be able to from about 1960) she could prevent a US build-up in these areas. Therefore, the deterrent would have to be backed up by forces which could prevent Russia knocking out the UK and overrunning the Middle

⁵⁷ JP (47) 55 (Final), 'Future Defence Policy', 7 May 1947, DEFE 6/2; JP (48) 59 (Final), 'Overall Strategic Concept for War in 1957', 16 September 1948, DEFE 4/16

⁵⁸ Brief for Secretary of State for Air, 8 January 1948, AIR 8/1587. The actual public announcement of the British nuclear weapons programme was remarkably low key; in May 1948 A.V. Alexander, the Minister of Defence, was asked a Parliamentary question about progress in modern weapons, and replied that 'all types of modern weapons, including atomic weapons, are being developed.' 450 HC DEB, 12 May 1948, c. 2117

East bases with conventional forces.⁵⁹ The Chiefs of Staff accepted the importance of the control of sea communications for access to sources of supply, flexibility and mobility of deployment of air forces, denying use of the sea to the enemy and, in the Mediterranean, for the Middle East.⁶⁰ Thus, the deterrent should comprise nuclear weapons and also conventional forces to defend the 'three pillars' – the UK, sea communications and the Middle East. Nuclear air power would therefore not provide a low-cost means to cut through the Gordian Knot facing British defence policy-makers.

In 1947, the forces envisaged were manageable. The Navy would need 'strong and up to date anti-submarine forces', with 'the backing of surface forces, including shipborne aircraft', and the RAF would need fighters as well as bombers. A large regular Army, however, would be 'neither necessary nor within our means to sustain', so there should be a small, well-equipped, highly trained and modernised regular Army, backed by a territorial force.⁶¹ Alexander concluded that the accepted priorities meant that the forces could not be treated equally:

Put crudely, my view is that proportionately most of our eggs must go into the baskets of research and development, the Air Force (especially on the deterrent side) and the Navy (primarily on Naval Aviation and protection of communications).

The option of reducing the Army to fund the needed modernisation of the RAF and the Navy was considered but rejected, although the Minister did give them a higher priority than the Army.⁶² The Chiefs of Staff accepted that 'cold war' was a significant threat, but argued that it 'must be fought largely on the political front'. A second threat was a conventional war in the near future but they acknowledged that Britain could not afford to prepare for this and must accept the risk; the priority had to be deterring war.⁶³ If either of these two assumptions were challenged, the problems for British defence policy would intensify. In fact, both soon fell and the UK had to wage the cold war with military as well as political means, and had to increase her conventional forces.

⁵⁹ JP (47) 129 (Final), 'Shape and Size of the Armed Forces', 11 November 1947, DEFE 6/3

⁶⁰ DO (48) 61, Report by COS, 'Defence Review', 14 September 1948, CAB 131/6

⁶¹ COS (47) 33 (O), Minister of Defence, 18 February 1947, DEFE 5/3

The first additional strain was a reassessment of the size of the Army that Britain needed. In early 1948, Field Marshal Montgomery, Chief of the Imperial General Staff, floated the idea that the defence of the UK required any Russian attack to be held as far east as possible, preferably on the Rhine, and stressed that Britain would need to commit substantial land forces.⁶⁴ Lord Tedder, Chief of the Air Staff, drew attention to the financial implications of the proposal and the fact that: 'If a Continental policy was now to be adopted, the future shape and size of the armed forces would need to be recast.' Admiral Sir John Cunningham, First Sea Lord, pointed out that traditional British policy was to refrain from land operations at the outset of a war and use maritime power, to which air power had now been added; undertaking land operations would reduce British sea and land power. Attlee questioned whether Britain could send troops to Europe as well as to the Middle East. Montgomery in turn insisted that it would be disastrous to allow the USSR to overrun Western Europe, while defence of the Rhine would facilitate both the air defence of the UK and the defence of sea communications.⁶⁵ Such a new commitment would increase the already grave strain on the budget; put simply, 'we shall certainly not be able to afford a deterrent air force, an adequate navy and a continental army.'⁶⁶ However, developments in world politics soon precipitated a rethink on Montgomery's proposal.

The international situation deteriorated sharply during 1948 and the assumption that war was unlikely before 1957 began to seem unduly optimistic. The Czechoslovak coup and the Berlin blockade fostered the impression that there could be a war 'in the near future', and the British forces were unprepared and needed urgent remedial measures.⁶⁷ The same year saw the beginning of the Malayan Emergency, which became a long and heavy UK commitment. The naval contribution

⁶² JP (47) 129 (Final), 'Shape and Size of the Armed Forces', 11 November 1947, DEFE 6/3; DO (48) 2, Minister of Defence, 'Shape and Size of the Armed Forces', 5 January 1948, CAB 131/6

⁶³ DO (48) 3, Report by COS, 'Size and Shape of the Armed Forces', 5 January 1948, CAB 131/6

⁶⁴ COS (48) 26 (O), CIGS, 'The Problem of Future War and the Strategy of War with Russia', 30 January 1948, DEFE 5/10.

⁶⁵ COS (48) 16th, 2 February 1948, COS (48) 18th, 4 February 1948, both DEFE 4/10

⁶⁶ PUS to Secretary of State for Air, 27 January 1948, AIR 8/1587

included carrier air strikes, warships patrolling the coasts and bombarding targets ashore, and transportation of troops. Growing international tension resulted in the creation of the WEU and NATO, which involved British pledges to maintain land and air forces in West Germany. In August 1948, Attlee warned that the government would have to reconsider the assumption that the risk of war would be low before 1952 and would then gradually rise until 1957.⁶⁸ British responsibilities in a war with Russia were described as, in order of priority: defence of the UK; control of essential sea communications in the Atlantic and Mediterranean; defence of the Middle East base; preparation of bases for US Strategic Air Forces; and fighting on the continent.⁶⁹ The last had not even been mentioned in January 1947.

Air Power and Navies

Air power was once again being pushed to the forefront of British strategy. This was reflected in the public debate, in which the Services took close interest. The Admiralty files contain a copy of lectures given by Lord Tedder at Cambridge in March 1947, on 'Air Power in Modern War'. As in earlier works on air power, Tedder made an explicit assumption that future conflict will 'inevitably be total war and world-wide.' He stressed the interdependence of air, sea and land power, and acknowledged that sea power continued to be vital to the UK, although the forces required to exercise it had changed and it now required air supremacy. So far, there was little to alarm the Admiralty. He continued, however, that although air and sea power were currently partners in the fight for the command of the sea, 'it is conceivable that this command in the future may be exercised mainly by air forces in some form or another'. Other familiar claims were repeated, such as that 'the performance, especially in hitting power, of land-based aircraft is inevitably far greater than that of ship-borne aircraft, and moreover that Aircraft Carriers are not like Malta – unsinkable.'⁷⁰ Lord

⁶⁷ DO (48) 49, Report by COS, 'Preparation for Defence', 29 July 1948, CAB 131/6. See also CP (48) 7, Secretary of State for Foreign Affairs, 'Review of Soviet Policy', 6 January 1948, CAB 129/23

⁶⁸ CP (48) 206, Prime Minister, 'Preparations for Defence', 24 August 1948, CAB 129/29

⁶⁹ DO (48) 53, 'Preparations for Defence', 11 August 1948, CAB 131/6

⁷⁰ Lee Knowles Lectures, Cambridge, 17 March 1947; published as Tedder, Lord (Marshal of the RAF) *Air Power in War* (London, Hodder and Staunton, 1948); also copy in ADM 205/67

Trenchard, Chief of the Air Staff during the RAF's early years, continued to attack carriers. They could not, he argued, operate within the 1200-mile range of land-based aircraft (which would soon be extended to 2000 miles) and would not be needed because such aircraft could cover all the oceans of the world. In 1950 he told the House of Lords that 'the large carrier is definitely obsolete and the small carrier a little less so', and suggested that naval aviation should be absorbed into the RAF.⁷¹

The sensitivity of the Admiralty to these resurrected interwar ideas is apparent in a file from November 1948. The Admiralty was warned that Lord Templewood (an interwar Secretary of State for Air) had put down a motion in the House of Lords 'to call attention to the state of the Royal Air Force and the vital importance of British air power'. In his speech, they were told, he was going to argue that air power was Britain's first line of defence, that 'there is no real naval threat excepting from submarines', and that 'a superior Air Force could probably prevent large bodies of troops from walking across the Continent' or by attacking rear areas could stop the movement of supplies. The RAF should therefore be first priority and 'should get financial support ahead of the other two Services.'⁷² Lord Fraser (First Sea Lord since autumn 1948) wrote to Lords with naval connections, drawing attention to the motion and stating: 'Whilst everyone will agree concerning the importance of the RAF and the vital necessity for aggressive action, there is a strong tendency developing again for the extinction of the Royal Navy.'⁷³ Captain T.M. Brownrigg (Director of Plans) went into more detail in refuting Templewood's assertion that the only Russian threat was submarines. Intelligence estimates showed that while they were indeed the greatest danger, there would also be a need to counter mines, the large Russian air force, an increasing number of high-speed coastal craft and even a surface Fleet, which although not strong was significant and growing. Air forces alone could not protect sea communications, while in seaborne assault and flank support, warships could provide a prolonged threat at immediate readiness, which aircraft could not. The Navy could also 'provide

⁷¹ Trenchard, draft paper, 'Some thoughts on air policy and the choice of the right tools by all three Services', 28 October 1946, AIR 75/17, 7-8; House of Lords Official Report, Volume 166, 4 April 1950, cc. 807-09

⁷² Notes on Lord Templewood's speech to the House of Lords, 24 November 1948, ADM 205/69; House of Lords Official Report, Volume 159, 24 November 1948, cc. 544-553

seaborne tactical air support when shore-based air support is not available or not adequate', as wartime experience in the Middle East and Far East showed, and even when shore-based air support was available, the mobility and consequent flexibility of carrier aviation would be 'invaluable'.⁷⁴

Nonetheless, doubts about the role and importance of naval power in view of the challenge from air power persisted amongst decision-makers, and were sharpened by pressure on the defence budget. Alexander wrote under the heading entitled 'Growing importance of the air arm', that:

The rise of the RAF to full status beside the older services adds another new element to costs. The disappearance of the traditional concept of an island protected by sea power alone which could always guarantee us the time in which to prepare for a land campaign after the outbreak of war is now generally accepted. What is less generally understood is that, for all its advances over the last 30 years, air power, even as we know it today, is not only developing still greater responsibilities but also its ability to meet these responsibilities.⁷⁵

The following month, Attlee stated that the first priority for re-equipment should be the RAF for radar and the air defence system; other programmes should be reconsidered and, 'in particular he wondered whether the imminence of the naval threat had not been over-estimated and there was not room for some further reduction in the provision proposed for naval equipment.' Hall replied that the programme already included considerable reductions.⁷⁶

The Battleship Debate Continued

One question that was moving towards a clear answer was the balance between carriers and battleships. An interesting 1948 paper by Captain R.M. Dick, Director of the Admiralty Tactical and Staff Duties Division, set out the perceived utility of the battleship.⁷⁷ The Navy must be able to defeat any concentration of enemy naval power, including heavy vessels, which required battleships to do so

⁷³ ADM 205/69

⁷⁴ Director of Plans, 22 November 1948, ADM 205/69

⁷⁵ DO (49) 66, Minister of Defence, 'The Requirements of National Defence: Size and Shape of the Armed Forces 1950-53', 18 October 1949, CAB 131/7

⁷⁶ DO (49) 22nd, 25 November 1949, CAB 131/8

regardless of weather or daylight. Added to this were the battleship's large number of anti-aircraft guns and ability to withstand damage; it was far superior in this respect to the carrier which could lose its striking power to a hit on the flight deck. However, the report made clear that battleships would operate in conjunction with aircraft carriers, not in competition with them. This technique 'has developed under the impact of conflict into the present balanced force with carriers and battleships acting in mutual support.' It allowed the carrier to conduct long range flying operations with relative impunity to surface attack, 'because she is *under the guns of the strongest surface element*', and allowed the battleship to approach the enemy coast or fleet and destroy them with relative impunity 'because she is *under the best airborne protection* under which freedom of surface action becomes possible.' Neither type of ship could survive in modern war without the other. Anti-aircraft guided weapons required a large ship and improving bomber performance reduced the advantage of the fighter, and thereby increased the importance of gun and missile defences: 'Thus the "battleship" will in the future be of as cardinal importance to protect our convoys and Fleets against attack from the air as she remains the final sanction in defence and offence in surface warfare.'⁷⁸

The same paper rebutted various criticisms of the battleship. Against the argument that it was not unsinkable, the paper stressed that no one had argued this. Rather, 'What is claimed is that the battleship can stand up to heavier attack than any other type of ship and thus continue longer in operation'. In response to the argument that the battleship was powerless against air attack, the paper emphasised advances in air defence provided by missiles, proximity fuses and improved anti-aircraft fire control. Finally, the paper refuted the claim that shore-based aircraft could protect British sea communications, arguing that Britain would not have the territory to cover all ocean areas with bombers *and* escorting fighters (the latter being important but often omitted in the air theorists'

⁷⁷ DTSD, 'The Role of the Battleship', 7 January 1948, ADM 205/69. Much of this paper is based on the Admiralty's reply to Lord Cherwell from 1944. It is interesting that such similar arguments were seen as relevant four years later.

⁷⁸ Ibid., Appendix III: The Battleship in the Future; original emphasis

arguments). Even if she had the territory, the cost in men, aircraft and air bases would be prohibitive.⁷⁹

The uses and examples which were adduced assumed a certain type of war and a certain type of threat which could only be met by battleships. Both of these assumptions were to change, as were the means by which the Navy sought to counter Soviet warships. Even in 1948, however, the issue of whether there was a need for battleships was less significant than the relative priority between them and carriers. The Admiralty informed the Defence Committee that battleships were needed against a potential enemy's battleships but this left a requirement for only five modern vessels. The five older battleships were not worth modernising, largely because 'their speeds on completion would still be inadequate for operation with a Carrier Task Force'. In fact, the Naval Staff saw no use for the older ships:

Their value, even if modernised as far as practicable at the considerable cost indicated, would be doubtful and we shall in any event require the money for the modernisation of our Aircraft Carriers which must be given first priority.⁸⁰

Crowe noted that: 'Despite the popular impression that the Royal Navy was reluctant to part with the battleship, the shift to Carriers was made with remarkably little dissent'. He cited an anonymous quotation from a senior naval officer:

As money got tighter no matter how attached the senior officers were sentimentally to the battleships we had little choice but to elect [sic] the ships that had proved the most versatile and could give us the most return for our money.⁸¹

Thus even though the Admiralty continued to envisage a vital role for battleships that no other platform could fulfil, the financial constraints under which the planners were operating forced these ships into a lower priority than carriers.

⁷⁹ Ibid., Appendix I: 'Historical Survey of the Value of Battleships in World War II', also ADM 205/69

⁸⁰ DO (47) 96, First Lord, 'Disposal of Certain of HM Ships', 15 December 1947, CAB 131/4

The Role of the Aircraft Carrier

The priority attached to carriers was becoming increasingly obvious. Captain J.F. Stevens (Director of Plans) noted that the planned carrier strength might be impossible due to financial constraints and therefore urged that aviation should be protected in the peacetime force, even though this meant accepting 'a degree of unbalance in favour of Naval Aviation in the Fleet.'⁸² Yet, debate continued over their roles. Here, British views diverged from those of the Americans, due to differing wartime experience, the yawning gap in resources and the diverging requirements of the two navies in future wars. Although the Royal Navy's war had been mainly defending sea communications, it also had some experience of power projection. A February 1945 report concluded that the landings in Italy and Southern France had demonstrated the value of naval aviation for tactical reconnaissance, ground attack, spotting for warship gunfire and providing fighter cover before the RAF could be established ashore. Since the RAF was not deployed in strength to the Far East, the role played by naval aviation there would be even greater.⁸³ The British Pacific Fleet participated in a variety of operations, one of which saw four fleet carriers operating in support of the Okinawa landings, then bombing targets such as airfields, railways and shipping in Japan itself. The Cabinet was told that in total it carried out 7255 sorties, dropped 1387½ tons of bombs, fired 1013 rockets, destroyed 288½ aircraft and damaged 247, and sank or seriously damaged 309 warships and merchant vessels totalling 356,760 tons.⁸⁴ Yet in spite of this, the Navy's post-war focus lay elsewhere.

The Royal Naval Tactical School stressed that it was 'determined not to devote too much thought to fighting the Pacific War over again (except in so far as it provides useful examples of the mechanics of operating carrier task forces)'. It was trying 'to swing thought away from massed "carrier slogging matches" of the Pacific War' and instead concentrating on anti-submarine warfare

⁸¹ Crowe, W. J. *The Policy Roots of the Modern Royal Navy, 1946-63* (Ph.D. thesis, Princeton University, 1965), 72-73

⁸² Director of Plans, 'The Future of Naval Aviation', 17 February 1947, ADM 205/67; Memorandum B513, 'The Future of Naval Aviation', 6 March 1947, ADM 167/129

⁸³ 'Naval Air Cooperation in Combined Assaults', February 1945, ADM 1/17399

(which occupied a third of the course), defence of convoys, attacks on enemy forces at source or on enemy coastal shipping 'in certain selected areas where it is assumed that it would not be practicable to obtain local air superiority by shore-based air forces', and – still taught but at the lowest priority – 'Conventional carrier air strike against a fully screened fleet of warships'.⁸⁵ This syllabus was realistic and casts doubt on periodic Air Ministry allegations of inappropriate fixation on Pacific War experience.

Brownrigg acknowledged that there were disagreements over policy for naval aviation, which had three tasks: fighter defence of fleets and convoys, anti-submarine warfare, and striking at enemy shipping and shore installations. Since the first two were priorities, this left 'negligible forces' for the third. Trying to perform them all 'must inevitably result in specialised penny packets, none of which will be strong enough to carry out their allotted task on the outbreak of war.' A strike capability was desirable but 'in our present straightened circumstances' it should not be a definite role with specifically designed aircraft but should rather be done by aircraft designed for other, essential roles. He noted that American opinion held a strike by less than a carrier task group, with a minimum of 200 aircraft, to be 'too weak to achieve any useful results against opposition'. He agreed with this assessment and recommended that Britain should use its small strike component as a nucleus on which to build up her own wartime carrier task group, even though it would not be ready until 20 months after the beginning of hostilities. He argued that 'no worthwhile results will be achieved by small air striking forces. (In fact, as in Norway, we might lose the cream of our naval aviation for no result.)' Flowing from this, his recommended aircraft complement would be 45% anti-submarine, 38% day fighter, 7% night fighter and 10% strike fighter.⁸⁶ To provide some context for the US figure of 200 as the minimum number of strike aircraft for useful results, the entire strength of British naval aviation in 1948 was 200 aircraft, although it was planned to rise to 300 by 1957. This figure

⁸⁴ CP (45) 159, 'Summary of Naval Air Operations 1st May to 1st August 1945', 4 September 1945, CAB 129/2; CP (45) 327, 'Summary of Naval Air Operations Since August 1945', 4 December 1945, CAB 129/5

⁸⁵ Director of Royal Naval Tactical School to DTSD, 18 June 1948, ADM 1/24518

⁸⁶ Director of Plans, 'Functions of Naval Aviation in a War Between 1948/1957', 28 September 1948, ADM 205/69

alone makes it clear that Britain and the US were playing in different leagues if, indeed, they were playing the same game. In wartime, naval aviation would expand from 300 to 600 and the proportions would change to 30% fighters, 50% strike aircraft and 20% anti-submarine aircraft.⁸⁷

One idea that was floated in 1948-49 concerned using carrier-based aircraft for nuclear strikes. Much of Russia (including most of her industrial potential and nuclear plants) was out of range of British aircraft operating from available bases. The problem was exacerbated by the vulnerability and insecurity of tenure of air bases in Cyprus and Iraq. A possible alternative would be to use aircraft from carriers in the Barents Sea, Sea of Okhotsk and Arabian Sea, from which they could hit almost all of Russia. Moreover, the deterrent effect would be enhanced by their unknown location, compelling the enemy to divert more of his forces. Problems would include weather, enemy threats (though for some targets the carriers would not need to close with the coasts, reducing the risk faced), the small weight of the attack and the requirement for new aircraft. The initial joint-service report concluded that with specially designed aircraft, the project could be worthwhile and would give the Navy the new role of assisting the RAF with the strategic air offensive.⁸⁸ The concept was discussed by the Chiefs of Staff, with the RAF predictably resisting the apparent encroachment on its territory. They argued that the performance of carrier aircraft would be inferior to land-based aircraft and suggested that effort could more profitably be devoted to increasing the range of the latter, making a carrier-based strategic bomber unnecessary. The Navy, on the other hand, raised the possibility of aircraft taking off from carriers but landing at bases in the Middle East, and argued that the JPS Paper had exaggerated the air and submarine threat.⁸⁹ The RAF believed that some in the Admiralty were influenced by American thought and insisted that the huge, 80,000-ton carrier contemplated by the US Navy to operate bombers large enough to carry nuclear weapons would be

⁸⁷ 'Role of Naval Aviation', 1949, ADM 1/24518

⁸⁸ JP (48) 7 (Final), 'Mounting of an Air Counter Offensive in 1957: Use of Naval Carriers', 11 March 1948, DEFE 4/10

⁸⁹ See discussions in COS (48) 41st, 18 March 1948, DEFE 4/10; COS (48) 65th, 11 May 1948, DEFE 4/13; COS (48) 80th, 11 June 1948, DEFE 4/13

very costly and highly vulnerable.⁹⁰ Vice Admiral Radford, US Vice-Chief of Naval Operations, emphasised to the RAF Director of Plans that, 'he did not want to get mixed up in strategic bombing; that he wanted to leave to the Air Force', but he did not believe they could achieve the results claimed. He argued that the ability to deliver A-bombs from a carrier would be a serious strategic threat to the USSR which could be exploited to force their air forces into combat, thus contributing to the overall air battle.⁹¹ The decision eventually taken was to suspend work on the project, after the Admiralty advised that Britain could not afford to develop and produce special aircraft and carriers for this purpose.⁹² The issue of delivering nuclear weapons from naval platforms would arise again.

The fundamental thinking behind the Royal Navy's air power was becoming clear. First, carriers were clearly prioritised above battleships and although many in the Admiralty still believed the latter to have vital roles, they accepted that modernisation of carriers and aircraft should have first call on limited resources. Secondly, the carriers were mainly intended to counter the submarine and air threat, concentrating on convoy protection rather than projection of power ashore, which was the priority for the US Navy.

The Harwood Report

To consider how the defence budget could be reduced to the level countenanced by the Treasury, the government set up an 'Inter-Service Working Party on the Shape and Size of the Armed Forces', referred to as the Harwood Committee after the civil servant who chaired it.⁹³ Its report of February 1949 noted the need to deal with the cold war, though it judged that only a small provision for this threat would be adequate unless 'cold war tactics were to be intensified – or more especially extended to additional theatres'. Its provision for war in the near future was small, taking the form of

⁹⁰ ACAS (P), 18 May 1948, in AIR 8/1792

⁹¹ Note of Conversation between Vice Chief of Naval Operations, US Navy, and Director of Plans Air Ministry, 5 November 1948, AIR 8/1792. They disagreed over whether a carrier could operate within range of an unbeaten air force!

⁹² COS (49) 164th, 4 November 1949, DEFE 4/26; COS (49) 350, First Sea Lord, 'Use of Aircraft Carriers in Connection with the Strategic Air Offensive', 19 October 1949, DEFE 5/17

⁹³ For a general account of the Committee's report and the reaction to it, see Grove, 47-55

limited insurance, while most resources were directed towards a more likely war after 1957 (the report referred to a 'possibility' of war in the near future and the 'probability' of war thereafter). It then recommended forces which could be afforded within the £700m budget. The forces 'responsible for withstanding the first impact of war upon this country' were fighters and their warning and control system, anti-aircraft artillery, seaward defences of ports and harbour and defence of shipping in UK approaches; these 'have superseded the fleet as the first line of defence of the country.'⁹⁴

The report stressed the need to protect sea communications but questioned the need for large naval forces, due to the strength of the US Navy relative to the USSR. Some tasks previously carried out by the Royal Navy 'must be performed by Allied naval forces or not at all'. Those to be dropped included cover against the 'small' surface threat to Atlantic shipping ('This threat has been accepted in so far as it cannot be countered by carrier-borne fighter or A/S aircraft'), the protection of convoys through the Mediterranean and defence of the Persian Gulf and the Far East (except Hong Kong). Several home and overseas bases would be scaled down or closed, the Navy's combined operations role would be reduced and the Royal Marines abolished.⁹⁵ The authors explained that they had recommended changes to Admiralty plans due to 'the increased weight we have given to the Battle of the Coasts as compared with the Battle of the Atlantic'. This meant eliminating battleships entirely, since there was no use for them except 'as possible platforms for new weapons such as heavy GAP' or for Royal tours. Indeed: 'If Russia started to build battleships we believe that an increase in naval air strength would be the proper reply'. Modern carriers would be cut from 14 to 12 (nine fleet and three light), although significantly there was to be no reduction in the planned front-line strength of naval aviation, of 200 by 1952 and 300 by 1957. The number of modern cruisers would be halved but smaller vessels, particularly minesweepers, would be increased.⁹⁶ The main strength of the Fleet would be a mobile carrier task force, which would be largely confined to eastern Atlantic and UK

⁹⁴ DO (49) 47, 'Size and Shape of the Armed Forces: Report of the Harwood Working Party', 21 June 1949, CAB 131/7: paras. 6-9, 45-46, 51-57. Papers relating to the report can be found in DEFE 7/592 and 593

⁹⁵ Ibid., paras. 25-27, 122, 134

⁹⁶ Ibid., paras. 126, 138; also Appendix A to Annex VIII – Shape and Size of Navy in 1956-57

waters, together with some escorts in the Mediterranean. The result would be a carrier and small ship Navy, 'whose main wartime task would be the protection of the United Kingdom and of its approaches and sea communications with North America against submarine attack'.⁹⁷ Unlike subsequent reviews, the Harwood Report concluded that defending sea communications should continue to be a British priority and that it required strong naval aviation.

The Admiralty made a number of criticisms of the report, complaining that neither the suggested peacetime nor wartime Fleet was properly balanced: 'the relation between the numbers of aircraft carriers and cruisers in particular being unsound. The omission of battleships was also not acceptable.' The Admiralty bridled at a suggestion that naval aviation should be integrated into the RAF and rejected the idea of abolishing the Royal Marines. It took up what became the chorus of the Services in response to Harwood: the forces recommended were insufficient to support government policy and, besides, even these inadequate forces would cost more than the £700m the Committee claimed and would therefore break the imposed budget ceiling.⁹⁸ The Chiefs as a whole concluded that the Report's recommendations would reduce the Navy more than the other Services. The Fleet would have a shortage of carriers for trade protection, and too few cruisers and minesweepers; escort groups for convoys would be reduced from ten to seven ships and there would be no patrol groups or offensive task groups for operations against enemy forces (e.g. any Soviet amphibious attack on Norway). There would also be too few RAF maritime forces.⁹⁹ Alexander stated starkly that: 'It is not difficult to see that the Harwood proposals as they stand would lead to such a catastrophic decline in our influence as would bring very close our extinction as a first rank Power.'¹⁰⁰

Later in the year, Alexander stated that the Harwood forces would actually cost £750m and would still entail abandoning commitments. He felt that more provision should be made for

⁹⁷ DO (49) 48, Joint Secretaries, 'The Size and Shape of the Armed Forces: The Harwood Report', 21 June 1949, CAB 131/7

⁹⁸ Memorandum B588, 11 April 1949, ADM 167/133; Minute 4283, 12 April 1949, ADM 167/132; COS (49) 143, First Sea Lord, 'Harwood Report', 23 April 1949, DEFE 5/14

reequipment and that a higher priority should be given to winning the cold war, 'with the underlying thought that if this is done we may hope not to be called upon to fight any other kind of war'. Moreover, since the report, the government had decided to increase production for the WEU and 'to prosecute the Cold War in Malaya and Hong Kong'. He therefore requested a budget of £810m to avoid having 'to abandon our overseas commitments on an extensive scale'. The Chancellor opposed him but Ernest Bevin, the Foreign Secretary, supported him, since 'any abandonment of our overseas commitments could hardly fail to lead to an intensification of the Cold War'. Subsequent discussion saw the Middle East commitment questioned once again but the need for some rearmament to buttress the morale of the WEU was accepted, and the budget was set at £750m for 1950-51.¹⁰¹

After the Harwood Report, the Admiralty scaled back its plans and devised a 'Restricted Fleet', which was further trimmed to become the 'Revised Restricted Fleet'. At a cost 17% lower than that of the Planned Fleet it would have one Active and four Reserve battleships (rather than the five Active in the Planned Fleet), and six fleet and four light carriers (as against eight and 12 respectively in the Planned Fleet), with 250 front-line aircraft (rather than the planned 300), and 18 cruisers.¹⁰² It rested on the assumption that in war, allies and Commonwealth countries would provide half the forces required for control of North Atlantic and Mediterranean sea communications, and all the forces for control of their own waters and sea communications in the South Atlantic, Pacific, Western and Eastern Indian Ocean and South East Asia.¹⁰³

The following table shows the number of major warships included in three plans proposed by the Admiralty between 1947 and 1949, and the recommendations of the Harwood Committee:

⁹⁹ DO (49) 48; also DO (49) 50, COS, 'Size and Shape of the Armed Forces 1950-52', 23 June 1949, CAB 131/7

¹⁰⁰ DO (49) 51, Minister of Defence, 'Size and Shape of the Armed Forces 1950-53', 27 June 1949, CAB 131/7

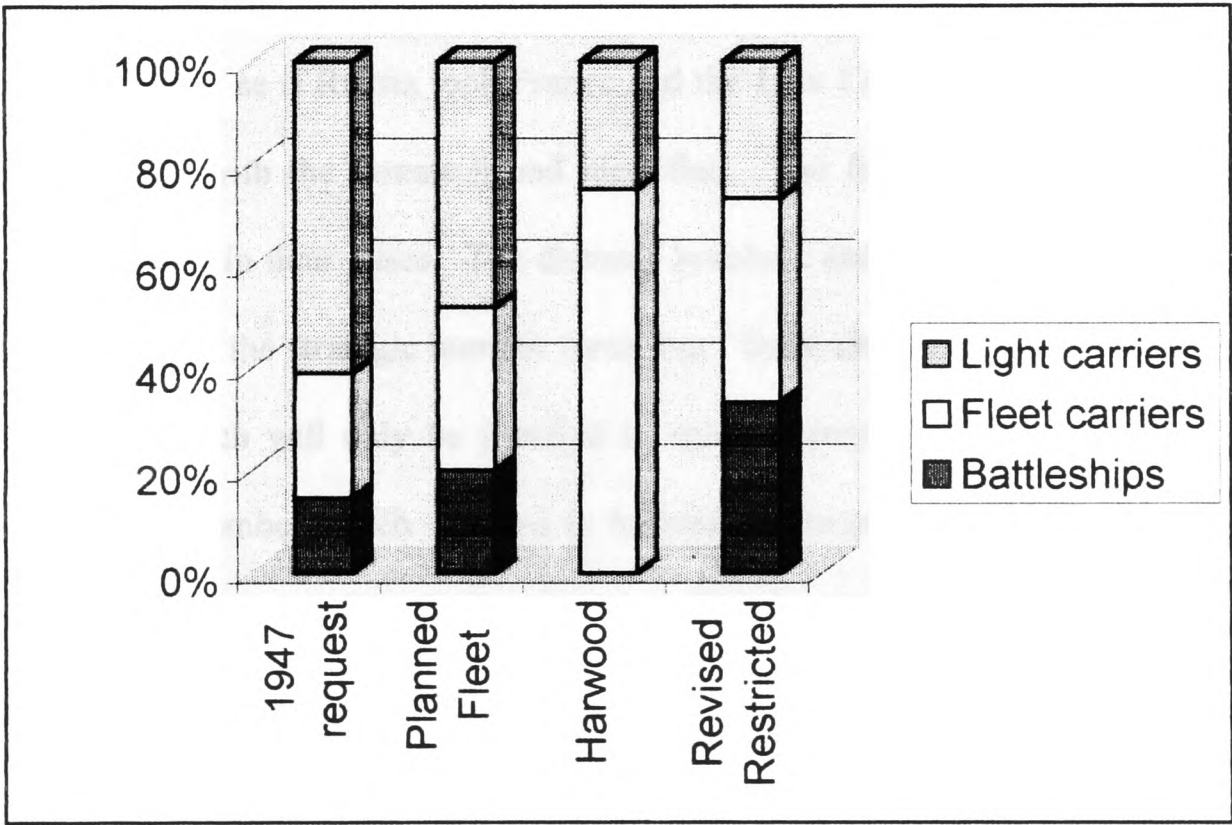
¹⁰¹ DO (49) 66, Minister of Defence, 'The Requirements of National Defence: Size and Shape of the Armed Forces 1950-53', 18 October 1949, CAB 131/7. Also DO (49) 19th, 19 October 1949; DO (49) 20th, 15 November 1949; DO (49) 21st, 21 November 1949; DO (49) 22nd, 25 November 1949, all in CAB 131/8. See also CP (49) 245, Prime Minister, 'Defence Estimates 1950-51', 8 December 1949, CAB 129/37

¹⁰² Memorandum B590, 'Revised Restricted Fleet', 23 May 1949, ADM 167/133; Minute 4285, 26 and 30 May 1949, ADM 167/132

¹⁰³ 'Revised Restricted Fleet', 30 June 1949, ADM 205/84

	Battleships	Fleet carriers	Light carriers	Cruisers
1947 request	6	10	25	35
Planned Fleet	5	8	12	23
Harwood	0	9	3	12
Revised Restricted	1 (4 Reserve)	6	4	18

The Revised Restricted Fleet attached more importance than Harwood to cruisers, due to their cold war utility. Indeed, the Admiralty suggested reducing the naval aviation strength suggested by Harwood from 300 to 250, because ‘it was better to make a severe cut here than to reduce still further the cruiser strength’.¹⁰⁴ Since increasing financial constraints meant that the total number of ships was bound to decline, the *relative* strength of the different classes is particularly significant, and is displayed in the following chart.



¹⁰⁴ DO (49) 21st, 21 November 1949, CAB 131/8. The Admiralty programme concentrated on the smaller classes of ship, particularly frigates and minesweepers.

Unlike the Harwood Committee, the Admiralty saw a continuing role for battleships. The increasing number of fleet relative to light carriers was due largely to the growing difficulty of operating modern aircraft from small carriers.

Defence of Sea Communications

The size and shape of the Fleet inevitably flowed from more basic assessments about the threats to sea communications and the best ways to counter them. A March 1949 Joint Planning Staff report is interesting for the views it expressed about the air threat to naval forces and the role of carrier aviation, and also as a contrast to later views. The main Soviet threats, it argued, would be submarine and air attack, including mines. Although Russia was unlikely to have carriers by 1957, shore-based naval aviation would be used for mining, reconnaissance and direct attack of shipping, while long-range bombers would be used, particularly against ports. There was less of a surface threat, though Soviet warships would operate at night or in areas with shore-based air support, and this danger would increase if Russia took France and the Low Countries. The report then examined the means of dealing with the threats it had identified. The first was 'Attack at Source', that is, attacking enemy forces in their bases. The distance involved and the weight of attack needed would generally require use of the strategic bomber force, but: 'Such attacks may involve a diversion of our strategic air effort which will only be justified in special circumstances.' Some targets could be attacked by medium bombers, such as ships in harbour, ports and naval bases, enemy airfields and communications. Carrier aircraft could be used 'extensively, at least in the opening stages of a war' against the targets specified for medium bombers:

They could play an important part until shore-based aircraft could be deployed, since they might provide temporarily the sole means of maintaining air superiority over our sea routes. Furthermore, the strategic mobility of carrier-borne aircraft might enable them to be used against targets out of range of shore-based medium bombers.

It is significant that this was stated in a joint-service report. The second category of measures, 'Offensive Control', included air-laid minefields, attacks on enemy surface forces and shipping (by surface forces, submarines, land-based and carrier-based aircraft) and anti-submarine operations. Aircraft were useful in this last role, especially in reducing submarines' time on patrol by forcing them to submerge, but the report stated that they would never be effective enough to replace surface forces in close support of convoys. Finally, the report listed 'Defensive Control' measures including mine counter-measures, close anti-submarine and anti-aircraft escort by ships, together with shore- and carrier-based aircraft, defence of ports and bases, defensive minefields and arming of merchant ships. The report concluded that: 'The primary rôle of the Heavy Carrier Task Force may be strategic bombing. It may, however, be employed in support of the control of sea communications in the rôle of Attack at Source.' The forces recommended indicate that working from threats to deduce force requirements may produce an impracticable conclusion: the report stated that the forces needed were three Heavy Carriers, 38 Fleet Carriers, 15 small carriers, 12 escort carriers, 2975 aircraft, eight heavy cruisers or battleships, 67 light cruisers, 184 destroyers, 820 anti-submarine frigates, 180 anti-aircraft frigates and 196 submarines.¹⁰⁵

Although forces on this scale were hopelessly unrealistic, the report revealed the breadth of roles for which carrier aviation was viewed as necessary, while the number of carriers of various types recommended – totalling 68 – is significant. Attack at source was recognised as a vital component of any plan to protect sea communications. Strategic air forces would be committed elsewhere and hence, just as in World War II, their commanders would resist 'diversion' to deal with maritime targets. One obvious deduction was that naval aviation should take over the role. For the RAF to state that no other arm should be permitted to undertake this vital task even though they themselves would not be able to do it was untenable. This is not to suggest that the Navy was seeking a heavy bombing role for itself; a strike capability for attack at source was viewed as important but the priority was elsewhere.

¹⁰⁵ JP (48) 65 (Final), 'Control of Sea Communications – Long Term Planning', 31 March 1949, DEFE 6/6

A 1949 paper by Rear Admiral R.A.B. Edwards (ACNS) sought to examine what types of ships the Navy would require. First call on limited resources should be minesweepers, air defence and antisubmarine escorts and carriers, and submarines for minelaying and anti-submarine operations. Ships for other tasks were important but due to financial straits should be limited to fast light cruisers for surface actions and support of other Services, and large carriers 'capable of operating the best fighters and strike aircraft, and carrying a good A/A gun armament' for the protection of carrier groups and important convoys against heavy air attack, and for anti-shipping strikes, minelaying, offensive bombing of shore targets and support of other Services. However, since only a few such ships could be afforded, Britain must also develop aircraft for use from smaller and cheaper light carriers (which he referred to as 'the "Woolworth" type of carrier'), for defence of Atlantic shipping against submarines and reconnaissance aircraft. Heavy bombing of enemy ports and bases should be 'Mainly an RAF task'. Regarding capital ships, Edwards stated: 'I think it can be assumed that we shall never be able to afford the luxury of battleships for any task other than to neutralise those of the enemy'. Russia had no battleships (although it might capture two French ones), so the threat 'cannot, therefore, be regarded as serious and is certainly not one against which we can afford to over-insure'. The existing battleships should not be scrapped, however, since Russia might acquire such ships and relying on light cruisers and carriers for surface cover would be a great risk. He recommended that the five existing battleships should be placed in low-readiness Reserve, with plans for the modernisation of their anti-aircraft armament prepared and occasionally updated.¹⁰⁶

The battleship question was still pulling senior decision-makers in the Navy two ways. On the one hand, there was still an important role for them; on the other, a more pressing need was for smaller vessels to meet the more likely threats from mines, submarines and air attack. Viscount Hall informed the Defence Committee that the most essential requirement was 'to have in full commission

¹⁰⁶ ACNS, 'Ships of the Future Navy', 20 April 1949, ADM 205/84. Note the similarities between this Fleet and that recommended by the Harwood committee.

as many as possible of the smaller vessels, chiefly the destroyers, frigates and minesweepers, on which the most immediate call would be made if an emergency came upon us in the near future.' Yet due to financial and manpower considerations it was not possible to do this and also to maintain the larger ships in commission. The Admiralty therefore proposed to keep HMS *Vanguard* for training and special duties but to place the other four remaining battleships into Reserve.¹⁰⁷ Yet the judgement that the battleship could still be useful reappeared in a memorandum written by Fraser a few weeks later, in which he stated that Britain did not know what heavy ships the enemy might have in war in 1957 and hence: 'Battleships must be regarded as essential insurance.'¹⁰⁸ The anticipated surface threat was considerable: the Admiralty expected the Soviet Fleet in 1957 to consist of one battleship, 33 cruisers and 193 destroyers, as well as 260 fast, 90 slow and 'large number' of coastal and midget submarines.¹⁰⁹

One technological development to which the Admiralty attached much importance in reducing the threat from air attack was guided weapons. Fraser had earlier told the Chiefs of Staff that their development was 'of the highest importance in order that we may assess their value in meeting future air attack', and to examine their implications for ship design. Guided weapons were particularly important due to the increasing air threat:

Our present defence, which lies in the gun and the fighter aircraft, becomes more difficult as the speed of the attacker becomes faster and faster. The guided missile is a weapon which may prove of immense value in this respect.¹¹⁰

Edwards' paper, described above, stated that although guided weapons were at an early stage of development, they 'will supplement the gun and the fighter and may eventually replace the latter'. It

¹⁰⁷ DO (49) 43, First Lord, 'Employment of Battleships', 8 June 1949, CAB 131/7. This proposal was subsequently approved: DO (49) 17th, 1 July 1949, CAB 131/8.

¹⁰⁸ COS (49) 236, First Sea Lord, 'Future Shape and Size of the Navy', 14 July 1949, DEFE 5/15

¹⁰⁹ 'British and Russian Fleets', 23 June 1949, ADM 205/84

¹¹⁰ COS (48) 148, First Sea Lord, 'Guided Weapons', 2 November 1948, DEFE 5/8

even suggested that in the Atlantic they could provide sufficient air defence to deal with 'snoopers' and light air attack, which would simplify the task of escort carriers.¹¹¹

Nuclear weapons and warfare

Britain had to consider how nuclear weapons could be used to defeat the USSR and the answers that were initially offered are a further interesting stage in the evolving theory of air power. P.M.S. Blackett, the eminent scientist, insisted that a few hundred atomic bombs 'could not possibly bring a quick victory' against Russia (a belief to which he referred as 'atomic Douhetism'); victory would be a slow process requiring thousands of bombs.¹¹² The Joint Intelligence Committee and Joint Planning Staff examined three possible target sets: administrative control centres, the armed forces and war potential. They concluded that neither attacks on the Soviet armed forces nor on war potential, that is 'electric power, transportation systems, oil supply and war industries', would lead to a rapid and decisive victory because they demanded greater bombing accuracy than could be achieved and could not quickly limit Soviet military operations or prevent them overrunning West Europe and the Middle East. Attacking centres of administrative control would, they suggested, be the best way to disrupt government functions and would also reduce Soviet war potential. The report therefore concluded that the best offensive use of nuclear weapons would be against centres of political, economic and administrative control.¹¹³ The Chiefs of Staff felt unable to endorse these conclusions, feeling that the Soviet leadership would anticipate attacks on its administrative system and would set up alternative control centres, and doubting whether large casualties would have the predicted effect on morale. It emphasised the lack of knowledge on the vulnerability of various target systems and suggested that it might be better to concentrate on Russian communications and oil production rather than on administrative centres.¹¹⁴ Some of the lessons of the strategic air campaign in World War II

¹¹¹ 'Ships of the Future Navy', para. 28

¹¹² Blackett, P.M.S., 'The military consequences of Atomic Energy' (1948) in *Studies of War: Nuclear and Conventional* (London, Oliver and Boyd, 1962), 11-14

¹¹³ JIC (48) 116 (Final) / JP (49) 80 (Final), 'Use of Atomic Bombs in a war against the Soviet Union', 4 August 1949. DEFE 4/24

¹¹⁴ COS (49) 127th, 31 August 1949, DEFE 4/24

had clearly sunk in. The other main flaw in the JPS/JIC analysis was the lack of attention paid to the probable effects of Soviet nuclear attacks, which would presumably be occurring simultaneously, destroying NATO air bases, control centres and so on.

Yet even without a consensus on how nuclear weapons would contribute to victory, British planners continued to see their use as central to Western strategy. A later JPS Report made the point strongly:

To achieve victory in war the United Kingdom and her Allies must destroy the ability and will of the Soviet Government or people to continue to fight. A strategic air offensive is the only practicable military means of penetrating into Russian territory and thus attaining this end. ... By air attack they [the Western Powers] can impede the Russian build-up in Western Europe and strike at Russian war-making capacity.

A strategic campaign was unlikely to achieve decisive results with conventional weapons and would therefore need to use nuclear weapons from the outset, before irreparable damage was done to the UK, as the only way to reduce the weight of attack against it.¹¹⁵ Once the USSR attained a nuclear capability, however, this hope of victory became more dubious, since use of nuclear weapons against the Soviet Union would ensure a like response against Britain which, as had been acknowledged, would constitute a fatal blow.

The effect of nuclear weapons on the British forces was considered in a September 1949 JPS report. It urged an increase in the effort devoted to air defence in order to inflict casualties on the enemy 'sufficient to make the cost of sustained operations by his strategic bomber force prohibitive'. It also envisaged far more powerful nuclear weapons and delivery by long range rocket, though this was a 'very long term project'. More broadly, the report concluded that conventional forces were still needed to secure bases and lines of communications, and to exploit the effects of the strategic air offensive. It recognised that ports would be particularly vulnerable but: 'Ships at sea will not in general provide worthwhile targets unless concentrated'. Convoys would be poor targets and

dispersal of ships would be an effective counter-measure, although it would increase the difficulties of defence against submarines. It recommended that the Admiralty should organise bases overseas, reduce the amount of time ships spent in harbour and expand replenishment at sea. Nuclear weapons were not solely a threat to navies but also represented another weapon that they could use. The report noted that:

Apart from the possibility of operating heavy bombers from Aircraft Carriers, naval tasks remain basically unaffected, but new methods of fulfilling them are in some cases needed. If heavy Aircraft Carriers equipped with suitable aircraft are available, they may be used to supplement, and to give flexibility to, the shore based strategic air offensive.

It pointed out that enemy naval ports could be attacked by nuclear weapons delivered from submarines or special light craft, as well as from land- or carrier-based aircraft.¹¹⁶

Defence Policy and Global Strategy

The debate over whether Britain should take on a new continental commitment was still very much alive. Late in 1949 Montgomery's successor as Chief of the Imperial General Staff, Field Marshal Sir William Slim, stressed doubts whether Western nuclear weapons would produce a quick decision in a war and cited the basic historical principle that Britain could not allow a hostile foreign power to seize the Channel ports. Might it not be preferable, he asked, to seek to hold Western Europe rather than the Middle East? The other Service chiefs were still sceptical. Lord Tedder believed that it would be disastrous for Britain to add major land forces in Europe to its defence commitments, while Vice-Admiral G.E. Creasy (standing in for Fraser) argued that the two British divisions to be committed could hold the Middle East but would make little difference in Europe.

¹¹⁵ JP (49) 124, 'Future Defence Policy', 16 December 1949, DEFE 4/27

¹¹⁶ JP (49) 45 (Final Revise), 'Effect of Atomic Weapons on the Organisation and Function of the Armed Forces', 23 September 1949, DEFE 6/8; approved by the Minister COS (49) 164th, 4 November 1949, DEFE 4/26.

Nevertheless, the Committee decided to produce a new study of defence policy.¹¹⁷ This became 'Defence Policy and Global Strategy', the British equivalent of the American NSC-68.

The review stressed the importance of the cold war, including economic recovery, and deterrence of rather than planning for major war with the USSR. Since the previous review in 1947 the principal developments were the creation of NATO and the Russian nuclear test, which meant that the US nuclear superiority would 'lose much of its deterrent effect sooner than had been anticipated'. A strategic air campaign using nuclear weapons was emphasised as 'the only practical military means of penetrating into Russian territory and bringing the war to a successful conclusion at an early date' by destroying the ability and the will of the Soviet government to fight. However, nuclear weapons would not necessarily provide a quick and easy victory, so conventional forces would also be required. Besides, defence of the UK also required that a Soviet advance be stopped as far east as possible, to prevent the use against Britain of tactical air forces and surface-to-surface rockets. Britain should therefore send land forces to Europe and make a small contribution to the strategic air offensive. The defence of sea communications was also recognised as vital, with Russia expected to seek to isolate Europe from overseas reinforcement and supply. The most dangerous threats would be 'attacks on ports from mining, bombing with conventional and atomic bombs, and sabotage, particularly against the United Kingdom, and from fast submarines against shipping', but the threat from surface attack must also be guarded against.¹¹⁸

The report represented a clear and compelling account of the political and military situation facing the allies but a grave weakness lay in specifying so many 'essential' commitments, including the air offensive, the holding of both Western Europe and the Middle East, the defence of North Atlantic, Home and Mediterranean sea communications, and cold war forces. *Global Strategy*

¹¹⁷ COS (49) 188th, 21 December 1949, DEFE 4/27

¹¹⁸ JP (49) 172 (Final), 'Allied Defence Policy and Strategy', 8 March 1950; discussed COS (50) 37th, 8 March 1950; both in DEFE 4/29. The final version for Ministers was COS (50) 139, 'Defence Policy and Global Strategy', 1 May 1950,

purported to set priorities but there were so many that little clue remained regarding what could be cut. The most important conclusions were that Britain now committed itself to sending land and air forces to Europe and to fighting the cold war globally. When the report was written, the latter took the form largely of political measures and deterrent forces, but a conflict soon erupted which would increase both the military side of British cold war strategy and the forces committed in Europe.

The Navy on the outbreak of the Korean War

Following Labour's narrow victory in the February 1950 general election, Emanuel Shinwell replaced Alexander as Minister of Defence, which represented a worrying development for the Royal Navy. According to Grove: 'Both Shinwell's capacity and inclination for anti-navy mischief were rather greater than Alexander's, and he was soon leading an attack by his ministry on the Royal Navy's carrier programme'.¹¹⁹ In May, Shinwell noted that the first naval priority was anti-submarine warfare and inquired whether the Admiralty was truly concentrating on this, or was actually maintaining:

for traditional and other reasons, vessels and establishments that had outlived their usefulness. For example, he enquired whether there was still a vital role for Fleet Carriers under conditions of modern warfare.

Particularly, he wanted to know, did they take account of the contributions of the US and other allies. In reply, Vice-Admiral Sir George Creasy (VCNS) stressed the value of fleet carriers in modern warfare and explained the Admiralty assumption that allies would provide half the forces in the Atlantic and the Mediterranean.¹²⁰ A brief for the Minister explained that the Navy would have carriers, destroyers, submarines and minesweepers for the defence of sea communications. Its five battleships (of which four would not be modernised until guided weapons were available) and cruisers were for surface and anti-aircraft protection for carriers, convoys and other escorts, and also

DEFE 5/20; approved at COS (50) 68th, 28 April 1950, DEFE 4/29. It is also referred to by its Defence Committee designation, DO (50) 34, 1 May 1950, CAB 131/9

¹¹⁹ Grove, 65

had important peacetime roles. Thus, no vessels were being kept for merely 'traditional reasons'.¹²¹ Given the bitter debates that would shortly erupt over this question, it is significant that Marshal of the RAF Sir John Slessor, Chief of the Air Staff, did not oppose the Admiralty in this meeting. Nevertheless, he did raise the question of maritime aviation with Fraser.

Slessor decided that the RAF should challenge the current allocation of resources. Although he did not believe 'that there is much to be got out of the Army', he felt that the Navy were both 'getting more than their proper share' and failing to spend it in the right areas:

I think we must challenge the whole policy underlying the 'Naval Aviation' programme in particular. ... Our line should be that neither the air nor the Navy can afford in peace anything but what I call 'survival factors' – that anything else, battleships for shore bombardment, carriers and aircraft for participation in tactical air operations or strategic air offensive, any sort of craft for attack on enemy merchant shipping, etc., just is not on if we are to have the survival forces in anything approaching sufficient strength.

The Air Staff should therefore start 'assembling ammunition' for this campaign. Understandably, he added: 'PS. This should be kept strictly secret and in no circumstances should it be allowed to be known that I am contemplating challenging Naval Aviation Policy.'¹²² His case was that although defending sea communications was a priority, Britain could not afford 'luxuries' in her armed forces, and 'something will have to go – almost certainly including some carriers and Naval Aviation', on the grounds that naval aviation was less efficient and more costly than shore-based aircraft. The Admiralty was planning too many strike aircraft, and too many carrier-borne relative to shore-based aircraft. Slessor suspected that, influenced by the Americans, it was planning to participate in an air offensive or opposed amphibious landings, while Britain could afford neither; he sought to 'get the Naval Staff into the open about this'. He also felt that the Navy should scrap its battleships and concentrate on anti-submarine escorts.¹²³

¹²⁰ COS (50) 74th, 11 May 1950, DEFE 4/31

¹²¹ Brief for Minister, 'Security of Sea Communications', 11 May 1950, DEFE 7/593

¹²² CAS to ACAS, 2 January 1950, AIR 8/1592

¹²³ Ibid.; also ACAS (P), 17 March 1950, AIR 8/1592

Slessor therefore wrote to Fraser, suggesting an investigation into maritime warfare. He stated that he was only seeking efficiency and doubted that the Services could defend 'this system whereby in effect we have two separate air forces'. He suggested making maritime air a joint service, though his main concern was that maritime war plans allocated too much to air forces as opposed to surface anti-submarine forces and too much to carrier-borne as opposed to shore-based aircraft, making a provision for the war at sea 'that represents a degree of insurance that we are unable to afford for any other commitment, on land or in the air'. Given his comments quoted above, he was somewhat disingenuous in denying that he 'was "getting at" the Navy or seeking a disproportionate share of our defence resources for the RAF at the expense of the Navy'; he also insisted that he wanted to avoid 'the sort of inter-Service wrangling that used to go on twenty years ago', and disavowed 'clandestine operations between the Services'.¹²⁴

Fraser's reply expressed concern that a joint air service risked repeating the unsuccessful pre-1938 system when the RAF had controlled the Fleet Air Arm:

We emerged from this period with a Navy, far too many of whose officers were wedded still to Surface Warfare and had little understanding of, or appreciation for, the air weapon; we emerged also with a Fleet Air Arm incomparably behind the US Naval Air Arm, which had remained under USN control, in equipment, aircraft and efficiency.

If maritime aviation reverted to the RAF, it could once again become 'a poor relation', with the Air Staff's priorities lying elsewhere. He denied that Britain was allocating too much effort to the threat in the Atlantic and argued that carrier and land-based aircraft were complementary. Above all, he was concerned about defence of shipping 'against air attack by modern enemy aircraft wherever we may meet it either out of range of our own shore based fighter aircraft or when they cannot arrive in

¹²⁴ CAS to First Sea Lord, 19 April 1950, AIR 8/1592; also in ADM 205/74. Slessor's personal files contain a 1950 document entitled 'Rough Notes on Method of Challenging the Proportion of our total Defence Resources allocated to Naval Aviation'; AIR 75/16

time.’¹²⁵ Others in the Admiralty advocated an attempt to gain control of Coastal Command from the Air Ministry. Captain C.L.G. Evans, Director of Naval Air Warfare, argued that the Navy needed control of shore-based maritime aircraft to become a balanced and economical force and to guarantee the necessary air support. He acknowledged that avoiding such contentious inter-Service matters would be easier: ‘Nevertheless, peace may be brought at too high a price’ and the Navy’s ‘silent acquiescence’ in the current system could lead to failure in war.¹²⁶ Fraser did not open a counter-offensive on this front, however.

Slessor denied that his suggestion represented a return to the pre-1938 situation, since that concerned the Fleet Air Arm as part of the battlefleet, whereas this issue related to anti-submarine warfare. He also referred to his suspicion that the Navy’s plans included expanding the carrier fleet for strikes north of Norway, which were outside the established defence priorities.¹²⁷ In reply to Slessor’s attack on the aircraft types of the Fleet Air Arm, Vice Admiral M.J. Mansergh (Fifth Sea Lord) explained that fighters were part of anti-submarine warfare, denying enemy submarines the support of air reconnaissance. They would also be needed to defend against enemy air attack in the Mediterranean; indeed, he suggested that the term ‘trade protection’ might be better than ‘anti-submarine’ for the carriers, to take account of the air threat. The overall composition of the FAA would be 40% anti-submarine, 50% fighter and 10% strike (the latter being included ‘to keep the technique alive, and up to date, and as a nucleus on which to expand in war’). The proportion of anti-submarine to fighter aircraft would be 2:1 in the Atlantic and 1:2 in the Mediterranean, reflecting the predominant threat.¹²⁸ Fraser agreed to the establishment of a Maritime Air Defence Committee, to ‘examine the problem of the air defence of sea communications.’¹²⁹ Slessor clearly expected his *démarche* to pay off: he wrote to his Secretary of State that he was assuming ‘that a substantially

¹²⁵ First Sea Lord to CAS, 27 April 1950, ADM 205/74

¹²⁶ DAW, 10 May 1950, ADM 1/21827

¹²⁷ CAS to First Sea Lord, 12 May 1950, ADM 205/74

¹²⁸ Fifth Sea Lord to VCNS, ‘CAS letter of 12 May 1950’, ADM 205/74

¹²⁹ First Sea Lord to CAS, 8 June 1950, ADM 205/74; see also First Sea Lord to Eliot, 15 June 1950, and CAS to Eliot, 19 June 1950, both in AIR 8/1592

increased – though still inadequate – provision will be made for the RAF, partly at the expense of the Navy'.¹³⁰ The committee first met in July 1950 and is covered in the next chapter.

The 1950 defence programme saw a small cut in funding for the Army, level spending on the Navy and increases for the RAF and research and development. Only small warships were being built, although the *Statement on Defence* proclaimed that manpower was being cut in order to fund modernisation.¹³¹ The Navy estimates emphasised research and development (particularly against the threats from high-speed jet aircraft and missiles, and submarines with a greater submerged speed and endurance) and the fact that the small ships which were being built were largely anti-submarine. The *Statement* commented that the current air threat required jet fighters and the Navy was conducting exercises to investigate their operation from carriers, although they would not be entering Carrier Air Groups until the following year. It also noted that when there had been an apparent Chinese threat to Hong Kong the previous year, a force including a carrier had been dispatched.¹³² This was in contrast to the previous year, when Hall had announced the withdrawal of the British carrier from the Far East on the grounds that there were no powerful and hostile navies there: 'It is considered that the Royal Air Force, which already has bases in the Far East, can best meet the requirements in that area at the present time', though a carrier would be sent out if it was needed.¹³³

Naval aviation and the effect upon it of technological innovation continued to be the Admiralty's main concern. One significant development was the Navy beginning to investigate the potential of helicopters at sea, in 1948.¹³⁴ Captain E.H. Shattock, (commander of the light carrier HMS *Glory* and formerly Director of Naval Air Warfare) wrote a paper in February 1950 about the future of naval aviation. He identified the main problem as the 'staggering' increases in the cost of

¹³⁰ CAS to Secretary of State, 22 May 1950, AIR 8/1588

¹³¹ *Statement on Defence 1950*, Cmd. 7895 (1950), paras. 11-12

¹³² *Statement of First Lord of the Admiralty Explanatory of the Naval Estimates 1950-51*, Cmd. 7897 (1950)

¹³³ House of Lords Official Report, Volume 162, 11 May 1949, cc. 537-38

¹³⁴ See Memorandum B556, ADM 167/131. Plans to use helicopters in the war had been dropped because technical problems prevented them being ready before the defeat of Germany, and they were not needed in the Pacific due to the large number of escort carriers there. Air Branch, 'Notes on Naval Air Matters', 19 February 1945, ADM 1/17399

aircraft, which when added to that of carriers were such that 'it is now a very pertinent question whether naval aviation is not now a luxury we can no longer afford'. He believed that naval aviation should concentrate on two key tasks. The first was countering the increasing threat from submarines which could stay submerged for longer, against which he had high hopes for the helicopter with sonobuoys or 'dunking sonar'. With its low speed it was more suited than aeroplanes for hunting submarines, and teething troubles with navigation and night flying would soon be solved. The only function which helicopters could not perform was 'the fighter defence of certain oceans, seas, and land areas', particularly shooting down reconnaissance aircraft, which would be vital and would require advanced aircraft. Shattock's paper held out high hopes for various new technologies, some of which were tried but faded (such as wheelless fighters which could land on either rubber-decked carriers or special mats which could be deployed ashore), and others which eventually proved their use, such as the 'vertical take-off aircraft' which were just then being made into test vehicles, or fitting carriers with an 'inclined ramp' to allow aircraft to take off from small space.¹³⁵ His ideas met a sympathetic reception. Evans, his successor as DAW, noted that trials of dunking sonar were to begin in September 1950, though problems were being experienced with helicopter performance in rough Atlantic weather. He predicted that the helicopter would never completely replace fixed-wing aircraft, with their advantage of greater speed. Captain R.D. Watson, Director of Plans, concurred, adding that strike aircraft were still needed to counter enemy surface forces and to attack enemy sea communications in areas beyond the range of shore-based aircraft.¹³⁶ Fraser commented that as DAW, Shattock had opposed the helicopter, drily noting: 'Luke XV, v.7'.¹³⁷

The immediate post-war years offered no period of respite in which Britain could calmly restructure its armed forces for peacetime and assess at a leisurely pace the various technological developments thrown up by the war. On the contrary, economic difficulties and the rapid

¹³⁵ 'Some Aspects of the Future of Naval Aviation', 22 February 1950, ADM 1/21827

¹³⁶ DAW to First Sea Lord, 10 May 1950 and Director of Plans to First Sea Lord, 22 May 1950, ADM 1/21827

¹³⁷ Also in ADM 1/21827. The Bible reference is 'there is more rejoicing in heaven over one sinner who repents than over 99 righteous persons who do not need to repent.' (New International Version)

deterioration of relations with the USSR swiftly threw defence planning into crisis. The perceived need for a nuclear-armed air striking force to provide a deterrent created a major competitor for funds within the tightly constrained defence budget. Moreover, the potential threat to Britain from Soviet tactical air power and rockets forced planners to accept a new and expensive continental commitment, which required land and air forces in Europe in addition to other home and worldwide responsibilities. Britain also faced a potential enemy which could threaten the sea communications on which she depended. The envisaged shape of the Navy that was needed to defend sea communications still included battleships but they had been supplanted at the heart of the Fleet. Aircraft carriers provided the core of the response to the threats from aircraft and submarines and also came to form the Navy's main offensive arm. Their role was mainly perceived by the Admiralty as defending sea communications, although there was also a recognition of the need to have a capability for strike against enemy surface units and (as a secondary capability) targets ashore. Air power was seen as a threat to ships, but one which could be met by fighters, anti-aircraft guns and guided weapons. Some clouds were appearing on the horizon both for the Navy and for naval aviation, however, as increasing competition for resources had impelled the Air Staff and some Ministers to begin questioning the priority attached to large carriers and capital ships. The debates over this between 1945 and 1950 were but a minor fore-shock compared to the struggle for survival fought over the next few years.

Chapter 2

The Korean War and Global Strategy, 1950-52

The advent of the cold war provided a clear rationale for the Navy, with an evident and growing potential threat to sea communications. Yet with purse-strings remaining tight, little progress was made in the Active Fleet. Most spending was devoted to research and development, which was believed to be a safe course because war did not seem imminent. Many of the fundamental assumptions of British defence policy were swept aside by the outbreak of a war a long way from Europe.

The Korean War

When North Korea invaded South Korea on 25 June 1950, Britain immediately decided to send a military contribution. The Chiefs of Staff argued that while sea and air action alone would be 'clearly insufficient' in Korea and the US had requested a small British land force for political reasons, they believed it 'militarily unsound to make even a token contribution' of ground troops, which would weaken UK forces elsewhere. The same argument applied to the RAF but the Navy had a carrier, two cruisers and five escorts in the Far East, which could immediately be committed. The Defence Committee agreed this recommendation.¹ Hence, in spite of some doubts about the relevance of naval power in the nuclear age, the first British contributions to the UN Command in Korea were warships including the light carrier HMS *Triumph*, which launched the war's first carrier air strike. UK naval forces made a substantial contribution to the UNC effort, including four carriers, 30 other warships and 16 Royal Fleet Auxiliaries.² Britain soon added land forces when the Cabinet decided that the political advantages of sending troops outweighed the military disadvantages and

¹ DO (50) 50, Chiefs of Staff, 'Situation in Korea', 5 July 1950, CAB 131/9; DO (50) 12th, 6 July 1950, CAB 131/8

² *Statement of the First Lord of the Admiralty Explanatory of the Naval Estimates 1954-55*, Cmd 9079 (1954), 4. The British carriers were *Triumph*, *Theseus*, *Glory* and *Ocean*, all light carriers, and the maintenance carrier HMS *Unicorn*,

committed a brigade group.³ Some RAF aircraft were sent to the Far East for patrol and transport but none undertook offensive operations. Hence, the British contribution took the form of naval and ground forces; the British air power which fought in Korea was carrier-based.

The role – and limitations – of air power

One lesson from Korea was that strategic air power and nuclear weapons proved neither able to deter all aggression nor appropriate for fighting all wars. In spite of Western nuclear predominance, a Communist attack had occurred, which indicated that more thought needed to be devoted to the effect of nuclear weapons – who would be deterred, from doing what, where? There was never a plausible way to use nuclear weapons in Korea, whatever some might have wished. Even Trenchard acknowledged the limitations of strategic bombing: ‘Events in Korea throw a further light on the atom bomb in the field of defence. They seem to me to show that the atom bomb cannot be relied upon in what I shall call a secondary war’, though it remained ‘immensely important’ in a long war.⁴ He did not pursue this line of thought to consider whether such ‘secondary wars’ might become widespread and how this would affect defence policy.

There were other attempts to devise means of using air power to end the conflict. At its outset, Air Marshal Sir John Slessor (Chief of the Air Staff) argued that if the Americans retreated from the peninsula, alternatives must be considered to the re-invasion of Korea. He suggested that bombing alone ‘as a form of police action’ could force North Korea to withdraw:

For example, the Allies might announce their intention in advance of bombing certain selected towns in North Korea. The inhabitants would be given adequate warning to evacuate and the Allies would then destroy, by precision bombing with High Explosive, one or two of the towns that had been warned – and so on until North Korea agreed to withdraw behind her own frontier. It would appear that there were a considerable number of good industrial targets in North Korea.

which was used as aircraft ferry, supply ship and spare deck to mitigate the effect of the distance to Singapore, the nearest British base.

³ DO (50) 15th, 24 July 1950, CAB 131/8; CM (50) 50th Conclusions, 25 July 1950, CAB 128/18

⁴ House of Lords Official Report, Volume 168, 12 September 1950, c. 958

The UNC 'would bomb everything of value in North Korea – factories, oil refineries etc. – until the order was issued for North Korean troops to withdraw'.⁵ His proposal begged a number of questions both practical, such as where participating aircraft would be based, and political, such as the attitude of Western and neutral public opinion let alone Russian and Chinese reactions.

Other efforts were made to use air power strategically. Farrar-Hockley noted that many US Air Force officers believed that they could win the war while ground forces held the line.⁶ Their attempts to do so included the ambitiously named 'Operation Strangle' aimed at the Communist supply system and the rather more sophisticated 'air pressure strategy' which sought the more cost-effective destruction of such high-value targets as power plants, irrigation dams and factories.⁷ Like the interwar air theorists, they sought to target both the enemy's will and ability to wage war. The problem was that North Korean and Chinese will proved resilient, while there were very few targets within North Korea which when destroyed would materially affect the Communist ability to fight. Contrary to Slessor's assumption, there were few important industrial targets in Korea and the sources of Communist war-making power lay in China and the USSR, off-limits to air attack. Korea became the prototype of nuclear-age limited war, which meant not only that nuclear weapons were unusable but also that geographical restrictions were placed on targets attacked with conventional weapons. Even after overt Chinese entry to the conflict, great care was taken to avoid widening the war further. The Cabinet was concerned that if the UNC attacked targets in Manchuria, Soviet aircraft could retaliate, precipitating a major war.⁸ The result was that UNC aircraft were strictly confined to targets and flight paths within Korea (making attempts to destroy the Yalu river bridges far more difficult).

⁵ COS (50) 112th and 113th, DEFE 4/33

⁶ Farrar-Hockley, A. *The British Part in the Korean War – Volume II: Honourable Discharge* (London, HMSO, 1995), 197-200

⁷ For a detailed account of the air campaign see Futrell, R.F. *The United States Air Force in Korea 1950-53* (Washington, Office of Air Force History, 1983); for more exaggerated views of what was or could have been achieved, see Weyland, O.P. (General, USAF) 'The Air Campaign in Korea' in Stewart, J.T. *Airpower: The Decisive Force in Korea* (Princeton, Van Nostrand, 1957) and Momyer, W.W. (General, USAF) *Airpower in Three Wars* (New York, Arno, 1980)

⁸ CM (50) 78th Conclusions, 29 November 1950, CAB 128/18

Strategic bombing could therefore have a limited impact in this war – though this was not for want of trying. Even a senior RAF officer, Air Vice Marshal Bouchier, reported that his impression confirmed that of many visitors to North Korea, ‘to the effect that although the strategically important railways still seemed to be working, not a mud hut in North Korea was left standing’, and that the Americans seemed to be bombing airfields which were already unserviceable.⁹

Even at the operational and tactical levels, air power fell short of its proponents’ promises. During the initial fighting in 1950, complete air supremacy failed to prevent many South Korean and American units being overrun by the advancing North Koreans. Subsequently, aerial reconnaissance failed to detect the entry into the country of seven Chinese armies (each about the size of a British or US corps) and then in the face of enemy air supremacy, China drove the UNC out of North Korea in just three weeks. Later, air power failed to prevent Communist forces amassing enough supplies for a series of major offensives. Air interdiction did not constitute ‘a vertical envelopment of the enemy as sure and decisive as if an army had been introduced behind him’, as the Commander of Far Eastern Air Force later asserted.¹⁰ Lord Cork and Orrery told the House of Lords that he had recently read a book by Alexander de Seversky, arguing that once command of the air was gained, ‘the Air Force could settle the war’; yet in Korea, even with complete command of the skies, the air forces had failed to hold back the invading army.¹¹ Seversky himself remarked that strategic air power could not be applied in Korea because there were no worthy targets and enemy sources of supply lay outside its borders, so air power could only be used in tactical roles ‘in which it is inevitably inefficient and wasteful.’¹² He was correct regarding the limitations of strategic bombing in this sort of war but his comments about other forms of air power were quite misplaced. The air supremacy enjoyed by the UNC was crucial because it allowed the Pusan bridgehead to be held, hindered the establishment of enemy air bases in Korea and slowed and reduced the scale of Communist offensives, forcing them to

⁹ COS (51) 101st, 22 June 1951, DEFE 4/44

¹⁰ Weyland, 17

¹¹ House of Lords Official Report, Volume 170, 21 February 1951, cc. 511-12

move only at night or in bad weather, or to accept punishing losses from air attack. It permitted a strategy by which the numerically far superior Communist forces could be halted, pushed back and then held at a cost in lives which the states contributing to the UNC were willing to pay. Yet it proved no more capable than in the Second World War of providing quick and easy victory by itself.

There were attempts to dismiss Korea as an exception. This line was taken by Seversky and also in the House of Commons by George Ward, Under Secretary of State for Air:

The vast importance of air power was demonstrated in the last war. Today it is decisive. Do not let us draw false lessons from what is happening in Korea. The United Nations Air Forces there have shown great stopping power. Indeed, without them our ground forces must have been overwhelmed by weight of numbers. But air power has not been deployed in the way that it would inevitably be deployed in a major war; that is, against the whole war-making power of the opponent.¹³

He overlooked the possibility of further wars like Korea in which strategic bombing would be equally inhibited. Interestingly, Slessor recognised the limitations of air power in this sort of war, arguing that other conflicts similar to Korea would require land and sea as well as air power, and that the Chinese army showed it was possible to fight an enemy enjoying air superiority: 'All this is cold comfort for him who hopes that air power will provide some cheap short cut to victory'. Air power could not have been decisive in a limited war such as Korea, he concluded, because 'air power in its fullest sense is an *unlimited* instrument'.¹⁴

The Role of Maritime Power¹⁵

One lesson from Korea was that the enormous utility of air power lay less at the strategic level than at the tactical and operational levels, and even here it was constrained and could not

¹² Seversky, A.P. *Air Power: Key to Survival* (New York, Simon & Schuster, 1950), x

¹³ 497 HC DEB, 18 March 1952, cc. 2108-09

¹⁴ Slessor, J. 'Air Power and World Strategy', *Foreign Affairs*, October 1954, 50-53, 61-63; original emphasis

¹⁵ For general accounts of maritime operations in the war, see Field, J.A. *History of United States Naval Operations in Korea* (Washington, US Government Printing Office, 1962) and Cagle, M.W. & Manson, F.A. *The Sea War in Korea*

provide a substitute for the other armed services. A second significant message was that, contrary to some post-World War II suggestions, a vital role remained for navies. Although static land fighting on a massive scale is not at first glance a propitious scenario for the exercise of sea power, UNC naval supremacy was fundamental to its strategy. Most importantly, and so often overlooked by sea-power sceptics, the vast bulk of personnel, equipment and supplies needed in such a war can only go by sea and requires protection.¹⁶ There was little enemy naval threat. The North Korean Navy possessed approximately 45 small craft including some torpedo boats but these could not seriously threaten UNC naval forces. The North Korean air force was also small and carried out a handful of raids on UNC warships, never inflicting more than light damage. Of more concern was the possible participation of the large Soviet air forces in the region, together with some 80 Chinese and Soviet submarines; the Cabinet noted that 'if the situation deteriorated, the presence of this large number of Soviet submarines in this area might become a serious menace'.¹⁷ Yet concern to keep the conflict geographically limited applied to both sides, so although considerable effort had to be devoted to precautionary patrolling (which according to O'Neill took up 31% of aircraft sorties for HMAS *Sydney* and 37% for HMS *Theseus*) and mines proved to be a considerable problem,¹⁸ the UNC could concentrate on using rather than establishing control of the sea.

Since Korea is a peninsula, naval forces could both deny the enemy use of the sea for transportation and also attack his forces and lines of supply ashore. General MacArthur's staff complained, inaccurately, that the North Koreans were using coastal waters as their main supply route; this was based on the argument that since the Far Eastern Air Force claimed to have knocked

(Annapolis, US Naval Institute, 1957); for the British side, see Grove, E.J. *Vanguard to Trident: British Naval Policy Since World War II* (London, Bodley Head, 1987), 137-150

¹⁶ Six out of seven people who went to Korea did so by sea, and for every ton of freight that went by air, 270 tons (including four tons of aviation fuel) went by sea: Cagle and Manson, 10

¹⁷ CM (50) 46th Conclusions, 17 July 1950, CAB 128/18; see also *Foreign Relations of the United States 1950 Vol. VII* (Washington, US Government Printing Office), 1248.

¹⁸ O'Neill, R.J. *Australia in the Korean War 1950-53 Volume II: Combat Operations* (Canberra, Australian Government Publishing Service, 1985), 472.

out roads and railways, yet supplies were still coming through, they had to be moving by sea.¹⁹ In addition to preventing the enemy from using the sea, naval forces escorted the huge amount of equipment and supplies being shipped into Korea, picked up downed pilots, bombarded targets ashore, cleared mines, and supported amphibious landings, raids and evacuations, which made China constantly concerned about the prospect of further major UNC landings in the rear. After a feint landing to assist ground operations in February 1951, General Ridgeway 'expressed great satisfaction with the naval operations by which his armies' flanks were secured and by which the enemy must be always looking over his shoulder.'²⁰ UNC naval supremacy effectively extended the enemy's frontline along the whole of Korea's coasts.

Naval air power in Korea

The most important direct maritime contribution to the UNC war effort was power projection by naval aviation. Carrier air power was particularly significant early in the conflict because of the small size of the US Far Eastern Air Force and the fact that it was trained for nuclear rather than tactical operations.²¹ Moreover, jets based in Japan were at the edge of their range and could spend only a few minutes over the battlefield. Air bases in Korea were overrun early in the war and were not available in sufficient numbers later on. There were also worries that if the war widened to include large-scale Chinese air attacks, UNC aircraft at overcrowded land bases would be particularly vulnerable.²² After assisting the successful defence of the Pusan bridgehead, carriers provided mobile air power to support the Inchon landing. They subsequently offered the ability to hit targets in the far north of Korea which were beyond the range of UNC aircraft based well to the south, or to provide fighter escorts for B-29 bombers which could reach that far. Naval aircraft even took part in the US Air Force's pride and joy, Operation Strangle and the air pressure strategy.

¹⁹ Farrar-Hockley, A. *The British Part in the Korean War – Volume I: A Distant Obligation* (London, HMSO, 1990), 74-78

²⁰ Andrewes to C-in-C Far East, 8 March 1951, ADM 1/22521

²¹ Yool, W.M. (Air Vice Marshal) 'Air lessons from Korea', *Brassey's Annual* 1951, 401

²² DO (52) 13, Chiefs of Staff, 'Action in the Event of Further Chinese Aggression', 25 April 1952, CAB 131/12

The Royal Navy operated a carrier – relieved by HMAS *Sydney* between September 1951 and January 1952, and at other times by US light or escort carriers – off the west coast of Korea. It could be re-deployed to the east coast according to need, for example, when the US Seventh Fleet periodically moved south to the Taiwan Straits. In total, US carriers flew over 250,000 operational sorties, with 30,000 more from British and Australian carriers, which represented about a third of the total UNC air effort.²³ British carriers launched the first carrier strike of the war and played an important role throughout, hitting airfields, bridges, tunnels, railways, rail marshalling yards, trains, troop concentrations, shipping and even strategic targets and Pyongyang itself. They also covered blockade, escort and mine-clearance forces; served as platforms for US mine-sweeping helicopters; and carried out anti-submarine and fighter patrols, coastal reconnaissance, spotting for bombardment, armed reconnaissance, counter air missions, support for guerrilla and special forces operations and close support of forces ashore.²⁴ One important innovation was the inclusion in carrier air groups of helicopters (initially loaned by the US Navy until British machines were available), especially for rescuing downed pilots. According to the British commander: 'Helicopters have proved their worth again and again in the Korean war and they are a welcome addition to our forces.'²⁵

The British contributions were all light carriers and operated a limited number of aircraft which were older and less capable than the US models. Shortly before the outbreak of war James Callaghan, Parliamentary Secretary to the Admiralty, described HMS *Triumph* as 'one of our most modern post-war aircraft carriers'.²⁶ Yet according to the British official historian, its aircraft were obsolete and the carrier encountered great difficulties in operating them, including a shortage of munitions and bomb racks, poor communications equipment and propeller shaft problems which

²³ Polmar, N. *Aircraft Carriers* (London, Macmillan, 1969), 561

²⁴ For examples of accounts of the operations of British carriers off Korea, see ADM 1/22364, 22368, 23615, 27273, ADM 116/5795

²⁵ Andrewes to C-in-C Far East, 'Final Report', 10 April 1951, ADM 1/22521

²⁶ 472 HC DEB, 22 March 1950, c. 1969

slowed her to 23 knots.²⁷ *Triumph's* replacement, HMS *Theseus*, had been modified and was better equipped, with Sea Fury XI fighters instead of Seafires, and the more modern Firefly V anti-submarine aircraft. Still, she had only one catapult rather than the desired two, 'she was overcrowded, her aircraft ammunition stowage was limited, and the aircraft lacked Very High Frequency (VHF) radios in common use among the United States Navy, Marines and Air Force aircraft and controllers.'²⁸ The effect of the limited performance of British naval aircraft was mitigated in practice by either sending them against less distant targets than those attacked by American aircraft, or by having Royal Navy aircraft provide air and anti-submarine cover for the whole force, thus freeing more US aircraft for strike missions.

The obsolescence of the carrier fighters was a source of great anxiety for the Admiralty. Serious concern followed the unexpected entrance into the war of the Soviet MiG-15 jet fighter, flown mainly by Chinese pilots, which outclassed any UNC fighter until the US deployed F-86 Sabres. The MiG-15 was far superior in performance to Royal Navy fighters, especially by virtue of its considerably greater speed, though its pilots' training and tactics were held to be poor. There were six encounters involving aircraft from HMS *Ocean* during September 1952, in four of which the British aircraft were outnumbered two or three to one. The outcome was one enemy aircraft shot down and four damaged, and four British aircraft damaged, of which two landed at airfields and the other two returned to the carrier, with no British aircrew casualties.²⁹

Still greater alarm surrounded the possible vulnerability of British carriers to attack by enemy jet aircraft. In late 1951, Captain K.A. Short (Director of Naval Air Organisation and Training) and Captain A.S. Bolt (DAW) stated baldly that: 'It is not a proper operation of war to deploy a single Carrier of any Class against a large air threat from superior aircraft.' They noted that sinking a

²⁷ Farrar-Hockley, *Volume I*, 61-62, 379; Sturtivant, R. *British Naval Aviation: The Fleet Air Arm, 1917-1990* (London, Arms and Armour, 1990), 165-66

²⁸ *Ibid.*, 379

British carrier would be a huge propaganda coup for the enemy and warned that if the air threat should increase – for example, if the enemy deployed jet bombers – the British carrier might have to be either withdrawn or re-deployed to the east coast to take advantage of US Navy jet fighter cover.³⁰ The following year, their fear came true. In December 1952 the Joint Intelligence Committee estimated that in addition to MiG-15 fighters, two regiments of Il-28 jet bombers had reached Korea.³¹ Concern was expressed that the British carriers were unable to deploy modern fighters capable of countering them and British ships lacked fire control systems suitable for engaging fast aircraft. Vice-Admiral William Andrewes, commander of the British naval force, believed that most enemy air power would be used against land targets rather than ships, while if it were to be directed against the latter it would be against those closer in-shore rather than carriers. However, Captain D.E. Holland-Martin (Director of Plans) warned that carriers without adequate fighter protection would be tempting targets, particularly since enemy aircraft operating over land would have to face US jets. Although the offensive operations being conducted were militarily useful and provided valuable experience, they were not ‘of such decisive importance as to justify the risk to the carrier operating alone with its obsolete fighters in the face of the new threat’.³² Bolt identified problems in the aircraft programme, predicting that the naval jet fighter would not even be available in 1954 unless it was made a super priority like the RAF fighter and tactical and strategic bombers. He stated that ‘we cannot continue to participate indefinitely in the “hot” war in Korea while enduring only a peace time priority for keeping our air equipment a match for the enemy’.³³

Although the carriers remained, the debate shows the concern surrounding the air threat – the Admiralty certainly could no longer be accused of neglecting aerial opposition. The problem was not that carriers were incapable of operating within range of enemy land-based air power as the interwar

²⁹ ADM 1/23260

³⁰ DAOT and DAW, 14 December 1951, ADM 1/24068

³¹ JIC (52) 61, quoted in ADM 1/24068

³² Director of Plans, 24 December 1952, ADM 1/24068

³³ DAW, 29 December 1952, ADM 1/24068

air theorists and their later apostles claimed. Rather, they could not operate against *superior* land-based air power. Facing such a threat, alternatives included withdrawing the carrier, depending on land-based air cover (which the Admiralty rejected because of its uncertain availability and reliability), or providing adequate aircraft. Such shortcomings were not due to any inherent superiority of land-based air power but were rather the result of specific policy decisions which had left the Navy inadequately equipped for certain tasks. RAF aircraft projects had received far higher priority than those of naval aviation. Lord Winster drew attention to the difference between the Service programmes, pointing out that 'while the R.A.F. apparently get three types of heavy bomber, the Navy is fighting in Korea with World War II type piston aircraft'.³⁴

The conflict offered lessons regarding the role of sea power, which according to the British official historian made a contribution which was 'successful beyond all expectations, and at very little cost'.³⁵ Crowe judges that the Royal Navy 'played a prominent part in the naval activities of that war and acquitted itself with distinction'. Grove concurs: 'It had been a major British naval war, a fact all too often forgotten in later years.' Nevertheless, both note that the conflict revealed shortcomings in British naval aviation, Grove commenting that it performed well in spite of its aircraft and Crowe pointing to the lack of jet aircraft and the inattention to the carriers' role in support of land operations.³⁶ Such deficiencies could be remedied; more important was the basic lesson that strategic air power and nuclear weapons would not be the appropriate responses to every problem. The assumption that wars would necessarily be total was refuted, as the Korean War remained limited. In Seversky's opinion: 'Obviously the conduct of a limited, localised battle in an unindustrialised little country is irrelevant to a full-scale world war.'³⁷ His observation was accurate but if total war became unlikely, Korea would take on considerable relevance for the more probable limited conflicts.

³⁴ House of Lords Official Report, Volume 182, 13 May 1953, c. 475

³⁵ Farrar-Hockley, *Volume II*, 296

³⁶ Crowe, W. J. *The Policy Roots of the Modern Royal Navy, 1946-63* (Ph.D. thesis, Princeton University, 1965), 128-30; Grove, 149-50

³⁷ Seversky, xvii

The war showed that there could be a need to fight limited wars outside Europe and that carriers could operate air power where land-based aircraft could not reach or were inadequate. The utility of such a capability would be demonstrated repeatedly in the years to come. Yet the conflict also drew attention to the parlous state to which the Royal Navy and its aviation arm had been reduced by post-war financial stringency and the resulting postponement of modernisation.

Rearmament

The outbreak of the Korean War shook the comfortable assumptions that war was unlikely before 1957 and would in any case be preceded by ample warning time. It appeared to show that, regardless of the supposed deterrent effect of American strategic air power, the Communist bloc was prepared to resort to direct military attack in addition to intimidation and subversion. General war suddenly seemed far more likely and the Defence Committee reluctantly noted that although plans assumed 18 months warning of war, Korea suggested that there could be little or no notice: 'In these circumstances, the peace-time forces maintained by the United Kingdom were hardly more than bluff.' Accordingly, in September 1950, Attlee announced significantly increased expenditure in order to deter war and in December, Hugh Gaitskell, the Chancellor, agreed to a further increase in the defence budget of more than a third.³⁸ Korea changed the perceived likelihood of hostilities but the type of war envisaged and the capabilities upon which rearmament concentrated were much the same as before. It might seem paradoxical that preparations for a total war centring on Europe were accelerated by a distant regional conflict which was limited politically, geographically and in the weapons used. In fact, the limited nature of the Korean War was seen as exceptional and the focus of planning continued to be a general war with the USSR which would involve nuclear weapons. Rearmament therefore concentrated on global war tasks and it was some years before limited war

³⁸ DO (50) 12th, 6 July 1950, CAB 131/8; 478 HC DEB, 12 September 1950, cc. 951-52; DO (50) 23rd, 21 December 1950, CAB 131/8. See also Shinwell, E. *Conflict without Malice: An Autobiography* (London, Odhams, 1955), 213-18

increased in prominence, even though the UK was simultaneously fulfilling cold and limited war commitments in Malaya, Hong Kong, the Middle East and soon Kenya and Cyprus.

The Chiefs of Staff defined the Navy's roles as protecting sea communications in the North Atlantic and Mediterranean (against which the 'major threat comes from submarines, mines and aircraft, but surface raiders cannot be entirely discounted'), transporting forces overseas, denying the use of the sea to the enemy, providing 'seaborne tactical air support when shore based air support is not available or adequate', and assisting the RAF with the strategic air offensive if required. The state of the Fleet was 'broadly similar to that existing in 1945. No new types of ship or weapon has been put into service since that date', although the Russian Fleet had recently gained five heavy cruisers and many destroyers and submarines. The report also noted that no fleet carrier would have completed modernisation by 1951, leaving only one carrier capable of operating modern aircraft. Interestingly, it stated that battleships had not been mentioned in the list of shortcomings 'as it is not at present planned to modernise them.' The Chiefs concluded that capabilities to meet the submarine, air and mine threats were inadequate and Emanuel Shinwell, Minister of Defence, accepted a programme concentrating upon mine counter-measures, naval aviation, naval stores and modernisation of ships (especially anti-submarine).³⁹ This list of deficiencies stressed small ships and the less 'glamorous' capabilities, showing none of the residual Mahanian pretensions of which the Admiralty was so often accused.

While the rearmament programme pursued existing plans, Air Ministry sniping at the Navy continued behind the scenes. While the intensity of its criticism was far less than it would be within a few years, attacks on naval plans concerning heavy carriers, battleships and even escorts began. From the start of rearmament, the Air Ministry criticised the Navy programme, arguing that money should be diverted from it to the RAF. One July 1950 memorandum questioned the need for a

³⁹ DO (50) 58, Chiefs of Staff, 'Ability of the Armed Forces to Meet an Emergency', 21 July 1950, CAB 131/9, Annex I: Royal Navy; DO (50) 56, Minister of Defence, 'National Defence', 21 July 1950, CAB 131/9

battleship and 18 cruisers 'presumably as a defence against surface raiders' and argued that the Admiralty programme should be revised, cutting large surface ships and carriers to fund more air defence squadrons. It also questioned the smaller ships on which the Admiralty programme concentrated: *'It cannot be sound policy to continue to over-insure on the sea against the menace of the submarine and to under-insure in the air against the menace of the atom bomb.'*⁴⁰ One brief stated that no cuts should hit the RAF:

The first blow should fall on the Navy's ship programme, on the general ground that Allied resources of surface vessels in relation to Soviet potentialities are less inadequate than in any other branch of the Armed Forces. The Navy already have the number of ships they require; but considerable savings could be made in their programme for modernising them, especially cruisers and fleet carriers.⁴¹

This brief contrasts with Slessor's comments quoted in the previous chapter about desiring greater numbers of anti-submarine vessels. Shinwell had some sympathy for the Air Ministry line and in October 1950 questioned the number of aircraft carriers, submarines and frigates in the Admiralty programme.⁴² The Navy survived this squall and the plans that were implemented included bringing forward some of the carriers that were under construction and increasing the front-line strength of naval aviation from 150 to 230 (compared to 180 in existing plans) by the end of 1952, in addition to completing new destroyers, frigates and minesweepers.⁴³ The programme eventually led to much needed improvements in aircraft; the re-equipment of carrier air groups with jet aircraft was hastened and trials were announced of helicopters for anti-submarine warfare.⁴⁴

British policy still strongly emphasised deterrence. As Attlee put it: 'The assumption was not that war was inevitable, but rather that, by a sufficient display of preparedness, war could be

⁴⁰ PUS to Secretary of State for Air, 19 July 1950, DEFE 7/594; original emphasis

⁴¹ Brief for COS Meeting 5 October 1950, AIR 8/1612

⁴² COS (50) 167th, 11 October 1950, DEFE 4/36

⁴³ CP (51) 16, Chiefs of Staff, 'Defence Programmes 1951-54', 12 January 1951, CAB 129/44

⁴⁴ *Statement of the First Lord of the Admiralty Explanatory of the Naval Estimates 1951-52*, Cmd 8160 (1951), 7-8

prevented.’⁴⁵ The Cabinet was told that the naval programme was directed mainly against submarines, while Viscount Hall, the First Lord, emphasised the threat of mine warfare, for which the Soviet Navy was powerfully equipped. The 1951 Admiralty statement confirmed that: ‘The whole programme is directed towards the underwater menace.’⁴⁶ Yet many in Parliament remained unconvinced that there was a serious threat or indeed any role for the Navy. In the 1951 Navy debate, J.P.L. Thomas (who became First Lord later in the year) felt it necessary to rebut those who ‘believe mistakenly that, in the light of our commitments on the Continent and in the light of the development of air warfare, the Navy should take third place in our defence considerations’. On the contrary, he argued, the larger and the more mechanised the British contribution on the continent, and the heavier and faster British bombers and fighters, the more they depended on the Navy for supplies and fuel, and ‘the more violent must we expect the attack to be on our sea lines of communication.’⁴⁷ This was in response to widespread scepticism about the need for the Navy. F.W. Mulley argued that ‘we must devote an increasing proportion of our defence resources to the Army and to the Air Force, and, in fact, become primarily a land and air Power and no longer chiefly a naval Power.’ Other MPs played down the Russian submarine threat, doubting estimates of numbers of modern Soviet boats and claiming that countering submarines was easier than it had been in the First World War. R.F.B. Bennett, a former Surgeon Lieutenant-Commander, suggested that long-range aircraft were far more effective, economical and mobile than carrier aircraft; the former could shoot down reconnaissance aircraft approaching a convoy – ‘provided that they get there in time’ (quite a reservation!).⁴⁸ Other Members were more sympathetic to the Navy, arguing that it needed cruisers to counter enemy surface raiders, which long-range aircraft could not do everywhere or at night, and noting out that even counting only modern, long-range submarines the USSR had a force about the size of

⁴⁵ DO (51) 1st, 23 January 1951, CAB 131/10

⁴⁶ CM (51) 7th Conclusions, 25 January 1951, CAB 128/19; House of Lords Official Report, Volume 171, 11 April 1951, c. 278; *Cmd 8160*, 5

⁴⁷ 485 HC DEB, 12 March 1951, cc. 1106-07

⁴⁸ *Ibid.*, cc. 1118-25, 1185-96

Germany's at the start of the war – and this at a time when the number of British escorts was below even the inadequate pre-war figure.⁴⁹

Although the debate took place during the Korean War, speakers focused on total war rather than limited wars. There were exceptions to this, for example, Lord Strabolgi argued that a solely anti-submarine fleet would not support Britain's worldwide role, which required cruisers with their long endurance.⁵⁰ Still, the contemporary British defence debate generally concentrated on general war. In such a conflict, the Navy seemed to be facing a growing threat. In September 1950, the Joint Intelligence Committee estimated that the Soviet Air Force had 18,560 aircraft, including a naval air force of 2980 (a figure which had risen to 3045 in the March 1951 estimate), and a Navy including one monitor, 17 cruisers, 133 destroyers, 181 ocean-going submarines and 130 coastal submarines. Soviet production was thought to be around 685 aircraft per month and 50 submarines per year.⁵¹

Nuclear weapons continued to wax in planners' concerns but assessing how they might be appropriately used continued to be difficult, as one interesting debate illustrates. In the first half of 1951, it was feared that Yugoslavia's Soviet satellite neighbours might be about to invade their recalcitrant former ally. British defence officials examined how Yugoslavia could be assisted. The Joint Planning Staff concluded that air support would allow it to resist almost indefinitely, though it would risk global war if Russia should intervene. It noted that since Russia would be supplying war materiel, any strategic attacks would have to be against communications, yet their under-developed state in the satellites meant that nuclear strikes upon them would be uneconomical. Hence the main use of nuclear weapons 'would probably be to achieve strategic/political ends by knocking out centres of population after due warning, trying thus to persuade the Satellites to withdraw.'⁵² The Air

⁴⁹ Ibid., cc. 1153-54, 1163-64, 1214-19

⁵⁰ House of Lords Official Report, Volume 171, 11 April 1951, cc. 263-64

⁵¹ DO (50) 101, 'Military and Economic Strength of the Soviet Union, JIC (50) 83 (Final)', 18 September 1950, CAB 131/9; DO (51) 50, 'Military and Economic Strength of the Soviet Union, JIC (51) 26 (Final)', 15 March 1951, CAB 131/11

⁵² JP (51) 11 (Final), 'Action in the Event of an Attack on Yugoslavia', 26 February 1951, DEFE 6/16

Ministry took a similar line. Tactical air support was impractical because of the vulnerability of bases in Yugoslavia and the distance from bases in Italy and Greece. Strategic bombing of oil installations and communications centres in Rumania, Hungary and Bulgaria would be the best option but the tonnage of high explosive needed 'would probably be beyond the realms of practicability unless combined with an atomic attack'. Indeed, the:

full effects of the air offensive could be achieved more rapidly if atomic bomb attacks were to be made on the important communications centres of BUDAPEST, the port of CONSTANTIA and the oil targets centred around PLOESTI.⁵³

Such ideas demonstrate the implausibility of using nuclear weapons in a limited war or in Europe.

The Air Ministry report was surprisingly generous regarding the contribution of naval aviation. Having accepted that NATO airfields were too distant and local ones too vulnerable to air attack or to being overrun by land forces, it stated that carrier aircraft:

offer a most useful potential, and they have the great advantage of not being tied to distant airfields; they also eliminate the problem of logistic support during the periods when carriers can be in action. Korea has indicated the valuable support which can be given by carrier born [sic] aircraft in the special condition of this campaign.

Carriers in the Adriatic could be of 'considerable assistance' especially if their aircraft refuelled at Yugoslav airfields to increase their range. Even after these airfields were lost, carrier aircraft would be able to penetrate more deeply than aircraft operating from Italy. Moreover, the submarine and mining threats in the Adriatic were unlikely to be serious and carriers would probably be able to protect themselves against the air threat unless the war escalated.⁵⁴ The Air Ministry line on carrier aviation would soon alter as it came to be perceived as a threat to the strategic bomber force. This paper also illustrated how the roles of British naval aviation were developing.

⁵³ COS (51) 222 (Revise), Air Ministry, 'Appreciation of the Problems of Affording Air Support to Yugoslavia', 21 May 1951, DEFE 5/30

⁵⁴ Ibid.

The evolving role of Naval Aviation

The Royal Navy was still primarily oriented towards the defence of shipping against submarine and air attack. The previous chapter explained the genesis of the Maritime Air Defence Committee, which included equal numbers of Admiralty and Air Ministry representatives and was chaired by Lieutenant-General Sir Gerald Templer. Its final report in 1950 vindicated both carrier-based aviation and the continuing importance of defending sea communications. It stated that anti-submarine air cover should normally be provided by shore-based aircraft out to 550 miles from air bases while beyond that it should be provided by carrier aircraft. Air defence against reconnaissance aircraft should also be carrier-based beyond about 80 miles of shore because of the speed of response required. Some strike aircraft would be needed against the surface threat in the Atlantic. In the Mediterranean, anti-submarine cover should be from shore bases but defence against air attack should be from carriers backed by radar pickets and early warning aircraft. While the initial cost of carriers was 'considerably more' than shore-based aircraft, thereafter there was little between them, while operationally it was more practical to operate defences from carriers than 'from comparatively remote shore bases'.⁵⁵ Thus, on operational and cost-effectiveness grounds, the claims of naval aviation over shore-based aircraft in the defence of sea communications received powerful backing.

A 1951 report by the joint-service Sea/Air Warfare Committee offers a further insight into air defence. It stressed that the first requirement was to frustrate enemy air reconnaissance: 'In ocean warfare only carrier-borne fighters can do this'. Neither ground-based nor ship-borne radars could provide sufficient warning of low-flying reconnaissance or attack aircraft to permit deck or ground-launched interception, while the alternative of continuous combat air patrol would require too many

⁵⁵ MA (50) 50 (Final), Report of the Maritime Air Defence Committee, 23 October 1950, DEFE 8/23. See also other papers in the same file, particularly MA (50) 10 (Revise), 'Scale and Nature of Threat to Our Sea Lines of Communication', 18 August 1950; MA (50) 6 (2nd Revise), 'Technical and Tactical Trends in Maritime Warfare', 31 August 1950; and MA (50) 18 (3rd Revision), 'Scale of Effort Required to Secure our Sea Lines of Communication', 4 October 1950

fighters. Early warning aircraft or radar pickets were needed, as well as Air Direction frigates. Around the UK, coastal shipping could be protected by shore-based aircraft but concluded that in the Mediterranean this would apply only at terminal points. En route, convoys should be protected by carrier fighters because reliance on shore-based aircraft would require a large number of airfields and aircraft in North Africa, while the need to remain within their range would still restrict the routes that convoys could take and thus make them easier for the enemy to locate.⁵⁶

Although there were debates over how best to protect shipping, this task remained the Navy's first priority. The continuing emphasis of the defence of sea communications has attracted criticism. Crowe accepted that Korea provided leverage for the Admiralty to reverse the post-1945 neglect of the Fleet, yet he suggested that the war did little to advance Admiralty thinking and its focus remained large, escorted convoys, which failed to take account of nuclear weapons. Hence, 'the trend inspired by the Russian naval threat served to tie the Admiralty to its traditional strategy which was due to become increasingly irrelevant in the coming years.' He also criticised the lack of jet aircraft and inattention to the carriers' role in support of land operations, which he described as 'one of the most glaring voids in the Admiralty's planning'.⁵⁷ Other authors, however, have identified a change in the Royal Navy's concerns during these years. Mats Berdal, for example, perceived 'a shift in British naval doctrine away from a concept of carrier operations primarily geared towards the direct defence of shipping'.⁵⁸ Furthermore, the Air Ministry and other habitual critics were always ready to accuse the Navy of seeking a 'glamorous' strike role at the expense of the more prosaic tasks of escorting shipping, which if true contradicts Crowe's criticism. So, did the Royal Navy abandon the direct defence of shipping and shift towards power projection as the role of naval aviation?

⁵⁶ COS (51) 62, Sea/Air Warfare Committee, 'Fighter Defence of Convoys', 9 February 1951, DEFE 5/27. The Admiralty noted elsewhere that Scandinavian convoys would also come under air attack, and without carrier-borne aircraft they would lack air cover for 300 miles, or 36 hours steaming: ADM 1/22934, August 1951. See also C-in-C Mediterranean to Admiralty, 16 August 1951, ADM 1/22776.

⁵⁷ Crowe, 123-24, 128-30

⁵⁸ Berdal, M. *The United States, Norway and the Cold War, 1954-1960* (London, Macmillan, 1997), 88

The US was more inclined than Britain to emphasise the use of carrier aircraft against land targets. This was not, as Crowe would see it, the result of a superior American understanding of maritime power. There were good reasons for greater British concentration on defending sea communications rather than projecting power ashore. First, it reflected differing war experience. While both states had been involved in all theatres and all naval roles, Britain's experience was dominated by the Atlantic and the protection of shipping, while the US effort was more weighted to the Pacific and power projection ashore. Secondly, meeting the growing threat to British sea communications was bound to be a major preoccupation, while the more distant and self-sufficient US had the luxury of using naval power to influence the campaign ashore (which the Royal Navy planned to do only after several months of wartime expansion). Finally, the disparity in the resources which each devoted to naval aviation was enormous and sufficient to ensure that the American focus on projecting power ashore was unrealistic for the Royal Navy, as experience in Korea emphasised. There was a genuine divergence in the tasks of the two navies but it should not be exaggerated. Although Britain continued to concentrate primarily on defending sea communications, the prominence of the strike role in the Royal Navy did increase between 1950 and 1952.

Korea was widely interpreted as exceptional, in that defence policy was still primarily oriented towards total war. Nevertheless, it provided an impetus for a greater emphasis within the Royal Navy on power projection. The war showed the value of carriers in attacking land targets, and particularly the advantages conferred by their flexibility and mobility. A memorandum by Rear Admiral Edwards (ACNS) argued that the core of the Navy should be the offensive Task Force, which was 'the Successor to the Battle Fleet' and offered the flexibility to fight a convoy through and then switch to support the Army. Although it had seemed as if the Navy might lose its strike aircraft the situation was now more auspicious: 'It may well be with the probable opening of the purse strings, the concept of an offensive carrier task force might well be revived.'⁵⁹ Admiralty plans were

⁵⁹ ACNS to First Sea Lord, 4 August 1950, ADM 205/74

that during the two-year first phase of a war, the only role of naval aviation would be trade protection; supporting the Army would only come in Phase II, so it was a low priority but kept alive.⁶⁰

The Royal Navy's tack towards a more favourable view of the strike role is indicated by major national and NATO exercises. The fleet carrier HMS *Indomitable* and the light carrier HMS *Theseus* took part in some in the Mediterranean in early 1952. 'Grand Slam' exercised convoy escort, defence against air and submarine attack and carrier strikes against targets in North Africa defended by land-based aircraft. The following month Exercise 'No Side' included mock air strikes on Malta, again defended by land-based aircraft.⁶¹ The Home Fleet participated in the famous 'Exercise Mainbrace' of 13-23 September 1952, which tested alliance land, air and naval forces in the defence of NATO's northern flank. The central part was played by the Striking Fleet, operating for the first time, with four US and two British fleet carriers (HMS *Eagle* and *Illustrious*), HMS *Vanguard* and a US battleship. Three light carriers (HMS *Theseus*, one Canadian and one US ship) formed an anti-submarine group, while another US light carrier operated with a Hunter Killer force and a British one with the Logistical Support Force. Although hindered by poor weather, the Striking Fleet fought its way through submarines, 'sank' a cruiser playing a surface raider, protected convoys (together with land-based aircraft) and supported amphibious landings and NATO forces ashore.⁶² British participation suggests the increasing importance attached to the strike role, yet it would be wrong to conclude that Admiralty opinion was becoming identical to that of the US Navy.

Two Royal Navy Lieutenant Commanders, who were on USS *Midway* during Mainbrace, expressed concern about the American approach. They felt that the US Navy based plans too heavily on Pacific War experience, making no allowance for the different conditions in the North Atlantic, notably the weather (which often made flying impossible) and the submarine threat (which 'was

⁶⁰ DAOT, January 1952. ADM 1/22667

⁶¹ For details see ADM 1/23623 and ADM 1/23560

almost completely ignored' but would inflict heavy losses on US carriers). They criticised the American failure to make use of shore-based early warning and reconnaissance aircraft and concluded:

the United States Navy knows only one way of operating a Carrier Task Force, the Pacific way. This might work in Northern European waters in wartime with heavy submarine threat. It certainly did not work in Mainbrace, but nothing short of a shooting war will force the Americans to change their methods.⁶³

Other reservations were expressed about Mainbrace and the concept of operations it tested. Slessor insisted that it was impossible to draw major lessons from a single peacetime exercise, yet added that its attempt to support NATO's northern flank had failed. He emphasised that the weather had forced the cancellation of most planned aircraft sorties and stressed the effectiveness of land-based aircraft attacks on the Fleet:

It is not questioned that air support from carriers can sometimes be effective. But it is highly dangerous to base any lessons on KOREAN experience, where there is no air opposition, no submarines and virtually no mines. The North Sea in a war with Russia will be completely different. It will also be very different from PACIFIC experience.⁶⁴

The Chiefs of Staff noted that modern weapons made it even more important to keep submarines away from convoys, and that more submarines would have to be sunk than could be achieved near convoys. This increased the importance of attacking submarines at source and in transit areas. Yet, regarding the large US carrier force, the point was made that:

A very large proportion of this latter figure was allotted for attack at source, which in the last war in fact only started to pay good dividends at quite a late stage. It might be worth suggesting to the United States that a greater proportion should in fact be allotted for Anti Submarine Warfare.⁶⁵

⁶² See description by First Lord, 505 HC DEB, 15 October 1952, Written Answers, cc. 23-24; Horan, H.E. (Rear Admiral) 'International maritime exercises of 1952', *Brassey's Annual* 1953

⁶³ 'Report on Experience in Exercise Mainbrace', November 1952, ADM 1/23452

⁶⁴ COS (52) 164th, 2 December 1952, DEFE 4/58. His thoughts on Mainbrace can also be found in his letters to General W. Barton Leach, Office of Chief of Staff of the USAF, 1 October 1952 and 3 November 1952, AIR 75/17

⁶⁵ COS (51) 54th, 28 March 1951, DEFE 4/41

Although the British Chiefs of Staff accepted forward operations and attack at source, they were not convinced that the Americans had struck quite the right balance between these and closer support of shipping. They were still less happy about the attention devoted by the US to using carriers in support of land forces (as opposed to attacking targets related to the defence of sea communications).

Both SACLANT and SACEUR placed great reliance on carrier support in the European land battle. The Joint Planning Staff examined General Eisenhower's plan to use carriers early in a war to assist in flank defence, both indirectly (by drawing off enemy air power) and directly. Its report concluded that: 'Although naval/air task forces could not be relied upon to undertake prolonged operations they could provide strong air support to the flanks of Western Europe for limited periods', offering 'temporary local air parity and possibly superiority'. Some criticisms reflected the Royal Navy's opinion about US plans, drawing attention to the danger from air and submarine attack and the problems caused by weather. The report also warned that devoting carriers to SACEUR could jeopardise the defence of shipping:

It must be remembered that the defence of sea communications in the Atlantic is vital to the defence of Western Europe. The safe and timely arrival of the Allied convoys would have a more permanent effect on the land battle than the temporary application of sea and air power to a selected area.⁶⁶

In considering the report, the Chiefs of Staff suggested that such ideas were 'based on, or at least greatly influenced by, the use being made of Carrier Task Forces in the Korean war', but this was a misleading analogy 'in view of the entirely different situation which would obtain in respect of air, surface and underwater opposition'.⁶⁷

There was less enthusiasm in the Royal Navy than among the Americans for using carriers to support land forces. An Admiralty paper of November 1951 examined the ability of Royal Navy

⁶⁶ JP (51) 29 (Final), 'Defence of the Flanks of the Western European Campaign', 7 March 1951, DEFE 4/41

⁶⁷ COS (51) 48th, 14 March 1951, DEFE 4/41; COS (51) 81st, 16 May 1951, DEFE 4/42

carriers to support land forces in Europe. It concluded that once domination was achieved at sea, carriers could provide 240 offensive sorties per day, with fighter-bombers for close support and strike aircraft for use against targets such as coastal shipping, harbours and bridges behind enemy lines. The report drew attention to the advantages of mobile carriers in support of advancing or retreating land forces, particularly where there was a shortage of airfields. However, it stressed that the first object of naval forces was to maintain sea communications, which would be achieved by attacking enemy forces, their shore bases and installations; such activity would have an indirectly beneficial effect on land operations, drawing off enemy air power, but early in the war there would be little direct support because the carrier force would be concentrating on its primary task.⁶⁸ British concerns were brought up in a meeting with Admiral Fechteler, SACLANT. Slessor argued that carrier striking forces could usefully make nuclear attacks on submarine bases but would be of less use in a land battle. Fechteler agreed that it might be more important for carriers to attack submarine bases to protect Atlantic sea communications: 'If these lines of communication were lost, SACEUR would also be lost.' Yet he felt that it would be necessary to attack targets around Kola in spite of the dangers and the mere presence of the carriers would draw pressure away from SACEUR.⁶⁹

Doubts about US policy were reflected in concern that American carriers in the Mediterranean might be monopolised by SACEUR at the expense of the campaign to secure sea communications. In April 1952, a SHAPE exercise took place which included naval forces in the Mediterranean supporting the land/air battle in Southern Europe. Lord Mountbatten, Commander-in-Chief Mediterranean (and a future First Sea Lord) took this opportunity to emphasise that the US carriers should not be tied down in support of land forces, which could involve their re-deployment as far west as the French Mediterranean coast or even the Bay of Biscay. While they might be available to provide some support for SACEUR, and their contribution to the general air battle would greatly

⁶⁸ Director of Plans, 'Support of Land Forces by a British Fast Aircraft Carrier Task Force', 28 November 1951. ADM 1/22672

⁶⁹ COS (51) 177th, 5 November 1951, DEFE 4/48

assist him, their essential purpose was to establish the air superiority necessary to keep open Mediterranean sea communications. The US carriers would be needed to prevent the USSR establishing naval air bases on the littoral, since the Royal Navy alone could not do so.⁷⁰

The US Navy attached greater priority than the Royal Navy to supporting land forces. The latter was seen by the Admiralty as one role for carriers but in a major war, their primary objective would be targets connected to the naval campaign. More extensive and ambitious projection of naval air power ashore would have to await victory in the struggle to control the sea.

New aircraft

The Korean War revealed the shortcomings of British naval aircraft. Lord Pakenham, a former First Lord, asserted that naval aviation 'represents the main striking force of the Fleet', and yet: 'Few of us would claim ... that our naval airmen have hitherto had aircraft fully worthy of them', though this was slowly being remedied.⁷¹ Exercises reinforced this message. Admiral Creasy, Commander-in-Chief Home Fleet, expressed concern about carriers and their aircraft in the light of experience provided by Mainbrace, which 'exposed the limitations of existing naval aviation'. He even suggested withdrawing British carriers from the Striking Fleet.⁷² Admiralty opinion favoured remaining with it because of the experience being gained, a desire that the Americans should see the improvement in British efficiency with new aircraft, and the fact that the carriers would be safer among the more advanced US aircraft!⁷³ In reply to Creasy's letter the Admiralty acknowledged aircraft limitations but emphasised that in Mainbrace the carriers had been operating under great difficulties, being only partly worked up, having less than full complements of aircraft, operating newly formed squadrons or receiving them only shortly before the exercise – indeed, one note

⁷⁰ ADM 1/22672

⁷¹ House of Lords Official Report, Volume 175, 27 March 1952, cc. 1046-47

⁷² C-in-C Home to Admiralty, 5 November 1952, ADM 1/24518

⁷³ Director of Plans, 19 November 1952; DAOT, 4 December 1952, both in ADM 1/24518

described them as 'a scratch lot'. Therefore the experience of the exercise 'although of great value, must be treated with caution'.⁷⁴

The effectiveness of a carrier depends primarily on the capability of its embarked aircraft. New naval aircraft were being developed but had been much delayed due to the lower priority attached to them than to RAF programmes. Nevertheless, between 1951 and 1953 the Sea Fury day fighter (which had itself replaced the Seafire) was replaced by the Attacker jet fighter, as a temporary solution until the Sea Hawk jet emerged. The Sea Hornet all-weather and night fighter was on the verge of being replaced by the Sea Venom. Later versions of the anti-submarine Firefly became available for use until they could be replaced by the Avenger or the Gannet. The Firebrand strike aircraft was replaced by the Wyvern. Aircraft for new purposes began to enter service, including the American-made Skyraider early-warning aircraft and the first helicopters.⁷⁵ An Air Staff paper explained that experience in the Far East and elsewhere, various experiments and a mail service in Los Angeles suggested that helicopters could be 'of the utmost value'. Their ability to ascend and descend vertically, to use small or restricted areas for take-off and landing, to fly slowly and hover meant that they could do some things which were previously impossible and others more efficiently and cheaply. Their main limitation was relatively low speed. The paper recalled that 'the Navy was the first to appreciate the need for helicopters', having long recognised their value for anti-submarine warfare and search and rescue. They could also be used for spotting for warship bombardment, mine location, communication, replenishment at sea and landing troops in amphibious operations. The paper noted that whereas before the Korean War the US Navy had ordered 105 helicopters, afterwards this figure rose to 2085 (including 25 with 'dipping sonar').⁷⁶

⁷⁴ Admiralty to C-in-C Home, 23 February 1953, ADM 1/24518

⁷⁵ See statement by First Lord, 497 HC DEB, 6 March 1952, cc. 675-76

⁷⁶ COS (52) 313, Deputy CAS, 'Employment of Rotary Wing Aircraft by the Three services', 16 June 1952, DEFE 5/40

These new aircraft amounted to a significant and welcome step forward for British naval aviation, yet this was no time for resting on laurels. The Admiralty was aware that the new fighters coming into service would themselves soon need to be replaced, since they would be out-performed by the MiG-15 and were only just capable of matching the Il-28 light bomber and Type 35 jet bomber. In other words, from their first deployment, the Navy's long awaited new fighters would offer an insufficient margin to protect shipping against unescorted bombers and no defence at all against escorted bombers.⁷⁷ The need for the Sea Venom and the planned N113 (which became the Scimitar) was therefore urgent.

A new strike aircraft was also needed, though this was more controversial. It was generally accepted that the Navy needed modern fighters but its strike capability was a perennial target for Air Ministry and Treasury. The principal argument for the new aircraft – the NA39, which became the Blackburn Buccaneer – was the growing surface threat. From around 1950, the USSR began to launch *Sverdlov*-class cruisers, which posed a clear threat to shipping. They could in theory be countered by battleships or cruisers but the old age and poor state of these vessels made reliance on naval aviation more attractive. However, as an Admiralty paper of November 1952 recognised, naval aircraft and their weapons were inadequate.⁷⁸ The *Sverdlovs* required a faster, longer-range aircraft capable of carrying larger and more advanced weapons, including nuclear bombs. As it became clear that small nuclear weapons were feasible, the Admiralty secured agreement that its aircraft should be able to use them against warships or naval targets ashore. In April 1952 a working party agreed that both RAF fighters and naval aircraft should be capable of carrying either of the two priority nuclear weapons (a penetrating bomb and an air-burst bomb) and noted that the Admiralty and Air Ministry had jointly agreed the weapons' maximum dimensions.⁷⁹ Land-attack was an additional argument for a new strike aircraft but was secondary in Admiralty concerns to the anti-ship role, both in the Navy's

⁷⁷ COS (52) 392, First Sea Lord, 'Navy's Need for N113', 28 July 1952, DEFE 5/40

⁷⁸ ADM 1/25076

genuine priorities and for the political reason that naval aircraft for use against land targets had attracted the hostile fire of Duncan Sandys (Minister of Supply and arch-critic of naval aviation) and the Air Ministry. The case for the strike role and the new aircraft – as well as for the fleet carriers more generally – was assisted by stressing the need to participate in the NATO Striking Fleet, since the government tended to be sympathetic to alliance considerations. Moreover, this justification was a plausible equivalent to the case for Bomber Command's medium bombers: although the US would, quite properly, provide most of the force, it was appropriate for Britain to make a contribution to such a vital capability.

As the previous chapter explained, the aircraft now entering service tested existing carriers to their limits and beyond. The newly-completed fleet carrier was at the cutting edge, as Thomas told the House of Commons: 'HMS *Eagle* will be able to handle larger and faster aircraft, and to handle them more quickly and with greater ease, than any previous carrier of the Royal Navy'. Her improved catapults and arrestor gear would allow the operation of jet aircraft at night as well as by day. The other carriers needed modernisation (with the exception of HMS *Eagle*, the fleet carriers would not be able to operate new types of aircraft) and further new vessels, including HMS *Hermes* were urgently needed to match the production of modern high-performance aircraft.⁸⁰

Composition of Naval Aviation

The balance of the types of naval aircraft altered over time. The composition approved in April 1950 was 50% fighter, 40% anti-submarine and 10% strike. However, by autumn 1951 three Admiralty department directors pointed out that the conditions upon which this figure was based had changed. Early warning aircraft and helicopters were being introduced, the Russians were continuing to build cruisers and destroyers and an increase in FAA strength had been approved which allowed

⁷⁹ COS (52) 221 / OAW/P (52) 4, 'Interim Report by Working Party on Operational Use of Atomic Weapons', 22 April 1952, DEFE 5/38

more naval aircraft to be devoted to tasks other than the primary ones of anti-submarine and air defence. Two other important factors were the ‘increasing extent to which Naval aircraft are losing versatility as they are gaining in performance’, and the:

increasing likelihood, owing to the deterioration of world conditions, of Great Britain becoming involved in minor wars, e.g. Korea, and incidents where army support roles for Naval aviation may predominate.

Current plans called for one fleet and two light carriers in each of the Atlantic (where the threat was mainly submarines, though strike aircraft would be needed against Russian surface warships) and the Mediterranean (where the threat was mainly air attack). The composition of the air groups in the two fleets on mobilisation was varied accordingly.⁸¹ The following table displays the carrier air groups:

	Total	Fighter	ASW	Strike	AEW
<u>HOME FLEET</u>					
1 Ark Royal CV	60	28	8	20	4
1 Hermes CVL	36	8	24	0	4
1 Colossus CVL	28	8	16	0	4
<u>MED. FLEET</u>					
1 Ark Royal CV	60	36	8	12	4
2 Hermes CVL	36 + 36	24 + 24	8 + 8	0	4 + 4
<u>TOTAL</u>	256	128 (50%)	72 (28%)	32 (12.5%)	24 (9.5%)

The proportion of strike aircraft was greater, though still modest and airborne early warning were added, at the expense of anti-submarine warfare (although the reduced *percentage* of aircraft for this role would not result in a proportional decrease in *numbers* due to the increased total FAA strength). The Royal Navy still focused primarily on the defence of sea communications. Even in April 1952, the planned British contribution to the NATO Mediterranean Fleet was for HMS *Illustrious* to operate

⁸⁰ 497 HC DEB, 6 March 1952, cc. 667-69; Memorandum B786, ‘Carrier Modernisation Programme’, 19 June 1952, ADM 167/138
⁸¹ Director of Plans, DAW & DAOT, 29 August 1951, ADM 1/25076

with the US force, providing anti-submarine and fighter defence to free American aircraft for offensive missions,⁸² which was reminiscent of practice in Korea.

The 1951 Admiralty memorandum referred to above explained that whilst this composition was appropriate for global war, the small number of strike aircraft and their concentration in fleet carriers was unsuitable for minor wars. These figures would have to be accepted in the face of strong enemy air opposition but, 'it is considered that some provision should be made for operations similar to those off KOREA re-occurring'. Thus, the number of strike aircraft should be increased by 16, which would be available to replace other aircraft in peacetime. The overall balance of naval aircraft would thus be 47% fighter, 26½% anti-submarine, 17½% strike and 9% early warning.⁸³ The suggested change was approved. The idea that the strike component should be greater in peacetime than in wartime is significant as an indication of the Navy's priorities. It reflected the experience of limited war in Korea and also in the on-going Malaya campaign, in which during 1952 alone the Royal Navy conducted five carrier air strikes and 39 warship bombardments as well as more routine patrolling and transportation duties.⁸⁴

In wartime, defence of shipping, particularly against the growing air threat, was still the main priority. The section of the 1952 Statement dealing with research and development emphasised measures to counter air attack, including new and faster aircraft and improved radar for longer-range interception. Aircraft penetrating the outer defences would be countered by new guns and the 'most promising weapon', a guided weapon for ranges between aircraft and guns.⁸⁵ In August 1952, the composition of naval aviation was modified once again, to 55% fighter, 21% anti-submarine, 17% strike and 7% early warning, thus increasing the number of fighters at the expense of the other three

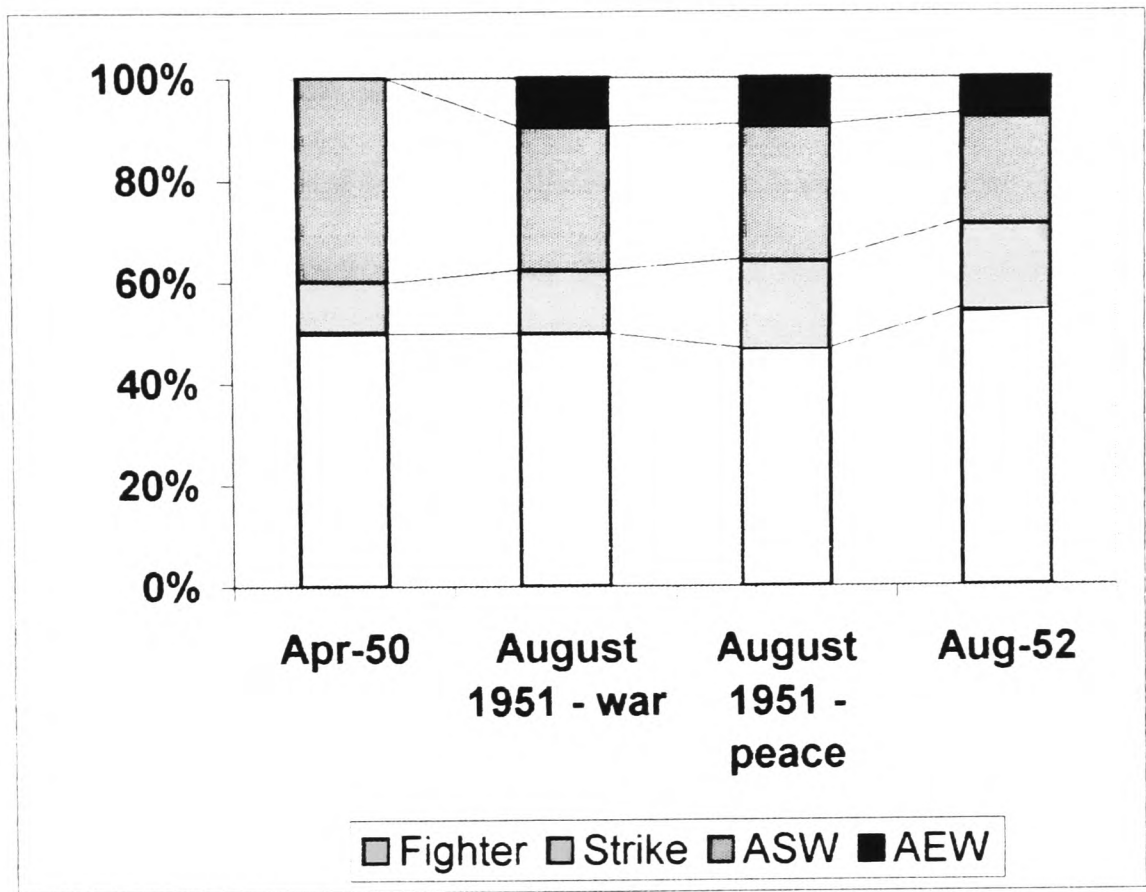
⁸² ADM 1/22672

⁸³ Director of Plans, DAW, DAOT, 29 August 1951, ADM 1/25076

⁸⁴ *Statement of the First Lord of the Admiralty Explanatory of the Naval Estimates 1953-54*, Cmd 8769 (1953), 3

⁸⁵ *Statement of the First Lord of the Admiralty Explanatory of the Naval Estimates 1952-53*, Cmd 8476 (1952), 9

categories, especially anti-submarine.⁸⁶ The varying proportions of the types of naval aircraft between 1950 and 1952 are displayed in the following chart:



The chart supports the argument that although the strike role did take on greater importance during the Korean War, it remained subordinate to the protection of sea communications; indeed, it formed part of their defence. The principal role of the new strike aircraft would be to counter *Sverdlovs*, because of the arguments against modernising or replacing existing capital ships. Most of the intended shore targets were themselves centrally related to the protection of shipping, such as submarine bases. The 1951 assertion that the Admiralty programme was directed against the underwater menace is not contradicted by the growing priority of the strike role within naval aviation, since attack at source was an increasingly important means of countering modern submarines. Support of forces ashore was accepted as a possible role for naval aircraft but it was seen as limited in utility and conditional on the prior accomplishment of the primary task of the carrier force.

⁸⁶ 'Changing proportion of aircraft types in peacetime Fleet Air Arm', 14 August 1952, ADM 1/25076

There had indeed been a shift in British naval policy but it should be exaggerated. The Admiralty had long intended to deploy a larger strike element following the expansion which would begin on the outbreak of war. The period after the Korean commitment was a fruitful time to adjust the composition of the FAA as new aircraft were delivered and further new models were ordered. The Royal Navy remained far more concerned with defending sea communications than the US Navy, which placed more emphasis on support of forces ashore. The British were also less sanguine than the Americans about the threat to carriers, particularly from enemy submarines. Besides, although naval aviation was an increasingly important part of the Fleet, it was not the only capability: other significant elements were for direct defence against mines and submarines. The 1952 Defence White Paper revealed that in addition to speeding up construction of five carriers and modernising others, the naval programme included completion of 40 minesweepers and accelerated construction of 18 anti-submarine frigates, together with modernisation of cruisers, destroyers and frigates.⁸⁷ Between 1950 and 1952 the Royal Navy's view of the importance of power projection and the strike role did alter but this was a matter of greater emphasis rather than a reversal of policy.

Defence Policy and Global Strategy Revised

In October 1951, the general election defeat of the Labour Party brought the Churchill government to power. R.A. Butler, the new Chancellor, sought reductions in defence expenditure, reducing in scale the planned rearmament and stretching it out over a longer period. Construction and modernisation were delayed and emphasis shifted from readiness to meet an immediate crisis to facing 'the long haul'. In March 1952, the Chiefs of Staff were asked to revise defence plans in the light of technological developments and changes in the international situation since the 1950 paper and because economic difficulties were calling the rearmament programme into question.⁸⁸ Thus began the latest stage in the adaptation of British defence policy to the nuclear age.

⁸⁷ *Statement on Defence 1952, Cmd 8475* (1952), para. 53

⁸⁸ This background is set out in C (52) 253, Minister of Defence, 'The Defence Programme', 22 July 1952, CAB 129/54

The new *Defence Policy and Global Strategy* paper was approved in June 1952.⁸⁹ If economic problems made a new strategy essential, another new factor provided an alternative since increased US nuclear power would either deter the USSR or, failing that, provide a war-winning capability. The USSR would use other means, so NATO faced a prolonged cold war, yet if it was waged 'in a patient, levelheaded and determined manner', hot war could be avoided. The main nuclear deterrent should be backed by the 'complementary deterrent' of land and air forces, armed with tactical nuclear weapons, to delay any attack until the strategic offensive took effect, to deal with infiltration, and for the cold war. The UK's priorities should be, first, to protect its interests in the cold war; second, to make a contribution to the deterrent (to confer influence with the US and to target objectives of particular importance to Britain, such as submarine and air bases); and third, to prepare for war in case deterrence should fail – all without ruining the economy.⁹⁰ Whereas previous plans had envisaged a war in which conventional forces would play a considerable role – as confirmed by post-Korean War rearmament – *Global Strategy* sought to reduce the costs of defence by increasing the emphasis on nuclear weapons.

Of particular importance to the roles and shape of the Navy was the expected nature of a future war. *Global Strategy* predicted an intense opening phase, with nuclear attacks on the UK and concerted efforts to cut sea communications. This period 'may only last a few weeks' but 'will be of unparalleled intensity', and by its end both the UK and the USSR 'will have suffered terrible damage'. It was impossible to say what type of warfare would follow if the conflict continued. Hence, logic suggested a concentration on forces for defence and the counter-offensive in this initial phase. Although the allies could not prepare solely for a short war of this sort:

⁸⁹ D (52) 26, Chiefs of Staff, 'Defence Policy and Global Strategy', 17 June 1952. CAB 131/12. This paper is sometimes referred to by its designation in the Chiefs of Staff Committee, COS (52) 361.

⁹⁰ D (52) 26, paras. 1-14, 19-21, 36-45, 74, 92, 96, 139

the fact that it is economically impracticable to make the preparations necessary for a long war should be faced, and a guiding principle of the rearmament programme should be to ensure survival in the short opening phase. Thereafter the effect of the atomic offensive will be apparent; if it has not been decisive, it will certainly be followed by a phase during which all forms of enemy attack will be much reduced, though perhaps less at sea than elsewhere.⁹¹

This was hardly a ringing endorsement of the significance of a future maritime war. The report accepted that sea lanes and ports must be kept open or 'the United Kingdom will soon cease to fight and will starve'. Protection of 'the North Atlantic and the United Kingdom's home waters, through which run what are literally the country's lifelines' was a high priority commitment, 'but provision for it must be conditioned by the probable nature and duration of a future war.' The threats would be nuclear attack against ports, mining, submarines, air attack and large cruisers. Counters to them should include attack at source, mine sweeping, naval and air operations against submarines at sea, early warning against low-flying aircraft, provision of alternative port facilities and stockpiles, and hunting Russian cruisers (though this should not be performed by Britain: in the Atlantic, it would mainly have to be done by the Americans and elsewhere by Commonwealth countries). Regarding the role of carrier task forces, the report argued that although SACEUR's original plans for the defence of Western Europe had emphasised them, the utility of his concept was doubtful and 'in our opinion the majority of the tasks envisaged could be more cheaply and satisfactorily carried out by shore-based aircraft.' It underlined the point made earlier:

our view of the rôle of Naval Forces differs from that of the Americans. We consider that the primary rôle of Naval Forces should be to safeguard the sea communications of the United Kingdom and her Allies and deny them to the enemy. The United Kingdom cannot afford the American technique of building up large naval forces to support continental land battles.⁹²

Admiral of the Fleet Sir Rhoderick McGrigor, First Sea Lord, had insisted on the inclusion in the report of the possibility of a second, post-nuclear phase of total war during which Britain would have to defend sea communications, which became known as 'broken backed' warfare. Yet the low

⁹¹ Ibid., paras. 27-33

prominence given to the concept is indicative of the scepticism of the other Service chiefs towards it. Darby described the idea as 'a concession to the Navy', adding: 'Apparently neither Slim nor Slessor took the concept seriously, but it was the price to be paid for McGrigor's acceptance of the paper.'⁹³ However, the Admiralty was by no means alone in doubting that a future war would be short. In discussions with Sir Oliver Franks (British Ambassador in Washington), Chairman of the US Joint Chiefs of Staff General Omar Bradley explained that the US anticipated a long war which would probably involve a need for re-invasion and liberation of Europe. There was agreement among the Americans that the war would be long because the air campaign would not prevent the USSR overrunning Europe, although Bradley added: 'There were a few enthusiasts in the US Air Force who thought they could win a quick and easy victory. He did not agree.'⁹⁴ In the event of such a war, there would be a need to defend sea communications. There was an evident threat to them, as Henry Tizard (the government's chief scientific adviser) proclaimed:

There was a school of thought which considered that the development of air power had reduced the importance of our sea communications; this view was extremely dangerous; in his opinion our sea communications were now more important than ever before.

An all-out attack on sea communications 'was of equal danger' to nuclear attack on the UK since the latter would lead to retaliation while an attack on sea communications might not yet could neutralise the country. The Chiefs of Staff agreed that the threat to sea communications was serious and 'presented as great a menace to the United Kingdom as did the threat of an atom bomb attack'.⁹⁵

Churchill at times seemed to share the view that the threat to sea communications was serious, telling the Commons that three threats could affect Britain's survival, which in order were mines, submarines 'and the threat from the air, ever-growing in its shore-based power'. Yet he also

⁹² Ibid., paras. 47, 106-109

⁹³ Darby, P. *British Defence Policy East of Suez 1947-68* (London, OUP for RIIA, 1973), 47

⁹⁴ Sir Oliver Franks to Foreign Office, 7 February 1952, DEFE 32/2

⁹⁵ COS (52) 29th, 19 February 1952, DEFE 4/52

noted that the development of air power 'cuts both ways', with aircraft carriers and shore-based aircraft assisting against mines and submarines.⁹⁶ He was not always consistent, at other times playing down the threat to sea communications. Thus, at a Chiefs of Staff meeting in June 1952, he approved the sections of the *Global Strategy* draft dealing with the expected length and nature of a future war, and argued that if the strategic air campaign paid sufficient attention to Russian submarine and minelayer bases, 'there was little prospect of the war at sea being very prolonged, since the Russians would have expended their means of replenishment and their bases would be destroyed.'⁹⁷

Some in Parliament were similarly sceptical. Group Captain C.A.B. Wilcock argued that neither the Army nor the Navy could be a deterrent to the USSR – in the latter's case because navies could not harm any Soviet bloc state, none of which depended on imports. Only air power could deter Russia, as the only arm capable of retaliating so strongly that war would be unprofitable.⁹⁸ This line of argument was a reversion to Bomber Command's wartime fallacy of dismissing the Navy and the campaign in the Atlantic as 'defensive', and may be compared to a gladiator discarding his armour and shield on the grounds that they could not injure his opponent. R.T. Paget listed the roles of capital ships as fighting the enemy fleet, eliminating surface raiders and supporting assault landings. Yet there was no enemy fleet, 'Surface raiding is a thing of the past, gone and over' since long-range aircraft would find and destroy raiders, and there would be no landings in the early stages of a war, while later ones could be supported by Reserve warships. After offering these arguments against battleships he continued that HMS *Vanguard* and the four fleet carriers 'can make no contribution whatever in an anti-submarine or an anti-minelaying rôle'; on the contrary, they were a liability because they required protection. In case any doubt remained, he explicitly stated that carriers 'were only a transitory weapon' until shore-based aircraft attained adequate range, which they

⁹⁶ 497 HC DEB, 5 March 1952, cc. 440-41. In the same speech, he claimed that there was 'no potentially hostile surface battlefleet afloat', before listing the Soviet fleet as containing 'three old battleships, about 20 cruisers, and a considerable annual building programme'!

⁹⁷ COS (52) 7th, 18 June 1952, DEFE 32/2

⁹⁸ 497 HC DEB, 5 March 1952, cc. 463-66. For war outside Europe, Wilcock advocated an ability rapidly to bring in troops and carrier air power, c. 469

now had: carriers 'will very soon be obsolete, if they are not obsolete already'. Another Member, Dr. Reginald Bennet, felt that the carrier's 'days are certainly numbered' and it would soon be rendered unnecessary. No new ones needed to be built, since the Navy had enough to last until long-range aircraft were developed capable of controlling the seas as effectively as surface craft.⁹⁹ One important point was made by Brigadier Terence Clarke who stated that although the House had heard much about the Navy in hot war, he was more interested in the cold war, in which the Navy was very important.¹⁰⁰ It is remarkable that there were so few references to limited war in a debate which took place during the British involvement in Korea and equally strange that the value of the Navy in such conflicts had to be pointed out by a soldier!

Coastal Command

The 1952 naval estimates debate examined the issue of the control of Coastal Command. The current situation was that it was 'owned' by the Air Ministry but in wartime, operational control during specific missions would lie with the Admiralty. Edward Shackleton, who had served in Coastal Command during the war, expressed alarm that some Members wished to question this arrangement, which would cause 'grave anxiety' and increase friction between the Services. Allan Noble, Parliamentary and Financial Secretary to the Admiralty, replied that although the question could be re-opened, the Admiralty was not doing so, and any change would have to take account of arguments in principle and also 'the very large practical problems'.¹⁰¹ If the Admiralty was reluctant to broach the issue, some MPs were quite happy to do so. The debate on the Air Estimates included an amendment urging an inquiry 'to ascertain the most efficient method of administration, operation and control of this essential arm of our maritime forces for the future'. Charles Fletcher-Cooke, proposing, argued that the system had not worked and while there had been good reasons not to change it in wartime, now was the appropriate moment. In the next war, anti-submarine warfare

⁹⁹ 497 HC DEB, 6 March 1952, cc. 806-16

¹⁰⁰ Ibid., cc. 829-30

would (with mines) be the only concern of the Navy, so the divided control of maritime aviation – for which there was no logical reason – became even more important. The motion received support from other MPs. Kenneth Robinson pointed out that Coastal Command had originally been attached to the RAF because since there were too few aircraft overall, those that existed needed to be interchangeable and so they were concentrated in one Service. This was no longer possible due to increasing specialisation, so the reasons for RAF control of maritime land-based aircraft were no longer valid. There needed to be the closest cooperation between ships and aircraft, which must therefore come under the control of the same Service. W.R. Perkins believed that the Air Council ‘naturally’ concentrated on Bomber and Fighter Commands with anything left going to Coastal or Transport Commands, with the former being an ‘unwanted child’ of the RAF. The anti-submarine aircraft of Coastal Command should be transferred to the Admiralty, so that it alone would be responsible for this task.¹⁰²

This case provoked a strong reaction. Shackleton insisted that ‘for the most part the Navy still prefers not to recognise the existence of air power’, and complained that: ‘so few of the naval leaders yet fully accept the principles and ideas of air power.’ His complaint seemed to be that the Admiralty did not recognise one *particular* conception of air power – when another MP intervened to say that aircraft could be a means of exercising sea power, Shackleton pounced on this, stating: ‘Precisely. That statement is in direct contradiction to the theory of air power.’ He argued that RAF aircraft could be switched between roles as needed and that even if the Navy controlled Coastal Command it would still depend on cooperation with Bomber and Fighter Commands. Air Commodore A.V. Harvey stated that the complexity of modern technology meant that there was still a need for an air arm under one control, coordinated by one staff. Nigel Birch, Parliamentary Secretary to the Ministry of Defence, denied that Coastal Command was an unwanted child; the Government decided the size and shape of the forces and the Air Ministry could not just say it

¹⁰¹ 497 HC DEB, 6 March 1952, cc. 771-72, 866

disliked Coastal Command and halve it. He repeated that it was easier to switch trained aircrew between heavy aircraft in the RAF than from light naval aircraft to heavy Coastal Command aircraft, and suggested that a transfer would involve the Navy duplicating the existing RAF 'back-stage organisation' of maintenance and technological back-up. Finally, he said that transferring Coastal Command to the Admiralty had been considered and rejected in 1946 when the present arrangement had been established. Not all were convinced, however, as James Callaghan pointed out that 'the desire to avoid a quarrel should be no substitute for thinking again'.¹⁰³

The status of Coastal Command had been discussed within the Admiralty. In 1951 Vice Admiral M.J. Mansergh (Fifth Sea Lord) asserted that cooperation between warships and land-based aircraft was still inadequate. McGrigor agreed that a unified command was necessary but warned that although Coastal Command needed expansion, the Navy would receive no additional funds for it. Besides, the RAF would oppose any such change, creating much bitterness.¹⁰⁴ A 1952 Board Memorandum repeated the desire to avoid ill-feeling with the RAF or public controversy like that seen in the US but added that the RAF underestimated the importance of the war at sea – 'It is only too easy to do so; the list of those who have, contains some of the most famous names in European history'. The paper suggested that this was not surprising given the RAF's concern with air defence of UK and striking the enemy on land, yet:

The proper degree of risk to be taken with Coastal Command ought not to be judged by a department which considers it in competition with other forms of land flying but by a department which sees it in its proper perspective in the war at sea.

Coastal Command had declined proportionally far more than Fighter or Bomber Commands: in January 1945 it was 10.1% of the RAF frontline, and in January 1952 just 3.5%. The memorandum's argument was not that the Air Ministry was deliberately hostile to maritime needs but rather that the

¹⁰² 497 HC DEB. 18 March 1952, cc. 2172-2185, 2200, 2138-41

¹⁰³ *Ibid.*, cc. 2186-96, 2206-14

¹⁰⁴ Meeting Held by First Sea Lord on 12 September 1951, ADM 205/76

present organisation reduced the effectiveness of shore-based aircraft.¹⁰⁵ When the Board discussed the paper, Vice Admiral E.W. Anstice (the new Fifth Sea Lord) expressed support but warned that it could provoke an RAF counter-claim to regain carrier aircraft. It concluded that if efficiency justified a change then problems such as manpower could be overcome and decided to set up a committee to investigate the question. However, a later meeting reversed this decision on the grounds that *Global Strategy* had opened discussions into how to make maritime aviation more cost-effective.¹⁰⁶

The Navy's complaint about shore-based maritime aviation was primarily that there was not enough of it. Although the Admiralty was always ready enumerate tasks which could only or best be performed by carrier air power, it clearly saw the latter as complementary to and not a potential replacement for shore-based air power. This case was more modest than the claim that land-based air power could do everything and offered none of the putative savings, yet it was accurate. The case for re-examining control of Coastal Command deserved consideration, given the continuing erosion of its strength – in spite of what Birch said – as the Air Ministry prioritised strategic bombing. Even if the Air Ministry's run-down of Coastal Command had been ratified by the government, it could be argued that another department might have offered a stronger defence. Nevertheless, the Admiralty held its fire in order to avoid inter-service bitterness as well as to avoid a counter-attack upon its own interests.

The Impact of Nuclear Weapons

The main factor intensifying the attacks on naval aviation was the increasing centrality of nuclear weapons in UK strategy. Discussions of strategic air power tended to concentrate on the effect of Western attacks on the USSR but some attention was devoted to the possible effects of Soviet nuclear attacks on Britain, which raised serious questions for the emerging strategy. The Air

¹⁰⁵ Memorandum B787, 'Control and administration of shore-based aircraft concerned with the war at sea', 17 June 1952, ADM 167/138

Defence Committee advised the Chiefs of Staff that if the Soviet Air Force could carry out nuclear attacks unhindered it would inflict 'mortal damage', and since there was no prospect of a defensive system in the near future, offensive action would have to be relied upon to reduce the threat by around 50%. It felt that there was a 'reasonable chance' of achieving this, although it depended on catching the Soviet Air Force on the ground, which required good intelligence.¹⁰⁷ The implication, however, was that Britain would need to launch a first strike, making any crisis immensely dangerous as well as provoking retaliation that would still be devastating. Moreover, the Chiefs judged that the predicted 50% reduction in the air threat was optimistic. Air Marshal Sir Basil Embry (C-in-C Fighter Command) pointed out that the Russians would use of their immense dispersal facilities and would receive warning of any approach by British aircraft. The 50% figure was 'unjustifiably optimistic', and the actual results would not be 'anything more than a bonus'.¹⁰⁸ An Air Defence Command memorandum was even starker, warning that if enemy aircraft used nuclear weapons:

our air defences could not prevent the utter destruction of the main centres of civilisation and industry on this Island. The imagination falters, and is appalled at the prospect of 10 atom bombs exploding on London, Glasgow and Liverpool, and a remaining 40 bombs on a further twenty ports, industrial complexes, or cities. All in a possible 48 hours.¹⁰⁹

The possibility of nuclear attack would affect the role of the Navy. The first British atomic test in October 1952 made the issue of the impact of nuclear weapons all the more pressing.

After the *Global Strategy* paper

The defence programme following the *Global Strategy* review faced the major task of modernisation. The Cabinet was warned that the large forces maintained since the war had precluded their re-equipment at a time of great advances in aircraft and electronics, which left much ground to

¹⁰⁶ Board Minute 4588, 26 June 1952; Board Minute 4594, 24 July 1952, both in ADM 167/140

¹⁰⁷ COS (51) 501 / AD (51) 91, Report by the Air Defence Committee, 17 September 1951. DEFE 5/33

¹⁰⁸ COS (52) 92nd, 30 June 1952; COS (52) 94th, 1 July 1952, both DEFE 4/55

¹⁰⁹ COS (52) 533, 'UK Air Defence Policy'. 26 September 1952, DEFE 5/41

make up.¹¹⁰ The Committee on Reconsideration of the Defence Programmes considered dramatic cuts in the Navy, which were once again championed by the Air Ministry.¹¹¹ Slessor offered his own suggestions as to how the required cuts could be found. Examining the RAF programme, he found no room for reductions in orders for fighters, Fighter Command generally (though its auxiliaries might be cut), Transport Command, Coastal Command or overseas commands. While Second Tactical Air Force in Germany might be reduced, doing so would be a mistake for psychological reasons and although the strategic bomber force could be trimmed, it formed the basis of the new strategy. Slessor then turned his analytical spotlight on the Navy, noting that while *Global Strategy* required five carriers, the current total stood at 22. He therefore recommended the scrapping of four battleships and ten carriers.¹¹² The Navy pointed out that these 22 carriers were not all in the Active or even Reserve Fleets but also included trials vessels and those being modernised and constructed. Some would be needed for war losses, to meet expansion and for second line duties such as training and ferrying. Above all, fleet carriers were ‘essential if naval or merchant ships were to operate in areas beyond the range of friendly land based fighters and under enemy air attack’. The Admiralty defended its one Active and four Reserve battleships as needed against raiders on shipping routes or as potential platforms for guided weapons. It noted that Russia was building five *Sverdlovs* per year and without battleships Britain would only have cruisers (just four out of 18 of which were modernised) and carriers to counter them. Even if carriers could be provided from the declining number Britain had, they could not always defend convoys in northern waters due to bad weather. Moreover, even old ships could serve in wartime, as the two World Wars showed, and the Prime Minister himself had directed that no ships should be scrapped which could have a use in war. The Admiralty also questioned the results to be expected from the strategic air offensive, noting that neither *Global Strategy* nor Slessor’s note acknowledged the ‘grave difficulties of penetrating to, finding and striking strategic targets deep into enemy territory’. There should therefore be further

¹¹⁰ C (52) 253, Minister of Defence, ‘The Defence Programme’, 22 July 1952, CAB 129/54

¹¹¹ The Committee’s memoranda and minutes of its deliberations can be found in DEFE 10/163

examination of the requirements for the strategic bomber force.¹¹³ This represented a rare shift to the counter-offensive for the Navy, which was primarily fighting a defensive campaign.

The committee's report reaffirmed the importance of the strategic bombing offensive, which was 'at the very foundation of Global Strategy' and 'necessary for the defence of the United Kingdom, for the anti-submarine campaign, for cold war purposes', to help develop the techniques involved and to provide influence on US policy.¹¹⁴ It also vindicated naval aviation, which it stressed had been considered 'in some detail'. The Committee saw two roles for it, first, anti-submarine warfare and second, protecting naval or merchant vessels where land-based fighter support was unavailable. This led to a suggested fighter : anti-submarine : strike ratio of 50:38:12.¹¹⁵ Perhaps most significant is that the committee still accepted the need for some strike aircraft. The committee's second report went into more detail about the role of the Navy. In peacetime and cold war, it would support British policy and interests, combat communist aggression (as in Korea and Malaya), set an example to European NATO states, provide a nucleus for a NATO force, and maintain a balanced Fleet which could be expanded in war. In hot war, helped by the RAF, it would keep open sea lanes at home and across the Atlantic, countering mines, submarines, air attack and enemy cruisers. The report acknowledged the need to:

Attack the maritime threat at its source, i.e. the enemy minelaying forces, U-boats and surface forces in their harbours and bases, where this is best performed by naval forces, including submarines and naval aircraft.

The report mentioned the need to defend sea communications in the Mediterranean and worldwide interests (especially in the Far East) and possibly also to support the sea flanks of the land campaign.

¹¹² RDP/P (52) 8, 13 August 1952, CAS 1531 of 26 July, DEFE 10/163. See also RDP/P (52) 6, 12 August 1952, DEFE 10/163, in which Slessor proposes naval aviation as an area to cut.

¹¹³ RDP (52) 1, 'Admiralty Comments on CAS 1531 of 26 July 1952'; also RDP/M (52) 2, Meeting 11 August 1952 and RDP/M (52) 3, Meeting 13 August 1952: all DEFE 10/163

¹¹⁴ RDP/P (52) 17, Introductory Section, 21 August 1952, DEFE 10/163: Annex C

¹¹⁵ RDP/P (52) 31 (Final), Report to the Chiefs of Staff, DEFE 10/163

This resulted in a requirement not for greater number of ships but rather for a greater number of *up-to-date* ships capable of dealing with modern mines, submarines, aircraft and surface ships.¹¹⁶

The Radical Review approaches

In Cabinet, Lord Alexander (Minister of Defence) summarised the position as involving no change in the size of the Army, some reduction in the Active Fleet, and expanding the RAF for air defence and as a contribution to allied deterrent forces.¹¹⁷ However, once again the proposed cuts were deemed insufficient by Butler, who demanded more. A further re-think was necessary, and on 7 November 1952 the government decided on 'a radical review of the pattern of our defence effort', against a comprehensive background of Britain's strategy, overseas commitments and economic position.¹¹⁸ The Chiefs of Staff were instructed to make reductions; they in turn agreed that a cut in commitments was essential to provide the required savings.¹¹⁹ If modern technology was to be accommodated within a decreasing budget then either commitments would have to be cut dramatically (from which politicians then as now recoiled) or a major alteration in assumptions would have to occur.

The Korean War challenged British planning assumptions about the probability of a future war and initially led to a burst of rearmament. This increase in spending together with the lessons of the war, particularly the utility of carrier air power, allowed the Royal Navy to complete an advance of a generation in its aircraft. Conceptions of the role of naval aviation also evolved in these years, though this may more accurately be seen as a shift of emphasis rather than a complete sea change. The Admiralty continued to differ from its American counterpart, putting more weight on the defence of sea communications than power projection, and more weight on attacking land targets connected

¹¹⁶ RDP/P (52) 46 (Final), 19 September 1952, Second Report, DEFE 10/163: paras. 12-16, 41

¹¹⁷ C (52) 316, Minister of Defence, 'The Defence Programme'. 3 October 1952. CAB 129/55

¹¹⁸ CM (52) 94th Conclusions, 7 November 1952, CAB 128/25

¹¹⁹ COS (52) 176th, 30 December 1952, DEFE 4/58

with the struggle to control the seas than on supporting land forces. In spite of the experience of Korea and Malaya, the focus of attention remained total war against the USSR. Some individuals in the Admiralty and in Parliament were exceptions, recognising the increasing salience of limited wars and the valuable role that the Navy could play in them.

The gradual tightening of the purse strings after the initial largesse sparked by Korea meant that the Navy's programme came under increasingly careful scrutiny, especially from an Air Ministry which was seeking not only to protect but to expand its own share of the defence budget. The debates of 1950-52 saw significant inter-Service sniping, mainly in the form of the Air Ministry attacking the Admiralty's plans for the size and shape of the Fleet, in particular the larger surface ships and naval aviation. A sign of the escalating bitterness and suspicion can be seen in a complaint to the Chiefs of Staff by McGrigor that a broadcast by Air Vice Marshal Bouchier went into some detail about the war in Korea but 'made no mention of the considerable part played by the Royal Navy'.¹²⁰ A further portent of stormy waters ahead lay in the two-phase war idea established by the 1952 *Global Strategy* paper. The full implications for the Navy of this different appreciation of the likely nature of a future war would soon become apparent.

¹²⁰ COS (52) 165th, 4 December 1952, DEFE 4/58

Chapter 3

Priorities and Protests: the First 'Radical Review', 1953-54

The centrality of naval aviation was demonstrated again at the June 1953 Spithead Coronation Review. The 1937 Review had included 11 battleships or battle cruisers and four carriers, whereas now there was a single battleship with five fleet and four light carriers, and a fly-past by 300 naval aircraft, including some jets.¹ The occasion also drew attention to the growing naval threat. Naval Staff experts took the opportunity to look over the Soviet visitor, the cruiser *Sverdlov* (the first of a class then numbering 14 vessels) and their report was sobering. They estimated her displacement at 17,500 tons and concluded that she:

compared favourably with RN cruisers. She is bigger, more powerful and likely to be much faster. She appears to be more heavily armed and armoured than RN cruisers, but her armament control is probably not so good as ours. ... She would be an unpleasant threat loose on the trade routes and would take a great deal of bringing to book.²

The years 1953-54 saw another threat to the Royal Navy which was equally ominous, although fought on a political battlefield. During the 'Radical Reviews' of defence policy the Admiralty had to fight for the very survival of its fleet carriers and the Fleet Air Arm against opponents who included the Minister of Defence (Lord Alexander), the Chancellor (R.A. Butler), the Secretary of State for Air (Lord De L'Isle) and, most implacably, Duncan Sandys, Minister of Supply and son-in-law of the ailing Prime Minister.

Improvements in naval aviation

British naval aviation showed signs of progress in 1953-1954. The problems associated with carrier operation of jet aircraft were largely solved. The ease and safety of landings were greatly

¹ Sturtivant, R. *British Naval Aviation: The Fleet Air Arm, 1917-1990* (London, Arms and Armour, 1990), 173-74; Wettern, D. *The Decline of British Sea Power* (London, Janes, 1982), 81

² C (53) 189, First Lord, 'The *Sverdlov*', 6 July 1953, CAB 129/61

enhanced by the mirror sight, which replaced the old baton method. Launching heavier aircraft was facilitated by replacing the insufficiently powerful compressed air or hydraulic catapults with the steam catapult, which utilised the ship's main power plant.³ A further difficulty lay in the need of heavier and faster aircraft for a longer flight deck on which to land, which threatened the practice of parking aircraft forward and could therefore halve aircraft complements. A solution was found in the angled deck, with which aircraft landed on a section of the flight deck off-set from the ship's centre line, thereby avoiding both take-off area and deck park. It also made night flying easier and safer, allowed simultaneous landing and taking off (thus accelerating and simplifying aircraft operation), reduced the time the carrier needed steaming into wind and lowered accident rates, thereby increasing serviceability. It was predicted that for HMS *Victorious*, the angled deck would permit 22 aircraft on deck as well as 20 in the hangar, more than doubling its capacity. Moreover, since half the hangar aircraft had to be anti-submarine while all the additional aircraft could be fighters or strike aircraft, the angled deck would treble the carrier's offensive power.⁴ These advances in carrier design were all pioneered by the Royal Navy – though eagerly taken up by the Americans – and made possible the operation from carriers of jet aircraft which could match their land-based counter-parts.

The improving carriers were starting to receive better aircraft. After the war, the government had decided to continue with piston-engined naval aircraft while awaiting the next generation of jets, judging it better to have purpose-designed aircraft was than to get new aircraft quickly. The Korean War ended this policy and by 1953 new aircraft were arriving.⁵ The anti-submarine turboprop Gannet, replacing the Barracuda, was 'super priority' but ran into delays and did not enter service until 1955. To stand in for it, US Avenger aircraft, which had served in the war as fighters, entered service in May 1953. Air defence and reconnaissance were improved by the introduction in 1953 of early warning Skyraiders. The Wyvern turboprop strike aircraft entered service in May 1953. Thetford described it as having 'more than the average share of teething troubles' with seven years

³ Sturtivant, 178-79; Beaver, P. *The British Aircraft Carrier* (Wellingborough, Patrick Stephens, 1987), 134-38

⁴ Memoranda B835, 8 May 1953 and B851, 18 July 1953, ADM 167/143; Beaver, 130-34

from maiden flight to first operational squadron;⁶ others were less kind, and its replacement became an urgent issue.⁷ Fleet Air Arm helicopters were becoming increasingly important: in 1953, they rescued about 600 people from floods in the Netherlands and were used in Malaya for transportation of troops and supplies, for evacuating casualties and in larger operations, including 'Operation Cato', in which they carried 650 troops and 4000 pounds of equipment and supplies for the ambush of a guerrilla force.⁸ In June 1954, J.P.L. Thomas, the First Lord, informed the Commons that there were about 100 British and US helicopters in service in the Navy (including the Dragonfly and Whirlwind, and the Hiller HTE2,) with 100 more British machines on order.⁹

Naval fighters attracted the greatest concern. The piston-engined Sea Fury, which had given sterling service in Korea, was joined by the Attacker jet fighter in 1952 but according to Wettern the latter had a maximum speed 100 knots slower than the MiG-15.¹⁰ This out-dated aircraft had always been seen as a temporary solution and (with the Sea Fury) was replaced by the Sea Hawk jet fighter from February 1954. The Sea Venom two-seat all-weather jet fighter superseded the Sea Hornet in the same year.¹¹ Although these additions to the Fleet Air Arm were most welcome in meeting some deficiencies, plans were underway for a further generation of aircraft, including the N113 and DH110 fighters and the NA39 strike aircraft.¹² In September 1953, Admiral Sir George Creasy, Commander-in-Chief Home Fleet, wrote that new aircraft were needed, particularly a high-performance day fighter and an all-weather fighter which could also perform strike and Army support roles. He advised that fighters should be given anti-ship missiles, while a small nuclear bomb would be needed against shore targets. The Admiralty replied that the N113 would be able to carry a small nuclear

⁵ 512 HC DEB, 16 March 1953, cc. 1836-38, 2009

⁶ Thetford, O. *British Naval Aircraft 1912-1958* (London, Putnam, 1958), 98-99, 174-77, 206-07, 322-23

⁷ One Admiralty memorandum referred to 'the relative failure of the Wyvern': DAW, 'Relative merits of N113 and DH110', 19 February 1954, ADM 205/95. Dickson, Chief of the Air Staff, was more direct, commenting 'the Wyvern is NBG': 'Review of Defence Programme', 25 August 1955, AIR 8/2044.

⁸ Sturtivant, 184-85

⁹ 529 HC DEB, 30 June 1954, cc. 1327-28

¹⁰ Wettern, 75, 91

¹¹ Thetford, 94-95, 224-25

¹² The N113 became the Scimitar (in service 1958); the DH110, the Sea Vixen (1957); and the NA39, the Buccaneer (1963).

weapon and that a specialised strike aircraft was envisaged which would have far greater range than existing aircraft and would be able to achieve surprise by approaching below the radar horizon.¹³ In an Admiralty Board discussion with Air Marshal Sir John Boothman, Controller of Supplies (Air) from the Ministry of Supply, concern was expressed that defence cuts might force the cancellation of one of the naval aircraft projects. Rhoderick McGrigor, First Sea Lord, acknowledged the need to decide which of the three programmes should be sacrificed if it became necessary. Apart from HMS *Vanguard* only naval aircraft could deal with powerful ships such as the *Sverdlovs* in wide ocean areas, yet there was general agreement that the least vital project was the NA39, since:

The DH110 and N113 were essential unless the Navy were to accept exclusion from waters within 200 miles of an enemy airfield; whereas without the NA39 some form of strike aircraft could be improvised.¹⁴

Given the significance which the Admiralty clearly attached to the new strike aircraft, the fact that it was lower in priority than the new fighters is telling.

The Navy would soon have to fight to retain its fleet carriers and to continue its aircraft programmes. Yet an even more challenging project lay over the horizon – new carriers. The Navy of the 1950s was well provided with ships laid down during the war and gradually completed thereafter. In February 1953, a Parliamentary answer confirmed that one fleet and five light wartime carriers had been completed and work was continuing on another fleet and five light carriers. Although several light carriers passed to friendly navies, this force would be adequate for several years. However, no carrier had been laid down since VJ Day.¹⁵ On 27 July 1953, the Admiralty agreed to place a Medium Carrier in the programme in 1958 and to convert existing carriers to angled decks.¹⁶ The mid-1950s, however, were inauspicious years in which to seek political approval for such a costly plan.

¹³ C-in-C Home to Admiralty, 'Future Naval Aircraft Needs', 18 September 1953 and Admiralty reply, ADM 1/24518. The strike aircraft referred to was the NA39.

¹⁴ Board Minute 4708, 15 October 1953, ADM 167/143

¹⁵ 511 HC DEB, Written Answers, 25 February 1953, c. 219

The Navy investigated opting for lighter, cheaper aircraft and hence smaller, cheaper carriers. This proved difficult in practice as it flew in the face of technological trends. Advancing air, surface and submarine threats demanded high-performance aircraft, which required large carriers. As Lord Fraser (former First Sea Lord) admitted in Parliament, although carrier aircraft were in some ways inferior to land-based aircraft, the problem was far worse with small carriers.¹⁷ In 1953 the Admiralty carried out trials on the anti-submarine Seamew, which would be lighter and cheaper than the Gannet and could operate from small carriers. Thomas explained that with it, 'a resolute attempt is being made to halt the trend towards large and complicated aircraft'. However, its small payload and limited endurance meant that its performance against rapidly improving submarines was inadequate and it never entered service.¹⁸ The possibility of operating modern aircraft on smaller carriers was also investigated. In May 1953, Captain A.S. Bolt (Director of Naval Air Warfare) proposed straight-deck trade protection carriers which could carry the new fighters on a displacement of only 20,000 tons (compared with the 28,000 tons of HMS *Hermes*). However, investigation of various ship designs revealed serious shortcomings in stability, aircraft lifts, arrestor gear and accommodation. It was concluded that 'the smallest worthwhile carrier is of the order of 30,000 tons', although about 20,000 tons would be possible with vertical take-off and landing aircraft.¹⁹ Such aircraft seemed the only way to make small carriers viable but were a long way off. Nevertheless, in May 1954 when the Board decided to continue with the DH110 and the N113, it also approved a contract for an experimental 'jet reaction' aircraft, which might eventually become a naval interceptor.²⁰

British naval aviation had made significant progress since the war. Some deficiencies had been dealt with and others were gradually being met as the defence programme tackled long overdue modernisation. Yet these projects were expensive and at a time of tightening budgets and competing views about the roles for the Navy and its aviation, they were about to attract increasing criticism.

¹⁶ Naval Assistant to First Sea Lord, 31 July 1953, ADM 205/102

¹⁷ House of Lords Official Report, Volume 181, 16 April 1953, c. 844

¹⁸ 524 HC DEB, 9 March 1954, c. 1951; Wettern, 84

¹⁹ For the correspondence concerning this concept, see ADM 1/25149

The First Radical Review

In November 1952 the Cabinet accepted the suggestion by Butler, the Chancellor, of a 'Radical Review' of defence expenditure.²¹ In January 1953, Churchill formed a committee, which included the Chiefs of Staff and was chaired by Sir Norman Brook, Cabinet Secretary, to review defence expenditure on the assumption that budget should remain level at the 1953 figure.²² Thus began what Grove terms the Review's 'first, not very radical, stage'.²³ His description is accurate because although the committee reaffirmed the priorities of the 1952 *Global Strategy* paper, it did not conclude that they required major changes in policy or force structure. This conservative approach soon came into conflict with the need to find significant savings in defence expenditure.

In 1953, the world seemed less threatening than it had a few years before. The Defence White Paper suggested that the risk of war had receded due to the West's growing military power and emphasised preparations for war as a deterrent and prosecuting the cold war, as in Korea and Malaya. Rearmament plans could be spread over a longer period and held to a lower peak.²⁴ The first priority was deterring war. The Chiefs of Staff believed that the West's nuclear deterrent would become less effective with advances in the USSR's nuclear stockpile, means of delivery and air defences. Still, 'the catastrophic nature of modern atomic warfare should act as a restraining influence so long as the west retains its striking power'.²⁵ Not everyone was convinced: Lord Winster doubted that bombing would succeed quickly, while in the meantime enemy submarines and bombers would be attacking British shipping and ports: 'The advocates of strategic bombing had better remember that two can "play bombers".' He later added that Trenchard's heavy bombers could not damage Russia as much

²⁰ Board Minute 4769, 13 May 1954, ADM 167/144

²¹ CM (52) 94th Conclusions, 7 November 1952, CAB 128/25. The papers relating to the Radical Review are not available as a body in the Public Record Office but its course can be pieced together from files containing references, quotations and copies of some papers. A helpful 1955 Admiralty summary can be found in ADM 205/164.

²² VCNS No. 828 to First Sea Lord, 'Review of Defence Expenditure', 24 June 1955, ADM 205/164, para. 8

²³ Grove, E.J. *Vanguard to Trident: British Naval Policy Since World War II* (London, Bodley Head, 1987), 90-91

²⁴ *Statement on Defence 1953*, Cmd 8768 (February 1953), paras. 1-6

as Russia's heavy bombers could damage Britain.²⁶ George Ward, Under Secretary of State for Air, admitted that the V-bombers were expensive: 'But without air power, so much – perhaps all – other defence expenditure may be nugatory. What use is it to protect the extremities of the body if the heart is left unguarded?'²⁷ The problem remained of how much effort should be devoted to bombers as against defending sea communications: to continue Ward's metaphor, however well guarded the heart was, it still depended on nourishment from external sources.

The question of priorities was already proving difficult. McGrigor argued that the size of the planned bomber force and its new super-priority reversed the policy of *Global Strategy*. Air Chief Marshal Sir William Dickson, Chief of the Air Staff, disagreed:

the force was being justified solely on the grounds that it would be required primarily in a defensive role – as a means of attack at source – to counter the enemy atomic offensive; there was no question of its being justified on the ground that it would be required to assist in a war-winning counter-offensive – that was something we could not afford and which would have to be left to the United States to provide.²⁸

Dickson's conception of the bomber force was subsequently approved by the Chiefs of Staff. Their report stated that since there could be no defence against nuclear weapons, the only option was to reduce its scale with a counter-offensive. Although nuclear attack was the greatest threat to the UK, there were two other extremely serious dangers – namely submarines and aircraft mining, which were best countered by attack at source and counter-mining. These were also tasks for medium bombers, as were support of land forces and rapid deployment overseas. Hence, the Air Staff sought 240 front-line medium bombers (350 including reserves) as the minimum necessary for the counter-offensive, not for other tasks.²⁹ The Chiefs thereby set out the basis of British defence policy within which the Navy had to find a place.

²⁵ D (53) 3, Chiefs of Staff, 'Likelihood of General War with the Soviet Union up to the End of 1955', 28 January 1953, CAB 131/13

²⁶ House of Lords Official Report, Volume 181, 15 April 1953, c. 807; Volume 182, 13 May 1953, c. 476

²⁷ 512 HC DEB, 12 March 1953, cc. 1509, 1515-16

²⁸ COS (53) 24th, 17 February 1953, DEFE 4/60

The Role of the Navy

The air enthusiasts in Parliament offered a two-pronged case, praising air power and seeking to bury the Navy. There was some scepticism about the Navy's role. Air Commodore A.V. Harvey dismissed the estimated strength of the Soviet submarine force on the grounds that they did not need 300 boats to destroy Atlantic shipping because they could destroy allied ports instead. Strategic air power would protect sea communications: 'our sea routes must be defended by our bomber forces operating over enemy territory'.³⁰ The strongest attacks were once again directed against naval aviation. Edward Shackleton argued:

It is ludicrous for aircraft carriers – as happened in the recent operation 'Mainbrace' – to be stooging around in the North Sea, which is within easy range of land-based aircraft, for anti-shipping operations, if they are likely to occur at all in a future war. The work is more easily covered by land-based aircraft.

He urged an inquiry into whether aircraft could take over some roles of the Navy and thereby save money.³¹ Reginald Bennett added that even in mid-Atlantic shore-based aircraft could also patrol against submarines more cheaply than carriers. Although he conceded that carriers still had a role in air defence, he saw this as expensive and a great risk. Harvey concurred, claiming that carriers were expensive and almost obsolete. Moreover, he argued that the Navy was to blame if it lacked the aircraft it wanted as it had never been air minded: 'They have never considered the air as a weapon which would really win wars.'³²

Lord Trenchard, long the most weighty opponent of naval aviation, pronounced that the country could save £100m annually by 're-combining Air Power' (i.e., scrapping carriers and the Fleet Air Arm). Carrier aircraft would always be inferior to land-based aircraft, he argued, while with long-range aircraft, carriers were unnecessary. He made one concession:

²⁹ COS (53) 114, 'RAF Medium Bomber Policy', 21 February 1953, DEFE 5/45

³⁰ 512 HC DEB, 12 March 1953, cc. 1575-1610, 1624; 518 HC DEB, 29 July 1953, c. 1400

³¹ 512 HC DEB, 12 March 1953, cc. 1633-34

³² *Ibid.*, c. 1885; 518 HC DEB, 29 July 1953, cc. 1398-1400

Carriers have their uses, I know, in small wars – if you can call them wars. In my day we used to call them expeditions; or even – when the Government did not want to give a medal for them – patrols.³³

The term ‘small war’ seems inadequate for Korea, which he failed to mention. Trenchard’s scepticism was supported by Lord Tedder (another former CAS), who suggested that a separate ‘Naval Air Force’ belonged to the last war rather than the next one and feared ‘that this part of the programme is, at best, due to a misguided attempt to imitate the methods of the American Navy in the Pacific in the last war’.³⁴ Defending the Navy, Thomas insisted that it had not only peacetime tasks and roles in ‘hot wars’ (as demonstrated in Korea and Malaya) but also a vital role in total war:

to keep open our sea communications both during that first intensive phase of modern war and following it. If the Navy cannot succeed in this I warn the House that the most up-to-date Air Force and the best equipped Army will be of no avail.

The Navy was concentrating on mines and submarines, yet the Russian Navy also had about 20 powerful cruisers (and was building more annually than the whole of NATO combined) and over 100 destroyers. This made it the second largest fleet in the world, much of it with modern equipment, backed by a powerful naval air force.³⁵ Defenders of the Navy, like the sceptics, were found on both sides of the House. John Dugdale, replying for the Opposition, stated that the Navy was not receiving enough of the defence estimates:

Do not let us wake one day to find that, while we hold the Middle East firmly in our grasp, 45 million people in this country are threatened by starvation as a result of the activity of enemy submarines.

Trenchard and Tedder’s arguments attracted trenchant criticism in the Upper House. Lord Gifford insisted that the arrival of convoys would be ‘a matter of life and death to this country’, and in mid-Atlantic and other parts of the world they could be protected only by carrier aircraft. Moreover,

³³ House of Lords Official Report, Volume 181, 15 April 1953, cc. 760-62

³⁴ *Ibid.*, cc. 788-91

³⁵ 512 HC DEB, 16 March 1953, cc. 1830-32. This was the first public acknowledgement that the Royal Navy had dropped into third place.

carriers were needed in small wars as the only means of quickly providing air support for combined operations; as shore-based aircraft became more sophisticated, their bases needed more preparation. Lord Teynham agreed and cited the example of Korea, adding: 'it is obvious that a carrier is necessary to give support to amphibious operations which may, of course, be beyond the range of shore-based tactical air forces'. Replying for the government, Lord Birkenhead stated that carriers had essential roles, which could not be performed by shore-based air power, due to their 'unique mobility'. Shore-based aircraft could conduct anti-ship strikes but even when they were available and in range to meet a sudden call, they might still be hundreds of miles away. Shore-based aircraft, he concluded, were valuable but complementary to carrier aircraft.³⁶

Government defence policy accorded with the proposals of the Parliamentary air lobby regarding the importance of a British force of nuclear-armed bombers. It did not, however, reflect their opinions about the irrelevance of the Navy or the superiority of land-based over carrier aviation. Their arguments for strategic bombers were remarkably in tune with the Air Ministry's case. Yet on naval aviation they went a considerable distance beyond what the RAF was at this stage arguing, let alone government policy.

A joint Royal Navy-RAF note in February 1953 accepted that aircraft would be required to protect sea communications against a 'full-scale attempt' in the first phase of a war to starve the country of food and raw materials and eliminate it as a base. The main threats would be submarines, mines, aircraft (which would be dispersed and therefore would not be eliminated by the allied air offensive) and surface ships: 'The Russian cruiser force is rapidly expanding and comprises ships of speed, endurance and gunpower greater than similar ships in the Royal Navy.' Maritime aircraft would be needed against these threats and for reconnaissance, mine-laying, attack of shore targets, attack at source and support of armies 'in areas where shore-based aircraft cannot be deployed economically or based within range'. The paper listed considerations relevant to the division of

³⁶ House of Lords Official Report, Volume 181, 15 April 1953, cc. 796-98; Volume 182, 13 May 1953, cc. 485, 501-04

maritime air tasks between shore-based and carrier aircraft. In bad weather, long-range shore-based aircraft could operate over the sea when carrier operations were impracticable, while with secure bases and sources of supply, 'shore-based aircraft may provide an economic means of meeting standing patrol and escort duties in ocean areas'. However: 'Fighter operations at sea at distances greater than 50 miles from a shore air base can only be carried out by carrier-borne aircraft'. There were also tactical advantages in the ability of carriers to operate with convoys, and: 'The mobility of carrier forces makes them particularly suitable for meeting sudden calls and requirements in areas overseas where no British air bases are in commission.' The note concluded that aircraft were important in 'Cold' and 'Hot' War maritime operations, and that both shore-based and carrier-borne aircraft were required.³⁷ Given that the Vice Chief of the Air Staff had jointly written this document, its endorsement of carrier aviation is striking.

Further support came the following month in a Chiefs of Staff report. It pointed out that nuclear weapons could reduce the enemy threat but this might be balanced by British losses (it is surprising that this point was not made more often). It noted that Germany had 56 submarines in 1939, while by 1954 Russia would have 245 in the West, of which about 75 would be deployable in the North Atlantic. Moreover, each Russian boat represented a greater threat since it was equipped with the 'snort', pressure mines and improved torpedos. Whereas the German air threat in the Atlantic had been small, Russia had a large tactical Air Force as well as a Naval Air Force. About 200 Type 35 jet bombers would be used against shipping, so there would be more need for high-performance carrier fighters than in the last war. However, the planned strength was less than the 1939 figure at a time when the threat was far greater in quantity and quality.³⁸

Global Strategy had asked whether money could be saved by more integration of Naval Aviation and the RAF, so the Maritime Air Defence Committee was reconvened under Sir Frederick

³⁷ COS (53) 75, VCNS and VCAS, 'Naval and Maritime Aviation', 7 February 1953, DEFE 5/44

³⁸ COS (53) 125, Chiefs of Staff, 'Naval and Maritime Aviation', 2 March 1953, DEFE 5/45

Brundrett, Deputy Scientific Adviser to the Ministry of Defence.³⁹ The Committee vindicated maritime aircraft in a wide variety of roles in maintaining sea communications and denying them to the enemy, noting that aircraft designed for such tasks could also attack enemy units at source and support forces ashore.⁴⁰ This report was uncontentious because it listed roles which could be performed either by aircraft or by aircraft together with other forces: it neither sought to distinguish between the two nor to specify which tasks could be performed by carrier-based and which by shore-based aircraft. More controversial and more revealing of imminent disputes was a paper setting out how the RAF member of the Committee's staff saw the balance between shore-based and carrier aircraft. He accepted that the latter were essential for air defence of shipping outside the range of shore-based fighters, defence of shipping against surface attack and attack on ships at sea. However, he contradicted current practice and disagreed with the Navy staff member by stating that many tasks currently performed by both carrier and shore-based aircraft could be performed solely by the latter, including direct and indirect support of shipping against submarines; attack on submarines and surface forces in port, attack on bases of maritime aircraft, attack on port installations, locks and dykes, and minelaying.⁴¹ Little progress could be made when the two Services had such differing viewpoints. The committee produced 21 papers between September 1952 and May 1953 but proved quite unable to agree a common view and in May 1953, after a succession of papers written by either the Admiralty or Air Ministry representative, it was suspended again.⁴²

The Admiralty felt that naval aviation was particularly under attack from proponents of land-based aviation, with McGrigor referring to 'a great deal of uninstructed and misinformed propaganda for air power on the old familiar Trenchard-Seversky lines, with which we have been familiar for so many years'.⁴³ There were signs that this school of thought was alive and well. In one meeting, De L'Isle claimed to have aircraft which might abolish the need for carriers but 'it was discovered that

³⁹ COS (52) 425, Note by Admiralty and Air Ministry, 11 August 1952, DEFE 5/40. Committee papers are in DEFE 8/39 and 40

⁴⁰ COS (MA) (53) 4, 20 March 1953, DEFE 8/40

⁴¹ COS (MA) (53) 9, 'Provision of Aircraft for Maritime Tasks', 5 April 1953, DEFE 8/40

they were on a drawing board and did not show much sign of turning up for another six years'.⁴⁴ The Admiralty continued to view naval air power as vital. In a highly symbolic move in May 1953, the Admiralty Board approved the reintroduction of the 'Fleet Air Arm' title. The name had been changed to 'Naval Aviation' in 1946 to stress that aircraft were an integral part of the Royal Navy; the Admiralty had now decided to reintroduce the old title because of its strong appeal with naval aviators and the public due to wartime associations.⁴⁵

The Radical Review intensifies

The June 1953 Brook Committee report offered few savings, as the reductions that the government desired would have needed a reassessment of UK foreign policy and commitments. Some cuts were suggested, which the Admiralty believed hit the Navy harder than the other Services.⁴⁶ Sandys, with Alexander and De L'Isle, began to push for a stricter interpretation of the priority attached to the initial stage of a future war in order to allow greater savings. They argued that only forces for the first six weeks of a war were required and any which would only be useful thereafter should be dropped.

Alexander sent the Chiefs a series of directives discussed by the Defence Policy Committee and approved by Churchill. They demanded cuts of £308m and since the forces needed modern equipment, manpower would have to be reduced and some risks accepted in discharging overseas obligations. Priorities would be: (I) forces for essential cold war commitments; (II) forces essential for survival in the opening six-weeks of a future war; (III) 'Forces which would not have a decisive effect upon our survival through the opening phase but would be needed in an ensuing period of "broken backed" warfare'. The third category, which included defending sea communication, would

⁴² 'Brief History of Maritime Air Committee', AIR 8/1618

⁴³ First Sea Lord to Admiral the Honourable Sir Reginald Plunkett-Erle-Drax, 18 June 1953, ADM 205/102

⁴⁴ First Lord to First Sea Lord, 12 June 1953, ADM 205/163

⁴⁵ Board Minute 4673, 18 May 1953, ADM 167/143; 515 HC DEB, Written Answers 20 May 1953, cc. 144-45

⁴⁶ VCNS No. 828, 24 June 1955, ADM 205/164, para. 9

be funded only after the needs of the first two were met. More worrying for the Navy were assertions such as: 'It should be assumed that, in view of the increasing range of shore-based aircraft, and the development of guided missiles, carrier-borne aircraft will in future play a less important strategic role.'⁴⁷ According to the Admiralty, the priorities 'appeared to be based on a memorandum by the Minister of Supply', in which he also argued that Britain should reduce its carriers and rely on the US to protect convoys until land-based aircraft could cover them. Sandys proposed an examination of the need for fleet carriers and cruisers, and of the Navy's large peacetime role; specifically, whether the RAF could 'share this burden'.⁴⁸

McGrigor strongly opposed these proposals, insisting that protecting sea communications would be vital both in the initial stages of war (thus disagreeing with the category in which the task was placed) and also after the opening period (thus disputing the idea that the third category could be disregarded).⁴⁹ It was reasonable to suggest that the USSR foresaw a role for naval forces in a nuclear war; as Phillip Newell, Admiralty Head of Military Branch wrote, the fact that it was still building cruisers showed that it believed it would have 'surface ships on the loose during the atomic phase'.⁵⁰ The form of war envisaged was also criticised. Rear Admiral Sir Anthony Buzzard (Director of Naval Intelligence) argued that the assumption that the US Strategic Air Force could break Russia's will to fight in just six weeks had 'grave implications and appalling disadvantages' including total dependence on having the first blow and uncertainties about the effect of aircraft casualties, the accuracy of bombing and the effect of nuclear weapons. The planned strategic offensive would also divert effort from tasks which would be vital early in a war such as counter-attack of air and naval bases, and support of crucial land campaigns. Buzzard therefore advocated that Britain should plan on a survival period of between six months and a year.⁵¹

⁴⁷ Minister of Defence, 19 June 1953, Annex to COS (53) 328, 'Radical Review', 8 July 1953, DEFE 5/47

⁴⁸ VCNS No. 828, 24 June 1955, ADM 205/164, paras. 10, 12; Head of M. to First Sea Lord, 20 July 1953, ADM 205/89

⁴⁹ COS (53) 76th, 22 June 1953 and COS (53) 80th, 26 June 1953, both DEFE 4/63

⁵⁰ Brief for First Lord, 10 July 1953, ADM 205/89

On 10 July 1953, Vice Admiral Sir Guy Grantham (VCNS) and Admiral Buzzard had a three-hour meeting with Sandys. He questioned the need for convoys to Scandinavia and operations in the Mediterranean, and asked why the US Sixth Fleet stationed there should not operate in the North Sea instead of the two British heavy carriers. He suggested that for maritime operations, shore-based aircraft were more economical than carrier-based aircraft. When his visitors explained the roles for which the latter were needed (including air defence, anti-submarine warfare and strike), Sandys repeated that Coastal Command could perform these tasks. They responded that it had no aircraft for dealing with air attack or reconnaissance and that RAF Canberras would be no use against warships unless they were specially trained and armed for sea operations, and then only in a limited area. Grantham described the meeting as 'a mind-clearing exercise' and thought that Sandys 'now has a fair impression of the probable scale and forms of attack on our sea communications and the way in which these will be met.'⁵² His judgement proved too optimistic and later events indicated that their conversation was no road to Damascus for the Minister of Supply.

All three Services were unhappy with government policy. The Directors of Plans argued that making the initial period of war the overriding priority could be justified 'only if the course of a war and its likelihood could be forecast with a high degree of certainty'. *Global Strategy* had argued that war was unlikely if the West waged the cold war resolutely, yet the force reductions envisaged would jeopardise Britain's ability to do so.⁵³ The Chiefs of Staff rejected the Minister's assumptions and the policies they implied, on the grounds that: 'For costing purposes the categorisation of forces by priorities is admittedly useful. Strategically, however, forces cannot be rigidly categorised in this way.' They rejected the idea that survival would be determined in the first six weeks of a war and objected that Alexander's directive conflicted with the principles of *Global Strategy*.⁵⁴

⁵¹ DNI 8529, 6 July 1953, ADM 205/89; original emphasis

⁵² VCNS to First Lord, 11 July 1953, ADM 205/89

⁵³ COS (53) 332, 'Radical Review: Implications of Service Tables', 9 July 1953, DEFE 5/47

The government continued to seek savings, replacing the Brook Committee in mid-July with the Defence Policy Committee, chaired by Butler. The Chiefs were asked to examine a list of 'major strategic issues'. Of the 11 questions, five concerned reducing land forces or anti-aircraft guns in the UK, increasing the number of US aircraft in Britain, replacing some of Transport Command with civilian aircraft and increasing Second Tactical Air Force in Germany. The first six related mainly or solely to the Navy. Some were plausible areas for investigation such as the effect of aircraft and guided missile developments on air and naval forces, but the others clearly portended reductions in the Navy. They included whether – in the opinion of the RAF! – there were any roles carried out by naval aviation or more broadly by the Navy (or Army) which could be undertaken by the RAF; what were the roles of cruisers and were they being taken over by light carriers; what naval forces would be required in the Mediterranean, assuming no land operations in the Middle East; whether the US could take more responsibility for protecting Atlantic convoys (could they deal wholly with the surface threat and provide air support where it had to be from carriers, with Britain providing only land-based air support?); whether the UK could reduce its naval requirements by assuming that US forces would be in position on the outbreak of war rather than two weeks later; whether a shift in allied responsibilities could allow Britain to drop the requirement for the N113 fighter and the Wyvern strike aircraft, and whether these aircraft were essential to British survival even without such a reallocation.⁵⁵ What is striking about this list is not only the extent to which it concentrated on the Navy in general and naval aviation in particular but also the faith placed in land-based aircraft.

The Joint Planning Staff examined the questions about protection of Atlantic shipping and once again its report vindicated naval aviation. Significantly it not only accepted that surface forces would be a 'considerable threat' but also stated that countering them would require aircraft carriers since allied air forces were unlikely to be available for this role. Air attack or reconnaissance would

⁵⁴ COS (53) 336, Chiefs of Staff, 'The Radical Review', 11 July 1953, DEFE 5/47. See also VCNS No. 828, 24 June 1955, ADM 205/164, paras. 10, 13

⁵⁵ DP (M) (53) 10, Minister of Defence, 'Further Examinations', 23 July 1953, in ADM 1/25077. See also COS (53) 371, Note by Secretary, 'Radical Review', 31 July 1953, DEFE 5/47

not initially be serious threats except against Scandinavian convoys, though the danger would increase should the USSR capture air bases in Western Europe: 'In the open sea defence against air attack and against air reconnaissance can be provided only by carrier based aircraft.' As for other carrier roles, the JPS doubted their effectiveness for flank support of NATO but agreed that the threat to sea communications required attack at source. The USSR's northern bases and communications were particularly vulnerable to allied carrier task forces, while long-range bombers could only be made available at the expense of other commitments. The writers of the report felt that carriers undertaking this role would be 'highly vulnerable' but since the US would do it anyway, Britain should join in so as to keep its influence over choice of targets. Without British carriers, SACLANT would lack adequate fighter cover and the ability to deal with surface threats. Besides, it would be 'unreasonable' to ask the US to defend sea communications without a British carrier contribution.⁵⁶ Another JPS report examined British naval commitments in the Mediterranean. It noted that they were undertaken both for Britain's own interests (including communications with Malta, Cyprus and the Middle East) and also to support NATO's southern flank, which would need Mediterranean sea communications for logistics. It concluded that withdrawal would damage SACEUR's strategy, jeopardise control of the Mediterranean, reduce British influence and prestige in the Middle East, risk the British command of Air Forces there and seriously weaken NATO.⁵⁷

The contribution of carriers in other sorts of conflict received some attention. Captain D.E. Holland-Martin (Director of Plans) provided examples of their cold war utility:

Carrier air support was the only Commonwealth contribution for a considerable period and Carriers probably saved the situation at Pusan. After three years a carrier is still a substantial part of our contribution.

Carriers might be needed to defend Hong Kong, they were part of current plans for operations in Egypt and for defending Malaya against China. Furthermore: 'Consideration was recently given to

⁵⁶ JP (53) 105 (Final), 'Protection of Transatlantic Convoys', 26 August 1953, DEFE 6/24

⁵⁷ JP (53) 106 (Final), 'Tasks of British Naval Forces in the Mediterranean in War', 28 August 1953, DEFE 6/24

sending a carrier to the Falkland Islands.’⁵⁸ Another paper from around the same time discussed ‘Support of Military and Amphibious Operations’, stating:

This is to some extent a secondary role for carrier borne aircraft. However, in the war and more recently in Korea carriers have amply justified themselves in this task. In any war of movement the mobility of the carriers gives great advantages when the difficulties of airfield construction and logistic problems connected with modern high performance aircraft are considered.

The paper mentioned the role of the carrier in providing fighter cover in operations such as the wartime landings in Salerno.⁵⁹ Still, the Admiralty focus remained total war with the USSR.

The Admiralty felt increasingly under attack in the Radical Review, with some justice: even the Chancellor – who chaired the review committee – remarked that ‘the Admiralty is making the biggest sacrifice’.⁶⁰ The arguments used against the Navy were a mixture of the familiar (e.g. that land-based aircraft could take over naval roles) and the more novel (notably the growing emphasis on the medium bomber force). In late July, the Admiralty Board noted:

The current naval plan had been criticised from several points of view and one school of thought was inclined to urge that a number of naval tasks, including anti-submarine operations in war, should be handed over to the RAF.⁶¹

Newell referred to ‘the attack on the Navy’, suggesting that the government envisaged an enlarged RAF taking over many current naval functions and believed that some types of ships – including cruisers, heavier carriers and even escorts – might be unnecessary.⁶² McGrigor pointed out to Dickson that there were things that carrier forces could do in anti-submarine warfare which shore-based aircraft could not, ‘such as tackling shadowing enemy aircraft, bringing to bear a concentration of anti-submarine aircraft and having readily available surface forces to deal with sono-buoy

⁵⁸ Director of Plans, ‘Briefs for Radical Review’, 8 June 1953, ADM 205/163. This was not the only reference to the Falklands. Discussing which naval roles the RAF might take over, Newell commented: ‘The least easy to imagine is the Falklands Islands commitment.’ Brief for First Lord, 18 July 1953, ADM 205/89

⁵⁹ ‘The case for Aircraft Carriers’, Annex to Brief Q, July 1953, ADM 205/89, paras. 9-10

⁶⁰ Butler to Alexander, 28 July 1953, AIR 8/1875

⁶¹ Board Minute 4693, 30 July 1953, ADM 167/143

⁶² Head of M., 15 August 1953, ADM 205/90

contacts.’⁶³ It is surprising that the opponents of carriers made little use of the vulnerability argument, which at other times was a staple of their case. Plans Division apparently anticipated such a gambit and offered an analysis of the war which suggested that carriers were less vulnerable than was often claimed: of 60 British carriers (11 fleet, 8 light and 41 escort) only eight were sunk – one by surface action, one by carrier-based aircraft, one by accident and five by submarines. None was sunk by shore-based aircraft.⁶⁴

The next moves

Lord Alexander now allocated a sum to each of the Services, based on the disputed priorities of his June directive.⁶⁵ The Admiralty’s response in August criticised his priorities as:

an unsuitable basis on which to plan naval expenditure as they place insufficient emphasis on the Navy’s role in support of our Foreign and Colonial policy in peace, or in the Cold War, and give little attention to the difficulties of getting food and raw materials into this island after the first six weeks of an atomic war.

It opposed the suggested reduction of its budget to £360m, viewing the idea with ‘grave concern’. If forced to accept such a cut, the Admiralty would reduce the Reserve Fleet to protect the Active Fleet, as well as scrapping HMS *Vanguard*, disbanding two of the three Royal Marine Commandos and cutting bases, stocks, provision of new aircraft, modernisation and new construction. Most serious would be the resulting inability to replace ageing ships, with the result that, ‘our Fleet *in 10 years time would be approximately half its present strength*’, with the number of carriers in the 1965 Fleet falling by 35% and cruisers, destroyers, frigates, minesweepers and submarines declining still more.⁶⁶

The Radical Review concentrated on naval aviation but battleships were also scrutinised. Kenneth Robinson MP argued that they ‘present an extremely large target for submarines and for

⁶³ First Sea Lord No. 2072, 17 September 1953, ADM 205/163

⁶⁴ ‘The case for Aircraft Carriers’, Annex to Brief Q, July 1953, ADM 205/89, paras. 14-15

⁶⁵ VCNS No. 828, 24 June 1955, ADM 205/164, para. 15

⁶⁶ MISC/P (53) 34, First Lord, ‘Radical Review’, 31 August 1953, ADM 205/90: original emphasis

aircraft' and lacked a role, since surface ships were more often sunk by aircraft and submarines than battleships, while their shore bombardment was inaccurate and could now be better performed by aircraft. Britain no longer needed battleships, which cost money even in Reserve. He concluded:

There is bound to be opposition from the Admirals to any suggestion of scrapping these ships. The Admirals do not like to see their heavy armament going. ... I cannot blame their Lordships for having a sentimental attachment to the battleship.

Commander Allan Noble, Parliamentary and Financial Secretary to the Admiralty, reported that it did not intend to build more battleships and the four *King George V*-class ships were in low readiness Reserve with very little being spent on them. However, 'we do not think that their useful life is at an end. We do not know what use they will be under the weapons of the future.'⁶⁷ This line was unchanged by August, when an Admiralty paper explained that *Vanguard* was retained because heavy ships were desirable for prestige and 'to demonstrate our standing as a first class power', noting that the US had four in commission. Battleships were also useful for training and were more economical than a carrier (the current operating cost of *Vanguard* was a quarter that of a fleet carrier), while if she were placed in Reserve it would take a year to prepare her for action. She would, moreover, have an important role during the initial stages of a war, deterring Russian cruisers when British naval and air forces would be fully stretched by other commitments. The paper noted that in the war, battleships had been needed against large surface vessels in bad weather and in darkness, especially in northern waters: 'Modern developments have not yet overcome these limitations of aircraft.'⁶⁸

In October the Admiralty presented its latest plans to the Defence Committee. Given the need to replace wartime ships and incorporate into the Fleet the modern equipment emerging from research and development programmes, the plan involved scrapping numerous Reserve ships. These included the fleet carriers *Indomitable*, *Implacable* and *Indefatigable* – which could not operate new aircraft without extensive modification and which the proposed budget would deprive of aircraft –

⁶⁷ 512 HC DEB, 16 March 1953, cc. 1861-64, 2018

⁶⁸ 'Operations Essential to Survival of UK through Opening Phase', August 1953, ADM 1/25077

and the four *King George V*-class battleships, which would require major modification to become effective.⁶⁹ At the meeting which discussed this proposal, Churchill expressed shock: 'In the "broken-backed" warfare which was likely to succeed the first atomic phase of a future war, these ships would probably be able to fulfil a valuable role.' He argued that after each side had taken losses, the battleships might be superior to anything the enemy had left, comparing them to the 50 elderly American destroyers which had been so useful in 1940. The Admiralty was instructed to consider alternatives.⁷⁰ Accordingly, it revised the plan, placing *Vanguard* in Reserve rather than scrapping her and retaining the *King George V*-class ships 'in view of the expressed wishes of the Prime Minister.'⁷¹ This exchange could be taken as a classic example of successful bureaucratic politics in which unacceptable implications of a proposal are stressed to undermine it. Yet given the need to find economies, the current policy of the Navy and the shortcomings identified in the battleships, eliminating them from the Reserve was sensible.

The Admiralty was still navigating stormy waters. In October, Trenchard initiated a Lords debate on 'Britain's Air Forces'. The plural in the title was quite deliberate, as his argument was once again that re-uniting the RAF and the Fleet Air Arm would produce annual savings of some £100m. Although he agreed that sea lanes must be kept open, he insisted that this could not be done by aircraft carriers, 'the most expensive, vulnerable and dangerous means of defence we can have today ... If these carriers go to sea, they are going to sea to be sunk.' With no carriers there would be no need for the Fleet Air Arm, so resources would be freed for Bomber Command.⁷² Trenchard was not seeking 'unification of air power' but the abolition of the FAA. He was supported by Lord Tedder, who described the 'segregation' of naval flying as unnecessary and unwise, and felt that the use of carriers would at best be 'an extravagant gamble'. Further support came from Lord Brabazon who doubted that there would be a repeat of Pacific War conditions when carriers had been needed.

⁶⁹ D (53) 47, First Lord, 'Future of Certain Units of the Reserve Fleet', 13 October 1953, CAB 131/13

⁷⁰ D (53) 13th, 14 October 1953, CAB 131/13

⁷¹ Director of Plans to First Sea Lord, 31 October 1953, ADM 205/91

⁷² House of Lords Official Report, Volume 183, 22 October 1953, cc. 1316-19

Besides, they were now threatened by guided missiles.⁷³ Peers with naval links fought back but more revealing were the contributions to the debate made by senior ministers. Lord Alexander stated that the Second World War had confirmed the Inskip decision (which returned the Fleet Air Arm to the Royal Navy in 1938) and he believed a new war would not be very different from the last one in that respect. He denied that only shore-based aircraft were needed, since the air threat demanded carrier fighters outside coastal areas. Moreover, he expressed doubts about Trenchard's figure of £100m savings since giving naval roles to the RAF would increase its expenditure.⁷⁴ De L'Isle argued that with limited resources, Britain could not meet all possible threats and must therefore prioritise. The greatest need was for a strong offensive in the air and hence for a long-range bombing force.⁷⁵ That a man in his position urged this as a first priority is perhaps less significant than the fact that the government minister closing a debate on re-combining naval air with the RAF did not even mention the Fleet Air Arm, let alone defend it!

Grove sees the Admiralty as emboldened by Churchill's reaffirmation of the broken backed concept, after which it 'moved into a full counteroffensive' to oppose the six-week criterion.⁷⁶ This seems accurate. Newell referred to the Admiralty having the Prime Minister's authority to think in terms of broken backed warfare, which improved the case for a large Active Fleet and the Reserves, which were: 'all very necessary if part of your *primary* task is to look beyond the atomic phase'. He also offered a more general criticism of basing UK strategy on the assumption of nuclear war:

*before we reach the full guided missile era we appear to be reaching the hydrogen bomb era. The destructive power of these weapons is so great that the current concept of war in the 1950s or early 1960s inevitably being an atomic war may recede and we may have to put some of our eggs in the basket of a global war that is not atomic. [hand-written note added: 'i.e. no atomry at all, like no gas in 1939-45'] In such a war starvation is the enemy's best conventional weapon and the Navy has a most important part to play.*⁷⁷

⁷³ Ibid., cc. 1334-36, 1347-53

⁷⁴ Ibid., cc. 1320-22

⁷⁵ Ibid., cc. 1357-58

⁷⁶ Grove, 95

Holland-Martin was adamant that the current emphasis on the opening phase of a war contradicted the advice of the Chiefs of Staff and Defence Committee decisions, noting that the 1952 *Global Strategy* Paper had explicitly stated that the allies could not prepare only for a short war.⁷⁸ McGrigor took up this line and objected that the Radical Review was drifting away from agreed strategic priorities by reducing the emphasis on deterrence and the cold war in favour of stressing the first six weeks of war. The Chiefs agreed to inform Ministers that they were 'most uneasy' over the Ministerial Sub-Committee's divergence from these principles and that the priority attached to the first six weeks 'had been wrongly interpreted to exclude further peacetime preparations outside that period'.⁷⁹

If the Admiralty counter-offensive stepped up a gear in October-November 1953, so did the onslaught against the carriers. At a Radical Review meeting held in late October the issue arose once again.⁸⁰ Thomas sought to deal with the 'misapprehensions' of his colleagues about the role of carriers and emphasised that the Navy was not planning ships on the scale of *USS Forrestal* (which displaced 59,900 tons compared with *Eagle* and *Ark Royal* at 36,800 tons). The main task of carriers was to provide a contribution to the allied Striking Fleet:

Its role is analogous to that of the Grand Fleet of World War I and the British Home Fleet of World War II, namely the offensive force for Atlantic and Northern waters, and the essential cover under which defensive forces, protecting our shipping from attack by aircraft, submarine and mine, can do their work.

The Striking Fleet could reduce threats to sea communications by attacking them at source, making it complementary to strategic air forces. It could launch heavy attacks with balanced forces of fighters and bombers, and the varied directions from which it could strike would force the enemy to build up substantial defences. The US already provided strike forces in the Mediterranean and the Pacific and could not be left with sole responsibility for offensive naval warfare in the Atlantic. The American

⁷⁷ Head of M. to First Sea Lord, 23 October 1953, ADM 205/91; original emphases

⁷⁸ Director of Plans, 'Radical Review – Progress Report', 24 October 1953, ADM 205/91

⁷⁹ COS (53) 121st, 27 October 1953; COS (53) 130th, 17 November 1953; COS (53) 131st, 23 November 1953; all DEFE 4/66

⁸⁰ MISC/M (53) 98, 26 October 1953; quoted RDP/P (53) 28, ADM 1/24695

force would not be in place until 15 days after the beginning of the war, so NATO was relying on the UK contribution to hold the ring alone; besides, a British share was required for a voice in the force's use. The paper also drew attention to the fact that the carriers' mobility allowed Britain to deploy at short notice air cover and strike aircraft in areas other than the North Atlantic and Mediterranean. It concluded by pointing out the effect of removing the heavy carriers on the morale of the Navy and on foreign opinion: 'In the eyes of the rest of the world we would cease to be a major Naval power.'⁸¹

The 10 November Defence Policy Committee meeting which took this paper examined the question: 'In view of the limitation of the total money available is the present and proposed expenditure on Naval Air justified?' Thomas stated: 'However little money was allocated to the Admiralty they would certainly give naval air a high priority for expenditure within it. The Navy simply could not do its job without it.' Sandys resumed the offensive, stating that fleet carriers were required for three main purposes. The first was to defend Norway, which he believed was not a strategic priority for the defence of the UK or Western Europe. The second role was offensive operations against enemy bases and minelaying in enemy waters: 'He could not understand why land based bombers could not perform these tasks with equal if not greater efficiency'. Third, carriers were said to be needed for protecting Atlantic convoys against raiders; here too he believed that land-based bombers would be equally effective and the US could be relied upon. Sandys concluded that carriers 'were desirable and should be provided if money were unlimited', but Britain could not afford them in its current financial situation. De L'Isle concurred: 'In his view the share of the Defence Budget to be allocated to the Royal Air Force must certainly be increased.' After what the minutes describe as 'a lengthy discussion', Alexander agreed with Sandys that spending money on fleet carriers required more justification; further papers should be prepared.⁸²

⁸¹ RDP/P (53) 28, First Lord, 'The Role of Aircraft Carriers', 9 November 1953, ADM 1/24695

⁸² RDP/M (53) 8, 10 November 1953, ADM 1/24695

The next significant Defence Policy Committee meeting took place on 27 November, when it considered memoranda on naval air by Thomas, Sandys, De L'Isle and Alexander.⁸³ Sandys' paper was summarised and criticised by Holland-Martin. The Minister believed that fleet carriers were allocated to the Striking Fleet for four reasons. The first two, protecting sea communications and supporting allied land forces, were important but could be left to the Americans, while the third, attack at source, could 'probably' be carried out more economically by land-based aircraft. (Holland-Martin noted that neither the Americans nor the Admiralty agreed, and a hand-written comment added 'airfields would be out of action'). The fourth task was to attack enemy raiders but Sandys asserted: 'The enemy won't attack our shipping' (Holland-Martin retorted, 'they are building *Sverdlovs* for ornament?'). Sandys stated that 'Any modern bomber could kill a *Sverdlov*' but Holland-Martin added 'if found on the right day, and if Bomber Command airfields not already out of action' and a hand-written note added 'they have no weapons and are not trained for this purpose'. Sandys accepted that strike aircraft were needed but claimed that they could be operated from light carriers (according to Holland-Martin, light carriers could not provide strike aircraft plus air and anti-submarine patrol simultaneously). Sandys stated that: 'The Carrier is less valuable than it was and anyhow the Americans can do it' (Holland-Martin noted that the US saw them as useful in hot and cold wars, and had increased the emphasis on naval air in the latest, much reduced, naval budget). Holland-Martin rejected Sandys' description of peacetime naval duties as: 'To carry reinforcements to overseas territories where there is unrest and generally to show the flag', stating:

Navies can still produce a concentration of potential force in any part of the world in a way that cannot be done by Armies or Air Forces which have to be landed and involved before their existence is felt.

The Minister urged that Britain should not duplicate US forces and since NATO already had superiority at sea, it should aim to increase the weight of the air counter-offensive. He concluded that the government should strictly apply the priority of the survival period, medium bombers and fighters

⁸³ The meeting was DP (M) (53) 6th, the papers were Minister of Defence, DP (M) (53) 13; First Lord, DP (M) (53) 14; Minister of Supply, DP (M) (53) 15; Secretary of State for Air, DP (M) (53) 16. Summarised in Minister of Defence.

should have priority, land-based air power could take over some of the Navy's tasks, and the new strike aircraft and fighters requested by the Admiralty were expensive and duplicated the roles of other forces.⁸⁴

The Admiralty was taken aback by the vehemence of the Minister of Supply's memorandum. Newell referred to 'Mr. Sandys' diatribe against the Navy' and mentioned that those who had seen the draft described it as 'virulent'.⁸⁵ Holland-Martin told McGrigor: 'The PM is said to have remarked of Mussolini that at least he had the pleasure of shooting his son-in-law.'⁸⁶ He added that fleet carriers were 'larger, faster, better armoured, and better able to protect themselves' than light carriers, and if Britain scrapped them, it 'would cease to be a major Naval power. Our Navy would sink to the level of the French or Dutch Navies.'⁸⁷

Thomas' memorandum began: 'Aviation influences every aspect of naval warfare, and the Fleet Air Arm is an integral part of the Fleet'. It was important in the cold war facing the country due to its mobility and flexibility, and was also part of the deterrent against war. Safeguarding sea communications required fleet carriers with the Striking Fleet and both light and escort carriers for direct protection of shipping. Fleet carriers would cover other naval forces and provide the Navy's main offensive power, which could not be just left to the Americans. Eliminating them would:

- (a) Sacrifice strategic mobility in peace and war.
- (b) Hamper our ability to wage the cold war.
- (c) Detract from the deterrent.
- (d) Materially reduce our influence in Allied naval matters.
- (e) Seriously affect the morale of the Navy, which would lose confidence in itself and in any Board of Admiralty which consented to such a reduction.

'Naval Air', 21 January 1954, ADM 205/94

⁸⁴ Director of Plans, 'Minister of Supply's arguments on Aircraft Carriers and Cruisers in DPM (53) 15 of November 1953', ADM 205/97; original emphasis

⁸⁵ Head of M., 'Radical Review', 17 November 1953, ADM 205/92

⁸⁶ Director of Plans to First Sea Lord, 21 November 1953, ADM 205/92

⁸⁷ Director of Plans, 'Naval Air (DP (M) (53) 13)', 17 November 1953, ADM 205/92

Fleet carrier roles included protecting sea communications, preventing enemy warships from supporting land and amphibious operations (they would have fighter cover, so attacking aircraft would need fighter escorts, which could only be provided by carriers), air defence, attack at source, minelaying, and supporting military and amphibious operations. The roles of light carriers were anti-submarine warfare and (less demanding) air defence of convoys and shipping outside the effective range of shore-based fighters, against reconnaissance aircraft or air strikes unescorted by fighters. The paper also suggested that as the devastating effect on both sides of nuclear war became increasingly apparent, a continued cold war became more likely. In such a conflict naval aviation offered advantages of mobility, flexibility and economy, as it reduced the need to build 'expensive and immobile bases overseas in peace'.⁸⁸

The most important memorandum prepared for the 10 November meeting was Alexander's. He stated a 'provisional view' that 'a clear case exists for carriers suitably equipped for the local protection of fleets and convoys against attack by submarines and aircraft in the open oceans'. However, Britain would have to rely on the US to counter surface raiders since, 'within our limited resources we cannot afford carriers constructed and equipped to act in a "strike" role'.⁸⁹ The roles of the fleet carrier would thus be split up and parcelled off either to British land-based aircraft or to American carrier-based aircraft, as Sandys had earlier suggested.

The Chiefs of Staff sent a memorandum to the committee, reiterating their disagreement with Alexander's priorities and expressing the hope that given their constitutional role as the Cabinet's strategic advisers, they would be able to examine any proposals from the Minister of Supply which differed from accepted policy.⁹⁰ This approach was backed by the committee and Churchill requested reports on the consequences of implementing Alexander's proposals, on which roles of carrier aircraft

⁸⁸ DP (M) (53) 14, First Lord, 'Role of Aircraft Carriers', ADM 1/24695

⁸⁹ DP (M) (53) 13, annex to Note by Minister of Defence, 'Naval Air', 21 January 1954, ADM 205/94. See also the summary in Board Minute 4734, 4 February 1954, ADM 167/144

⁹⁰ This was numbered DP (M) (53) 17 and is summarised in VCNS No. 828, 24 June 1955, ADM 205/164, para. 17

could be undertaken by shore-based aircraft, and on the case for and against transferring Coastal Command to naval control.⁹¹ Accordingly, Alexander asked what would be saved by placing the two fleet carriers in unmaintained Reserve, on the assumption that the carrier's role would be limited to convoy escort.⁹² The Admiralty would no longer participate in the Striking Fleet and would lose certain capabilities from the remaining carriers, including strike aircraft and the new fighters, which Sandys and Alexander felt would be unnecessary.

The Admiralty's initial reply made clear its opposition to the Minister's plan. Its paper repeated that aviation was the main offensive power of the Navy and necessary for the protection of sea lanes, and that Britain needed to contribute to offensive naval war with fleet carriers just as it was intending to share in offensive air warfare via Bomber Command. Alexander's proposal would also meet US opposition, and although it could be mitigated by providing two additional light carriers for trade protection, doing so would greatly reduce potential savings. Fleet carriers would still be needed because light carriers could not handle modern aircraft without expensive modernisation, and some not even then. The Admiralty answer as to what could be saved by the proposals was therefore that all the planned aircraft were still needed except the Wyvern and NA39 strike aircraft, and that no construction would be dispensed with because there were no plans to build further fleet carriers in the period under consideration, while another light carrier would need to be laid down.⁹³

Alexander responded curtly, pointing out that the small predicted savings rested on an assumption which had not been part of his proposal, that the two fleet carriers would be replaced by two additional light carriers. He demanded figures for their removal without replacement and also inquired why the Admiralty still perceived a need for the N113 and DH110 fighters: the Navy would only have to deal with long-range reconnaissance aircraft, for which existing fighters would be

⁹¹ PM to Minister of Defence, 'Naval Air', 27 November 1953, ADM 205/92; see also Minister of Defence, 'Naval Air', 21 January 1954, ADM 205/94, para. 3

⁹² RDP/P (53) 30 (Revised), Minister of Defence, 'Naval Air', 1 December 1953, ADM 205/93

⁹³ RDP/P (53) 32, First Lord, 'Reply to RDP/P (53) 30', 9 December 1953, ADM 205/93

adequate, and any replacement could be provided by something far cheaper than the proposed aircraft.⁹⁴ The Admiralty therefore wrote a second memorandum stating that putting two fleet carriers into unmaintained Reserve would save £10m the following year, rising to a peak of £23m in 1956-57 and dropping to £12.5m in 1957-58. If they were joined by an additional light carrier, the savings would be £13m the following year, rising to £30m and falling to £23m in 1957-58. Some of the savings would be eliminated by reduction of American aid for the cancelled aircraft.⁹⁵

The Admiralty still fought its corner. It insisted that the air threat to shipping was increasing even in ocean areas far from land, 'owing to the greater range of aircraft and improvement in anti-ship weapons and detection devices'; hence it was all the more necessary for maritime forces to be accompanied by high-performance fighters.⁹⁶ Thomas strongly defended the need for both the new fighters, arguing that: 'The effect of losing air superiority over trade routes, including the Western Approaches, would be just as serious, and almost as rapid, as losing it over the United Kingdom.' Without ever coming into range of land-based fighters, Russian Type 35 jet bombers (of which there were 250 in the Baltic and Northern areas) could reach the approaches of the Clyde or even, operating from bases in Norway or Northern Denmark, the south-west approaches to the UK. The current Sea Hawk and Sea Venom fighters could not destroy these aircraft, which had a ceiling 4000 feet higher than theirs, and while they had reached the limits of their development, Russian bombers would continue to improve. Thomas cited the Air Ministry claim that it could easily destroy ships with guided bombs: 'To such an extent as this view is valid the same must be held to apply to Russian aircraft.' Trade defence required the all-weather DH110 but that two-seater aircraft lacked the ceiling to counter very high aircraft or the climb for interception from deck, for which the N113 was needed; the two types were complementary.⁹⁷

⁹⁴ Minister of Defence to First Lord, 18 December 1953, ADM 205/93

⁹⁵ RDP/P (53) 32, Admiralty memorandum, 'Answers to Questions in RDP/P (53) 30', 23 December 1953, ADM 205/93

⁹⁶ 'The case for Aircraft Carriers', Annex to Brief Q, July 1953, ADM 205/89, paras. 2-4

⁹⁷ First Lord, 'The Need for the DH 110 and the N113', 23 December 1953, ADM 205/93

As Churchill had directed, Alexander asked the Admiralty and Air Ministry for an agreed list of which roles currently assigned to carrier-borne aircraft could be switched to shore-based aircraft. Formulating such a list proved difficult, took four drafts and still contained notable disagreements. It agreed that only carrier fighters could counter reconnaissance aircraft or direct air attack beyond the range of shore-based fighters. Amphibious operations might be needed and outside the range of shore bases, they would require carrier aircraft. Anti-submarine operations and reconnaissance could physically be performed by land-based aircraft, yet efficiency and economy demanded a mix of them and carrier aircraft. Both sides compromised in these statements, which were as far as agreement went. The Admiralty believed that some mining and attacks on submarine bases could be more effectively carried out by carrier aircraft, while the Air Ministry believed that they would all be better performed by shore-based aircraft.⁹⁸ The paper agreed that shore-based aircraft could attack warships in harbour and could attack them at sea with conventional weapons if they justified a diversion of sufficient V-bomber effort. The Air Ministry was confident that when both guided weapons and sufficient nuclear bombs to justify use against such targets were available, a small force of land-based aircraft could attack them 'with near certainty of success'. The Admiralty, on the other hand, doubted that new weapons would solve the problem because when guided bombs were available the enemy would probably have its own ship-borne guided weapons able to 'annihilate high flying heavy bombers'. It also emphasised problems of reconnaissance and identification in open ocean areas and argued that targets of opportunity including raiders that escaped detection could best be attacked by naval forces available on the spot. It backed this argument with a paper summarising a report into the wartime escape of the German battle cruisers *Scharnhorst* and *Gneisenau* through the English Channel, when bad weather made it difficult to find them and low cloud made high-level bombing impossible. In all, 242 Bomber Command aircraft had taken off, of which 188 failed to locate the German ships, 15 were shot down and 20 damaged. Neither ship was hit.⁹⁹

⁹⁸ ACNS (W) paper (agreed with the Air Ministry representative), 10 December 1953, ADM 205/93

⁹⁹ Ibid., plus annex: Bucknill Committee Report

Some of the sting was now drawn out of the dispute over the relationship between land-based and carrier-borne air power. McGrigor raised the issue directly with Dickson, who was prepared to fight his corner but seemed less eager to attack naval aviation than his predecessor, Slessor. Their conversation revealed that the Air Ministry was far from united over the anti-carrier offensive:

He gave me his own personal views, but explained that he was in great difficulty as they were not the views of his Secretary of State, who was determined to attack, and as far as possible abolish, Naval aircraft and Carriers, in order to reduce the amount of money which had to be spent on the Country's defences.¹⁰⁰

The two Service chiefs found many areas of consensus, which vindicated the arguments proposed by the Admiralty during the Radical Review:

We agreed that Bomber Command could not, in fact, undertake duties at present allocated to the Carrier Striking Fleet unless it was considerably reinforced. Even then it would be most likely that the additional bombers would be thrown in to swell the Bomber Force in support of either SACEUR or the Strategic Air Force, and would not be diverted to attacks on Russian northern bases and communications, or operations in Scandinavia.

They also agreed that fighter-escorted strikes from carriers, with surprise, might be more effective in northern waters than attack at extreme range by Bomber Command, and that accurate mine-laying might be better undertaken by carrier aircraft in some areas. They agreed that two fleet carriers 'was a small price to pay for having a say in the employment of this Striking Force', while having carriers in or near commission made it wasteful not to use them (though if the country was starting from scratch without carriers, careful thought would have to be devoted to whether it was worth building them). As regards NATO and the deterrent, abandoning the carriers would be 'most undesirable'.¹⁰¹

Coastal Command

The other question dividing the Admiralty and Air Ministry was control of Coastal Command, which predictably reemerged. Some in the Admiralty feared that its transfer could be

¹⁰⁰ First Sea Lord to First Lord, 22 December 1953, ADM 205/93

presented as a palliative to lessen the pain of naval cuts. Newell explicitly advised McGrigor to say nothing about Coastal Command, because 'it now looks as though this will come our way and we had better not appear to be in a mood to accept it in return for a much reduced Navy.'¹⁰² Alexander judged that there was no advantage in creating two shore-based air forces and repeated the common argument that transferring Coastal Command would be a 'retrograde step' which 'would cause a major upset, physically and mentally'.¹⁰³ The Admiralty was clearly not satisfied. While Alexander had argued that changing the status of Coastal Command would cut a large part of the RAF, the Admiralty pointed out that out of 302,000 RAF personnel only 11,000 were in Coastal Command. The Admiralty also argued that unlike tactical aircraft, Coastal Command aircraft were specialised and could therefore not be switched to other tasks. Moreover, the RAF not only lacked anti-ship strike aircraft and long-range fighters, it had not even issued a requirement for them.¹⁰⁴

The issue came to a head early in 1954. A Board Minute explicitly states that the Admiralty proposed transferring control of Coastal Command and that some Ministers agreed but the RAF and the Minister of Defence opposed it.¹⁰⁵ The Admiralty may have been unwilling to push the question too far for fear of jeopardising the tentative ceasefire with the RAF which emerged in late 1953 but it clearly believed that its operational case had not been refuted. Thomas told Churchill: 'there has been no answer to the basic argument that when war came it was found essential to put it [Coastal Command] under naval operational control rather than the Navy under the control of the RAF'. He repeated that making the Navy solely responsible for anti-submarine warfare would save money, while failing to do so would result in 'two Services operating the same aircraft for the same purpose with the same weapons at the same time.'¹⁰⁶ Nevertheless, judging by the number of references in the

¹⁰¹ Notes of conversation, enclosure to First Sea Lord No. 2829, 22 December 1953, ADM 205/93

¹⁰² Head of M. to First Sea Lord, 20 July 1953, ADM 205/89

¹⁰³ Minister of Defence, 'Naval Air', 21 January 1954, ADM 205/94, paras. 16-20

¹⁰⁴ RDP/P (53) 35, Secretary of State for Air, 'Coastal Command: Responsibility for Maritime Aircraft', 10 December 1953, AIR 19/659; Head of Air Branch, 'Coastal Command brief – reply to Minister's brief, DPM (54) 1', 27 January 1954, ADM 205/94; 'Secretary of State for Air, DP (M) (54) 4, Coastal Command', 2 February 1954, ADM 205/95

¹⁰⁵ Board Minute 4734, 4 February 1954, ADM 167/144; also VCNS No. 828, 24 June 1955, ADM 205/164, para. 6

¹⁰⁶ First Lord to Prime Minister, 22 February 1954, ADM 205/95

files and the papers concerning the two subjects, the issue of Coastal Command was far less prominent than that of the fleet carriers, which was coming to a head.

Alexander's Compromise

In January 1954, responding to Churchill's request for an investigation of the consequences of eliminating the fleet carriers, Alexander proposed a compromise. He acknowledged that reconnaissance and anti-submarine operations required both land- and carrier based aircraft, and the latter were also needed to counter reconnaissance or air attack beyond the range of shore-based aircraft. The basic need for carriers was thereby recognised – though this had never been seriously questioned. He defined the extent of their roles, stating:

Attacks on enemy targets at source and offensive minelaying are, in my view, tasks which should be assigned to shore-based aircraft and undertaken by the RAF. ... On the other hand I do not think that the task of destroying surface raiders at sea can be left to the Americans or to RAF land-based aircraft. The Royal Navy must be able to take offensive air action against surface raiders in its own defence and that of convoys under its protection.

Changing his opinion from November, he judged that carrier aircraft were required for attack of shipping and that Royal Navy aircraft should perform that role. He acknowledged that supporting ground forces where land-based aircraft could not be provided also demand carrier aircraft but insisted that this task would have to be left to the Americans: 'In my view this is a requirement to which the UK cannot, within its limited resources, give a high priority.' Savings would then be possible: 'If we confine the role of naval air as proposed we do not need heavy carriers nor aircraft armed with atomic weapons.' Alexander noted that eliminating fleet carriers would reduce the force to three light carriers, making training difficult and risking criticism for spending so much on the fleet carriers only to place them in Reserve. He therefore suggested keeping one Active fleet carrier and one for training, although both would be 'manned and equipped for a light carrier role only', saving

over £10m annually.¹⁰⁷ Thus, by the end of 1954 the Active Fleet would have three light carriers and the fleet carrier *Ark Royal*, which would be equipped only as a light carrier; *Eagle* would be similarly equipped but used for trials and training. Work on modernising the fleet carrier *Victorious* would be cancelled and the same fate might befall the light carrier *Hermes*. An Admiralty minute noted that the Sandys agreed with Alexander about carriers, although he also suggested that the number of light carriers should be reduced from three to two.¹⁰⁸

If Alexander expected the Admiralty to be mollified by nominally preserving fleet carriers and keeping a residual anti-ship strike role he must have been seriously disappointed. His proposal seemed to overlook – and his paper did not even address – its arguments about the need for fleet carriers for defending sea communications. The Admiralty fought back hard.

The Admiralty's case

The Admiralty continued to criticise the basic assumptions of the Radical Review. Admiral Buzzard again questioned the validity of planning on a six-week survival period. Recent developments in US bombing policy meant that cities were unlikely to be attacked with nuclear weapons early in a war, which precluded the possibility of Russia being defeated in six weeks. Hence it was reasonable to plan for a survival period of six months which made defending sea communications more important.¹⁰⁹ The Admiralty continued to oppose gambling on a short war. McGrigor offered a quotation: 'It will be a violent storm but very short. I count on a war of three months, and I have organised all my policy on that assumption'. He continued:

This was not said by the present Minister of Defence or Supply, but by the German Chancellor Bethman-Hollweg in August 1914 and quoted in Prince Bulow's memoirs. I feel it is too good to waste.¹¹⁰

¹⁰⁷ Minister of Defence, 'Naval Air', 21 January 1954, ADM 205/94

¹⁰⁸ Board Minute 4734, 4 February 1954, ADM 167/144

¹⁰⁹ DNI 8642, 22 January 1954, ADM 205/94

It was not only the Admiralty which doubted the wisdom of staking everything on a short war. A meeting between the Chiefs of Staff and Foreign Office officials in February 1954 noted that the 1952 *Global Strategy* paper had foreseen a time when both sides would possess a substantial nuclear capability. This had come to pass, which Field Marshal Harding argued undermined the policy of massive retaliation. Brundrett suggested that as the Western lead over Russia in nuclear weapons declined, the weight placed on the secondary, conventional deterrent would have to increase.¹¹¹ Such doubts would grow over the coming years but were not yet sufficiently widespread or pressing to divert the government from its basic approach to defence, which regardless of its strategic merits had the attraction of promising significant reductions in expenditure. If the Admiralty was to save the fleet carriers, it would have to argue their merits in the type of war envisaged by the government rather than challenge its perception of the type of war for which the country should prepare.

The Admiralty questioned the ability of medium bombers to perform the various proposed tasks. Grantham pointed out that there was no RAF plan to attack northern Soviet bases, which was crucial to Atlantic naval operations. Moreover, he argued, the RAF had neither aircraft capable of conducting such attacks, nor the weapons, fighter support and navigation aids that would be required.¹¹² Other papers argued that if the RAF was correct to state that the proposed 240 medium bombers were less than half the number necessary for minimum military tasks, there would not be enough for offensive minelaying or attack at source. Naval aircraft could be used to cover this capability gap, since they were more suited for these roles than land-based aircraft. It was also suggested that the V-bombers lacked defensive armament and would therefore be vulnerable to Soviet fighters, which had so improved since the V-bombers were conceived that the latter's high ceiling and speed was no longer a defence.¹¹³ Grove, however, argues that the Admiralty deliberately did not push such points in Ministerial discussions because of the risk of provoking more determined

¹¹⁰ First Sea Lord to Head of M., 12 February 1954, ADM 205/95

¹¹¹ Meeting between COS and Foreign Office representatives, 2 February 1954, 'US Strategic Policy', DEFE 32/4

¹¹² VCNS to First Sea Lord, 18 December 1953, ADM 205/93

¹¹³ Head of M., 25 January 1954; Briefs R, Z for First Sea Lord, 28 January 1954: all ADM 205/94

opposition from the RAF, and instead stressed the roles of the heavy carriers and the new aircraft.¹¹⁴ Since Dickson had tempered RAF opposition compared to Slessor's time, it made sense not to jeopardise a possible compromise and provoke renewed assaults from that quarter.

The Admiralty therefore continued to stress the advantages of the heavy carrier over the light carrier, in size, speed, sea-keeping, balance of aircraft types, armoured flight deck and hangars, superior defensive gun armament and damage control, and its ability to carry twice as many aircraft and to operate them in poor weather or sea conditions. It emphasised that Alexander's proposals still required air defence and an offensive capability against surface raiders and submarines. All three planned aircraft were therefore still needed and dropping the tasks of attack at source and offensive minelaying would save only 'relatively minor adaptations to some of these aircraft.' Some targets could only be attacked by naval aircraft and others could best be attacked by them, such as those which at extreme range for land-based bombers or those for which accuracy was particularly important (as was also the case with minelaying). Carrier aircraft could operate from shore bases (as they had on over 100 occasions during the war) whereas land-based aircraft could not operate from carriers, and therefore lacked this flexibility. Almost any European country could provide land-based aircraft; only one could provide heavy carriers.¹¹⁵

The value of naval aircraft for delivering nuclear weapons was recognised by the Chiefs of Staff. They approved a report which noted that the medium bomber was the only available means capable of carrying the British Mark I nuclear weapon, which it could 'in certain circumstances' deliver with great accuracy. The importance of nuclear weapons justified the great cost of the V-bombers. However, they suffered from 'extremely limited' dispersal possibilities due to the limited number of bases with the required special runways and facilities: 'The possibility thus exists that in five years from now it might not be possible to operate the medium bomber without incurring

¹¹⁴ Grove, 106

unacceptable losses.' Britain should therefore develop alternative means of delivery including naval fighters: 'The additional threat imposed on the enemy and the possibility of using this form of attack remote from one of our own airfields would be most valuable.' The report therefore recommended that any new strike aircraft should be able to use nuclear weapons, that a smaller nuclear bomb should be developed and that first priority in programmes for delivering nuclear weapons should go to the RAF and naval fighters.¹¹⁶

The Navy was not slow to realise the potential significance of nuclear capability. The British carriers' role was mainly to provide fighter cover for the American carriers, thereby allowing them to operate a higher proportion of strike aircraft. Yet this was partly due to the shortage of nuclear weapons for Royal Navy strike aircraft: Holland-Martin remarked that attack at source was a lower priority than other carrier roles, 'until Atom bombs are available for Fleet Air Arm use.'¹¹⁷ Newell wrote to Captain H.C.D. MacLean (the new Director of Plans) urging a greater emphasis on naval aviation and its ability to deliver nuclear weapons due to the increased attention devoted to them in the White Paper: 'If we do not ride in on this wave I should have thought that we are on the way to being really badly sunk.'¹¹⁸ Captain E.D.G. Lewin (DAW) confirmed that either the N113 or the DH110 – either of which could operate from a modernised light carrier) – would be able to carry the light nuclear bomb.¹¹⁹ Admiralty briefs argued that nuclear-armed carriers could form a valuable part of the deterrent:

the Navy's main offensive weapon is air strike. With what the Americans call an 'atom capability' the fast heavy Carriers are a new factor in the deterrent. There are

¹¹⁵ Head of M., 25 January 1954; Head of M., 'Draft DPM Paper for First Lord', 26 January 1954; Briefs F, K, L, M for First Sea Lord, 28 January 1954; all in ADM 205/94

¹¹⁶ COS (53) 511, 'Operational Use of Atomic Weapons', 12 October 1953, DEFE 32/3. Intriguingly, each section of this report opens with a quotation from *Alice's Adventures in Wonderland* or *Through the Looking Glass*.

¹¹⁷ Brief E for First Sea Lord, 28 January 1954, ADM 205/94; Director of Plans, 'Radical Review – the Role of Aircraft Carriers', 9 November 1953, ADM 205/92, para. 4

¹¹⁸ Head of M. to Director of Plans, 21 January 1954, ADM 205/94

¹¹⁹ DAW, January 1954, ADM 205/94. It was pointed out, however, that no light carrier would be able to operate the N113 or DH110 until *Hermes* was available in early 1959: Director of Plans and DAW, 'Naval Air', 22 January 1954, ADM 205/94

important areas where the RAF cannot help and where the Light Carrier is too limited in its weapons to be able to search, strike and at the same time defend itself.¹²⁰

The growing appreciation of this capability was demonstrated when Thomas referred in the Commons to progress with the new 'swept-back wing jet fighter', adding that it could carry an atomic bomb.¹²¹

The Admiralty also defended the aircraft programmes which had been questioned. Lewin explained that due to 'the relative failure of the Wyvern', both the new fighters would have to perform additional roles to those originally envisaged. The DH110 was needed for high-altitude work while the more rugged N113 would be superior for ground attack, anti-surface strike and other low-altitude tasks as well as countering enemy fighters. Both aircraft were therefore needed, though their limited radius of action and weapons-carrying ability meant that for strike they could only be stop-gaps until the NA39 was available.¹²² The Board noted the difficulty of convincing critics of the essential naval functions of the fleet carrier, which it believed was due to the widely known intention of the US Navy that its fleet carriers should support land forces in Europe.¹²³ Thus, it stressed the anti-ship role of naval strike aircraft as their primary task. The case for the NA39 was still centred on the threat to shipping posed by the *Sverdlovs*. The only alternative to aircraft would be a battleship escort for every convoy, which was impractical. An aircraft for this role would need a wide operational radius for search, high speed at low altitude for surprise and the ability to operate from a modernised light carrier. The Navy currently had no aircraft with these characteristics, so it needed the NA39. The emphasis was on essential tasks and then the 'bonus' ability to fulfil additional roles:

It is emphasised that the Naval Staff would not feel itself justified in stating a requirement for an aircraft solely to attack shore objectives and to lay mines. However, the Navy has frequently been called upon to attack such targets and it is apposite to examine the NA39's potentialities in this field.

¹²⁰ Head of M., 'Draft DPM Paper for First Lord', 26 January 1954, ADM 205/94

¹²¹ 524 HC DEB, 9 March 1954, c. 1951

¹²² DAW, 'Relative merits of N113 and DH110', 19 February 1954, ADM 205/95

¹²³ Board Minute 4734, 4 February 1954, ADM 167/144

The radius, low altitude and weapons carrying capability of the NA39 were required 'for purely maritime war' but could also provide an economical method to deliver small nuclear bombs on targets within a few hundred miles of the enemy coast. It could also fly at the low altitude necessary to deliver mines accurately, which the medium bomber could not without reducing its range.¹²⁴

The core of the Admiralty case was that the fleet carriers already existed and it would be foolish to make such a great reduction in their capabilities for such a small saving. Newell pointed out that whilst the aim of reducing naval aviation was to save £40m, the most it would actually save would be £30m, while increasing the burden on the RAF (thus incurring additional expenditure) and on allies. The savings demanded could be found elsewhere, for example, reducing the planned Medium Bomber Force from 240 to 200 aircraft, and giving some of its roles to the Striking Fleet.¹²⁵ The Admiralty's defence of the carriers rested heavily on their role in total war. It noted that scrapping the fleet carriers would prevent the Navy from ever again supporting the Army, and while the US could provide such support in planned operations, 'for unplanned withdrawals or sudden emergencies, as in Korea, this could not always be done'.¹²⁶ Apart from this reference, however, the idea of using carriers other than in war with the USSR is conspicuous by its absence.

The outcome of the first Radical Review

Thomas went so far as to send Churchill a 'personal memorandum to let you know how very strong the feeling is on the Board of Admiralty about the question of heavy carriers.' He noted that the Admiralty had conceded deep cuts but 'the Board is of one mind that naval air should not be touched'. Alexander had gone some way to appreciating its views but:

His suggestions about the Fleet Air Arm that I am opposing mean taking away the striking power of the Navy... Carriers known to be capable of operating aircraft carrying the atomic bomb are essential to the Navy in the coming decade.

¹²⁴ Director of Plans and DAW, 'Naval Air', 22 January 1954. Annex I, 'Requirement for the NA39', ADM 205/94

¹²⁵ Head of M., 'Minister of Defence – RDP/P (54) 4', 16 January 1954, ADM 205/94

¹²⁶ Head of M., 25 January 1954, ADM 205/94

He attached great significance to the promise made to NATO to provide two heavy carriers, while British and allied naval circles 'would be alarmed to see the finest heavy carriers in the world for North Atlantic conditions are not to be used for the purpose for which they were built and for which they are so well suited'.¹²⁷

Grove argued that the situation was now more favourable for the Admiralty with Sandys temporarily removed from the fray by illness and the RAF backing away from confrontation to avoid further probing of the case for the V-bombers and because they, like the Admiralty, were averse to any 'deal' by which the Admiralty would lose the fleet carriers but be mollified with Coastal Command.¹²⁸ Jackson and Bramall concluded that, 'as had happened so often in the past and was to do so again in the 1980s, the Navy was saved by world events'; the increasing vulnerability of the V-bombers made carrier strike aircraft 'a sensible precautionary supplement', while the new threat of the *Sverdlovs* provided a naval role for them, and NATO required three carrier groups in the North Atlantic.¹²⁹ The combination of these and other factors proved decisive. A meeting of the Defence Review Committee in February 1954 decided to keep in commission two heavy and three light carriers. The N113 fighter would go ahead but there would be further consideration of the DH110 and new strike aircraft projects. Coastal Command would remain with the RAF.¹³⁰

Naval aviation was by far the most significant issue in the first Radical Review and the questioning it faced was explicitly motivated by a desire to save money. The Review was driven more by the question of allocating for funds between roles and forces rather than by claims that particular roles were no longer necessary or could no longer be performed by carrier air power. The latter was attacked on the basis of arguments that shore-based aircraft could more effectively and

¹²⁷ First Lord to Prime Minister, 22 February 1954, ADM 205/95

¹²⁸ Grove, 107

¹²⁹ Jackson, W. and Bramall, Lord *The Chiefs: The Story of the United Kingdom Chiefs of Staff* (London, Brassey's, 1992), 287-88

more cheaply carry out the maritime tasks hitherto performed by naval aircraft, and that priority had to go to strategic air power which would deter or win a war. Doubts were expressed over whether there was a significant role for the Navy and particularly for its carriers in the brief but violent first nuclear phase of a war with the USSR, which became an increasingly dominant priority for British defence planning.

Setting priorities between roles can be understood in either of two ways. The weaker interpretation is that although one role is more important than another, both are necessary and so both require funding. The second, stronger interpretation is that the first priority must be fully funded before any resources left over can be devoted to the second. The former view emphasises that both roles are vital, the latter that one is more important than the other. In the first Radical Review, the first view was held by the Chiefs of Staff and the second by the Ministers of Defence and Supply.

The Admiralty's response had two main elements. First, it queried the policy of planning on a short, intense nuclear war. The use of nuclear weapons was not inevitable (which meant the USSR would not be defeated quickly) and if there was an initial nuclear phase, some preparations had to be made for what would come afterwards. Second, it claimed that even in a nuclear first phase, protecting sea communications would be important and that capability formed part of the deterrent to war. An increasing emphasis on the delivery of nuclear weapons can be discerned in the Admiralty's arguments. Unlike the US Navy, however, which had seized on nuclear strike several years previously as a rationale for large carriers, the Royal Navy sought them for defending sea communications (primarily against warships at sea and secondly against air and naval bases ashore) rather than for support of forces ashore. It is significant that there were so few references to operations in cold or limited war outside Europe. In spite of contemporary operational experience in

¹³⁰ The meeting was DP (M) (54) 2nd, and is referred to in Board Minute 4747, 26 February 1954, ADM 167/144. See also Director of Plans, 'Defence Priorities', 14 August 1954, ADM 205/97

Korea and Malaya, the naval case in the Radical Review concentrated overwhelmingly on total war with the USSR.

The Admiralty enjoyed almost complete victory in the first Radical Review, though its task was simplified by the fact that the fleet carriers already existed and had many years of service ahead of them. The aim was therefore to keep and modernise them rather than to argue for replacements. This success was short-lived, however, as many of the same questions soon re-emerged and the prevailing view of the nature of a future war changed once again.

Chapter 4

'The Swinton-Sandys Inquisition'¹ : The Second Radical Review, 1954-55

The Admiralty's success in the first Radical Review was reflected in the 1954 Defence White Paper. The paper stated that a global war would see both sides use nuclear weapons in a short and immensely destructive opening phase:

If no decisive result were reached in this opening phase, hostilities would decline in intensity, though perhaps less so at sea than elsewhere, and a period of 'broken-backed' warfare would follow, during which the opposing sides would seek to recover their strength, carrying on the struggle in the meantime as best they might.²

This was the first public reference to the concept of 'broken backed warfare' (and the last in a Defence White Paper). Lord Alexander, Minister of Defence, explained to Parliament that a future war 'would probably start with an opening phase of unparalleled intensity lasting a few weeks or perhaps only days during which both sides would use the atom bomb'. The immense power of US Strategic Air Command might make this initial period decisive by destroying enemy war-making potential but if not, there would be 'an intermittent struggle, gradually spreading worldwide during which both sides would be recovering from the initial onslaught and rebuilding the fighting strength to carry on the struggle'. Emphasising the 'long haul' to avoid economic exhaustion, British priorities would be, first, the cold war, second, the deterrent, and third, preparations for major war.³

Although defence policy was largely a matter of consensus between the parties in these years, Parliamentary dissent over British nuclear weapons was growing. Michael Foot, echoing American critics of John Foster Dulles and his doctrine of massive retaliation, questioned the role of strategic air power in cold war crises. Would the West, he asked, really attack Russia with nuclear weapons in response to a communist coup in Iran or a Greek-Bulgarian border clash? R.H.S. Crossman argued

¹ VCNS to First Sea Lord, 23 August 1954, ADM 205/97

² *Statement on Defence 1954*, Cmd 9075 (1954), paras. 5, 11, 13

³ House of Lords Official Report, Vol. 186, 16 March 1954, cc. 357-359

that the real deterrent was not the small and expensive British force of strategic bombers but the American presence in Europe and its nuclear weapons.⁴ Some wished to see the Air Ministry devote more attention to tactical air power. Both R.T. Paget and John Strachey advocated aircraft capable of cooperating with the Army, the former wishing them to act as artillery and 'tank breakers' and the latter mentioning limited war operations. Lord Tedder made a suggestion reminiscent of interwar policy when he urged increased reliance upon 'air control' in conflicts such as Malaya and Kenya to reduce the load on the Army.⁵ Nonetheless, the nuclear role was clearly preeminent.

The government apparently perceived a need to justify conventional weapons. The White Paper stated that deterrence required conventional forces to hold an enemy attack and exploit nuclear strikes, and forces overseas to deter aggression and for cold war operations. However, the limited budget meant that the country could not afford both new weapons and conventional forces of the current size, so there would be 'a gradual change' in the structure of the armed forces. Greater emphasis would be placed on the RAF and Army expenditure would fall, although the Royal Navy could not be reduced because of the necessity of defending sea communications.⁶ Nigel Birch (Parliamentary Secretary to the Ministry of Defence) stressed that a 'firm defensive shield in Europe' was almost as important a part of the deterrent as the threat of nuclear weapons. Strategic air power could not prevent armies advancing on land unless they were also opposed by conventional ground forces, which would also provide defence in depth for radar and prevent the enemy from supporting bomber attacks on the UK with fighter escorts and short-range missiles. Birch added that conventional weapons would also be required at sea in a hot war, to maintain the flow of supplies to the UK and to the continent. The Navy was concentrating on countering mines and submarines, yet:

The carrier also has a vital role to play. At present, there is no other way of dealing with enemy bombers over the open sea or, perhaps more important, of dealing with enemy reconnaissance aircraft shadowing our convoys.

⁴ 524 HC DEB, 4 March 1954, 1472-89, 1506, 1535-47

⁵ Ibid., cc. 1468-69, 1507; House of Lords Official Report, Vol. 186, 17 March 1954, cc. 476-77

Besides, instead of hot war there might be a continuation of cold war, as in Korea, Malaya and Indochina: 'To carry on a cold war there must be troops armed with conventional weapons. What good are atomic weapons in Malaya?'⁷ Alexander stated that: 'In the face of mining and submarine warfare the Royal Navy is likely to have as hazardous and difficult a task in a future struggle as it has faced in two world wars'. Britain would need to maintain sea communications and ensure the flow of supplies, so plans concentrated on anti-mine and anti-submarine forces, 'which, of course, include the aircraft carriers'.⁸ The programme envisaged completing the carriers which were under construction (*Ark Royal*, *Albion*, *Bulwark* were to be completed in 1954, with *Centaur* following soon after) and adding new jet and early warning aircraft.⁹

There was a feeling in Parliament that the government was being less than forthright on the importance of the Royal Navy in national policy. The Opposition spokesman, James Callaghan, doubted that Britain's current cruisers could handle a Soviet *Sverdlov* but the carrier which could do so, 'is under challenge and under very heavy fire from a great many senior officers in the Royal Air Force – mostly retired, but nevertheless officers of very great weight and experience.' Callaghan remarked that there was more inter-Service argument about carriers versus land-based air power than at any time he could remember. Viscount Alexander of Hillsborough suggested that there was much confusion over whether the carrier would continue to be important or whether all maritime air tasks would be performed by shore-based aircraft. Lord Teynham believed that naval aviation was still under attack:

I suspect the propagandists of the anti-aircraft carriers and anti-Fleet Air Arm are putting their heads together again, as we have seen recently in a number of articles which have appeared in some of the Air Force journals.¹⁰

⁶ Ibid., paras. 14-16

⁷ 524 H.C. DEB, 2 March 1954, cc. 1021-30

⁸ House of Lords Official Report, Vol. 186, 16 March 1954, cc. 359-360.

⁹ *Statement of the First Lord of the Admiralty Explanatory of the Naval Estimates 1954-55*, Cmd 9079 (1954), 2, 7

¹⁰ 524 HC DEB, 9 March 1954, cc. 1955-58; House of Lords Official Report, Vol. 186, 16 March 1954, cc. 388-89, 425

It was clear that many in Parliament were yet to be convinced of the value of naval aviation. R.H.S. Crossman, for example, questioned the wartime role of fleet carriers, in which the Navy had a 'vested interest' in order to keep up with the Army and RAF: 'No-one believes' they would have a use. P.B. Lucas wondered whether, with improvements in land-based air power, Britain should keep so many carriers. He doubted that their cost was justified by operational utility, since shore-based aircraft and strategic bombers could take care of convoy protection, anti-submarine warfare and anti-ship strike. They were also needed in conflicts such as Korea but given the number of American carriers, the Royal Navy should reduce its force. Edward Shackleton accepted that air escort of convoys was needed but should be provided by 'something smaller and a great deal less expensive than even the light Fleet carrier', while for the strike role, the whole of the oceans were within bombing range of land bases.¹¹ Several MPs expressed scepticism about 'broken backed warfare', including Emanuel Shinwell (a former Minister of Defence) and R.T. Paget, who insisted: 'A man with a broken back cannot go on fighting, nor can this nation.' Lord Lucan questioned whether there could be any fighting after the initial exchange because it would be impossible to mobilise and fight with anything more than sticks and stones.¹² The Parliamentary and Financial Secretary to the Admiralty, Allan Noble, noted that naval aviation was 'the main armament of the Fleet today'. To proponents of land-based aircraft, he posed the question: "'Where would the next war lead us?'" Let them remember that carriers were required in Korean waters and, in the last war, from north Russia to the Pacific.'¹³

The Long-term Plan for the Navy

There was a suspicion that the Admiralty itself was not quite clear about the role and direction of naval policy. A New Year's Eve leader in *The Times* stung enough for it to be clipped out and filed. The editor felt not enough was known about Admiralty plans, which had first involved new minesweepers and anti-submarine vessels, yet now envisaged building light carriers and guided

¹¹ 524 HC DEB, 2 March 1954, cc. 1062-65, 1090, 1120; 9 March 1954, cc. 2082-85

¹² 524 HC DEB, 2 March 1954, c. 1046; 4 March 1954, c. 1465; House of Lords Official Report, Vol. 186, 16 March 1954, c. 457

missiles: 'The weakness of the admirals' case until now has been their inability to make up their minds about the types and numbers of new ships they want to build for the atomic age.'¹⁴ Given the battles the Admiralty had waged to secure approval for the ships they had consistently urged but seen repeatedly delayed, their exasperation at this uninformed criticism can be imagined. Yet a similar impression had taken root in Parliament. Even Lord Teynham, who was generally sympathetic to the Navy, bemoaned the lack of a new construction programme and speculated that it was because the Admiralty was unsure what sort of Fleet it wanted.¹⁵

Consequently, in January 1954, Alexander requested a memorandum on the future of the Navy. An early draft of the paper reviewed the scientific and technical advances expected over the following 10-15 years. Economy and the need for dispersion in case of nuclear attack would put a premium on keeping carriers as small as possible. The trend to larger carriers might be halted and reversed by 'jet reaction lift', which could allow high performance aircraft to be operated from smaller and slower vessels than existing Fleet carriers. Carrier strike forces would be needed to supplement land-based aircraft in the strategic air offensive, since medium- and high-altitude aircraft would be increasingly at risk to Soviet guided weapons, while carrier-borne aircraft could attack at low level with fighter escorts and offered the ability to diversify the direction of attack.¹⁶ The draft paper foresaw an increasing air threat even in the mid-Atlantic which would require air defence with every convoy. Guided weapons would complement fighters but would not replace them since they could not deal with shadowing aircraft. Air defence would therefore be provided by trade protection carriers with fighters, guided weapons ships with large ship-to-air weapons and anti-aircraft escorts with smaller ship-to-air weapons and guns, all directed by an integrated radar system for fighter control and missile direction, including both airborne radar and picket ships. Defence against surface attack would rest on a combination of aircraft, ship-to-ship guided weapons and long range torpedos.

¹³ 524 HC DEB, 9 March 1954, cc. 2168-70

¹⁴ *The Times*, 31 December 1953, ADM 205/102

¹⁵ House of Lords Official Report, Volume 189, 27 July 1954, cc. 140-41

¹⁶ 'Long Term Plans for the Navy', 6 February 1954, ADM 205/102, paras. 5, 11, 27-28

Anti-submarine warfare would be enhanced by nuclear-powered submarines and the long-range 'Corsair' acoustic detection system, which would allow submarines to be attacked economically far from convoys. Shipping would still require air cover and some escorts for direct defence.¹⁷ Admiral of the Fleet Sir Rhoderick McGrigor discussed the paper with Sir Frederick Brundrett, Scientific Adviser to the Ministry of Defence, who agreed with it and offered to support it in the Ministry. Brundrett wrote that since US nuclear power was close to being 'cancelled out as a complete deterrent' by the growth of the Soviet stockpile, the 'ancillary deterrents' of forces on the continent and 'returning to the Navy their power to strike offensively' were becoming essential.¹⁸

The revised and cut-down version of the paper was sent to Alexander on 6 March. It outlined important developments, including a more abundant supply of nuclear weapons, guided missiles for use against aircraft and warships, long-range detection of submerged submarines, 'the development of aircraft with vertical take-off and landing', nuclear propulsion and ship-launched ballistic rockets. Ultimately, it argued, the Fleet would need no ships mainly armed with guns, as surface ships would be countered by ship-borne guided weapons and aircraft. Protection of shipping against submarines would rely less on close escort and more on torpedo counter-measures, destruction of submarines in their bases and interception in transit by warships, submarines, aircraft and helicopters, all controlled from listening stations ashore. Protection of shipping against air attack (to which the enemy would increasingly turn as anti-submarine measures improved) would rest upon 'fighters using vertical take-off and landing from the smallest possible trade protection carrier', seaborne anti-aircraft and anti-missile guided weapons and attacks on airfields. Technological advances would also affect land-based air power: Soviet guided missiles would make attack deep into Russia by level-flight bombers prohibitively expensive, even if nuclear weapons were used. The continuing effectiveness of the deterrent would therefore come to depend on delivering nuclear weapons by ballistic missiles (which could be launched from submarines) rather than aircraft. Before then, since high- and medium-

¹⁷ Ibid., paras. 13, 19, 21-22, 32-37

¹⁸ Quoted in First Sea Lord to First Lord, 2 March 1954, ADM 1/25891

altitude aircraft would be increasingly vulnerable to defences, there would still be some targets best attacked by carrier aircraft.¹⁹

This far-sighted report suggests that the Admiralty was neither resisting change nor overlooking its likely impact. The effects of various developments were embraced, even when the resulting predictions challenged major interests within the Navy. Alexander, at least, was pleased with the paper, congratulating the Naval Staff and stating that: 'I think it shows a great deal of imagination and careful forward looking thought'.²⁰

The new strategic assessment

British defence policy was still coming to terms with the nuclear age. A January 1954 report on the initial stages of a total war estimated that Britain would suffer two million casualties, eight million people would be made homeless, London would not be practicable as a city to live in or as a seat of government 'for an indefinite period' and the country would lose 75% of its rail network, 60% of its gas supplies and 40% of its electricity generation. It predicted, with classic British understatement, that civilian morale would be 'poor'.²¹ Yet this report took account only of fission weapons and not the hydrogen bomb which would be far more destructive. In April 1954, Churchill set up the 'Committee of Ministers on Defence Policy' to review defence plans in the light of the hydrogen bomb and to reduce the 1955 budget from £1650m to £1500m. Such savings could not be achieved without a change of policy and the recent White Paper had been based on the 1952 Global Strategy paper, which was written before the H-bomb. Lord Alexander therefore requested a new review of global strategy from the Chiefs of Staff.²²

¹⁹ 'The Navy of the Future', 2 March 1954, ADM 205/102

²⁰ Minister of Defence to First Lord, 19 March 1954, ADM 1/25891

²¹ COS (54) 16, 'Problems of the Armed Forces in the Initial Phase of a War', 15 January 1954, DEFE 5/51

The Chiefs agreed decided that nuclear weapons would probably make war less likely. They might also mean that a war could begin with a period during which the conflict was 'limited in area, in targets and in the weapons used', before escalating to total war. This possibility reversed the previous idea of an intense nuclear phase followed by 'broken backed warfare'. The Chiefs still believed that even if there was an initial stage of war without nuclear strikes, 'these weapons would in the end be used by both sides.'²³ The hydrogen bomb might therefore make global war less likely or it could mean that such a war might begin with a lengthy conventional phase. However, of these possibilities only the former offered the tantalising prospect of significant savings, whilst the latter would require a more costly policy and would thus be less politically attractive. The Cabinet Secretary, Sir Norman Brook, told Churchill that reducing the defence budget to £1500m would require 'a significant change in defence policy'. He noted that the previous government had planned on the assumption of war between 1954 and 1956, whereas the present one had simply stretched out its programme over a longer period. The new Joint Intelligence Committee report, which argued that the H-bomb made war unlikely, would allow a new assumption that the UK did not face a major war for the foreseeable future. Although this would still require a nuclear deterrent and a contribution to the defensive shield in Western Europe, it would allow substantial savings in all three Services and in stocks and mobilisation reserves.²⁴

The new strategic assessment, *UK Defence Policy*, underwent a number of drafts and was the subject of a great deal of argument but was finally approved by the Chiefs of Staff on 31 May.²⁵ It concluded that nuclear weapons had made deliberate resort to war far less likely than a local war gradually escalating to global war, which would probably start with an intense nuclear bombardment. Such a war would be devastating but was unlikely, whereas the cold war was certain to continue and

²² COS (54) 116, Minister of Defence, 'Defence Policy and Global Strategy', 9 April 1954, DEFE 5/52; VCNS to First Sea Lord, No. 828, 'Review of Defence Expenditure', 24 June 1955, ADM 205/164, para. 21. See also Grove, E.J. *Vanguard to Trident: British Naval Policy Since World War II* (London, Bodley Head, 1987), 108-11

²³ COS (54) 43rd, 12 April 1954, DEFE 4/69; JP (54) Note 10, 'Defence Policy and Global Strategy', 20 April 1954, DEFE 6/28; COS (54) 45th, 22 April 1954, DEFE 4/70

²⁴ Sir Norman Brook to Prime Minister, 3 May 1954, PREM 11/840

must be waged assertively, in part to prevent local wars which could escalate. The first priority should therefore be the cold war and, second, Britain's influence as a world power which required it to 'join the "H-Club" as cheaply as possible'; any other commitments must come after these two.²⁶ Strategic air power remained central. Since there was no defence against nuclear attack, the counter-offensive was critical 'to overcome the enemy's offensive capacity and will to resist by nuclear bombardment'. The heart of Allied policy would be the deterrent which comprised, first, strategic and tactical nuclear weapons, and second, conventional forces in Western Europe which were 'an essential complement' to the main deterrent, to show the USSR that it could not hope for quick territorial gains at little cost.²⁷ Forces needed for the exercise of influence as a world power and to meet cold war commitments would therefore take priority over those needed for global war. A momentous step for British defence policy was taken on 16 June, when the Defence Policy Committee approved a proposal that the nuclear weapons programme should be revised to develop the H-bomb. This decision was ratified by the Cabinet in July.²⁸

The section of the paper dealing with the Navy was particularly contentious and was the main reason for the multiple redrafts during May.²⁹ The final report gave the Navy's primary task as supporting foreign policy in peacetime, which would continue to include protection of worldwide interests, contributions to NATO forces and action with the United Nations: 'Experience since 1945 has shown that a balanced fleet including ships of all types except battleships is necessary.' As for wartime, 'Preparations for the protection of our sea communications in war are not only reduced in priority but may well be altered in form.' For example, the need for minesweeping was less, the scale of imports needed by the country after a nuclear attack might be so reduced that escorts could be cut and there was little point in retaining Reserve ships which could not quickly be brought into service. The paper noted that the Admiralty had already cut manpower and the Active Fleet, including an

²⁵ The report was approved at COS (54) 65th, 31 May 1954, DEFE 4/70. It was presented to the Cabinet as C (54) 249, 'United Kingdom Defence Policy', 31 May 1954, CAB 129/69.

²⁶ JP (54) Note 11, Directors of Plans, 'UK Strategy', 6 May 1954, DEFE 6/28; COS (54) 53rd, 10 May 1954, DEFE 4/70

²⁷ COS (55) 396, Chiefs of Staff, 'UK Defence Policy', 31 December 1954, DEFE 5/55, paras. 8-11, 19, 25, 28.

operational carrier, but concluded that it should be asked to review Fleet requirements, plans for modernisation, ship-building and new aircraft, and the size and composition of the Reserve.³⁰

Nevertheless, the report also made a strong case for the continuing importance of defending shipping, predicting that the USSR would launch major naval and air attacks on Western Europe and its sea communications at the start of a war. As well as holding the USSR on land, the allies would have to 'gain command of the sea from the outset by destroying her fleet, her mercantile marine and her bases'. The paper also reasserted that although the intense nuclear phase would probably determine the outcome of the war, fighting would continue thereafter, albeit on a smaller scale.³¹ Even though the term 'broken backed warfare' did not appear in public after the 1954 White Paper, the concept was still used behind closed doors.

The instruction given to the Admiralty to review Fleet requirements resulted in a June paper by Philip Newell, Head of Military Branch. He noted that the priorities in the new strategic concept were very different from 1953 when 'ensure survival' was the highest priority and "prestige" was a forbidden word'. The new view was that Britain's primary concern should be its peacetime responsibilities and the cold war, rather than major war. In cold war the Navy would contribute to the deterrent by clearly showing the ability, with Allies, to control sea communications in any hot war, whether local or global. Supporting Foreign and Commonwealth policy required the ability, 'to provide an effective show of naval force whenever and wherever needed', as well as paying goodwill visits and assisting allied navies. The paper assessed that although current escort forces were inadequate to protect even greatly reduced imports and it would be risky to cut them, doing so would be preferable to harming the Fleet's ability to make shows of force or to take advantage of developing technology. Priority in construction should be given to ships which would be most effective in the

²⁸ CC (54) 48th Conclusions, 7 July 1954, CAB 128 / 27

²⁹ This can be followed in DEFE 4/70.

³⁰ Annex to C (54) 249

³¹ C (54) 249, para. 20; COS (55) 396, DEFE 5/55: paras. 21-22, 24

cold war if they would also be useful in hot war. If deeper cuts had to be made, it argued, these should be in the larger and more expensive units, to permit a greater number of smaller units and hence confer more flexibility. Such a policy, however, should not go so far that it would jeopardise the Navy's influence in the Commonwealth and NATO or its deterrent power. As the most expensive items, carriers and aircraft should be cut if deeper reductions became necessary, but:

If Naval Aviation is to continue, as it must do if we are not to fall to minor power status unable even to contribute to the defence of our own sea communications, we should plan on a minimum of 4 operational carriers in place of the present 5 in peace. Any lower figure would also make the production of naval aircraft prohibitively uneconomic.³²

Local wars would continue to occur and experience had shown that all types of warship other than battleships were required in such conflicts.³³

The increased importance attached to the cold war raised the possibility that the battleship HMS *Vanguard* might be reprieved. An Admiralty memorandum remarked that since the first Radical Review when Ministers had decided to relegate her to the Reserve, defence priorities had changed: 'there is likely, as a result of the present review, to be an even greater emphasis on the need to retain our position as a world power (at the expense of direct hot preparations in the short term).' A battleship in the Active Fleet could be useful for tasks such as foreign visits, although there was a high manpower cost and it might be preferable to have more small ships as opposed to one battleship.³⁴ Newell still felt that there was a place for *Vanguard*, although more for British prestige as a world power than for local wars: 'battleships are not as dead as the dodo, we and the Americans know their worth.'³⁵

³² Head of M., 'Review of Naval Policy', 17 June 1954, ADM 1/25787

³³ Head of M., 'Naval Annex to RDP/P (54) 7', 3 July 1954, ADM 205/97

³⁴ Memorandum B913, 'Future of HMS Vanguard', 24 June 1954, ADM 167/144

³⁵ Head of M., 'Naval Annex to RDP/P (54) 7', 3 July 1954, ADM 205/97

The Air Ministry apparently saw the defence of its own plans as requiring renewed attacks upon the naval programme. De L'Isle confided to Air Chief Marshal Sir William Dickson, Chief of the Air Staff, his belief that a stage had been reached 'when heads and hearts will inevitably be broken ... I am afraid that the matter will inevitably resolve itself into the old argument of Bombers v Carriers.'³⁶ A more explicit analysis of the problem was provided by R.C. Chilver, Assistant Under Secretary at the Air Ministry, who feared the Air Ministry programme might prove particularly vulnerable because its expenditure was planned to increase; hence, it would have to push for 'really large savings on conventional preparations for global war'. Some of his proposed economies related to the Army but as before, the Navy was the main target – even those elements for which there was a genuine place in the new strategy:

This means in the first place that we ought to aim at large savings on anti-mine, mine-laying, submarines and anti-submarine preparations. We are inclined to think that only the big ships cost money, but there must be quite a lot of money in the smaller ones. We must admit, I am afraid, that carriers and cruisers have a value for limited war, but they are so unpopular that I hope we shall get something knocked off them.

Chilver made his meaning still clearer in a postscript, in which he stressed that he was not arguing that the RAF should accept a proportionate cut in its budget: 'It would be monstrous if we were not let off much more lightly than the others.' Yet even a smaller cut would be so harmful that the other Services' programmes would have to be attacked: 'we shall not escape with a light cut unless we successfully attack both the easy and difficult items in the other Services.'³⁷

Around this time, a figure who had loomed large in previous British defence reviews made a renewed appearance. In mid-1954 Sir John Slessor, former Chief of the Air Staff, published *Strategy for the West*, which suggested that he continued to see air power as dominant. He wrote that although air power did not win the Second World War alone, the Allies could have 'enforced German surrender by air action' had policy been shaped accordingly, and air power could have made the

³⁶ De L'Isle to CAS, 30 April 1954, AIR 8/1875

return to Western Europe a mere occupation. He also stated that 'modern air power has made the battlefield irrelevant.' Referring to Douhet, he wrote:

I have never read his works, but understand that he made the mistake of being a bit too far ahead of his time. 1939-45 proved him wrong; another war in our time might well prove him right.³⁸

However, in some respects his arguments represented an advance on the interwar air power thinkers, especially the attention he gave to limited wars, in which, he stressed, air power was unlikely to be decisive. He believed that 'balanced forces' would be too expensive and that first priority should go to long-range bombers and atomic weapons, which would deter war. Second should be affordable land forces, particularly for limited wars. If further economies were needed, these should come from naval forces, especially those elements not relevant to defending sea communications against submarines and mines. Slessor's main target for savings was Britain's carriers, which were 'appallingly expensive to build and maintain', and lacked a wartime role to justify their cost. They could be useful for air defence of convoys and in amphibious operations, but the latter were no longer required and carrier aircraft were inferior to land-based aircraft against submarines and for support of land forces on NATO flanks. Moreover, he argued, carriers would be particularly vulnerable to guided atomic weapons. Some should be kept for air escort of convoys, for use against enemy cruisers and for the cold war, though NATO had far more than were justified.³⁹

McGrigor asked Captain E.D.G. Lewin (DAW) to read and comment on the book by his old sparring partner. He reported that Slessor had very much underrated the vulnerability of the V-bombers and their bases to Soviet attack and the value this placed on carriers as mobile air bases. Although Slessor acknowledged that sea communications were vital to NATO, he also suggested that greater use of air transport could reduce this dependence. There was no prospect of this helping on the trans-Atlantic route, however, particularly for fuel: 'Like many airmen he seems to assume that

³⁷ AUS (A), to CAS, 'UK Strategy', 11 May 1954, AIR 8/1875

³⁸ Slessor, J.C. (Marshal of the RAF) *Strategy for the West* (London, Cassell, 1954), 12-13, 96-97

Avgas is produced in this country.’ Other weaknesses Lewin identified in Slessor’s arguments were the fact that although he admitted that air attack would be a serious threat to shipping which required carrier-based fighters, he made no effort to suggest how many carriers would be required for this but then stated that NATO had more carriers than it needed. Moreover, he proclaimed the vulnerability of carriers to homing weapons but neglected the difficulty of finding them at sea, shadowing them if they were defended by fighters and deploying enough aircraft to ensure their destruction. The fact that Slessor accepted that carriers had a role against surface warships but offered no other solution to this threat, was ‘tantamount to admitting that carriers are necessary for this purpose’.⁴⁰ Slessor recognised the importance of limited war and of sea communications but continued to overlook the shortcomings of land-based aircraft in some roles and maintained his opposition to the carriers. On that subject, he had not changed his mind since leaving office.

The Salisbury Report

The Ministerial committee paper presented to the Cabinet by Lord Salisbury repeated the conclusions of the Chiefs of Staff assessment that:

the military means to exert our influence as a World Power and to meet our ‘cold-war’ commitments should have priority over preparations for major war, wherever there is conflict or competing demand on limited resources.

It recommended maintaining the planned figure of 240 medium bombers while removing older aircraft from Fighter Command. New naval construction and modernisation would be restricted to ships which would be valuable in both war and peace, so nearly all the minesweeper programme would stop, escort conversions would be reduced and remaining plans would be spread over a longer period. Manpower would be cut by one-eighth to 120,000, the Active Fleet would shrink, including a cut from five to four carriers, and the Reserve Fleet would to be ‘drastically reduced’.⁴¹

³⁹ Ibid., 21, 48, 58-64, 69-94

⁴⁰ DAW to First Sea Lord, 17 June 1954, ADM 205/96

⁴¹ C (54) 250; Lord President of the Council, ‘Report by the Committee on Defence Policy’, 24 July 1954, CAB 129/69

Philip Newell was wary of the implications which might be drawn from the paper. He accepted that the statement of aims, emphasising preparations for cold war above those for hot war, was a reasonable summary of the Chiefs of Staff assessment. He objected, however, to the inclusion of a statement that 'such resources as we can devote to preparations for major war should be concentrated on measures which would be effective immediately on the outbreak of war', which was not based on the Chiefs' paper. He felt that the danger of this statement:

in the hands of such as Mr. Duncan Sandys is that since in their view there is no immediate task for the Navy on the outbreak of war, the Cabinet endorsement of this sentence would mean that the Navy was purely a cold war instrument with no essential hot war use.

He emphasised that the Navy would probably be the only Service to survive the first period of war and be capable of operating thereafter, when food and supplies would still need to be imported. Newell's fear was that acceptance of the idea that the Navy no longer had a wartime role could lead to further cuts in its budget.⁴² Moreover, judging from the growth of its submarine programme, Russia appeared to accept the importance of sea communications in a war. Naval Intelligence reported that Soviet submarine production was increasing. Whereas the previous year they had built 54 ocean-going submarines their capacity had now increased to 74 per year, and they were also converting older boats and organising their Fleet for worldwide operations:

The only conclusion I am able to draw from the above facts (and I would emphasise that we have been most careful not to over-assess the numbers building and the building capacity) is that the Russians themselves expect a war, if it comes, in which massive submarine attacks on shipping will be necessary.⁴³

Newell's concerns were well founded. An Air Ministry brief argued that there was scope for far greater savings in the Navy's budget and urged that the Admiralty should be pressed further on the

⁴² Head of M. to First Sea Lord, 'C (54) 250 – The Report on Defence Policy to be taken at tomorrow's Cabinet', 26 July 1954, ADM 205/97

⁴³ Ibid.; also DNI to First Sea Lord, 26 July 1954, ADM 205/97

costs of naval aviation, 'despite the exhaustive examination which was made earlier this year'.⁴⁴ The Admiralty, in contrast, felt that its review had been 'far more drastic' than those of the other Services, resulting as it did in 'disproportionately large' savings of £25m from a much smaller budget, compared to £20m from the RAF and £65m from the Army.⁴⁵

The Cabinet was disappointed by the savings offered, of £105m as against the £150m demanded. Lord Salisbury stated that the Services had tried hard to reduce their requests but although the figure was still above the Chancellor's target, they could not recommend further cuts. Duncan Sandys, still Minister of Supply, noted that the committee's report was based on separate reports from the individual Services and argued that looking at defence policy as a whole might permit changes in their proposals and hence additional economies. He urged further studies to investigate this and was supported by De L'Isle. Churchill agreed and approved the creation of a small group of Ministers to conduct the examination.⁴⁶ Thus was born the 'Cabinet Committee on the Defence Review'. Its membership included the Prime Minister, who only participated in the later stages, Lord Swinton (Commonwealth Secretary), Duncan Sandys, Nigel Birch (Parliamentary Secretary to the Ministry of Defence), and Lord Alexander himself as Minister of Defence, although he was absent for the early part of the committee's work. Neither the Service Ministers nor the Chiefs of Staff were members, although they were periodically consulted.⁴⁷ As Grove comments, the composition of the committee was hardly auspicious for the Admiralty, since in addition to Sandys it contained Lord Swinton, who had been Secretary of State for Air between the wars, while Birch was formerly Parliamentary Under-Secretary at the Air Ministry, where he had championed the V-bomber as the strike weapon for all three Services.⁴⁸

⁴⁴ Brief for Secretary of State for Air, 6 July 1954, 'Effects of New Strategic concept on the Navy', AIR 8/1875

⁴⁵ VCNS No. 828, ADM 205/164, paras. 22-23

⁴⁶ CC (54) 54th Conclusions, 27 July 1954, CAB 128/27

⁴⁷ C (54) 329, Prime Minister, 'Defence Policy', 3 November 1954, CAB 129/71; VCNS No. 828, ADM 205/164, paras. 24-25

⁴⁸ Grove, 111. As Secretary of State for Air 1935-38, Swinton had fought the return of the Fleet Air Arm to the Admiralty; on 17 July 1936 he told the Cabinet, 'the fundamental thing is that the Fleet Air Arm is an integral part and branch of the Air Force'. Cross, J.A. *Lord Swinton* (Oxford, Clarendon, 1982), 135-219; quotation 180-181. Nigel Birch became Secretary of State for Air in 1956.

The Swinton Committee

The Defence Review Committee first met on 5 August, with Lord Swinton in the chair. When Alexander returned to the country from the US, he wrote a strong letter to Churchill, complaining that the committee had been set up and met without him. He objected to the fact that the committee was examining:

matters of Defence for which I am responsible and on which I have already expressed my views and recommendations to you. You will, I feel sure, appreciate that it will be very difficult for me to serve you if I don't enjoy your confidence.⁴⁹

His threat to resign suggested that it was not only the Admiralty which was beginning to chafe at the continuing prominence in defence policy of Ministers from other departments. Churchill sought to placate Alexander by asking him to take over the committee and to pass on the report 'when you have approved it'. He justified the inclusion of Sandys on the committee on the grounds that 'he had a lot of knowledge of the subject and is not earmarked to any one particular Service Department.'⁵⁰

The committee began by stating that it would be guided by the priorities set out by Lord Alexander during the first Radical Review, which had emphasised the 'survival' period at the outset of a total war, even though this differed from the recent Chiefs of Staff strategic assessment. It issued further questions to the three Service Departments and prepared provisional conclusions. The initial draft of the report suggested no change to the Army programme and accepted RAF plans for fighters, medium bombers, Coastal Command, and the Auxiliary Air Force but asked for £3m cuts in administration and an investigation into reducing Transport Command. Once again, the Navy bore the brunt of the committee's economies. It recommended a further cut in the naval budget, on top of what had been offered in July, of £23m (£15m from the Fleet Air Arm, £5m from administration and

⁴⁹ Alexander to Churchill, 13 August 1954, PREM 11/706

⁵⁰ Churchill to Alexander, 15 August 1954, PREM 11/706

£3m from minesweepers). It specifically suggested that the two heavy carriers be withdrawn from the Striking Fleet, equipped as light carriers and used as convoy escorts. Significantly, Alexander reserved his position on the draft report because he disagreed with its conclusions on the Navy.⁵¹ Although neither the Chiefs of Staff nor the Service Ministers were consulted about the initial proposals, the Admiralty, according to a summary of the review, 'obtained some idea of what they were by back door methods' which allowed them to brief Thomas.⁵² Various drafts of the report (Admiralty files contain references to at least four) were considered, often with bitter arguments, during August and September before it was finally submitted to the Cabinet.

There was some renewed questioning within the Admiralty about the value and role of the medium bomber force. Newell believed that the committee had not offered a sound case to support the view that nuclear weapons required a reduction in the Navy:

On the contrary they have entirely neglected the thought that the 10 bases from which the RAF can fly aircraft (together with the American bases in East Anglia?) must be located with absolute accuracy on the Russian operational maps and their existence and the existence of our and the American bombers in this country ensure destruction for this country if war should come.⁵³

Captain H.C.D. MacLean, Director of Plans, claimed that the bomber force had no independent war role which would not be covered by the US Air Force. Even if its bases were not destroyed at the outbreak of war, they would be by the time the aircraft returned from their mission. Hence from this costly force 'which has little value in peacetime and is only a small contribution to the deterrent, in war, it appears that we can only expect one sortie at the most.' He did not advocate scrapping the bomber force, rather that it should have fewer than 240 aircraft.⁵⁴ The Navy was not alone in its scepticism. In Cabinet Sir Anthony Eden, the Foreign Secretary, stated that although he agreed with

⁵¹ Head of M., 'Defence Priorities', 13 August 1954, ADM 205/97; VCNS No. 828, ADM 205/164: para. 27, 29

⁵² Ibid., para. 28. A later letter reveals that the Admiralty was tipped off about the Committee's views by Sir Richard Powell, Permanent Secretary at the Ministry of Defence. ACNS to First Sea Lord, 23 August 1954, ADM 205/97

⁵³ Head of M. to First Sea Lord, 'DR (54) 9', 13 September 1954, ADM 205/98; original emphasis

⁵⁴ Director of Plans to First Sea Lord, 14 September 1954, ADM 205/98

the creation of a medium bomber force, he wondered whether it needed to be as large as was planned and whether Britain should attempt to add to the 'large resources' of the US strategic bomber force.⁵⁵

The issue of cruisers and battleships re-emerged as the committee sought to keep HMS *Vanguard* in commission at the cost of reducing two cruisers to Reserve. The Admiralty felt that the new emphasis on winning the cold war, prestige and peacetime commitments, improved the case for keeping her. She would be useful as a flag ship and for training, while 'a battleship is a far more impressive representation of naval power than any other type of ship, more especially for flag showing purposes'. In hot war, *Vanguard* would be the only ship 'which would undoubtedly be superior to a Russian SVERDLOV in a surface gun action.' Although the Navy was planning to counter enemy warships mainly with carrier aircraft, Exercises 'Mainbrace' and 'Mariner' had shown that battleships were valuable when bad weather prevented or restricted flying. The paper concluded that there 'might well be advantages' in having *Vanguard* in the cold war compared to two cruisers and she would be superior to two cruisers in hot war (though less valuable than a carrier).⁵⁶ Newell, however, suggested that the Admiralty demand of the Prime Minister that all battleships should be scrapped, on the grounds that minesweeping would be far more important in the second phase of a war. If Churchill agreed, 'we should have some white elephants off our hands: if not, the illogicality would be very clear.'⁵⁷

Although the Admiralty accepted the value of its last battleship, it was reluctant to concede further cruiser reductions. The Board had earlier noted that although cruisers might ultimately disappear, they would be needed for some years, until the guided weapon proved itself, for anti-aircraft fire and to help protect convoys against surprise attack by surface warships. They were

⁵⁵ CC (54) 54th Conclusions, 27 July 1954, CAB 128/27

⁵⁶ Director of Plans and DOD, 'Cost and Effect of Retaining VANGUARD in Commission', 9 September 1954, ADM 205/98

⁵⁷ Head of M. to First Sea Lord, 13 September 1954, ADM 205/98

superior to carriers for controlling a task force and cheaper for peacetime police functions.⁵⁸ Thomas now wrote to Alexander, setting out the advantages of retaining *Vanguard*, but continued: 'balancing cold and hot war requirements the Admiralty consider that the number of cruisers cannot be further reduced and for this reason regretfully concluded that *Vanguard* must go into Reserve.'⁵⁹ Alexander accepted its arguments about cruisers, informing Churchill that he opposed reducing these 'most useful and versatile ships in peace and war' below ten.⁶⁰ The Swinton Committee stuck to its guns. Its final report acknowledged the importance of the cruisers' peacetime role 'in police duties and in showing the Flag', but argued that carriers could to some extent take over these tasks. *Vanguard* should be kept in commission for prestige and to have 'a vessel superior to the latest Russian cruiser,' so the planned cruiser force should be reduced from 10 to eight.⁶¹ It is ironic that a committee that was so hostile to naval power in general, and to carriers (the most modern naval arm) in particular, should recommend the retention of a battleship in the Active Fleet.

The carrier question

One early conclusion of the Swinton Committee was that the heavy carriers should be removed from the Striking Fleet, confined to an escort role and 'at any rate in peacetime' equipped only as light carriers, halving their aircraft complement. The Admiralty objected that it would be neither economical nor efficient to do so, because their power would be halved and their training disrupted while overheads remained the same. Moreover, little would be saved because the same types of aircraft would be required in similar proportions whether the carrier was in the Striking Fleet or escorting convoys, since it would still need to counter submarines, air attack and surface raiders. Besides, their complements could not be rapidly increased, as was implied, because providing additional aircraft and training new pilots would take two to three years. The committee also,

⁵⁸ Board Minute 4755, 18 March 1954, ADM 167/144

⁵⁹ First Lord to Minister of Defence, 'Effects of Retaining HMS VANGUARD in Commission', 14 September 1954, ADM 205/98

⁶⁰ Minister of Defence to Prime Minister, 25 August 1954, ADM 205/97

⁶¹ C (54) 329, Prime Minister, 'Defence Policy', 3 November 1954, CAB 129/71, paras. 14-16

according to the Admiralty, virtually ignored 'both the diplomatic effect of withdrawing from the Striking Fleet, and the Cold War and deterrent value of carriers.'⁶² The report contentiously stated:

There can be no question of having a larger Navy than we need, or can afford; and we must make the best use of existing material ... It is only natural that the Navy should wish to have their share in air power which is growing in importance.

The Admiralty objected furiously that the first statement was obvious and applied just as much to the other two Services and as for the second: 'The Navy requires air power to do its job, not just for the sake of "having a share in it".'⁶³

The committee offered a plethora of arguments against the carriers, in rather more detail than had been employed during the first Radical Review. As well as being important in their own right, the committee's views provide a summary of the anti-carrier case. The most fundamental criticism was that the strategic importance of sea power had declined and would continue to do so. Lewin (DAW) described this as 'a dangerous half truth'. Although it was true to the extent that the UK could no longer take as much or as little of any war as she wished, both Britain and NATO still depended on sea communications which would be threatened by a powerful and growing Russian Navy.⁶⁴ Vice Admiral W.W. Davis (VCNS) denied that the importance of sea power was declining and argued that in the thermonuclear age the reverse was the case, with sea power providing 'that essential strategic and tactical mobility which cannot be given to land-based aircraft'. In any case, as an island Britain still needed seaborne supplies and hence a balanced Fleet.⁶⁵ Rear Admiral A.N.C. Bingley (Fifth Sea Lord) also pointed out that the rising importance of air power would not necessarily continue: 'For example we believe that there will come a decade during which only ships will be able to launch ballistic rockets at targets deep inside Russia.'⁶⁶ Related to the view that sea

⁶² Fifth Sea Lord, 5SL 1671, 'Swinton Report (FAA)', 10 September 1954; Fifth Sea Lord, 5SL 1679, 'DR (54) 9', 16 September 1954, both ADM 205/98

⁶³ Fifth Sea Lord to Minister of Defence, 18 September 1954; Fifth Sea Lord, 5SL 1696, 'Meeting of Defence Committee of Cabinet 21 September 1954', 24 September 1954, both ADM 205/98

⁶⁴ DAW to First Sea Lord, 15 September 1954, ADM 205/98

⁶⁵ VCNS No. 1434 to First Sea Lord, 17 September 1954, ADM 205/98

⁶⁶ 5SL 1696, ADM 205/98

power was becoming less significant was the claim that the Fleet 'could not play any direct part in stemming the first onslaught of nuclear attack in the opening intense phase of war'. The Admiralty argued that the nuclear phase of any future war would include 'an unprecedentedly intense air, submarine and surface attack' on the large number of merchant ships which would be at sea, which would have to be countered by the Navy and particularly the carriers.⁶⁷ Newell offered a simple rejoinder: 'Is it really thought that the Russian Navy will remain in its bases?'⁶⁸

The committee assumed that the British carriers in the Striking Fleet were mainly intended for attacking shore targets which, it believed, could more economically be accomplished by shore-based aircraft. In Davis' words:

The Committee still seem to think we want a strike aircraft just to strike at shore targets and so 'rob' Bomber Command of their livelihood! They do not apparently appreciate that the removal of strike aircraft from the Navy's armoury is somewhat equivalent to taking away the Army's artillery or the Air Force's big bombs!⁶⁹

Ministers had accepted that strike aircraft were needed against surface ships but had not approved the related functions of attack at source and offensive minelaying. They were needed by the naval commander 'because, otherwise, there can be no guarantee that sufficient priority will be given to the task by the land-based Air forces.'⁷⁰ The Admiralty once again stressed the need for a covering force including heavy carriers to protect sea lanes as, 'the umbrella under which we exercise the command of sea communications.' Alternatively, it could switch to other areas and roles as needed, attacking targets ashore, disrupting enemy amphibious operations, supporting armies on land, 'or for any other purposes for which a source of mobile air power is necessary.'⁷¹

⁶⁷ DAW to First Sea Lord, 15 September 1954, ADM 205/98

⁶⁸ Head of M. to First Sea Lord, 'DR (54) 9', 13 September 1954, ADM 205/98, para. 10

⁶⁹ VCNS No. 1434, ADM 205/98, para. 3

⁷⁰ Director of Plans to First Sea Lord, 'Swinton Committee Report', 9 September 1954, ADM 205/98

⁷¹ Fifth Sea Lord, 5SL 1635, 'DR (54) 4th Meeting of Cabinet Committee on Defence Review – Minutes', 12 August 1954; VCNS to Sir Richard Powell, 19 August 1954, 'The Role of the Covering Force', both ADM 205/97; original emphasis

The perception that the British heavy carriers, like those of the US, were intended mainly for attacking shore targets was apparently widespread in spite of the Admiralty's efforts to stress their role in defending sea communications. Discussions with Sir Richard Powell (Permanent Secretary at the Ministry of Defence, who had leaked the committee's recommendations to the Admiralty) revealed that he too was under the impression that the planned strike aircraft were intended for use against shore targets. He had been suspicious, for example, about the wide operational radius of the NA39 and needed convincing that this was to allow it to find and destroy enemy warships, with the ability to hit land targets 'a lucky bonus which it would be foolish not to exploit as the situation demands and opportunity offers'.⁷² In early September the Defence Research Policy Committee – including its RAF representative – agreed to support the Navy's request for the NA39 strike aircraft:

This support was based on our requirement for an efficient strike aircraft to attack ships, the other capabilities of the aircraft (strike on shore targets in a hot war and Army support strike in a peripheral war) being regarded as bonuses.⁷³

An Admiralty memorandum emphasised that 'our whole argument for the NA39 development is based on the need to attack the Russian surface fleet in a hot war and to strike with the most up-to-date weapons in a warm war'.⁷⁴

As an additional argument for reducing the two heavy carriers to an escort role, the Swinton Committee suggested that more carriers were required on shipping routes, whereas the Admiralty proposed reducing the light carriers deployed there from three to two. The Admiralty agreed that more carriers were needed for trade protection but pointed out that it had accepted the reduction only 'because of heavy pressure for economy'. The heavy carriers in the Striking Fleet had their own contribution to make to protecting shipping, against surface warships as well as against major air attack. Without their cover, light forces accompanying convoys would be exposed to attack by

⁷² ACNS to First Sea Lord, 23 August 1954, ADM 205/97

⁷³ Fifth Sea Lord, 5SL 1663, 'NA 39', 2 September 1954, original emphasis: 5SL 1679, both ADM 205/98. Also, Sir Richard Powell to Minister of Defence, 'Strike Aircraft', 2 February 1955, DEFE 13/66: the conclusion regarding the NA39 was in DRP/P (54) 32, and was approved by the Chiefs of Staff and the Minister of Defence.

superior Soviet naval forces.⁷⁵ It is ironic that the committee paid lip service to the Admiralty's arguments about the need to protect sea communications, insisting that it was so important that the heavy carriers should be retasked to make a direct contribution to it.

A further line of attack was that: 'Carriers are getting more and more vulnerable to shore-based air attack'. This argument, common in the interwar debates, was notable by its absence during the first Radical Review but now reappeared. The Admiralty countered: 'There is no evidence to support this. What *are* getting more vulnerable are the Bomber Command airfields on D day.'⁷⁶ The locations of bomber bases would be well known to the USSR and would be the first targets attacked, whereas carriers would be at sea before the outbreak of war. 'A "Pearl Harbour" against Allied bomber airfields may well leave the carriers as the only British surviving source of nuclear attack.'⁷⁷

The committee claimed that the carriers' roles could be performed by other means and that 'the role of the Aircraft Carrier is already restricted through the ever increasing range of shore-based aircraft'. The Admiralty countered that the increasing range of modern aircraft actually supported the case for carriers, since it applied to enemy aircraft too: with a growing threat to shipping, naval fighters were even more essential against reconnaissance aircraft and air attack. Besides, to provide an adequate replacement, land-based aircraft would have to be able to conduct naval operations even in remote areas, while in war they would be fully stretched by other tasks.⁷⁸ This was a familiar argument: more novel was the claim that guided missiles would replace manned aircraft in the Navy. The Admiralty argued that 'the reference should be dropped since it has no relevance to the time scale under consideration', and, moreover, 'it must be made clear that this era arrives for land based aircraft first.' In offensive operations at sea, aircraft would still be needed to search large areas of sea for

⁷⁴ DCNS, 'Defence Review', 1 November 1954, ADM 205/99

⁷⁵ 5SL 1679; Fifth Sea Lord to Minister of Defence, 18 September 1954, both ADM 205/98; First Sea Lord's comments, DR (54) 10th, 26 October 1954, AIR 19/653

⁷⁶ 5SL 1671, ADM 205/98; original emphasis

⁷⁷ 5SL 1635, ADM 205/97

⁷⁸ 5SL 1679; DAW to First Sea Lord, 15 September 1954, both ADM 205/98; First Sea Lord's comments, DR (54) 10th, 26 October 1954, AIR 19/653

enemy warships and to carry guided weapons. Defensively, fighters would be needed to engage enemy aircraft before they reached the launching point of their own guided weapons (which would be beyond the range of ship-borne anti-aircraft missiles). Hence, scientific advice suggested that land-based aircraft would be rendered obsolescent long before this applied to carrier aircraft.⁷⁹ Newell suggested that whilst the report included Churchill's view that sea power was becoming less important, in fact: 'sea/air power seems likely to prove the last surviving form of manned air warfare. Our main allies anyhow appear to think so.'⁸⁰ Admiralty objections were conceded and the statement about naval aircraft giving way to guided weapon was removed from later drafts of the report.

From the outset, the Swinton Committee set great store by the argument that the Fleet Air Arm was particularly expensive. This originated with Duncan Sandys who alleged that a front-line naval aircraft cost twice as much as a comparable RAF aircraft and gave a total annual cost for naval aviation of £80m.⁸¹ During the committee's deliberations, one of the few amendments made to the draft report was the addition of a statement that the FAA's cost 'appears to impose a burden disproportionate to results', which Bingley felt was 'tendentious to put it mildly.'⁸² The Admiralty objected to Sandys calculation, arguing that it included some items unconnected with the carriers and their aircraft. It defended the cost of the FAA (which it stated as £70m annually – a figure which was accepted by the committee and inserted in subsequent drafts of its report), arguing that carriers used smaller and cheaper aircraft for operations which would otherwise require long-range shore based ones. There was no evidence that shore-based aircraft could conduct these roles more cheaply and, moreover, they could not perform many tasks on the periphery at all.⁸³

Comparing costs was truly difficult. The RAF suggested that the cost of carrier escorts should be factored in, so the Admiralty countered that a share of Anti-Aircraft Command, the RAF

⁷⁹ 5SL 1696; DAW to First Sea Lord, 15 September 1954; VCNS No. 1434: para. 5; Fifth Sea Lord to Minister of Defence, 18 September 1954, all ADM 205/98

⁸⁰ Head of M. to First Sea Lord, 'DR (54) 9', 13 September 1954, ADM 205/98, paras. 7-8; original emphasis

⁸¹ VCNS No. 828, ADM 205/164: para. 27; 5SL 1635, ADM 205/97

Regiment and the Observer Corps should be included, as well as allowances for the cost of the RAF Movements Vote, Royal Auxiliary Air Force Squadrons and Search and Rescue organisation. The Admiralty also argued that figures for the cost of RAF Commands 'usually omit allowance for overheads, such as share of the costs of Training Command, Maintenance Command, Technical Command etc.', let alone the cost of airfields, while naval aviation had to bear the costs of air/sea rescue, communications, maintenance and the training of its ground personnel. It was true that FAA wastage rates and number of reserves were high: the former was due to deck-landing accidents, which were expected to fall with new landing aids, while the latter resulted from deliveries of aircraft originally ordered for a much larger FAA.⁸⁴ Another difficulty in comparing costs was whether the Fighter Command figure should include the Control and Reporting System, since the cost of the carriers included the naval equivalent. With this addition, FAA aircraft were about 125% the cost of their RAF equivalents, while without it the figure was about 150%. For this cost, Fighter Command covered a single role in a limited area, providing 'aircraft designed and trained only for the interception of enemy aircraft attacking the UK in a hot war', whereas the FAA had a great variety of roles in hot, warm or cold wars, could operate anywhere in the world and rapidly switch between theatres. 'In view of the flexibility and wide application of this power, can it really be said that a cost ratio of 1¼ to 1½ is a "burden disproportionate to results"?'⁸⁵

John Slessor would have insisted that this was the case; he now entered the debate once again. In October 1954, he wrote in *Foreign Affairs* that protection against mines, submarines and surface raiders were part of the deterrent.⁸⁶ Yet the same month, he visited Australia and questioned its need for naval aviation, which he argued should not be termed 'air power', because: 'One light carrier with a few Gannets and Venoms has not really got anything to do with Air Power.' Australia,

⁸² 5SL 1696, ADM 205/98

⁸³ 5SL 1635, ADM 205/97; 5SL 1671, ADM 205/98

⁸⁴ 5SL 1679; Under Secretary of Finance to Parliamentary Secretary, 21 September 1954; Head of Air Branch, 'Comparison of Strength and Cost of Fleet Air Arm and Fighter Command', 21 September 1954, all ADM 205/98

⁸⁵ Fifth Sea Lord to First Sea Lord, 5SL 1687, 20 September 1954; Fifth Sea Lord, 5SL 1700, 28 September 1954, 'Defence Committee', both ADM 205/98; original emphasis

⁸⁶ Slessor, J. 'Air Power and World Strategy', *Foreign Affairs*, October 1954, p. 53

he argued, should not waste resources 'trying to be a miniature microcosm of a full-sized Navy', but should rather drop naval aviation which was uneconomical for it and concentrate on light escorts. Slessor did not discuss his views with the Chief of the Australian Naval Staff but only with the Chiefs of the other two Services, which prompted McGrigor to refer to the 'mischief' he was making.⁸⁷ The Admiralty view was that land-based aircraft could not cover the vast ocean areas of the Far East, so mobile naval aircraft were important. As a major power in the area Australia, whose carrier aircraft were suitable for defence against air and submarine attack, should make a contribution.⁸⁸

It is striking how few references were made in these debates to tasks of naval aviation other than for a hot war against the USSR. Most of the papers cited included passing references to cold and limited war roles but these were evidently seen as a small part of the case for carriers. There was a clear distinction in this respect between the defence of naval aviation and that of cruisers, which mentioned their hot war role but concentrated on their utility in cold and limited war. Thus, there were comments such as: 'The mobility of carriers makes them particularly suitable to provide air power rapidly in peripheral wars', and: 'This paper makes no mention of the Cold War or of the Warm ones associated with it; the Fleet Air Arm, as Korea showed, is particularly capable of rapidly providing the air power required in these.'⁸⁹ However, the relative weight of the Admiralty's argument was slanted towards total war. It thereby followed the committee, which was still basing its case on the opening phase of a nuclear war, even though doing so contradicted the new strategic assessment. MacLean felt that the new priorities assisted the Navy's case. He wrote that the committee was using the priorities of the previous Radical Review to attack heavy carriers and the Fleet Air Arm. Its arguments against the Navy centred on the 'initial phase of a future war', and thus overlooked the fact that the emphasis had shifted to preventing war, because 'there is now grave doubt whether in fact there will be any "survival period" should a nuclear war break out'. The new

⁸⁷ First Sea Lord to Vice Admiral Collins (Chief of Australian Naval Staff), 29 October 1954, ADM 205/105

⁸⁸ First Sea Lord to Captain J. Smallwood, UK Services Liaison Staff, Melbourne, 29 October 1954, ADM 205/105

⁸⁹ 'The Fleet Carrier', September 1954, 5SL 1679, both ADM 205/98

policy, he felt, increased the value of such impressive ships as the fleet carriers around the world in peacetime, 'heartening our friends whilst deterring our enemies'.⁹⁰

The Admiralty feared that the Minister of Defence would reject the use of naval aircraft against shore targets and support the committee's recommendation to remove the heavy carriers from the Striking Fleet.⁹¹ In fact, this worry proved unfounded as Alexander came out strongly in support of the Navy against the recommendations of the Swinton Committee, which was one of the main differences from the first Radical Review. Sending his comments on the draft to Churchill, he noted:

As you will see, there is a large measure of agreement, except over the Navy, which presents the most difficult problems. I do not think that we can cut the Navy any further unless we deliberately decide no longer to have three Services of more or less equal status and relegate the Navy to the background.

In his view, however, this would be 'entirely wrong', and, 'we must continue to keep three balanced Services, though a measure of priority must be given to the Air.' Alexander agreed with the proposed strength of two heavy and two light carriers (which was what he had suggested in January) but argued that if the heavy carriers were to remain in commission they should retain their full complement of aircraft. He accepted the need for strike aircraft against *Sverdlovs* and insisted that the carriers' strike role was misunderstood:

It has never been intended to provide them with aircraft or weapons primarily designed for strategic strikes against shore targets, and the fact that they could in case of need be used in support of the army or to strike shore targets is purely incidental.

One reason for the confusion was their wartime assignment to the 'Striking Fleet', the name of which was 'an Americanism and a misnomer', since its role was that of a covering force or, 'the umbrella under which control of sea communications will be exercised'. He therefore concluded that the allocation of the heavy carriers should be unchanged and opposed the suggested £15m cut in the FAA

⁹⁰ Director of Plans, 'Defence Priorities', 14 August 1954, ADM 205/97

⁹¹ ACNS to First Sea Lord, 23 August 1954, ADM 205/97

budget: 'There is no evidence that such a saving is possible.'⁹² The fact that Alexander had now changed his position to support naval aviation wholeheartedly and the terms in which he did so show that the Admiralty had convinced him that there was an important role for it. The Air Ministry would now have to argue against the Minister of Defence as well as the Admiralty. One of its briefs stated that: 'Unless they [the Admiralty] can be forced to save more, there is a risk of further cuts being imposed on Air Votes', and therefore urged that Striking Fleet tasks should be left to the Americans, 'since we do not subscribe to this expensive way of waging war'. The British carriers should have their complement reduced, the NA39 strike aircraft should be cancelled and rather than prune the Seamews as the Admiralty was proposing, it should cut 'a number of the more expensive Gannets'.⁹³

The next moves

Alexander's support for the carriers continued in September when the Defence Review Committee considered the latest draft report, which still advocated a £23½m cut in the Navy. He repeated the explanations discussed above as to why the Fleet Air Arm was more expensive than Fighter Command and although he accepted that savings were needed, he rejected the report's suggestions for achieving them. Much had already been trimmed from the FAA (including £10m of the £25m of naval cuts already made for 1955) and the saving of £2m in 1955 from switching the heavy carriers to escort duties would be 'disproportionately small' compared to the disadvantages of doing so. Alexander was supported by the Foreign Office, which stressed the political difficulties that the proposals would cause within NATO. McGrigor added that growing Russian naval air power meant that the current equivalent of the Grand Fleet needed a strong force of carrier-borne aircraft, while light carriers had sufficed off Korea because there was no submarine threat and air cover was provided by American forces. John Boyd-Carpenter, Financial Secretary to the Treasury, stressed his institution's enthusiasm for the proposal to save £15m from the FAA but added that alternative cuts would be acceptable, 'provided that savings were not thereby diminished'. Churchill once again

⁹² Alexander to Churchill, 25 August 1954, ADM 205/97; Brook to Churchill, 4 November 1954. PREM 11/1501

added his weight to the carrier sceptics. He acknowledged that it was 'undoubtedly necessary' to counter the Russian naval and air threat, but believed that carrier aircraft should have a smaller role in doing so than in Admiralty plans given the lower cost of land-based aircraft. He also rejected basing planning on further conflicts like Korea, on the grounds that the West should seek to deter rather than fight such wars. He had not changed his views by the end of the meeting, when he restated that the FAA, which the committee felt 'would absorb a disproportionate share of the resources which we could afford to devote to defence,' offered the best prospect for savings. While he was prepared to countenance other suggestions, he still believed that the heavy carriers could have their complements reduced and be restricted to an escort role 'without serious prejudice to their operational efficiency'. The committee agreed to invite Thomas and Alexander 'to re-examine urgently' the FAA programme and find additional savings from it of £15m.⁹⁴

By the time of a truly crucial meeting of the Swinton Committee on 26 October, the balance of opinion in the government had altered markedly due to a number of changes in key personnel.⁹⁵ Lord Alexander was replaced as Minister of Defence by Harold Macmillan, who was in turn replaced as Minister for Housing and Local Government by Duncan Sandys, with Selwyn Lloyd becoming Minister of Supply. This ministerial reshuffle was of immense significance in the debate because although Macmillan maintained the full support for the carrier programme to which Alexander had lately been converted, Sandys had departed and his successor was no die-hard opponent. The 26 October meeting considered a paper by the former Minister of Defence which offered £8m savings from the Navy rather than the desired £23½m, including a saving of £3½m rather than £15m on the FAA, £1½m rather than £3m on minesweepers and £3m from administration.⁹⁶ The savings on the FAA resulted from cutting the Seamew order, reducing the Sea Hawk order (on the grounds that

⁹³ Brief for Under Secretary of State for Air for DR (54) 10th, 26 October 1954, AIR 19/653

⁹⁴ DR (54) 8th, 21 September 1954, AIR 19/653

⁹⁵ The Admiralty saw Churchill as an opponent; one memorandum prefaced a summary of the anti-carrier case by stating: 'Sandys-Swinton-Churchill say...'; Fifth Sea Lord, 5SL 1671, 10 September 1954, 'Swinton Report (FAA)', ADM 205/98

⁹⁶ VCNS No. 828, ADM 205/164, para. 33

lower accident rates decreased the number required) and spreading out the Gannet order.⁹⁷ Swinton acknowledged that the new proposals would reduce FAA strength but felt that it was still too high and should fall further, as it would if his committee's proposal to reduce the heavy carriers' complement was adopted. The Chancellor, R.A. Butler, was worried by the small savings offered and suggested that expenditure on building and modernising carriers could be reduced, but the Allan Noble (Parliamentary and Financial Secretary to the Admiralty) explained that modernisation was necessary to reduce the accident rate, which was required to meet the savings offered. Dickson, Chief of the Air Staff, was relatively restrained, accepting that 'it was necessary that the Navy should be equipped for some years to come with the aircraft required to strike effectively at enemy forces at sea', although the question remained for the longer term as to whether it would be better to develop expensive naval aircraft for the strike role or to rely more on land-based aircraft.⁹⁸ Opposition to the carriers as such had markedly decreased by this meeting, giving way to a general desire for savings without a particular source being specified. Macmillan suggested that the future role of the FAA should be studied (including the longer term issue mentioned by Dickson) while in the shorter term the economies offered in his paper should be accepted as an initial contribution towards the Chancellor's target; Butler accepted this proposal. Churchill stated that there should be a further study of the future role of the FAA in the defence programme but that this should no longer delay the submission of the committee's report to the Cabinet.⁹⁹ Although the full Swinton Committee report went to Cabinet, the Admiralty was on the verge of clinching the argument.

The Swinton Committee Report

The most striking aspect of the final report is how little of its substance had been revised, in spite of the determined opposition of the Admiralty and the Minister of Defence. It recommended no

⁹⁷ For the changes in the naval aircraft programme, see DMARD (RN) to US (Air), 30 October 1954; also MISC/M (55) 118th, 29 November 1954; both AVIA 65/70

⁹⁸ DR (54) 10th, 26 October 1954, AIR 19/653. The draft committee report was DR (54) 12 and the paper by the Minister of Defence was DR (54) 14.

⁹⁹ DR (54) 10th, *ibid*.

radical changes in the Army, while for the RAF it stated that the main issue was how much emphasis should be given to the medium bomber force, which it described as being 'of cardinal importance to the primary aim of our defence policy'. As for the Navy, although it 'could not play any direct part in stemming the first onslaughts of nuclear air attack in the opening intensive phase of war', it would need to bring in supplies from abroad. Yet although the Services would remain 'of equal status and honour', they would need to vary in size according to the political and technical circumstances:

In the new strategic conditions, the relative importance of sea power in our defences is evidently diminishing and there is no sign that this trend will be arrested. There can be no question of having a larger Navy than we need, or can afford; and we must make the best use of existing material. It is natural that the Navy should wish to have their share in air power, which is growing in importance. The cost of the Fleet Air Arm, however – already about £70 millions a year and expected to rise sharply – appears to impose a burden disproportionate to results. Moreover, the rôle of the aircraft carrier is already restricted through the ever-increasing range of shore-based aircraft.

The Admiralty was planning to reduce the light carriers for convoy protection – in which role land-based aircraft could not replace naval aviation – from three to two but this would be insufficient to protect the crucial Atlantic routes 'upon which in the later stages of a war our life might depend'. The report therefore recommended that 'the two heavy carriers should be manned and equipped for the escort rôle only and that, at any rate in peacetime, their complement of aircraft should be reduced to that of the light carriers.' This would permit a reduction in numbers of aircraft, saving £2m in 1955 and possibly more thereafter; there should be an investigation into the future role of the FAA in case its aircraft could be reduced further. As if this were not enough the report concluded by warning that re-equipment of Bomber and Fighter Commands and the introduction of guided weapons would lead to a 'substantial increase' in the Air Ministry budget, so if defence expenditure did not increase, expenditure on one or both of the other Services would need to be cut again.¹⁰⁰

Predictably, the Admiralty was furious. A later summary described the report to the Cabinet as including 'all of the objectionable matter contained in the earlier draft with only minor

amendment.’¹⁰¹ McGrigor told the Board that it was ‘thoroughly unsatisfactory’ and included many points that Admiralty representatives had resisted without reference either to their dissent or to the fact that the former Minister of Defence had strongly supported the Admiralty over the FAA.¹⁰² Davis compared eliminating the Navy’s strike aircraft to cutting the Army’s armour or denying the RAF its tactical aircraft for financial reasons:

It would be the same if in the first World War we had removed the big guns and ammunition from the battleships of the Grand Fleet and invited Admiral Beatty to command this Fleet and defeat the German High Seas Fleet.

As for the claim that it duplicated an RAF role, he pointed out that the Navy had often given gunfire support to the Army, which the latter found useful even though from the naval point of view it was a subsidiary role for warships: ‘We were not told we were poaching on the Royal Artillery preserves, so why is it suggested we are poaching on Bomber Command’s preserves?’¹⁰³ He also noted that the £2m saving from the elimination of naval strike aircraft represented one-eighth of one percent of the defence budget, while the whole Fleet Air Arm was 4½% of it, or: ‘The cost of only three medium bombers for the RAF!’ Davis objected that the paper did not make it clear that the proposal would deprive the Navy of its ability to attack targets as sea as well as those on land.¹⁰⁴ It was also argued that the report ‘still completely disregards the cold and warm wars and the ability of the Fleet Air Arm to deploy in any part of the world at short notice air power capable of many roles.’¹⁰⁵

J.P.L. Thomas wrote a memorandum from his sick bed to Churchill, referring to the ‘more nonsensical ideas’ of the Defence Review Committee and stressing that it alone, and neither Alexander nor Macmillan, wanted to reduce the role of the heavy carriers, ‘which alone can give the Norwegians the feeling that we are with them’. He repeated that Admiralty plans were not new and accorded with long-standing NATO plans; SACLANT had even requested a third heavy carrier, and

¹⁰⁰ C (54) 329, Prime Minister, ‘Defence Policy’, 3 November 1954, CAB 129/71, paras. 7-10, 12-13, 31-38, 45

¹⁰¹ VCNS No. 828, ADM 205/164, para. 34

¹⁰² Board Minute 4814, 4 November 1954, ADM 167/144

¹⁰³ VCNS, ‘Notes on the Consequences of the Denial of Strike Aircraft to the Navy’, 3 November 1954, ADM 205/99

although Britain could not provide this, the request demonstrated the undesirability of reducing the heavy carriers to a defensive escort role.¹⁰⁶ This strength of feeling came across in the Admiralty paper on the Fleet Air Arm for the key Cabinet meeting. In it, Thomas wrote that the report:

contains a number of expressions of opinion and recommendations which are not in accordance with the views of the Board of Admiralty and to which the First Sea Lord and I have taken every opportunity of objecting.

The report, he thought, was unrealistic and failed to take into account the cumulative effect of previous cuts, as well as further ones to come. Exhaustive discussions had shown that the role of heavy carriers was 'complementary to, and not in competition with, that of the Royal Air Force'. Such ships with their full complement of aircraft were vital for Britain's share of alliance tasks because they alone were capable of simultaneously operating fighter, anti-submarine and early warning aircraft and also being able to 'launch a worth-while blow at whatever threatens us by sea.'. The paper reiterated that both Thomas and McGrigor had expressed strong dissent, in which they had been firmly supported by Alexander, and that: 'The present Board of Admiralty feels most strongly in this matter.'¹⁰⁷ In the guarded language of Cabinet memoranda this was powerful stuff indeed but it had actually been toned down from earlier intentions: in September, Newell recorded that McGrigor had stated 'that either the measures proposed in the draft Report should not be pressed or that the Board of the Admiralty should resign.'¹⁰⁸

The Cabinet decides

The Cabinet meeting of 5 November considered the Swinton Committee report and the two Admiralty papers. McGrigor strongly opposed the committee's proposal regarding heavy carriers, arguing that in war British naval forces 'would be vulnerable to attack by the powerful surface forces

¹⁰⁴ VCNS to First Sea Lord, 4 November 1954, ADM 205/99

¹⁰⁵ 'Notes on C (54) 329', (undated) p. 66, ADM 205/99

¹⁰⁶ First Lord to Prime Minister, 3 November 1954, DEFE 13/66

¹⁰⁷ C (54) 332, First Lord, 'Defence Policy: Fleet Air Arm', 4 November 1954, CAB 129/71

¹⁰⁸ Head of M. to First Sea Lord, 13 September 1954, ADM 205/98

of the Russian Fleet unless they were covered by a strategic force fulfilling a rôle similar to that of the Home Fleet in the last war'. This was the task of the Striking Fleet, which had to include carriers capable of dealing with Russian cruisers; although it might be used against any Russian amphibious attack on Norway, 'such a task would only be incidental to the primary strategic rôle'. The British contribution to the Striking Fleet was two heavy carriers, which would have to counter the Soviet Fleet before US naval forces reached the East Atlantic. He noted that the Admiralty had offered further savings, including reducing aircraft strength but the Chancellor still demanded more. Churchill reaffirmed that:

he was not convinced that the large and increasing resources which would be absorbed by the Fleet Air Arm were justified by the contribution which it would make to our defences. He believed that larger savings could be made in this sector of our plans.

However, he would not insist that the Swinton Committee proposals were put into effect if alternative savings could be found. The Cabinet agreed to reduce the minesweeper programme, since nuclear weapons made mines less likely to be used against major British ports, and agreed that there should be further consideration of 'the strategic rôle of the Fleet Air Arm and the manner in which heavy aircraft carriers could best be equipped to fulfil their part in this rôle.'¹⁰⁹

The Aftermath

Shortly afterwards, Sir Frederick Brundrett made an important intervention. Noting that the Chiefs of Staff had decided that the deterrent and warm war should have priority over preparations for hot war, he suggested that the Swinton Committee had ignored this. Their attacks on naval aviation 'were based solely on the contribution which aircraft carriers make to the hot war.' He believed that the Admiralty had mistakenly followed the committee's lead in this respect; indeed, even at the

¹⁰⁹ CC (54) 73rd Conclusions, 5 November 1954, CAB 128/27

November Cabinet meeting, McGrigor had based his case for the carriers on hot war. Brundrett saw an alternative rationale:

The requirement for the carrier can and should be fully justified on the basis of the warm war need. Such activities are almost invariably in outlying portions of the Globe and involve sea transport. Protection of these forces, and, indeed, in general, protection of the landing of these forces must necessarily depend on air protection from carriers unless it so happens that there is a convenient RAF base in the neighbourhood. Thus, in most cases, there is a need for both fighter and strike aircraft carrier borne.

The Fleet Air Arm therefore needed modern aircraft to fulfil agreed policy. Brundrett denied that the FAA would be of value only for a short time, because its warm war duties would increase as Britain became more dependent on guided weapons and ballistic rockets to deter hot war.¹¹⁰

Macmillan seemed receptive to Brundrett's arguments and the case for the carriers. He defended the Navy in Parliament, saying that its role was unchanged: 'It has the duty of securing the sea communications of our island and the world-wide support of our Commonwealth and trading interests.' He noted that the Navy was effectively incorporating modern technology to improve its ability to fulfil traditional roles, especially strike, and emphasised improvements made to the carriers and their aircraft during the previous year.¹¹¹ Just as his predecessor had come round to accept the value of the carriers, the new Minister of Defence was also convinced that they had a role to play. That his statement to Parliament was not mere rhetoric is confirmed by his subsequent decisions.

In December a Cabinet sub-committee discussed heavy carriers and the Fleet Air Arm. Macmillan offered some familiar arguments in their defence. Dropping the promised NATO contribution of two heavy carriers would be politically awkward and would forfeit Britain's voice in the wartime employment of the Striking Fleet, for an annual saving of £2-3m. The strike role could not be dropped even if carrier complements were halved because of the Soviet cruiser threat, and

¹¹⁰ Brundrett to Minister of Defence, 18 November 1954, DEFE 13/66

¹¹¹ 535 HC DEB, 1 December 1954, cc. 234-36

since the only strike aircraft available was the 'obsolescent' Wyvern, the Navy would need either the NA39 or additional N113 fighter-bombers. Besides, light carriers could not operate the full range of aircraft needed for early warning, anti-submarine warfare, fighter cover and strike. The Navy believed that RAF bombers could not secure command of the North Atlantic in war because they would be committed against strategic land targets, while high-altitude bombers would be unsuitable and the crews would not be trained for attack of sea targets. The Minister also argued that the policy of building up a deterrent to major war could well lead to an increase in local wars and crises where ready availability of carrier aviation could be essential. The Korean war had shown that:

carrier airborne forces were the only form of readily available air support for the Army and air coverage of sea communications in circumstances where ground air forces were limited by the availability of airfields capable of taking modern aircraft and by the supply problems arising when the ground air forces were called upon to operate in areas remote from their normal bases.

Moreover, light carriers had sufficed off Korea only because there was no submarine threat and negligible air opposition, so they could concentrate on the strike and escort fighter roles rather than anti-submarine and early warning. Macmillan therefore suggested that he should present a paper to Cabinet which would argue for fully complementing the heavy carriers with the aircraft they would need for their intended role, rather than raise the general issue of land-based versus carrier-borne air power. The meeting agreed.¹¹²

Macmillan duly submitted a paper to the Defence Committee in January 1955 in which he argued that any savings would assume that naval strike aircraft were unnecessary because fighters could attack enemy warships: 'Such an assumption is not in my view justified, since carriers cannot fulfil their functions, whether in a covering force on the trade routes, or in a warm war, without efficient strike aircraft.'¹¹³ This wording represented a strengthening of the paper's original draft which stated that *the Navy* believed this assumption to be unjustified. Powell told Macmillan that the

¹¹² MISC/M (54) 123rd, 6 December 1954, DEFE 13/66

¹¹³ D (55) 1, Minister of Defence, 'Defence Policy: Heavy Aircraft Carriers', 7 January 1955, CAB 131/15.

Admiralty would prefer him to state that it was *his* opinion if he agreed, adding: 'I think it is the view of everyone in the Ministry of Defence who has been concerned with this problem that the Navy is right.'¹¹⁴ His paper continued that without the two promised carriers Britain would lose its influence on the use of the Striking Fleet and until the American carriers arrived, 'there would be no carriers on this side of the Atlantic capable of operating in waters subject to heavy enemy air attack and outside the range of shore-based air cover'. He added that the heavy carriers might also be needed in cold or warm war (and repeated the point about the permissive conditions for light carriers off Korea) and that it would be wasteful to use a large carrier to operate the aircraft complement of a smaller vessel. He conceded that: 'The relative roles of land and carrier based aircraft in the kind of Atlantic battle which might take place in the early stages of a war will continue to be fiercely debated', but on the current practical matter, the financial saving of reducing their aircraft complement was not worth the damage to the efficiency and prestige of the Fleet. He therefore recommended that they should be complemented as heavy carriers.¹¹⁵

On 13 January, the Cabinet Defence Committee agreed to Macmillan's recommendation (which, he stressed, would not prejudice the question of the new strike aircraft).¹¹⁶ Thomas expressed the Admiralty's relief, writing to Macmillan that they were 'most grateful to you for the way you have handled the vexed question of full complement of aircraft for our heavy carriers. It has been a piece of masterly diplomacy by you.'¹¹⁷

One question remained: what Macmillan referred to as 'part of the deal' for the Admiralty getting a full complement for the carriers was that he should undertake an inquiry into the need for the new strike aircraft.¹¹⁸ Powell reminded him that the Defence Research Policy Committee had recently examined this issue fully and concluded that it was 'essential to have some means of

¹¹⁴ Sir Richard Powell to Minister of Defence, 'Role of Heavy Aircraft Carriers', 4 January 1955, DEFE 13/66. Macmillan wrote in the margin that he concurred.

¹¹⁵ D (55) 1, paras. 5-7

¹¹⁶ D (55) 1st, 13 January 1955, CAB 131/15

destroying enemy surface vessels which may be armed with modern equipment'. The current Wyvern aircraft was supposed to do this, but 'was already obsolete before it came into service.' The committee had considered the alternative of developing a strike version of the N113 but rejected it due to its very limited utility, and therefore recommended that 'work on the NA39 should proceed as rapidly as possible'. Both the Chiefs of Staff and Lord Alexander, the then Minister of Defence, had approved the recommendation, so Powell suggested that Macmillan should tell the Defence Committee that there was a need for a strike aircraft to destroy enemy surface vessels and that this should be the NA39. Macmillan commented: 'I think this is a very good way out of a difficult position.'¹¹⁹ This line was also accepted by Brook, who told Churchill that while the carriers needed 'an effective means of destroying enemy surface vessels', the Wyvern was out of date and there was no way to adapt existing aircraft. The only alternative, he concluded, was a purpose-designed aircraft.¹²⁰ Macmillan passed on his opinion to the Defence Committee, quoting the findings of the Defence Research Policy Committee that the strike N113 would be inadequate and that development of the NA39 should continue. The committee concurred.¹²¹

The second Radical Review of 1953-54 saw naval aviation come under renewed attack. There can be little doubt that the Admiralty felt under siege, given references to the 'Swinton-Sandys Inquisition' and to the 'continued obnoxiousness' of its report, which included 'a number of deplorable mis-statements'.¹²² The stakes were undoubtedly perceived as high, with Philip Newell commenting in an internal Admiralty paper that the decision over the Swinton report could be 'as grave as any that has faced the Navy in history', and concluding: 'Minesweepers apart, we have gone as far as we can without becoming a French Navy.'¹²³

¹¹⁷ First Lord to Macmillan, 13 January 1955, DEFE 13/66

¹¹⁸ Macmillan to Powell, 14 January 1955, DEFE 13/66

¹¹⁹ Powell to Macmillan, 'Strike Aircraft', 2 February 1955, DEFE 13/66, with hand-written note by Macmillan.

¹²⁰ Brook to Churchill, 'Naval Strike Aircraft', 14 March 1955, PREM 11/1501

¹²¹ D (55) 3rd, 15 March 1955, CAB 131/15

¹²² VCNS to First Sea Lord, 23 August 1954. ADM 205/97. Fifth Sea Lord, 5SL 1696, 'Meeting of Defence Committee of Cabinet 21 September 1954', 24 September 1954, ADM 205/98.

The strategic reasons offered for the wave of criticism were varied, including familiar arguments about carrier vulnerability and land-based air power. It is difficult to escape the impression, however, that the strategic case was secondary and the true rationale was simply financial. Given continuing economic problems, the defence budget could not increase. Yet with the growing cost of modern technology, the overwhelming importance attached to the V-bomber and the decision to produce the hydrogen bomb, spending would rise unless major economies were accepted. Given this need to find savings, the heavy carriers and Fleet Air Arm provided a convenient target, which coincided with the preferences of certain key Ministers and the Air Ministry. This interpretation is supported by the fact that the reasons given for cutting naval aviation were so changeable over time, and by the way in which a change in personnel in October 1954 swiftly ended the campaign against the heavy carriers.

Nevertheless, the assault on naval aviation was intensified by the fact that the Admiralty's case seemed to rest on uncertain and shifting ground. Their argument for the carriers still focussed on the naval contribution to a hot war and made only fleeting references to cold and limited war. One part of the problem was the doubtful plausibility of 'broken backed warfare'. The idea of continuing to fight after a nuclear attack seemed dubious, even though it was fair to argue that Britain would still need imports of food and raw materials after such an attack; 'recovery period' might have been a more felicitous term. The Admiralty had a better case in the suggestion that naval forces were part of the deterrent or that there could be a prolonged conventional phase to a future war. However, such ideas had not yet been generally accepted and although strategically plausible they entailed politically unacceptable increases in expenditure rather than the economies that were sought. The reluctance to base the Navy's case on cold and limited war is understandable: disavowing a hot war role would seem to marginalise the Fleet, making it vulnerable to future financial raids. Moreover, in concentrating on hot war, the Admiralty was following the priorities of the Swinton Committee, even

¹²³ Head of M. to First Sea Lord, 13 September 1954, ADM 205/98

though in doing so it was neglecting the new strategic appreciation. Yet it was the cold war case which swung the balance of political opinion in the Admiralty's favour.

The reviews of 1953 and 1954 still concentrated on trimming capabilities maintained to fight a certain type of war and fulfil certain international commitments. There had been some change in the view of the likelihood and nature of war and some commitments had been shaved away at the margins, but in neither case were drastic changes yet accepted. The second Radical Review had not reoriented British defence policy for the thermo-nuclear age, though it had set the groundwork for more fundamental developments which were to follow in the next few years.

Chapter 5

The shadow of the H-bomb: 1955-1956

The cumulative effect of the Radical Reviews and more publicly expressed doubts about the Navy's future were serious. In late 1954, Admiral McGrigor (First Sea Lord) noted the uncertainty caused partly by the budget and also by 'the impact of Nuclear Warfare; coupled with the claims of the Royal Air Force supporters that they could pretty well do everything for which the fleet was required.' He argued that, first, the cold war would continue and could become quite intense:

The Navy will have a big part to play both in local war at sea and in direct support of the Army ashore, in which Naval air power may prove all important, in view of shortage of airfields and immobility of our Air Force.

Second, even in nuclear war there would be a need for seaborne supply. Third, a balanced Fleet ready at short notice was needed to supplement the deterrent.¹ The Admiralty's approach was still primarily oriented towards nuclear war, though the fact that McGrigor listed the limited war role first is significant. Finding a balance between the two would become the decisive issue over the coming months. As Lord Pakenham put it, the dilemma facing the Navy was 'how to prepare for a thermo-nuclear war and a conventional war at the same time within a tolerable budget'.²

The Admiralty initiated 'a series of studies on the effect of thermo-nuclear warfare on the logistic and servicing problems of the Royal Navy'.³ Two papers resulting from this process emerged in late 1954. While current planning was based on the assumption that nuclear weapons would be used, it was suggested that as stockpiles increased nuclear war might become too destructive to be contemplated, although 'localised conventional wars' would still occur. In any global war, food and supplies for Britain and NATO would still need to come by sea, and shipping would need to be

¹ First Sea Lord to Commanders-in-Chief, 29 December 1954, ADM 205/102

² House of Lords Official Report Volume 197, 9 May 1956, c. 318

³ Permanent Secretary to First Sea Lord, 23 March 1955, ADM 205/165

protected even after a nuclear attack. The Fleet would have to make use of 'dispersion backed by the mobility afforded by afloat support' and ensure that no ship was sufficiently valuable to justify the use of a nuclear weapon against it, which could make the carrier task force concept 'impracticable'. However, carriers might be the only survivors of an 'initial blitz', so their nuclear capability would be useful in war and part of the deterrent in peace. The papers therefore argued that the Navy should be armed with nuclear weapons.⁴ The argument that there might be a need to fight a conventional phase of a war, or even a wholly conventional war, was sound but represented swimming against the tide of British defence policy. The main impediment to any such approach was no less significant for being financial rather than strategic. The Permanent Secretary to the Admiralty, Sir John Lang, noted that both the Chiefs of Staff and the Permanent Secretaries expected any world war to be nuclear. He acknowledged that this involved a gamble and that a war could begin and continue for some time as a conventional conflict but since the UK could not afford to prepare for this, in practice it had to plan on the assumption that war would be nuclear from the outset.⁵

The implications of such an assumption were becoming clearer. In early 1955, 'Exercise Thunder' tested plans to deploy forces overseas in the face of nuclear attack. It showed that without a warning period current mobilisation or deployment plans could not be carried out.⁶ Moreover, Thunder only involved fission bombs. With hydrogen bombs the conclusion was even more grim, as another study, the Strath Report, indicated. An attack with ten weapons, each with a yield of ten megatons, against London and other urban areas would result in 12 million dead, four million wounded and 13 million unable to leave their homes for at least a week, destruction of more than half the country's industrial capacity, grave dislocation of essential utilities and widespread contamination of agricultural production and water supplies.⁷ An Admiralty assessment described it as 'realistic and

⁴ Director of Plans, 'The Navy and the Hydrogen Bomb War', 1 October 1954, ADM 205/102; Memorandum B942, 'Review of Naval Policy', 26 November 1954, ADM 167/144

⁵ Permanent Secretary to First Sea Lord, 23 March 1955, ADM 205/165

⁶ 'Report on Exercise THUNDER', 11 March 1955, ADM 205/165

⁷ The report, D (55) 17, has not been released but is quoted in COS (57) 278, 'Form and duration of a major war', 18 December 1957, DEFE 5/80

of great value in bringing home the quite unprecedented devastation and destruction that would be caused by a thermo-nuclear attack'.⁸

The 1955 Defence White Paper paid particular attention to thermo-nuclear weapons, which posed 'new and revolutionary problems' for British defence policy, and announced the decision to acquire them.⁹ Thereafter, the paper faced two ways, stressing the centrality of the nuclear deterrent but also insisting on the importance of conventional forces, including the Navy. Thus, it explained the increased emphasis on the deterrent, which 'must rest primarily on the strategic air power of the West, armed with its nuclear weapons', yet also stressed that Britain could not rely solely on strategic air power because the USSR had a large and growing Navy and preponderance in land forces. While nuclear weapons might prevent overt aggression, conventional forces would still be needed against 'the indirect approach through infiltration and subversion'. It stated that nuclear weapons 'do not radically alter the role of any of the three fighting Services' and each would contribute to the deterrent, the cold war and fighting a major war, in which both land and naval forces would be needed, although their weapons, organisation, tactics and training would be 'profoundly affected'.¹⁰

Explaining the Paper to the Commons, Churchill acknowledged the importance of conventional forces in Western Europe, 'to prevent piecemeal advance and encroachment', and, especially, in the cold war. Yet he devoted most attention to the H-bomb. Its great power and the resulting fall-out would, he suggested, have a levelling effect between the situation of the USSR and that of the far smaller UK, making large countries highly, if not equally, vulnerable: 'it may well be that we shall by a process of sublime irony have reached a stage in this story where safety will be the sturdy child of terror, and survival the twin brother of annihilation'. The USSR would be unlikely to risk a surprise attack while the West had a monopoly of H-bombs, while once they too possessed

⁸ D. of P. and Head of M., 'Defence Implications of Fall-out from the Hydrogen Bomb', March 1955, ADM 205/165

⁹ *Statement on Defence 1955 – Cmd 9391* (1955), paras. 1, 4

¹⁰ *Ibid.*, paras. 15-26, 33

them, together with the ability to hit the US, the situation would be one of 'saturation', that is, 'both are capable of inflicting crippling or quasi-mortal injury on the other', which would enhance deterrence.¹¹ Swinton, the Commonwealth Secretary, again emphasised the political and military importance of a British contribution to the West's deterrent. He also acknowledged the need for land forces and tactical aircraft to hold the Russians as far east as possible, and the necessity of 'retaining command of the sea', which with land and air action 'will hold the line until the full effect of the thermo-nuclear counter-attack has been felt'.¹² The opposition welcomed the apparent demise of the broken backed warfare concept. Emanuel Shinwell rejected it as implausible, while Clement Attlee described it as 'an extraordinary illusion', adding that after a nuclear attack the issue would be survival rather than continuing to fight.¹³

With priority being devoted to nuclear weapons, conventional forces would inevitably be squeezed. Still, the continuing importance attached to the Navy and its role in general war was evident throughout the White Paper. Although it emphasised the initial stage of major war it added:

We cannot, however, be sure that the initial phase will be decisive; certainly all our efforts must be directed to securing that it is not decisive against us. Some provision, though on a lower priority, must therefore be made for continuing operations after the initial phase, particularly at sea.

It noted the importance of securing sea communications, 'without which we cannot for long survive', and singled out for mention the Navy's contribution of heavy carriers to the Striking Fleet, which could 'hit the enemy either independently or in support of allied land forces and land-based air forces.' Referring to naval research and development, it stressed 'long-range aircraft and weapons for use against fast and heavily armed cruisers', and the fact that recent improvements to carriers allowed them to operate heavier and faster fighter and strike aircraft, 'the latter being capable of carrying

¹¹ 537 HC DEB, 1 March 1955, cc. 1893-1905

¹² House of Lords Official Report, Volume 191, 16 March 1955, cc. 1127-30. Although he was speaking for the government in the defence debate, the chair of the eponymous Radical Review committee devoted to naval issues just one line in a speech covering eight columns in Hansard.

¹³ 537 HC DEB, 1 March 1955, c. 1911; 2 March, 1955, c. 2171

atomic bombs'. There were some references to the utility of naval forces in limited war. It noted that the presence of the Navy could be a steadying influence, it could move the planned strategic reserve rapidly, and in limited wars like Korea, the Navy 'can provide quickly, by reason of its mobility, powerful assistance to the land battle.'¹⁴ These comments would not have looked out of place in a statement on the naval estimates; the Admiralty had clearly made progress in persuading the Ministry of Defence of the validity of its strategic concepts.

The Admiralty statement offered a more detailed explanation of the part to be played by maritime power, including an essay on 'The Role of the Royal Navy in the Age of Thermo-Nuclear Weapons'. It mentioned tasks in peace and in local wars, in which, 'the sea and air power of the Royal Navy can be brought to bear quickly and effectively in almost any part of the world'. Most attention, however, was devoted to wartime functions, including destroying enemy ships, protecting communications and providing 'direct air support for operations ashore and afloat in those areas where it cannot be readily given by shore-based aircraft.' The British contribution would include 'battle groups of carriers, guided missile ships and their escorts', replacing the main fleets of the past: 'they provide the strength on which all other naval activities depend', covering light forces and providing a mobile offensive force.¹⁵

In Parliament, opinion was split fairly evenly between those who believed the Navy would have a role in global war and those who were more sceptical. One factor common to both two strands was an overwhelming concentration on total nuclear war, with few mentions of more limited conflicts. Edward Shackleton accepted that the Navy had a cold war role but insisted that in a hot war British naval bases and dockyards would be destroyed by nuclear weapons, as would Russian submarines. Yet John Maclay argued that there could be no certainty over how a war would start: it might, for example, begin with the sinking of a few ships, in which case there must be an ability to

¹⁴ *Cmd. 9391*, paras. 17, 29, 36, 40, 50, 82

respond in a way which would not escalate the conflict. In any case, the USSR also had a large cruiser and submarine force which would be posted around the world before the outbreak of a war.¹⁶ Once again the carriers attracted considerable criticism. Shackleton queried the justification for spending £350m on the Navy, for carriers or for anti-submarine warfare. Woodrow Wyatt accused the government of 'trying to invent new roles for the Royal Navy', and while he accepted that some carriers were necessary for cold war operations, he believed that their future was questionable: 'I do not think the aircraft carriers justify the great expense we have had on them so far'. Attlee perceived 'special pleading' in the Navy estimates, and doubting whether carriers would be of any use in narrow seas or other parts of the world. Michael Foot added that they were particularly vulnerable. However, the Opposition front-bench spokesman, James Callaghan, felt that there was a strong but not yet a final case against the carrier, and in particular asked, 'how can it be that a mobile launching platform may be more vulnerable than a fixed runway?'¹⁷

J.P.L. Thomas stressed that carriers were the principal counter to Soviet *Sverdlovs*. Expert opinion in the US and Britain 'fully supports the carrier battle group in a war of nuclear weapons as a self-protecting, largely self-contained mobile airfield', which would be 'compact, hard-hitting and, at the same time, flexible and elusive'. They had been proved in Korea and further conflicts of that sort could occur. Allan Noble, Parliamentary and Financial Secretary to the Admiralty, denied that carriers were vulnerable since they were difficult to locate and had strong air defences:

Personally, at the start of a thermo-nuclear war I would very much rather be at sea in an aircraft carrier than I would be on one of the airfields in this country from which our own bombers are to operate.

It was difficult to know where air power might be needed and a carrier could move 500 miles each day: 'The *Sunday Express* seemed to complain last week that a carrier does not go as fast as a

¹⁵ *Statement of the First Lord of the Admiralty Explanatory of the Naval Estimates 1955-56 - Cmd 9396* (1955), paras. 2-6

¹⁶ 537 HC DEB, 2 March 1955, cc. 2127-29 and 3 March 1955, cc. 2306-07, 2357

bomber, but it certainly goes very much faster than an airfield.’¹⁸ One previous critic of the carriers who now reversed his previous position was Air Marshal Saundby, who having felt in 1953 that naval aircraft were not needed against enemy warships, now wrote that heavy carriers had a useful role against *Sverdlovs*, to avoid Bomber Command being diverted for this task and because heavy jet bombers were not the ideal counter to warships. He also suggested that carriers could supplement the main strategic air offensive, using the advantage of surprise.¹⁹

The Admiralty statement listed the operational fleet carriers as *Eagle* and *Ark Royal* (which had commissioned in February 1955), with *Victorious* modernising and *Illustrious*, *Implacable*, *Indefatigable* and *Indomitable* in Reserve. The operational light carriers were *Centaur* and *Albion*, with *Bulwark*, *Triumph*, *Ocean* and *Theseus* in trials and training, *Glory* and *Warrior* in Reserve and *Hermes* building. As before, their assigned tasks concentrated upon global war but also recognised their value in other types of conflicts. The statement described the carrier as:

the core of the modern fleet. It can deploy air power very quickly to any part of the world in either global or local wars. It is of particular value, first in areas which are not well provided with airfields suitable for modern shore-based aircraft, and secondly for operations beyond the range of such aircraft. Carrier-borne aircraft are not an alternative to shore-based aircraft; the two are complementary, and together they provide the world-wide air cover which our world-wide commitments require.

It listed the aircraft programmes underway, including an anti-submarine helicopter, and emphasised that the new strike aircraft would have greater range and speed than its predecessors and would also be able to carry atomic weapons.²⁰ However, as Crowe noted, in spite of these references the 1955 Fleet still lacked nuclear weapons and aircraft capable of carrying them.²¹

¹⁷ 537 HC DEB, 1 March 1955, 1982-84, 2000-02 and 2 March 1955, cc. 2174, 2273-80; 542 HC DEB, 10 June 1955, cc. 213-15

¹⁸ 537 HC DEB, 3 March 1955, cc. 2249-2252, 2432-33

¹⁹ Saundby, R. (Air Marshal) ‘Sea power and the aircraft carrier’, *Brassey’s Annual* 1953; ‘The Royal Navy in the Atomic Age’, *Brassey’s Annual* 1955

²⁰ *Cmd* 9396, paras. 9, 42-46

²¹ Crowe, W. J. *The Policy Roots of the Modern Royal Navy, 1946-63* (Ph.D. thesis, Princeton University, 1965), 139-41. By contrast, as Berdal noted, the US Navy had 15 attack carriers, all with nuclear weapons: Berdal, M. *The United States, Norway and the Cold War, 1954-1960* (London, Macmillan, 1997), 69-70.

The Evolving Navy

Since the war, the Admiralty had perceived submarines as the principal threat. In 1955-56, however, air attack began to cause increasing concern as a number of exercises suggested worrying conclusions. In August 1955, exercises with the US Sixth Fleet in the Mediterranean demonstrated the vulnerability of both navies to air attack. HMS *Eagle* and *Albion* made a successful attack on the carrier USS *Intrepid* at a distance of 235 miles. The 12 attacking Wyverns (the shortcomings of which have been described) flew the last 80 miles at low level and were undetected. An American counter-strike saw eight out of ten small raids detected and seven intercepted, then further attacks on *Intrepid* were also highly successful.²² Air defence was seemingly a problem even for the more lavishly equipped US Navy. Another British exercise held later in the year in the Norwegian Sea painted 'a far from happy picture', and revealed 'severe limitations' in air defence. Coastal and Bomber Command aircraft without electronic support were intercepted before bomb release in 43½% of sorties, and those with it in only 16%. The main deficiency was inadequate radar and it was also concluded that the Sea Hawk fighter had insufficient endurance and rate of climb, radar picket ships were important and more study of electronic warfare was needed.²³

Part of the solution to Fleet air defence was guided weapons. The Navy's main project was the unglamorously named 'Sea Slug' missile, for use against high-flying aircraft which were difficult for fighters to intercept. It was guided by warship radar, had a range of about 30,000 yards and could carry a nuclear or a conventional warhead. Work had begun on the project in 1947 but it had encountered delays and cost increases and by 1955 was not expected in service until 1960. Other guided weapons under development for the Navy were 'Green Light', a short-range, light-weight, manually guided anti-aircraft missile, 'Orange Nell', a short-range active radar homing anti-aircraft

²² C-in-C Mediterranean to Admiralty, 26 October 1955, ADM 1/26081

²³ Analysis of Exercise Phoenix One, October 1955, ADM 1/27047.

missile, and two anti-ship weapons, the 'Green Cheese' air-launched 'powered guided bomb', and the 'Blue Sky' ship-to-ship missile.²⁴ Sea Slug was the main priority. It had been planned to order Convoy Guided Weapon Ships for 1960 and then Fleet Guided Weapon ships for 1963-64, but in 1954 the latter were raised in priority. Rear Admiral G. Barnard (DCNS) recommended the change because such ships accompanying a carrier would allow a reduction in its fighters in favour of additional strike aircraft.²⁵ In February 1955, the Admiralty requested Cabinet approval for the preparation of designs for the new cruisers. They would displace about 11,000 tons and would at first have a dual armament of Sea Slug ship-to-air missiles and guns for use against Soviet cruisers, though the latter would eventually be replaced by a ship-to-ship missile. The request was approved, though it was stressed that this was not authorisation to order the ships.²⁶ The new cruisers were seen as crucial to counter the growing Soviet air threat. The Admiralty predicted that guided weapons would effect change 'comparable to that once brought about by the introduction of the Dreadnought', yet expected them to reduce fighters and guns rather than replace them.²⁷

There was still some dissatisfaction with the quality of naval aircraft. James Callaghan drew attention to the limitations of the Attacker and Sea Hawk fighters, neither of which, he claimed, could defeat the aircraft it was designed to counter or offered sufficient range or load in the strike role. As for the Wyvern, he suggested that its performance was so inadequate that when the British heavy carriers were operating with their US counterparts they 'would be limited to putting up fighters'.²⁸ Yet naval aircraft were showing some improvements. In 1955, Thomas announced that by the end of

²⁴ RDB/PL (55) 97, Ministry of Supply Research and Development Board, 'Naval Aviation', 22 September 1955, AVIA 54/2171: para. 5. Memorandum B1134, 'G.W. Destroyer', 7 March 1957, ADM 167/150. Two of the warships which fought in the 1982 Falklands War (HMS *Antrim* and *Glamorgan*) were armed with Sea Slug. 'Green Light' became the Sea Cat missile, which was the main air defence weapon of several UK warships in the Falklands. A long-range surface-to-air missile, 'Blue Envoy', and air-to-air missiles were also being developed by the Ministry of Supply for the use of both the Navy and the RAF.

²⁵ DCNS, 10 August 1954, ADM 1/25609

²⁶ C (55) 32, First Lord, 'Naval New Construction Programme 1955-56', 8 February 1955, CAB 129/73; CC (55) 13th Conclusions, 15 February 1955, CAB 128/28

²⁷ *Cmd.* 9396, para. 21. See also PDP/M (55) 3, 26 July 1955, DEFE 10/335; ACNS(W) to DCNS, 8 October 1954, ADM 1/25609; DAW, 'Air Defence of the Fleet 1965-75', 8 May 1956 and DOR, 20 April 1956, both ADM 1/26468

²⁸ 537 HC DEB, 3 March 1955, cc. 2263-65

the year the front-line Fleet Air Arm fighter, strike and anti-submarine aircraft would all be either jet or turbo-prop aircraft. Moreover, the Sea Hawk and Sea Venom fighters (described by Selwyn Lloyd, Minister of Supply, as 'interim types') were on course to be replaced, respectively, by the N113 in 1957 and DH110 in 1958.²⁹ They would be supported by the Gannet early warning aircraft which would replace the Skyraider in 1958. The follow-on for the N113 and DH110 was intended to be the Saunders Roe P177 turbo-jet and rocket fighter. Further ahead, a supersonic naval fighter was envisaged, which was expected to be similar to the RAF OR329 project.³⁰ Work continued on the NA39 strike aircraft, which was expected in service in 1961. For anti-submarine warfare, the light Seamew which was to have operated from escort carriers had been dropped (because of its poor carrying capability and the fact that the new concept reduced the role of the Reserve carriers which would have carried it after mobilisation) and the Gannet was to be phased out. Both would be replaced by helicopters, including the Sikorsky S58 and the twin-rotor NA43.³¹ Not everyone was convinced of the value of helicopters, as the Earl of Gosforth urged a halt to their use by the Army because of their susceptibility to bad weather.³² The Admiralty was more optimistic. Rear Admiral A.N.C. Bingley, Fifth Sea Lord, expected that their ability to operate in poor weather could be improved and helicopters 'will then be a better A/S vehicle in almost every way than the fixed wing aircraft'. The latter could cover a greater area but the fact that submarines now spent little time on the surface meant that aerial radar search was of limited use, while the number of sonobuoys that they could carry was restricted. The helicopter with dipping sonar had an 'overwhelming advantage', and although it could not currently carry weapons, it should be able to do so by 1960.³³

²⁹ 537 HC DEB, 3 March 1955, cc. 2250-51 and 2 March 1955, c. 2092

³⁰ RDB/PL (55) 97, Ministry of Supply Research and Development Board, 'Naval Aviation', 22 September 1955, AVIA 54/2171, para. 6

³¹ DC (56) 9, Minister of Defence, 'Military Aircraft Programme', 26 March 1956, CAB 131/17; also George Ward in 549 HC DEB, 8 March 1956, c. 2468; MISC/M (55) 118th, 29 November 1954, AVIA 65/70

³² House of Lords Official Report. Volume 196, 21 March 1956, c. 678

³³ Fifth Sea Lord, 'Naval Anti-submarine Aircraft', 27 August 1955, ADM 205/104; see also MISC/M (55) 3rd, 7 January 1955, AVIA 65/70. A paper by Mountbatten emphasised the value of helicopters against submarines: PDP/M (55) 3, 26 July 1955, DEFE 10/335.

The new government

April 1955 saw a thorough change of personnel as Winston Churchill finally retired as Prime Minister, succeeded by Anthony Eden. Macmillan became Chancellor, replaced as Minister of Defence by Selwyn Lloyd. The same month saw changes in the Admiralty with the retirement of Sir Rhoderick McGrigor, who was succeeded as First Sea Lord by Earl Mountbatten of Burma. Some continuity at the Admiralty was provided by that fact that J.P.L. Thomas, First Lord since 1951, remained in office and was ennobled, becoming Viscount Cilcennin. Despite the Radical Reviews, the defence budget had not yet reached a sustainable level given continuing economic difficulties. The new administration won a General Election in May and in July commenced another review, culminating in a White Paper which heralded significant changes in UK defence policy. The Navy and its aviation were scrutinised but in contrast to the Radical Reviews they were not the main focus of attention, as the programmes of the other Services were also questioned. Nonetheless, the process ended with a fundamental shift in the Royal Navy's role.

The Chiefs of Staff believed that the current pattern of forces, with the addition of new technology, was still required but realised that rising costs made this impossible. The main lines of a new approach soon became clear: the deterrent would be the highest priority, though the size should be the minimum necessary 'to enable us to be a respected member of "the H-Club".' Forces for fighting a global war would be the lowest priority; indeed, resources should not be allocated to forces intended solely for use after the initial period of such a war.³⁴ The Chiefs predicted that if there was a global war, 'the use of nuclear weapons will at once become general and the UK would be subjected to such devastation that she could not function as a main support area,' though fighting might continue thereafter. Bowing to political pressure, they accepted that it would be wasteful to develop forces solely for the phase of a global war following the initial intense period, because forces not ready on D-Day might never be useable. Since risks had to be taken, they should relate to the

likelihood of the type of war for which they were envisaged. Those primarily for global war, the least likely contingency, would be the least damaging field for cuts.³⁵

Previously held views about the nature of war were slow to disappear. The Chiefs still believed that the Navy would be crucial in the 'resuscitation phase' after an initial nuclear exchange:

The size to which the Russians had expanded their Navy made it seem possible that they envisaged controlling the Continent of Europe through the power of their Navy to isolate it after the devastating stage of nuclear bombardment.³⁶

When Selwyn Lloyd asked whether they agreed that most naval preparations for global war were third priority, Mountbatten replied that the Chiefs 'could not envisage a future major war ending after the initial nuclear exchanges' and in the following period, which could determine the final outcome, the Navy would have a major role. Priorities could not be absolute, and cutting out a lower priority before any reductions were made in a higher one would be wrong: there was a need for balance.³⁷ De L'Isle, still Secretary of State for Air, took the contrary view that priorities must be tightly adhered to:

If we don't do this we may find ourselves, for example, in the unrealistic position of spending money on the means to "bring food in over the beaches" after bombardment by H-bombs while cutting back the air defence system of Great Britain to the point of absurdity.³⁸

Eden, the new Prime Minister, was also sceptical about the role of the Navy in global war. While he accepted that there were sound military reasons for British ground and air forces in Europe, he argued that the contribution to NATO naval forces was primarily of political importance.³⁹ The Admiralty agreed that trimming global war forces was the least bad option but insisted that it involved risks. It

³⁴ JP (55) 61 (Final), 'Long Term Defence Programme', 8 July 1955, DEFE 6/30; COS (55) 56th, 12 July 1955, DEFE 4/78

³⁵ MISC/P (55) 27, 'Long Term Defence Programme: Strategic Factors', 25 July 1955, DEFE 7/963; approved at COS (55) 60th, 22 July 1955, DEFE 4/78.

³⁶ COS (55) 51st, 29 June 1955, DEFE 4/77

³⁷ MISC/M (55) 69th, 12 July 1955, DEFE 7/963. Mountbatten reiterated this point at COS (55) 60th, 22 July 1955, DEFE 4/78

³⁸ Secretary of State for Air to Minister of Defence, 14 July 1955, DEFE 7/963

³⁹ DC (55) 8th, 26 August 1955, CAB 131/16

would harm the Navy's ability to control the seas and hence prejudice Britain's survival after the initial bombardment.⁴⁰ Lloyd suggested roles and manpower levels for each Service together with areas for economies. He felt that the Navy's global war contribution should be limited to what could be done by cold and limited war forces, though research and development in areas such as anti-submarine warfare should continue. Cruisers should be replaced as they went out of service by guided weapon cruisers. As for naval aviation: 'The front-line strength of the Fleet Air Arm appears to be so small as not to admit of a reduction.' However, the medium carrier planned to be laid down in 1958-59 was dropped, as was any purely global war provision for the FAA.⁴¹

Coastal Command was once again an early target for reductions. Assuming that 'the decisive phase of a thermo-nuclear war will be the first few hours or days', the Air Ministry planned to reduce it from 15 squadrons of 114 aircraft to five squadrons of 34 aircraft. If a lower budget cut was imposed, the reduction would be from 114 to 66 aircraft.⁴² Mountbatten objected to the proposals but Dickson replied that they were in accord with strategic priorities.⁴³ The Admiralty was not prepared to go further, with the Board agreeing not to make a bid for control of Coastal Command on the grounds that it would represent an additional commitment for which the Navy would not receive extra money or manpower.⁴⁴

During the 1955-57 review there was less overt Air Ministry criticism than previously of the other two Services' programmes, due in part, no doubt, to the fact that it was having to offer a more concerted defence of its own plans, even the medium bombers. Still, the disagreements which had underlain earlier disputes remained. The Air Ministry felt that the other Services were still clinging to the idea of a two-phase war and had not accepted that the first phase would be 'decisive and final'.

⁴⁰ Memorandum B1004, 'Long-Term Defence Programme', 8 September 1955, ADM 167/139

⁴¹ Ministry of Defence paper, 26 August 1955, DEFE 7/963; also DC (55) 8th, 26 August 1955, CAB 131/16

⁴² MISC/P (55) 47, Air Ministry, 'Long Term Defence Programme', 30 September 1955, AIR 8/1912

⁴³ MISC/M (55) 99th, 3 October 1955, DEFE 7/964

⁴⁴ Board Minute 5021, 21 June 1956, ADM 167/146

The Army and Navy believed that while US nuclear power was an effective deterrent, limited British resources would better be devoted to forces for pursuing its own interests in cold and limited war, reducing the medium bomber force. They supported current NATO strategy which the Air Ministry believed should be revised 'to meet the facts of the nuclear age', and opposed the idea of reducing Britain's contribution to NATO.⁴⁵ Dickson, Chief of the Air Staff, suggested that the divergence was one of approach rather than substance, as the Air Ministry accepted that there would be a second phase in a war. However, due to reductions in the defence budget Britain could not afford to make specific provision for it.⁴⁶ This pragmatic approach to the Gordian knot of future war became the basis of government policy.

The Air Ministry questioned the needs for continued research and development projects for global war, and for any Reserve battleships, guided weapon cruisers, the new carrier planned to be laid down in 1958-59 and 13 new submarines.⁴⁷ It asserted that 'there seems to be scope for much closer scrutiny and criticism of the Admiralty programme', even though the Minister had expressed doubts that the Fleet Air Arm could be reduced any further: 'The question is whether it could be simpler and cheaper.' Specifically, it asked whether the NA39 strike aircraft and the early warning Gannet were truly required for cold and limited war operations.⁴⁸ Dickson, however, realised the likely response to this, noting that the Minister, 'might say that the Navy need some modern A/C[sic] for strike in a limited war & the Wyvern is NBG.'⁴⁹

The Navy continued to argue that with the right aircraft, carriers could contribute to the British deterrent. In the face of opposition to this idea, particularly from the Secretary of State for

⁴⁵ Brief, 'MISC/P (55) 45 and 46 – Notes by Admiralty and War Office', 3 October 1955; JP (55) Note 19 (Final), 'Long Term Defence Programme – Aim', 4 October 1955, DEFE 6/33; Brief for CAS for Staff Conference, 6 October 1955, 'Long Term Defence Programme – JP (55) Note 19 (Final)': both AIR 8/2044

⁴⁶ COS (55) 80th, 6 October 1955, DEFE 4/79

⁴⁷ Brief for Secretary of State for Air, 14 September 1955, AIR 19/660

⁴⁸ Head of S6, 'Review of Defence Programme: The Effect of the Minister of Defence's Memorandum on the Army and Navy', 25 August 1955, AIR 8/2044: para. 5

⁴⁹ Ibid., handwritten note

Air, it stressed that it was not claiming to offer 'more than a very small addition to the Deterrent'. However, the planned NA39 would have 'better performance at low altitude than any land based bomber', and by compelling the enemy to extend and divert his defences it would assist Bomber Command. Moreover, since the carriers and the nuclear-capable NA39 were required anyway: 'The cost of including us in the Deterrent is therefore nil and there seems no reason for the Air Ministry to get so excited about doing so.'⁵⁰ Nonetheless, the Air Ministry continued to see the naval aviation programme as a threat. It objected to a suggestion by Lloyd that 'at a later stage the Navy might provide a part of the nuclear deterrent', insisting that neither carrier strike aircraft, 'necessarily of relatively limited performance', nor the nuclear-powered submarine mentioned by the Admiralty were serious alternatives which merited funds.⁵¹

Aviation was not the only controversial aspect of the Navy programme, as considerable criticism was also directed against the cruisers. The Admiralty emphasised that they had important roles in cold war as well as global war and planned, as explained above, a new class of guided weapon cruisers. In the meantime, work would continue on the three, gun-armed *Tiger*-class vessels. In response to complaints about the slow pace of cruiser construction, Thomas insisted that although the current force was getting old, the Admiralty would not build new ones even if it had the money, preferring to concentrate on the guided weapon cruisers.⁵² Callaghan criticised the decision to press on with the conventionally armed *Tigers*, which 'will become out-dated and obsolescent before they are finished', while the Air Ministry expressed doubts that guided weapons cruisers were needed: 'for cold and limited war purposes conventional armament should suffice'.⁵³ The possibility of reducing the cruiser force surfaced in the Defence Committee, with the suggestion that: 'For purposes of showing the flag a modern destroyer was not much less impressive than a cruiser.' In response the

⁵⁰ Fifth Sea Lord to First Sea Lord, 16 July 1955, ADM 205/106

⁵¹ Head of S6, 25 August 1955, AIR 8/2044: para. 3: Brief, 14 September 1955, AIR 19/660

⁵² 537 HC DEB, 3 March 1955, cc. 2250

⁵³ Ibid., c. 2271; 549 HC DEB, 8 March 1956, c. 2336; Head of S6, 'Review of Defence Programme: The Effect of the Minister of Defence's Memorandum on the Army and Navy', 25 August 1955, AIR 8/2044: para. 5

Admiralty argued that the force was already small relative to commitments and that cruisers would be needed for guided weapons and for: 'First class air warning radar which cannot be carried in a smaller hull'.⁵⁴ This argument over cruisers is a further indication of the dilemmas brought about by the introduction of new weapons.

One decision which proved easier to take concerned the battleship HMS *Vanguard*. The previous autumn, the Swinton Committee had decided to keep her in the Active Fleet instead of two cruisers and she was now refitting, to commission in January 1956. In the 1955 defence debate, Michael Foot derided *Vanguard* as 'probably the most vulnerable ship in the world'. Yet Noble responded that she had excellent firepower, sea-keeping qualities and cold war prestige value: 'Not only is she the greatest possible deterrent to the *Sverdlov* cruiser, but she forms part of the deterrent in the cold war and a possible warm war.'⁵⁵ In early August, however, the Admiralty decided to raise the issue again, largely because of manpower reductions since the previous decision. The arguments used were much the same as during the Radical Review, although it was noted that now might be a good time for change because of the lower likelihood of global war and the shift in defence policy to emphasise readiness for cold and limited war, in which there was no role for the battleship which could not be performed by a cruiser. Moreover, unlike a cruiser, *Vanguard* would need an anti-submarine screen.

Vanguard would give us prestige in the cold war, but no more; the smaller ships which are her equivalent in manpower and the price of her commissioning are collectively of much greater value in both cold and limited wars.

The Board therefore sought to place her in maintained Reserve.⁵⁶ Thomas wrote to Eden explaining that the trials ship *Girdleness* would be commissioned in June 1956 for development of 'the all-important guided weapon SEA SLUG'. Due to reductions in skilled manpower, crewing this ship –

⁵⁴ DC (55) 8th, 26 August 1955, CAB 131/16; VCNS to First Sea Lord, 3 December 1955, ADM 1/28929

⁵⁵ 537 HC DEB, 3 March 1955, cc. 2380, 2434

which required more electrical ratings than *Vanguard* – would require two modern anti-submarine frigates to be cut. Alternatively, he suggested, she could be placed in Reserve which would avert that reduction and also permit the retention of another cruiser and frigate.⁵⁷ Admiralty views regarding *Vanguard* were further elaborated in a Cabinet paper which stated:

It has long been agreed that her contribution in cold or limited war is only her prestige value. In global war her value particularly against Sverdlovs is undoubted, but she would still be available in reserve for this role.⁵⁸

The Cabinet duly approved the proposal, adding: ‘Attention was drawn to the need to make it clear that the battleship could still be made available for active duty at short notice.’⁵⁹ In view of the clichéd view of Admiralty conservatism, particularly concerning the battleship and the big gun, it is striking that its challenge to the government’s policy of retaining *Vanguard* rested partly on the priority attached to the development of guided weapons. Moreover, the gradually increasing emphasis on cold and limited war is evident.

The next stage in the eclipse of the battleship occurred in February 1956 when the Admiralty proposed down-grading the four *King George V*-class vessels (*King George V*, *Howe*, *Anson* and *Duke of York*) to low readiness Reserve. Lord Cilcennin (as Thomas had become) explained that the 1955 review had re-examined the need for them and concluded:

The value of the ships as a deterrent and their potential value in war have now fallen so low that the heavy outlay of money and manpower in maintaining them, even in their present unmodernised conditions, is no longer justifiable.

The ships were costly and swallowed up scarce manpower. Without modernisation, their only possible role would be bombardment, ‘but they would need escorts for protection against air attack’

⁵⁶ Memorandum B1000, ‘Future of HMS Vanguard’, 10 August 1955, ADM 167/139; approved Minute 4901, 11 August 1955, ADM 167/141

⁵⁷ First Lord to Prime Minister, 24 August 1955, DEFE 13/66

⁵⁸ DC (55) 31, First Lord, ‘Future of HMS Vanguard’, 25 August 1955, CAB 131/16

⁵⁹ DC (55) 11th, 19 October 1955, CAB 131/16

and would take 12 months to refit. Even with modernisation, at a cost of several million pounds each, their armament would be adequate but they would be too slow to catch a *Sverdlov*: 'Consequently they would be far less effective than the carrier with modern aircraft strike weapons, or the "Tiger" class cruisers now being completed.' Moreover, they could not be converted for an alternative role, such as guided weapons platforms, because of the prohibitive cost, the short life of their elderly hulls and the fact that they would be 'far less satisfactory' than purpose built ships. The Admiralty therefore requested that they be placed in extended unmaintained Reserve (that is, the lowest category), and this only because scrapping them before the new cruisers were laid down would provoke an adverse public reaction. It noted that there was no question of scrapping *Vanguard*, which was at one month's notice for sea, although it would take 'appreciably longer' to ready her for action. The Cabinet Defence Committee approved the proposal.⁶⁰ James Callaghan, for the opposition, thought that relegating *Vanguard* to the Reserve was long overdue and suspected a personal reason for her survival:

She was brought into commission when the right hon. Gentleman the Member for Woodford (Sir W. Churchill) became Prime Minister; she went into reserve when he retired from his post as Prime Minister. She is the price we have had to pay for having the right hon. Gentleman as Prime Minister.

He felt that the money spent on her refit and maintenance was wasted and urged that she should be scrapped.⁶¹ George Ward (Parliamentary and Financial Secretary to the Admiralty) defended keeping the battleships in Reserve 'until it is uncertain that they have reached the end of their lives.' He acknowledged that there was some anxiety that all Britain's battleships were in Reserve and there were only nine active cruisers: 'But the principal striking power of the fleet today is provided by a balanced force of aircraft operating from floating bases.'⁶²

⁶⁰ DC (56) 4, First Lord, 'Future of the King George V class battleships', 14 February 1956; DC (56) 4th, 2 March 1956, both CAB 131/17

⁶¹ 549 HC DEB, 8 March 1956, cc. 2336-43

⁶² 549 HC DEB, 7 March 1956, cc. 2083-84, and 8 March 1956, c. 2319

The battleship therefore sailed closer to its demise. In this process, air power did not play the role usually attributed to it – that is, a threat posed by land-based aircraft. Rather, naval aircraft provided an *alternative* to the battleship's main role of destroying enemy warships. Their other cold and hot war roles, which were still important, would fall to the cruiser.

Naval Aviation

A December 1955 paper by Captain H.C.D. MacLean, Director of Plans, set out Admiralty policy for naval aviation. In global war, from D-Day two British fleet carriers would form 'Carrier Striking Group Two' of the Striking Fleet, which would attack enemy naval and air forces and their naval bases, cover and support amphibious operations, assist in attaining overall air superiority in North Europe, strike targets ashore and support ground forces. Britain would also contribute four light carriers, split between the Eastern Atlantic and the Mediterranean, to defend shipping against air and submarine attack, and with some self-defence ability against surface forces. However, as well as a 'rapidly increasing submarine threat' and a growing number of *Sverdlovs*, the air threat was growing inexorably. The maximum range of Soviet bombers was set to increase from 700 nautical miles to 1500nm by 1965 (with some threat as far distant as 4000nm), and they would be enhanced by long-range and supersonic short-range guided weapons, improving radar and electronic support. In limited war, carriers would attack 'all forms of major sea or land target', supporting amphibious operations, helping air forces achieve air superiority, assisting land forces and defending sea communications. The threats faced would be on a reduced scale but satellite states would have modern weapons (including kiloton nuclear weapons) perhaps one or two years after Russia.⁶³

The growing sophistication of enemy forces demanded new aircraft: the paper concluded that a long-range, high speed naval attack aircraft was required, which as well as fulfilling the demanding

⁶³ Director of Plans, 'Present Policy for the Fleet Air Arm', December 1955, ADM 205/112: paras. 2-3, 6-18

strike role would free fighters from needing a strike capability.⁶⁴ The weaknesses in the current strike aircraft were continuing to cause concern. Rear Admiral A.R. Pedder (Flag Officer Aircraft Carriers) believed that in global war, the British carrier group could 'cripple but not yet annihilate' a Soviet surface force outside the range of shore-based fighter cover, but could not conduct sustained attacks on shore targets or close support of forces ashore before enemy air opposition was eliminated. While he considered that the carriers were 'better equipped than ever before for peace time emergencies and limited wars', they would be inadequate in global war until the arrival of an improved, longer-range strike aircraft with nuclear capability. Still, he added that British naval air defences (particularly radar and fighter control) were better than those of the Americans and complemented their strike capability.⁶⁵ Indeed, in 1955 Mediterranean exercises, HMS *Albion* had performed the role this implied, providing air and anti-submarine cover for the US Sixth Fleet.⁶⁶

The Navy still needed new aircraft but their cost posed difficulties. In November, Eden set out the main areas for savings. He listed the Navy first, especially cruisers and the naval aircraft programme, and also mentioned Fighter Command, guided weapons and Coastal Command. In the Cabinet Defence Committee it was also suggested that the Navy might drop the N113 fighter. The Admiralty insisted that it was vital not only as a fighter but also as the only aircraft which in the near future would offer adequate performance in strike and ground attack; if dropped, it would need to be replaced. Nevertheless, the Ministry of Defence and Treasury stated:

Ministers will wish to balance the need for savings in expenditure, to which the abandonment of the N113 without replacement would make a substantial contribution, against the importance of its operational role.⁶⁷

⁶⁴ Ibid., paras. 19-20

⁶⁵ Flag Officer Aircraft Carriers' Haul Down Report, 12 May 1956, ADM 1/26538

⁶⁶ C-in-C Mediterranean, 10 May 1955 and C-in-C Mediterranean, 26 October 1955, both ADM 1/26081

⁶⁷ DC (55) 13th, 4 November 1955, CAB 131/16; Ministry of Defence and Treasury, 'Long Term Defence programme', 16 November 1955; MISC/M (55) 122nd, 9 November 1955, both DEFE 7/965

Rear Admiral Bingley argued that cancelling the N113 would deprive the Navy of a strike capability against ships or shore targets until the NA39 entered service in 1962. Moreover, the Fleet would lack air defence against Soviet aircraft expected in service from about 1960 (against which the RAF was scheduled to receive two new fighters), which would leave it unable to perform most of its global or even limited war functions because it could not approach within range of enemy land-based aircraft.⁶⁸

Various reductions were made in the Admiralty programme. The Defence Research Policy Committee recommended dropping several of its guided weapons, including Sea Slug, Green Light (the light ship-to-air weapon) and Green Cheese (the air-to-ship missile).⁶⁹ The Admiralty defended Green Cheese, arguing that it was needed as an all-weather weapon against *Sverdlovs*, without which the NA39 could only use a nuclear weapon requiring a 'suicidal' close approach. Nevertheless, the missile was abandoned, with 'great reluctance'. Sea Slug survived, however, because of its significance for the Fleet and also because a high proportion of its cost had already been spent. When Mountbatten stressed its importance, Dickson, Chief of the Air Staff, stated that the Chiefs of Staff as a body supported the Navy.⁷⁰ Although the Admiralty fought to keep this missile programme, it was also aware of its limitations. MacLean emphasised that Sea Slug was an incomplete defence against air attack due to its limited 15-mile range, its ceiling of 50,000 feet and small target handling capability, so new fighters would also be required. Vice Admiral Davis wrote: 'it would be impossible to defend the Fleet without the next generation of aircraft as well as SEASLUG'. The missiles were later described as a 'second line of defence, in as much as they will engage all enemy bombers which successfully evade the outer fighter defences.'⁷¹ Hence the need was recognised for a new missile and for further fighter development after the N113, which had only narrowly survived.

⁶⁸ Fifth Sea Lord to First Sea Lord, 'Effects of Cancelling N113', 18 November 1955 and Fifth Sea Lord to First Sea Lord, 29 November 1955, both ADM 1/28929

⁶⁹ DRP/P (55) 65, 9 November 1955, DEFE 7/965

⁷⁰ MISC/M (55) 128th, 17 November 1955; MISC/M (55) 139th, 29 November 1955, both DEFE 7/965; also ADM 1/28929. In fact, the Air Staff had doubts about the value of Sea Slug, which they felt was expensive and had a questionable performance; see AIR 8/2119.

The Admiralty recognised the threat from air attack, which received an increasing amount of attention during the mid-1950s. This threat did not mean that warships were fatally vulnerable but rather that they needed adequate defences if they were to fulfil their intended roles.

Mountbatten successfully argued for the retention of the P117 jet fighter programme, stressing that it could be dropped only if Sea Slug's range could be 'substantially increased' or a better and cheaper aircraft provided; he could not accept there being no successor to the DH110. The Admiralty reluctantly agreed to the cancellation of the planned Mach 2.5 fighter, the RAF OR329, as long as the Navy's requirement for a high-performance fighter was recognised.⁷² Selwyn Lloyd was apparently among the sceptics regarding the future of manned aircraft, commenting that 'he was himself inclined to give a great deal of weight to the fact that with the arrival of the ballistic missile the whole concept of air defence with manned fighter aircraft would become untenable.'⁷³ Some holding this opinion had a clear motive, as when Macmillan, the Chancellor, pressed the Defence Committee to investigate when the new concept of air defence with more guided weapons and fewer fighters could come into effect (and urged that in the meantime, expenditure on fighters should be reduced).⁷⁴ Evidently 'vested interests' are not necessarily confined to one side of a debate. However, Walter Monckton, who replaced Lloyd as Minister of Defence in December 1955, approved a paper for the Cabinet Defence Committee stating that for global and limited war the Navy needed fighter, strike and anti-submarine aircraft.⁷⁵

Wettern criticised the Admiralty for not explaining the role of the carrier properly which, together with the lack of any conflict since 1945 where sea communications were threatened, allowed

⁷¹ Director of Plans, 'Present Policy for the Fleet Air Arm', December 1955, ADM 205/112: paras. 19-20; VCNS to First Sea Lord, 3 December 1955, ADM 1/28929: para. 16; Christopher Soames, Parliamentary and Financial Secretary to the Admiralty, 570 HC DEB, 13 May 1957, c. 54

⁷² MISC/M (55) 139th, 29 November 1955, DEFE 7/965

⁷³ Ibid.

⁷⁴ CP (56) 17, Chancellor, 'Economic Situation', 21 January 1956, CAB 129/79: paras. 45-49

⁷⁵ DC (56) 9, Minister of Defence, 'Military Aircraft Programme', 26 March 1956, CAB 131/17

the impression to spread that its only use was power projection. He ascribed this failure, which 'was to store up grave problems for the future', to the Board not being sure about the role of carriers, with some of its members still being pro-gun and not realising that strike aircraft were 'vastly more potent weapons against the new Russian cruisers' than *Tiger*-class cruisers.⁷⁶ Wettern was incorrect to suggest that the Admiralty had not pressed the case for carriers in defending sea communications, which was inevitably difficult because of doubts about its relevance in a nuclear war and the government's over-riding priority of trimming the defence budget. He was also quite wrong in the reason he offered: carriers were undoubtedly seen as the most important part of the fleet, for the defence of sea communications (including countering enemy cruisers, for which they were rated much more highly than cruisers) as well as for power projection. There was a belief that the gun still had a use (which was quite correct) but it was seen as less important than either guided missiles or, particularly, strike aircraft. Here too, the difficulty was caused not by the Admiralty failing to appreciate the need for strike aircraft but by budgetary constraints. Contrary to the view that old salts on the Admiralty Board favoured cruisers, it was clear that the number of these ships would be allowed to fall dramatically to protect the carrier force.⁷⁷

The 1956 Defence White Paper

The 1956 defence statement defined Britain's roles as, first, making a 'contribution to the Allied deterrent commensurable with our standing as a world Power' (including nuclear weapons and a conventional contribution to NATO) and then cold war, limited war and global war. It stressed the need for conventional forces to be at high readiness because mobilisation could no longer be relied upon and noted that equipping them with increasingly expensive modern weapons meant that their numbers would fall. The total strength of the armed forces was to decline from 823,600 in 1955 to 735,000 in 1957 (i.e., a cut of 10.75%). The Army would face proportionately the largest reduction

⁷⁶ Wettern, D. *The Decline of British Sea Power* (London, Janes, 1982), 106-07

(14.3%) and the RAF the smallest (5.5%), while naval manpower would decline from 128,400 to 116,500 (i.e., 9.25%).⁷⁸ Monckton explicitly stated that the four roles mentioned were in order of priority.⁷⁹ Lord Carrington (Parliamentary Secretary, Ministry of Defence) repeated this formula but added that none could be abandoned: 'Such an operation would be in the nature of the amputation of an arm or a leg, imposing severe limitations on the whole body. Our defence policy is indivisible, a complete whole.'⁸⁰

The White Paper gave fairly equal prominence to the global and limited/cold war roles of the Navy, stating: 'The further development of new weapons and techniques should enable it to strike whatever may threaten us by sea in the future whether in limited or global war.' It stressed the Navy's value in cold and limited war, yet also announced that due to the growing Soviet submarine threat, anti-submarine forces would expand.⁸¹ In Parliament, Monckton first emphasised the Fleet's role in limited war: 'the aim is to have immediately available, wherever it may be needed, a force of aircraft carriers equipped with modern aircraft and supplemented by cruisers and escorts.' The total war role of the Navy was by no means dismissed, however, as he also mentioned that the Fleet needed modern equipment, including anti-submarine capabilities, as well as guided weapons and nuclear propulsion.⁸²

The Admiralty statement, which announced a budget reduction of £21m in real terms, was similarly ambivalent. On the one hand, it claimed that the year's activities showed the peacetime value of the Navy in supporting British policy: 'They have shown too how quickly and effectively the sea and air power of the Royal Navy can be brought to bear in almost any part of the world.' On the

⁷⁷ See, for example, force levels for different budget allocations in VCNS to First Sea Lord, 3 December 1955, ADM 1/28929

⁷⁸ *Statement on Defence 1956 – Cmd. 9691* (1956): paras. 1-13, Appendix

⁷⁹ 549 HC DEB, 28 February 1956, cc. 1019-20

⁸⁰ House of Lords Official Report, Volume 196, 21 March 1956, c. 725

⁸¹ *Cmd. 9691*, paras. 19-24, 33

other hand, it said that this ability to deploy power rapidly was 'no less important in global war', although in such a war the main role of the Fleet would again be to keep free the sea lanes on which Britain depended and which would be attacked by 'a massive underwater fleet and a powerful surface fleet which would be at sea with their fleet train.'⁸³ In the Commons, the first naval role listed by George Ward was limited war, for which the Navy was particularly valuable because it 'is the most mobile of all three Services and can most easily operate independently of land bases.' The same mobility was useful for port visits and other tasks which built prestige. Third was global war; whatever its duration, Ward insisted that the Navy would have a role in defending shipping. Enemy submarines and cruisers would, with afloat support, be at sea before war began and therefore could not be destroyed by nuclear attack on their bases.⁸⁴

In spite of the government's efforts, there were still doubts about the plausibility of a naval role in global war (though there were fewer doubts regarding limited war). Some recognised that war might include a non-nuclear phase, which would make defence of sea communications important. On the other hand, there were doubts whether the idea of a global war without nuclear weapons was realistic; more importantly, as has been shown, Britain and her allies simply could not afford to prepare for one. NATO strategy turned on the assumption that any substantial Soviet attack, even if it was confined to conventional weapons, would meet a nuclear response. Hence planning had to work on the basis of a nuclear war, yet here there was further scepticism about the role of the Navy. Callaghan criticised the Admiralty as 'living in the past' with its assumption of an attack on sea communications by traditional methods. Any war would be short, he argued, and even in a long war the UK would not be an effective base due to nuclear attack on ports. However, Lord Teynham argued that Britain could not gamble on the assumption that there would be no need to bring supplies into the country after a nuclear attack, even if such supplies had to be brought in over the beaches.

⁸² 549 HC DEB, 28 February 1956, c. 1031. The first nuclear power submarine, *USS Nautilus*, made her first voyage in January 1955; in Autumn 1957 she visited the UK before passing under the Arctic ice caps.

⁸³ *Explanatory Statement on the Navy Estimates 1956-57 by the First Lord of the Admiralty – Cmd 9697* (1956)

Earl Howe pointed to the importance of sea communications, arguing: 'Unless the Navy succeeds in its task, the Air Force will be grounded.' Viscount Cilcennin, the First Lord, made a similar case: 'No matter what may happen in such a war, this country will still have to import food to live; and, moreover, if we live, we fight on. To do so we must have imports of oil and ammunition.'⁸⁵ Doubts remained about the carriers' value in global war. Some MPs argued that warships in general and carriers in particular were vulnerable, or claimed that land-based air power was increasingly able to take over their roles.⁸⁶ Others, however, believed that carriers would have value even in global nuclear war given their mobility and the difficulty of destroying a carrier at sea compared to a fixed land base, or even suggested that they might be useful for surprise hit-and-run nuclear strikes.⁸⁷

Discussion of the Navy therefore concentrated on global war tasks; indeed, it is striking that the White Paper paid considerably more attention to limited war than did the Parliamentary debates. There were some doubts about the importance of carriers in limited wars. Kenneth Robinson wondered whether 'we expect any more Korean Wars – major, but limited in the geographic sense and without the use of nuclear weapons?' R.T. Paget acknowledged that in Korea the carriers 'were of some value, although not of very essential value, but that was a very peculiar circumstance', as a peninsula around which the West had complete command of the sea. In a local war, if Britain had access to airfields it should use aircraft from them, whereas 'if we do not have them, we should not dare to bring a carrier anywhere near to the localities of such airfields.' Douglas Glover also felt that Korea was unusual but made a wider point, suggesting that in a crisis it was better to use aircraft than ships for landing troops and if there was further fighting in Malaya or Indo-china, 'a navy, as such, would not become operative'.⁸⁸ Such arguments would soon be refuted.

⁸⁴ 549 HC DEB, 8 March 1956, c. 2317

⁸⁵ 549 HC DEB, 8 March 1956, cc. 2341-45; House of Lords Official Report Volume 197, 9 May 1956, cc. 275, 310, 321

⁸⁶ 549 HC DEB, 29 February 1956, cc. 1256-57; 549 HC DEB, 8 March 1956, cc. 2438-39, 2456-57

⁸⁷ 549 HC DEB, 8 March 1956, cc. 2346-47, 2359, 2370-71

⁸⁸ 549 HC DEB, 8 March 1956, cc. 2435-36, 2455-56, 2461

The Admiralty statement boasted of some progress in carriers, announcing that all four front-line ships and the training carriers now had angled decks, while *Ark Royal* also had steam catapults and modern radar (as would *Victorious* and *Hermes* when they were completed) and *Centaur* would receive them during modernisation. The N113, described by the Statement as a 'fighter/strike/ground attack aircraft', had flown successfully and was about to begin deck-landing trials.⁸⁹

Internal Admiralty studies on the effect of nuclear weapons led to some changes. The 'Way Ahead' committee made many savings in the shore support of the Navy, as well as reducing the size of the Reserve Fleet to improve readiness. Afloat support was increased, to enhance the ability of navies 'to operate overseas without needing continual support from expensive and vulnerable shore bases'.⁹⁰ However, it is clear that the idea of broken backed warfare was far from dead, even if the term itself was seldom used except by sceptics. The Admiralty continued to see defence of shipping in a nuclear war as important, for which it has been criticised. Crowe saw its reductions of the Reserve Fleet and shore support as showing 'increased sensitiveness to the demands of nuclear war and a willingness to progress with changing conditions', but as failing to solve the basic problem of a conception that stressed protecting trade in a global war. He described the continuing concentration on Soviet submarines as an 'inconsistency' which showed 'ambivalence' behind the scenes.⁹¹ His dismissal of the Soviet submarine threat understated the need to defend sea communications, while his allegation of 'inconsistency' is quite unwarranted. The Admiralty was thoroughly consistent in its view that defending sea communications was crucial, regardless of what further roles were adopted, as indicated by their determined efforts to maintain a capability for it.

⁸⁹ *Cmd 9697*: para. 13-16, 28. See also George Ward, 549 HC DEB, 8 March 1956, cc. 2319-2320. Cilcennin noted that the angled deck and mirror landing sight had reduced the deck landing accident rate by more than 50%: House of Lords, Official Report Volume 197, 9 May 1956, c. 323

⁹⁰ *Cmd 9697*: paras. 23-27. See also Crowe, 152-53; Grove, E.J. *Vanguard to Trident: British Naval Policy Since World War II* (London, Bodley Head, 1987), 175

⁹¹ Crowe, 153

The review continues

The full implications of the established priorities of British strategy – first, deterring global war, second waging cold and limited war, and lastly, preparing for global war – were now finally being recognised and put into effect. This was inevitable given the government's continuing insistence on savings: Macmillan, drawing on his experience as Minister of Defence in his new position of Chancellor, sought further economies. He told Monckton that he wanted £40m cut from the defence estimates and suggested options including cutting minesweepers and submarines, suspending work on the carrier HMS *Victorious* and reducing Admiralty research and development expenditure (though he did not say where). He also called for a 'thorough review of long-term defence policy, and this should lead to major changes in defence programmes'.⁹² Far-reaching shifts in policy could not for long be avoided. Even the medium bomber force was not sacrosanct, though doubts took the form of querying the size of the proposed force rather than advocating its elimination. Eden stated that while he sought an 'effective contribution' to the deterrent, he felt that for financial reasons the planned bomber strength might have to be reduced and the Cabinet discussed adjusting the V-bomber production programme.⁹³ General Sir Gerald Templer (Chief of the Imperial General Staff since September 1955), acknowledged the government's desire to attain nuclear weapons but expressed concern about the cost. He suggested that the US might prefer Britain to contribute a smaller deterrent and more effective conventional forces. Air Chief Marshal Sir Dermot Boyle, Chief of the Air Staff, continued to insist on the planned figure of 200 bombers.⁹⁴ It would eventually shrink but the principle of a force of about this size had been accepted.

The Admiralty continued to defend the Navy's role in global war and was clearly pleased with a statement by Marshal Zhukov at the 20th Soviet Communist Party Congress in February 1956:

⁹² Macmillan to Monckton, 9 May 1956, AIR 8/2063; CM (56) 42nd Conclusions, 14 June 1956, CAB 128/30

⁹³ CM (56) 42nd Conclusions, 14 June 1956 and CM (56) 44th Conclusions, 19 June 1956, both CAB 128/30

‘In a future war the struggle at sea will be of immeasurably greater importance than it was in the last war.’⁹⁵ Mountbatten fought hard against proposals to eliminate preparations for ‘the survival period of global war’ (perhaps a more felicitous term than ‘broken backed warfare’), arguing that the secondary deterrent was ‘a major part of the deterrent itself’, because if UK sea communications could not be protected, no bomber force would deter.⁹⁶ His concerns were reflected in the Board of Admiralty, which was unwilling to drop the defence of sea communications. It was argued that a local war could well escalate to global war, with nuclear weapons either not used at all or used only after a long period of conventional hostilities, particularly once the USSR reached nuclear parity with the US. Such a conflict would require defence of shipping, which made the capability for this part of the deterrent.⁹⁷ Vice Admiral Davis complained that the Chiefs of Staff were being misquoted: they had not accepted that there would be ‘no continuing phase of global war’, but rather that its form and pattern were difficult to predict. Nor had they said that the UK could ‘dispense with preparation for global war’, rather that it was a lower priority than cold and limited war, and could be reduced if severe cuts were necessary.⁹⁸

A Joint Planning Staff paper of June 1956 stressed the nuclear deterrent, together with the presence of allied land and air forces in Europe to prevent a limited Soviet incursion. It concluded: ‘Apart from those maritime forces needed to support the Striking Fleet, no other maritime forces need be assigned or earmarked for NATO.’ This implied that ‘whole classes of ships in many navies will become redundant’, and that much of SACLANT and all of Channel Command would disappear.⁹⁹ When the Chiefs of Staff discussed this paper (which they agreed to redraft) Mountbatten emphasised

⁹⁴ COS (56) 70th, 17 July 1956, DEFE 32/5. Boyle, who became CAS in December 1955, was described by Jackson and Bramall as less wedded to fighting his corner than Dickson: Jackson, W. (General) and Bramall, Lord (Field Marshal) *The Chiefs: The Story of the United Kingdom Chiefs of Staff* (London, Brasseys, 1992), 294; this judgement seems ill founded.

⁹⁵ For example, Mountbatten to Parliamentary Secretary, 26 April 1956, ADM 205/110. It subsequently appeared in numerous letters and briefings.

⁹⁶ COS (56) 54th, 29 May 1956, DEFE 32/5

⁹⁷ Board Minutes 5016, 7 June 1956 and 5021, 21 June 1956, both ADM 167/146

⁹⁸ VCNS to First Sea Lord, 26 June 1956, ADM 205/163

⁹⁹ JP (56) 120 (Final), ‘NATO Strategy and Level of Forces’, 27 June 1956, DEFE 6/36. It noted that the presentation of the policy would ‘need careful consideration’ to avoid prejudicing the alliance’s survival.

once again that they had agreed to give global war preparations the lowest priority, not to drop them entirely. Yet now, he complained, the Policy Review Committee was implying that all preparations for global war could be dropped. He suggested the possibility of a conventional start to a war or of the USSR seeking victory through a major submarine offensive. Templer believed that direct Soviet aggression in Europe was unlikely precisely because it would lead to nuclear retaliation and suggested that limited scenarios were more probable, such as an East German move on West Berlin. Boyle suggested that the real question was whether the Alliance should aim to maintain major forces on the continent, which was unattainable, or rather move to a trip-wire defence.¹⁰⁰ The revised paper made the divergence of views still more explicit, setting it out without offering a conclusion. Templer and Mountbatten believed that the two sides' nuclear weapons might cancel each other out, giving the USSR an advantage due to its conventional lead, which it might use in a non-nuclear conflict in Europe. Boyle, however, believed that conventional forces should be reduced 'on the basis that they will not contribute significantly to the deterrent or to operations in a global war'. As for maritime forces, while a nuclear-armed Fleet was part of the deterrent, no naval forces other than those assigned to the Striking Fleet would be needed.¹⁰¹

Opinion in the Ministry of Defence and the government more broadly had for some time been edging towards the Air Ministry conception. One paper derided the Army and Navy's expectation of conventional fighting after a nuclear exchange: 'This is not only nonsense, it is nonsense we cannot possibly pay for.' Military operations from the UK would last no more than a week and convoys could not be moved for the first three months, after which nuclear weapons 'will have brought the war to an end for all practical purposes'.¹⁰² Such an approach portended major reductions in the Navy's provision for global war; the same paper argued that it would remove any defensive role for carrier aircraft 'which could not be done as well or better by shore-based aircraft', while the V-

¹⁰⁰ COS (56) 63rd, 29 June 1956, DEFE 4/88

¹⁰¹ COS (56) 271, 13 July 1956, DEFE 32/5

¹⁰² A. Cary to Powell, 8 March 1956, DEFE 7/966

bombers made the carrier strike role redundant.¹⁰³ Whatever the merits of the strategic case for the defence of sea communications in global war, the debate was clearly swinging against it. Dropping it would represent a considerable gamble but this was a risk which the UK's financial situation compelled it to embrace.

Nevertheless, an alternative focus for the Navy was emerging. A number of factors, particularly the desire to save money by reducing the size of the forces (in particular, abolishing National Service), were making it a more attractive tool for cold and limited war. The Directors of Plans noted the difficulties caused by a Middle East 'air barrier', resulting from an increasing number of states refusing permission for overflight by British aircraft, while the 'stationing of ships in foreign stations makes the Navy a valuable weapon in the Cold War'.¹⁰⁴ Moreover, as Darby remarked, overseas bases themselves increased manpower demands, since they required troops for their defence.¹⁰⁵ Increasing doubts about the security of tenure of overseas bases coincided with the need to reduce manpower by cutting garrisons. The Admiralty Board noted that the review was contemplating assigning Britain's overseas responsibilities to the Navy, due to budget cuts in the other Services. This would result in a new role and hence a different size and shape for the Fleet: 'The first call upon the Navy will no longer be to guard its sea lanes in war.' The attractions were that it would provide a clear role and permit savings but it would also entail reductions in the Navy's global war preparations. This risked the Navy 'having to fight a global war with a Navy much more completely geared to cold and limited war than at present', though this danger could be mitigated by training limited war forces as much as possible in global war tasks such as anti-submarine warfare.¹⁰⁶

¹⁰³ Ibid.. This contradicted the Directors of Plans, who had accepted a nuclear strike role for naval aviation, stating: 'The use of carriers and peripheral bases gives the West a substantial geographical advantage in the nuclear exchange.' JP (56) 24 (Final), 'Review of World Situation,' 1 March 1956, DEFE 4/84: para. 14

¹⁰⁴ JP (56) 24 (Final), paras. 7, 9

¹⁰⁵ 'Thus the effect of air doctrine was to tie down army forces to the defence of British bases.' Darby, P. *British Defence Policy East of Suez 1947-68* (London, OUP for RIIA, 1973), 84

¹⁰⁶ Memorandum B1079, 'Long Term Defence Review – Chiefs of Staff Study', 5 June 1956, ADM 167/146

Sure enough, the Chiefs of Staff stated that overseas garrisons should be reduced, with reliance placed instead on a mobile reserve transported by ships stationed overseas and aircraft. It added: 'Some of the tasks of overseas RAF fighter and strike squadrons might be taken over by joint RAF/RN manned carrier based aircraft, either shipborne or disembarked.' There should be 'drastic economies' in global war forces and associated research and development, including naval anti-submarine and anti-mine forces (though some would be required for limited war). The Navy would be re-organised into a number of Task Forces, with carriers as a 'back bone', together with cruisers and anti-submarine forces on a scale suitable for limited war. The paper added that greater resources would be devoted to the Fleet Air Arm, but 'since we visualise this becoming a joint RN/RAF force, this increase must be related to the proposed decreases in RAF overseas commands'.¹⁰⁷ A Joint Planning Staff report noted that RAF fighters were tied to UK defence. Hence:

Naval aviation also provides a valuable source of mobile air potential for use in conditions of limited war and we see a distinct advantage in equipping a large part of our carrier force with strike and fighter aircraft for this purpose at the expense of anti-submarine and other global war requirements.¹⁰⁸

There were some doubts about the need for carriers in limited wars and the extent to which Britain should prepare for them. The Ministry of Defence paper which dismissed the possibility of post-nuclear hostilities argued that the carriers' shortcomings would not apply in distant limited wars but that Britain could not afford special provision for such conflicts.¹⁰⁹ Reginald Maudling (Minister of Supply) wrote in August 1955 that terms like 'cold war' and 'limited war' were too ill-defined: 'We cannot afford to cover the full range of military temperatures, yet if we don't define what we mean we may find ourselves attempting to do so.' He suggested that Britain should aim to handle by itself only internal imperial security or minor external aggression and should plan for limited war

¹⁰⁷ COS (56) 219, 'Long Term Defence Review', 7 June 1956, DEFE 5/68. These were the first references to the possibility of a joint Navy-RAF force which would operate from carriers but could also deploy ashore. The idea would surface again in the early 1960s but was rejected by the RAF. It was resurrected and put into practice in the 'Joint Force 2000' proposal of the 1998 Strategic Defence Review. See *The Strategic Defence Review*. Cm 3999 (1998), para. 115

¹⁰⁸ JP (56) 115 (Final), 'Limited War', 26 June 1956, DEFE 6/36

¹⁰⁹ Cary to Powell, 8 March 1956, DEFE 7/966

against major powers in the Middle East or Far East only with the US as an ally.¹¹⁰ The forces envisaged for such operations also proved somewhat controversial. One Air Ministry brief argued that the Admiralty was proposing more naval aviation than was necessary, since it was difficult to imagine a limited war with enemy shipping to attack or where British shipping would have to be defended; 'the Admiralty appears to envisage a limited war of a sort inconceivable to anyone else'.¹¹¹ However, while the government's unshakeable attachment to a medium bomber force harmed the Navy's case, its acceptance of a need to fight limited wars now came to the Admiralty's aid. This role met general approval and, moreover, it was recognised that 'the forces we provided for limited war should be of global war quality in order that they could contribute to the deterrent.'¹¹²

The Air Ministry purported to be making provision for limited war. Nigel Birch, Secretary of State for Air, insisted that the RAF had to prepare for limited war as a second priority, for which it needed small but modern forces of fighters and bombers.¹¹³ Yet the focus of Air Ministry attention clearly centred on the medium bomber force, Fighter Command and Second Tactical Air Force in Germany. Indeed, Lord Balfour claimed that the Air Ministry's preoccupation with global war meant that the RAF was failing to devote sufficient attention to the more likely local wars, like Korea.¹¹⁴ The Air Ministry wished to concentrate on global war and was quite prepared to see the Navy take over the provision of air power in limited wars (even if some papers queried the level of sophistication of naval aviation needed to do this). Thus, one Air Ministry memorandum in March 1956 argued that the reduction in overseas bases could lead to a shift towards air reinforcements from the UK and 'possibly fighter or strike aircraft from aircraft carriers.'¹¹⁵ A brief for the Chief of the Air Staff noted that the mobility of both land-based and naval aircraft could allow them to be moved

¹¹⁰ Reginald Maudling to Selwyn Lloyd, 30 August 1955, AIR 19/660. For similar worries about 'tepid and limited wars', see Secretary of State for Air to Minister of Defence, 14 July 1955, DEFE 7/963.

¹¹¹ Brief for CAS for COS Committee, 'Long Term Defence Review', February 1956, AIR 8/2045; paras. 4-6

¹¹² COS (56) 33rd, 20 March 1956, DEFE 4/85

¹¹³ 549 HC DEB, 5 March 1956, c. 1724-28 and 29 February 1956, cc. 1312-14

¹¹⁴ House of Lords Official Report, Volume 197, 16 May 1956, c. 455

¹¹⁵ Note by ACAS (P) 1680, 23 March 1956, AIR 8/2045

to trouble spots in a crisis to 'enable air support to be given by carrier or shore based aircraft'. It continued: 'In the RAF, saving could be made in [Boyle added 'some'] overseas fighter and strike squadrons which could be replaced by carrier aircraft on an "as required" basis.'¹¹⁶

Although the Admiralty was reluctant to give up its global war role an alternative was now available in the form of limited war. Moreover, the fact that the same warships could be used for both purposes offered some flexibility in reconciling political instructions from the government with strategic assessments from within the Admiralty. In an important shift from the Radical Reviews, the Air Ministry, happy to focus on its own global war capabilities while seeing savings made in those of the Admiralty, actively advocated such a shift in the Navy's role. Unlike the Radical Review the proposed changes did not represent a simple loss of naval capability but rather a change in focus with room for fudge which would still allow some, if reduced, attention to defending sea communications in global war.

Preparations for Limited War

One interesting issue in these discussions, which emphasises how definitions evolve, concerned the use of nuclear weapons in limited war. This seems surprising unless it is realised that 'limited war' was distinguished from global war against the USSR. Nigel Birch explained the difference between unlimited and limited war as being that the former involved the use of nuclear weapons and the latter did not.¹¹⁷ However, the term 'nuclear weapons' was commonly used at this time to mean strategic weapons, with tactical weapons often referred to as 'atomic'. Other documents show that the use of tactical nuclear weapons in otherwise limited wars was envisaged. Hence the Chiefs of Staff stated that small tactical nuclear weapons 'would almost certainly be used in a limited

¹¹⁶ Brief for CAS, 'Long Term Defence Review', 2 May 1956, AIR 8/2045: paras. 16-17. 30

¹¹⁷ 549 HC DEB, 29 February 1956, cc. 1312-14

war but not thermonuclear megaton weapons with their consequent fall-out effect'.¹¹⁸ At other times they suggested that use of tactical (or 'atomic') weapons was unlikely in Europe, where it would lead to global war, possible but unlikely in the Middle East, but either more likely or 'probable' against China.¹¹⁹ Specific plans for limited war made it clear that the use of nuclear weapons was seen as conceivable and even desirable in the Middle East – for example, in a war against Egypt over the Suez Canal.

The Joint Planning Staff reported that the most likely limited wars would be with Egypt or China (other possibilities included Argentina or Chile over Antarctica, Guatemala over British Honduras, and Indonesia over Borneo or New Guinea; the Chiefs of Staff added Saudi Arabia or Yemen over Aden). In such a war, the decision whether to use nuclear weapons would turn on the 'balance to be struck between the military advantages of a quick and economical decision and the political disadvantages and repercussions of their use.' It noted that limited war using conventional forces alone would be long and expensive, and warned that British forces could not be significantly reduced unless the planning assumption was adopted that nuclear weapons would be used. Against China, they would be essential.¹²⁰ The Chiefs accepted the report with minor amendments, concluding that Britain must be able to fight limited wars either with nuclear weapons or with conventional weapons alone. The latter would have to be of the highest quality, due to Soviet supplies of modern weapons to developing states.¹²¹ Norman Brook (Cabinet Secretary) referred to some of the Chiefs of Staff as planning to fight 'an old-fashioned "gentleman's war"' without tactical nuclear weapons, which would be expensive. He advised Eden to inform them that although the final decision would fall to the government of the day, they should assume that use of nuclear weapons

¹¹⁸ COS (55) 51st, 29 June 1955, DEFE 4/77

¹¹⁹ See for example COS (56) 61st, 19 June 1956, DEFE 32/5; JP (55) 61 (Final), 'Long Term Defence Programme', 8 July 1955, DEFE 6/30: paras. 16-17; COS (55) 176, 'Long Term Defence Policy (Strategic Factors)', 25 July 1955, DEFE 5/59: para. 10; MISC/M (55) 75th, 27 July 1955, DEFE 7/963

¹²⁰ JP (56) 115 (Final), 'Limited War', 26 June 1956, DEFE 6/36

¹²¹ COS (56) 63rd, 29 June 1956, DEFE 4/88

would be authorised. This would allow a more modest assessment of forces needed: 'A particularly expensive item is the requirement for carrier-borne air forces.'¹²²

In the light of events which were about to occur, it is fascinating that the JPS report of June 1956 devoted considerable attention to British action against Egypt to force it to open the Suez Canal. It noted recent improvements in Egypt's weapons and recommended first, neutralising the Egyptian Air Force; second, destroying its Navy and imposing a maritime blockade; third, seizing one or two points of entry; and fourth, defeating Egyptian ground forces by land and air action. RAF aircraft in the area would be constrained by the distance from available bases to Egypt and while naval aircraft could operate over Egypt, there would not be enough of these alone. The paper stated that it could not estimate the likelihood of the government authorising the use of nuclear weapons:

Nevertheless, from a military point of view, the quickest and most economical method of achieving our aim would be by the use of a limited number of kiloton weapons to neutralise the Egyptian Air Force. ... Furthermore, the use of nuclear weapons on military targets might in itself bring about the capitulation of Egypt.¹²³

The crisis which would begin the following month lent such statements a rather surreal air and underlined the difficulty of basing policy solely on anticipated scenarios.¹²⁴

The Admiralty produced a paper on 'The Future Role of the Navy', which acknowledged Monckton's directives of continuing the deterrent but making drastic economies in forces for global war. It stressed, however, that global war naval forces had *already* been heavily reduced:

to a certain extent the navy's preparedness for Global War has suffered and successive economy drives have reduced our forces to a level barely adequate for their Cold and Limited War tasks. The aim of the present policy has therefore to a large extent already been anticipated as far as the Navy is concerned.

¹²² Norman Brook to Eden, 9 July 1956, PREM 11/1266

¹²³ JP (56) 115 (Final), paras. 26-36. Another paper acknowledged that whether or not nuclear weapons were used, naval forces would play a key role in a war of this sort; JP (56) 125 (Final), 'Forces for Limited War', 18 July 1956, DEFE 6/36.

¹²⁴ When the Chiefs asked whether to plan for the possibility of war with Egypt over the Suez Canal, Brook told Eden 'the contingency is so remote that we could take the risk of telling them they need not take account of it in their plans'. Brook to Eden, 9 July 1956, PREM 11/1266

It noted that additional reductions were being made in the Navy's global war forces. These cuts represented 'grave risks' and the paper warned against concentrating so much on cold and limited war that the Navy lost its ability to reorient itself for defending sea communications. However, it also noted that some ships would be added to the operational Fleet to meet cold and limited war commitments, including a commando carrier for a Royal Marine Commando with troop carrying helicopters,¹²⁵ four destroyers and three frigates. These forces, together with a carrier, would mainly be deployed 'in the East where reductions of forces ashore appear inevitable'. The paper sounded a further note of caution, warning that much of the Fleet dated from the Second World War, since when no carrier or cruiser had been laid down and only eight destroyers had been built:

unless a programme of New Construction is now rigorously pursued the main units of the Fleet in 1965 will have dwindled to a size which would reduce the Navy to the level of a Continental power and would make it impossible to maintain a world wide disposition of ships.

The future Fleet would include two Active fleet carriers (with a third in Reserve or modernising), two Active light carriers (with five, dropping to two, in training or Reserve). One battleship was expected to remain in operational Reserve in 1960 but would have gone by 1965.¹²⁶ The Chiefs of Staff decided to forward the paper to the Policy Review Committee. Templer remarked that although he welcomed the commando carrier, it was expensive at £2m-4m per year, whereas an infantry battalion could be maintained for £700,000 (plus about £1m to build its barracks).¹²⁷ The virtue of the sea-based solution, however, was that it would replace several such static Army units. An Air Ministry brief accepted that the commando carrier 'may well be of value, particularly in such areas as the Persian Gulf'. It suggested that its operation of troop-carrying helicopters would be 'the Navy's first

¹²⁵ This ship, which would be a converted light carrier, had initially been entitled a 'landing ship to carry a Royal Marine Commando' but the Admiralty Board changed it to 'Commando Carrier'. Board Minute 5030, 19 July 1956, ADM 167/146

¹²⁶ COS (56) 280, First Lord, 'The Future Role of the Navy', 20 July 1956, DEFE 5/70

¹²⁷ COS (56) 71st, 24 July 1956, DEFE 4/88

incursion into the air transportation role.’¹²⁸ This was incorrect, as naval helicopters had performed that role in Malaya. It is interesting that the concept of the commando carrier was in circulation well before the Suez operation.

The shape of the Navy was bound to change with the new strategic concept. Lord Winster felt that the new First Sea Lord, Mountbatten, faced ‘a task similar to that which confronted Fisher fifty years ago, the task of building a new Navy.’¹²⁹ There were indeed major changes in terms of shore support and in the gradually increasing attention to amphibious operations, and further developments were underway as the principal responsibility of the Fleet switched to limited war. However, what is perhaps remarkable is how *little* the Navy changed. The Air Staff described the paper as an ‘uneasy balance’ between the traditional Admiralty view and the ‘new look’ increasing the emphasis on cold and limited war; it ‘ends up with very much the same Navy as at present’.¹³⁰ There was some justice in this charge as the evolution of the Navy in response to the strategic revolution initiated by the hydrogen bomb was still at a comparatively early stage. Yet this was about to change.

¹²⁸ Brief for CAS for COS Meeting 24 July 1956, COS (56) 280, AIR 8/2135

¹²⁹ House of Lords Official Report Volume 197, 9 May 1956, c. 293

¹³⁰ Brief for CAS for COS Meeting 24 July 1956, COS (56) 280, AIR 8/2135

'The Navy seems to be coming back into its own':¹ 1956-57

The main events of the Suez crisis are well known.² Nevertheless, the conflict is significant in the debate about British defence policy and the role of the Navy within it. On 26 July 1956, Colonel Gamal Abdel Nasser announced the nationalisation of the Suez Canal. From the outset the British government agreed on a military response should diplomatic means fail. The fundamental problem was that, despite recent studies of limited war, this crisis was utterly different from the narrow scenarios for which Britain had been preparing since the war. Shortages of airborne troops and transport aircraft precluded a rapid operation, while Egyptian armoured strength meant that some three divisions would be required to control the Canal. Since the bulk of this force would have to go by sea, preparations would take several weeks.³

The Planning Process

From the outset, the possibility of using air power alone was discussed and the Chiefs of Staff requested a study on disrupting Egyptian oil supplies by bombing.⁴ The Joint Planners reported that air action could begin quickly but on its own might not succeed. It therefore recommended that intensive air action should be accompanied by preparations to follow up with land forces, so although the aim might be accomplished by bombing alone there would be an alternative option if it were not. The initial objective of air action would be to destroy the Egyptian Air Force, before turning to:

concentrations of Egyptian forces and other military targets in Egypt with the object of reducing potential opposition to an assault landing. Particular attention should be paid to the possibility of reducing the flow of oil from Suez to Cairo, on which so much of the Egyptian economy depends and to interrupting the L[ines] of

¹ Lord Winster, House of Lords Official Report Volume 203, 9 May 1957, c. 600

² General accounts include: Love, K. *Suez: The Twice-Fought War* (New York, McGraw Hill, 1969); Louis, W.R. & Owen, R. (eds.) *Suez 1956: The Crisis and its Consequences* (Oxford, Clarendon, 1989); Fullick, R. and Powell, G. *Suez: The Double War* (London, Leo Cooper, 1990); Kyle, K. *Suez* (London, Weidenfeld and Nicolson, 1991)

³ CM (56) 54th Conclusions, 27 July 1956, CAB 128/30

⁴ COS (56) 74th, 30 July 1956, DEFE 4/89

C[ommunication] of the Egyptian forces in Sinai by attacks on bridges over the Suez Canal.⁵

Some ambivalence can be discerned over whether bombing would succeed on its own or whether it was a prelude to and preparation for ground action. A similar debate had accompanied the strategic bombing campaigns of World War II and Korea, and would recur over Vietnam, the 1991 Gulf conflict and the former Yugoslavia in 1992-95 and 1999.

Equally evident from the earliest discussions was the impediment that political factors imposed on bombing, which was stressed by Admiralty officials. Captain E.D.G. Lewin, Director of Plans, urged that the first draft plan should be amended to 'state that intensive air action would start against airfields and military targets'. The Chiefs of Staff agreed: 'it should be made clear that the air action referred to in para. 6 of the report would be entirely in support of the military operation.'⁶ Stronger dissent was offered by the Vice Admiral W.W. Davis:

I believe this is politically quite unacceptable. Surely it is not the plan to bomb all and sundry regardless of human life, state of the Canal, bridges etc., and then, as it were, land the troops as an afterthought! I think politically and morally it would be quite indefensible to carry out a bombing attack on Egypt like this and then perhaps land the troops afterwards. I am sure this must be regarded as a punitive operation and not a full-scale conquest and political considerations are of the highest possible importance.⁷

He was prescient, as political restrictions would indeed impose severe restrictions upon the air campaign.

Other, more practical considerations limited the use of air power. The Cabinet was told that 'preparations would be made to build up a ring of bomber bases at points around Egypt'.⁸ There was a multitude of air bases available. However, airfields in the UK, Gibraltar, Aden and Bahrain were

⁵ JP (56) 135 (Final), 'Action against Egypt – Outline Plan', 31 July 1956, DEFE 4/89

⁶ Director of Plans to First Sea Lord, 1 August 1956, ADM 205/120, original emphasis; COS (56) 76th, 1 August 1956, DEFE 4/89. Despite speculation the previous month, this meeting also noted the assumption that nuclear weapons would not be used.

too far away, and Idris in western Libya was at the edge of the range of the Valiant bomber. Nevertheless, this left bases in Malta, Iraq, Jordan, El Adem in eastern Libya, and Cyprus.⁹ However, in modern conditions host governments could veto the use of bases, which eliminated Iraq, Jordan and Libya. This brought home an important constraint in planning military operations: airfields must not only exist but also be available for use. Secondly, if British bases are in range of enemy bases then the reverse may also be the case. There were worries that the airfields were vulnerable to attack by Egypt's advanced Il-28 jet bombers and MiG-15 fighters, which might be based in Syria or flown by Soviet 'volunteers'. The operation commander, General Sir Charles Keightley expressed concern about Nasser 'doing a "Pearl Harbour" on Malta and Cyprus', and noted the problem of air defence at the latter due to out of date equipment, absence of modern radar and lack of space for aircraft dispersal; the closely packed aircraft were 'dangerously vulnerable to even a single bomber'.¹⁰ Moreover, these airfields were by no means ideal. The distance from Malta to Suez (over 1000 miles) limited the number of bomber sorties, while the short runways restricted their bomb load. An additional disadvantage of basing aircraft far from the theatre was susceptibility to weather conditions. Although the weather over Egypt was fine: 'At Malta the weather imposed limitations on bomb loads and cancellation of sorties.' Only a limited number of aircraft could operate from these over-crowded bases, and at Cyprus they would have to include defensive fighters. The Akrotiri base there was close enough to Suez for land-based RAF Venom fighter-bombers to participate, but only carrying guns and rockets, not bombs, and they would only be able to spend 10-20 minutes over the target area. Hunter fighters based in Cyprus could not be used at all.¹¹ Such difficulties were partly the result of the previous RAF emphasis on total war, as Air Vice-Marshal R.B. Lees, Assistant Chief

⁷ VCNS to First Sea Lord, 2 August 1956, ADM 205/120

⁸ CM (56) 54th Conclusions, 27 July 1956, CAB 128/30

⁹ See Air Ministry map with ranges from air bases to Suez in nautical miles and table of aircraft ranges in AIR 8/2111

¹⁰ Note by General Keightley, 'Operation Musketeer', September 1956, ADM 205/132; COS (56) 380, Appreciation by General Keightley, 'Operation Musketeer', 12 October 1956, PREM 11/1104; COS (57) 220, 'Part II of General Sir Charles Keightley's Despatch', 11 October 1957, DEFE 5/78: para. 10

¹¹ ACAS (Ops) to VCAS, 20 August 1956, AIR 8/1948; Naval Report on Operation Musketeer, ADM 1/27373, paras. 254-55; A/ACAS (Ops), 19 February 1957, AIR 8/2111: para. 24; COS (57) 220: para. 7

of the Air Staff admitted: 'there is no doubt that before MUSKETEER Bomber Command and indeed the Air Ministry staffs concerned had their sights set firmly on the global war ball'.¹²

The evolving plan

The initial plan began with air strikes to knock out the Egyptian Air Force, then involved three divisions (including one airborne) landing at Alexandria, with its deep-water port. They would join an armoured division entering by land from Libya and advance on Cairo, topple Nasser and seize the Canal.¹³ However, this plan was dropped in early September because of concern that it would lead to a long campaign and that Alexandria was a dubious target if the Suez Canal was the objective. Most important was fear of civilian casualties and damage to property from air and sea bombardments. Eden, the Prime Minister, told the Cabinet Egypt Committee on 7 September that 'extensive devastation and loss of life would be inevitable', and much greater than previously envisaged, 'which caused him grave concern'.¹⁴ Thus, a new plan began to emerge which reverted to the concentration on air power first mooted at the end of July. Eden explained that the new plan would eliminate the Egyptian Air Force, 'cut oil supplies and destroy oil storage facilities in Egypt', and hit enemy armed forces to permit a landing against little or no opposition. An assault landing was still seen as necessary because of doubts that 'the complete disintegration of the Egyptian Army could be achieved by air action alone'.¹⁵

The new plan, 'Musketeer Revise', was elaborated during September and October. Keightley stated: 'The aim is to create, by a sustained air offensive, a situation in Egypt which will bring about the downfall of the Nasser Government and permit land forces to secure the Suez Canal'. Phase I would be the neutralisation of the Egyptian Air Force and Phase II would aim 'to break the will to

¹² ACAS (Ops) to VCAS, 24 January 1957, AIR 8/2111

¹³ A/ACAS (Ops), 19 February 1957: paras. 4-5; Jackson, W. and Bramall, Lord *The Chiefs: The Story of the United Kingdom Chiefs of Staff* (London, Brassey's, 1992), 298-299

¹⁴ EC (56) 25th, 7 September 1956, PREM 11/1104; Jackson and Bramall, 300-02

¹⁵ EC (56) 25th, 7 September 1956, PREM 11/1104

resist of the Egyptian Government and people by the progressive disruption of the organisation and administrations of the country', before the occupation of the Canal in Phase III. The plan's core was:

an air offensive consisting of concentrated attacks on selected military and other target systems, with the object of producing ever increasing disruption of Egyptian economy, morale, administration and the reduction of the will and power to resist.

Targets would include military installations, troop concentrations, naval units, oil storage tanks and refineries, Cairo Radio, key points of road and rail communications and government buildings. Many targets would be in 'closely populated areas', so to reduce casualties warnings should be given, though not enough to assist the defence.¹⁶ In a later note Keightley referred to 'targets which could be selected and attacked until the Egyptian national economy, home life and administration is crippled.' Although he wrote that the plan minimised damage to civilians, he added: 'It may be that if Egyptian morale is higher than has been assessed I shall require more latitude to attack targets which will have a more direct impact on the nation as a whole.'¹⁷ The focus on air power to break the will and ability of the Egyptians to fight, and to topple the regime, survived successive drafts. An October version referred merely to 'reducing' the ability and will to resist, yet stressed that among the plan's advantages was that it 'attacks the Egyptians where we believe they are weakest, that is their morale.'¹⁸ Beaufre rejected the idea that so few aircraft could destroy the Egyptian will to resist in eight to ten days (which would have required far more aircraft or nuclear weapons). He described the idea as originating with the British Chief of the Air Staff, who believed in 'Victory through Air Power' theory.¹⁹ Liddell Hart concluded: 'Another influential factor in the prolonged bombing seems to have been an Air Staff desire to try out its favourite theory and see if the issue could be decided by air action alone.'²⁰

¹⁶ SD 12 (56) Note 1A (Final), General Sir Charles Keightley, 'Alternative to Musketeer', 9 September 1956, DEFE 6/39

¹⁷ Keightley, 'Operation Musketeer', September 1956, ADM 205/132

¹⁸ COS (56) 380, 'Operation Musketeer', 12 October 1956, PREM 11/1104. The same paper warned that the air campaign might last as long as 10 to 14 days, or even longer. It was later reduced to six days; Eden, Anthony *Full Circle: Memoirs, Volume III* (London, Cassell, 1960), 534-35

¹⁹ Beaufre, A. (General, French Army) *The Suez Expedition 1956* (trans. R. Barry; London, Faber & Faber, 1969), 55, 138

²⁰ Liddell Hart, B.H. *Deterrence or Defence* (London, Stevens and Sons, 1960), 30

The Air Ministry viewed the plan as a risky compromise between a true air campaign and a land assault. Air Chief Marshal Sir Dermot Boyle, Chief of the Air Staff, warned that it 'may result in our falling between two stools'. For example, the government might be influenced by world opinion and halt the bombing prematurely, before the will to resist had been shattered. He therefore recommended that the plan be recast to emphasise air and psychological action, removing from the list targets related to land operations. Troops might be needed to restore order but there would be no assault landing.²¹ The Air Ministry's high hopes for the air campaign were demonstrated in a brief which suggested that before ground forces landed, bombing 'must already have been sufficiently effective to allow them more or less to walk ashore'.²² Another brief complained about the instruction to avoid hitting targets which would upset normal life in Egypt, which would harm efforts to destroy Egyptian will:

An all out air plan is certain to succeed if the Air Commander is given a political directive which allows him to carry it out logically and ruthlessly to the point where the Egyptians' will to resist is broken, and they are prepared to negotiate on terms acceptable to us.

Air power had been criticised 'because it failed to achieve decisive results in Korea (the fact that its hands were tied was conveniently ignored)'. If Ministers did not accept the implications of the plan and allow, if needed, attacks on the centres of Cairo and Alexandria then 'air action alone may well fail' – the last word being crossed out and replaced by 'not be given the chance to succeed'.²³

Admiralty officials still had serious misgivings. Davis wrote: 'I don't think for a moment we should rely on political clearance to attack the large number of transportation targets'. Although Boyle believed that bombing could obviate the need for a landing, Davis (and according to him, General Templer and Sir William Dickson, Chairman of the Chiefs of Staff Committee) doubted the

²¹ CAS to COS, 20 September 1956, AIR 8/2081

²² Brief for CAS, 1 August 1956, AIR 8/1948

²³ Brief for CAS, 24 September 1956, AIR 8/2081

government would permit it to continue as long as CAS planned.²⁴ Keightley's intentions caused some alarm. He told the Commander-in-Chief Mediterranean that bombing could destroy the enemy armed forces:

When I asked what would happen if all the tanks, guns and transport were hidden in the towns and villages, he said they would go for them there and that the civilian population would have to take it. He added that this would form part of the breaking of the will to resist. My impression was that the towns would be heavily bombed if there were any military targets in them, or any targets concerned with the administration of the country.²⁵

Lewin was concerned that although the plan supposedly sought to limit civilian casualties, in practice the target set, which would be bombed at night, would have a very different result. He also doubted whether it would be effective: 'The lesson of the past is that air attack alone is seldom conclusive and in fact tends to bind a people more closely together rather than the reverse.' He added that alternatively, bombing could disrupt enemy forces and communications, facilitating a land operation, and hence suggested a shorter air campaign which really would minimise civilian losses.²⁶ Rear Admiral R.H. Wright (ACNS) denied that unrestricted air attack would 'almost certainly' lead to the Nasser government being quickly overthrown, pointing out that bombing 'puts rich and poor in common peril and unites them.'²⁷

There were widespread doubts over whether bombing alone would work. More fundamentally, any air campaign with a chance of destroying Egyptian morale would have implications unacceptable to the British government. The use of nuclear weapons was never plausible in such a conflict and nor was an all-out bombing campaign. The idea that Egypt's will and ability to fight could be shattered at all, let alone in such a short time, without inflicting enormous civilian casualties and damage to property beggars belief. Keightley wrote bluntly that an air campaign was bound to cause civilian casualties (though fewer than a land invasion) and the

²⁴ VCNS to First Sea Lord, 19 September 1956, ADM 205/132

²⁵ C-in-C Mediterranean to First Sea Lord, 24 September 1956, ADM 205/133

²⁶ Director of Plans, 'Alternative to Musketeer (Note by CAS)', 25 September 1956, ADM 205/132

government would have to remain resolute in the face of world opinion.²⁸ Yet this was never plausible. Boyle sent Walter Monckton (Minister of Defence) a plan for retaliation in the event of a surprise Egyptian attack on Malta or Cyprus, which included hitting an airfield near Cairo for maximum psychological impact. When Monckton informed Eden, he added that he had amended the orders to emphasise the need to avoid civilian casualties.²⁹ If even the response to a pre-emptive Egyptian attack was to be so tightly restricted, then the Air Ministry's plan was simply unrealistic. Air power acting independently was not going to provide the panacea that some sought.

The role of the Navy

There was a general awareness that any operation could have significant implications for the defence review. An Air Ministry brief stressed the importance of the air campaign for the place of air power in future strategy and mentioned inter-Service disagreements relating to the review.³⁰ The Admiralty was hardly ignorant of the possible benefits: Mountbatten intended to 'press for a post-mortem, if only to underline the importance of the naval contribution.'³¹ Indeed, there was a prospect of a considerable naval role given the difficulty of providing sufficient land-based aircraft. As early as July, the Chiefs agreed that: 'Air attacks against enemy tanks would have to be undertaken by carrier based aircraft'. The initial plan noted:

Owing to the lack of allied bases within fighter range, British and French carrier-borne aircraft would be primarily responsible for fighter cover, ground attack, and any fighter reconnaissance required for the assault.³²

The revision of Musketeer increased the relative contribution of naval aviation, from about half the sorties to about two-thirds, according to Lewin. It would cover most ground-attack targets (which were out of range of fighter-bombers in Cyprus) and all close support (because of the ability of naval

²⁷ ACNS to VCNS, 11 October 1956, ADM 205/120

²⁸ COS (56) 380, 'Operation Musketeer', 12 October 1956, PREM 11/1104

²⁹ Monckton to Prime Minister, 21 September 1956, PREM 11/1092

³⁰ Brief for CAS, 24 September 1956, AIR 8/2081

³¹ First Sea Lord's Weekly Meeting, 5 September 1956, ADM 205/120

³² COS (56) 74th, 30 July 1956, DEFE 4/89; JP (56) 135 (Final), para. 11

aircraft to remain longer over the battlefield). Several targets would fall to naval aircraft because 'the Air Force cannot take on bridges, etc., and pin-point targets which form the majority in Phase II of the alternative operations.'³³ HMS *Eagle* was in the Mediterranean at the start of the crisis, while *Bulwark* was in home waters on training duties and was also sent out. *Albion* was initially expected to be unavailable but her refit was completed a month early so she too took part. Two training carriers, *Theseus* and *Ocean*, were pressed into service to carry troops to Malta.³⁴ The flexibility conferred by having several carriers in reserve proved important. Except *Eagle*, all of the British vessels were light carriers, as were the two French ships, *Arromanches* and *Lafayette*.

The enemy order of battle caused concern rather than alarm. It was suspected that Egypt might have taken delivery of two or three Soviet submarines which they were known to have bought. Eden and the Cabinet Committee were told that they could have 'serious' operational consequences.³⁵ Some maritime patrol aircraft were based in Malta and Cyprus, and it was suggested that carrier and land-based strike aircraft might have to be reduced in favour of anti-submarine aircraft. Eventually the threat assessment was down-graded and 'was never considered so serious as to prevent strike aircraft being embarked in favour of anti-submarine aircraft'; indeed, anti-submarine Gannets were removed from *Eagle* and replaced by an additional squadron of fighters.³⁶ The Egyptian Navy included four destroyers, six frigates, 16-22 torpedo boats, four minesweepers and six landing craft. The Egyptian Air Force was more formidable, including 110 MiG-15 fighters, 49 Il-28 light bombers, 30 Meteor fighters and 69 Vampire fighter-bombers – all jets – plus many obsolescent aircraft. Egypt had also bought some MiG-17s but like the submarines, it was not known whether these had been delivered. The air threat was assessed as 'moderate', though the possibility of attack by jet bombers

³³ Director of Plans, 26 September 1956, ADM 205/118

³⁴ First Sea Lord 16 August 1956, ADM 205/117; Naval Report, paras. 259-62

³⁵ EC (56) 24th, 4 September 1956 and EC (56) 30th, 19 September 1956, PREM 11/1104; Hailsham to Eden, 18 September 1956, PREM 11/1120. Hailsham replaced Cilecennin as First Lord in August 1956.

³⁶ Director of Plans, 'Effect on Musketeer of Egyptian Submarines', 5 September 1956, ADM 205/118; SD 12 (56) Note 1A (Final), DEFE 6/39; Naval Report: para. 253; Department of Operational Research (DOR) Report No. 34, 'Carrier Operations in Support of Operation Musketeer', 1959, ADM 1/27051: para. 17

escorted by fighters led to continuous daylight combat air patrols.³⁷ Captain F.H.E. Hopkins, Director of Naval Air Warfare, judged that the air defence system 'would stand up well' against Il-28s, destroying 50-80% of attackers. He was more worried by the prospect of strafing attacks by MiG-15s but given the likely skill level of their pilots, concluded that the defences would inflict sufficient losses to make use of these valuable aircraft in such a role 'extremely unprofitable'.³⁸ The naval report on the operation stated that the main enemy threat was assessed as air attack, with smaller threats from surface vessels and submarines. Mountbatten ordered that all ships should fully man their anti-aircraft armament, while the rest of their weapons were unlikely to have targets and need not be fully manned.³⁹ Continuous patrols were mounted against air, submarine and surface threats but there were few worries about serious enemy interference.

The quality of naval aircraft still posed a problem. The limited improvement in the Fleet Air Arm since the salutary experience of Korea was evident, as its fighters were still inferior to MiG-15s. Hopkins pointed out that the latter had a far higher speed, much faster rate of climb and better manoeuvrability than the Sea Hawk, the main naval fighter, and was superior to the Sea Venom, although he predicted that the higher skill of FAA pilots would compensate. Either fighter could best the Il-28 bomber. As for the much criticised Wyvern strike aircraft, he warned that unescorted it would be a 'sitting duck' to the MiG-15 or any other Egyptian jet fighter. Indeed, the less capable Wyverns were initially withheld from operating inland until air superiority was attained.⁴⁰

The 'Port Said Operation'⁴¹

Air attacks began on 31 October with night-time medium-level Valiant and Canberra strikes on airfields, designed to crater the runways. These missions proved unsuccessful: not a single

³⁷ DOR No. 34, paras. 21-22; 'Strength of the Egyptian Forces', October 1956, AIR 8/2081

³⁸ DAW, 'Naval aircraft versus Egyptian Air Force', 3 August 1956, ADM 205/120

³⁹ Naval Report; para. 283; First Sea Lord Weekly Meeting, 15 August 1956, ADM 205/120

⁴⁰ 'Naval aircraft versus Egyptian Air Force': Naval Report; paras. 295, 298

⁴¹ This title, used in *Explanatory Statement on the Navy Estimates 1957-58 by the First Lord of the Admiralty*, Cmd. 151 (1957); encapsulates the limited nature of the campaign compared to the broader plans made previously.

Egyptian airfield was rendered unusable, with the result that some aircraft escaped. Mountbatten later wrote that 'that there was ample evidence to show that none of the Egyptian runways were hit by the RAF except the civil airport at Cairo West, which they were told to avoid.'⁴² Ground-attack aircraft, including those from carriers, hit aircraft and base facilities and enjoyed more success, without a single loss. There was a feeling in the Air Ministry that 'there were considerable political restrictions imposed from Whitehall, and attempts to reorganise this vital phase', yet the Egyptian Air Force was still destroyed 'in less than 36 hours by a force of Allied bombers, land-based and carrier-borne ground-attack aircraft'.⁴³

There was more opposition at sea but nothing that represented a threat to the operation. HMS *Newfoundland* destroyed the frigate *Domiat* and engaged four torpedo boats in the Red Sea; the French ship *Kersaint* damaged the destroyer *Ibrahim* off Haifa; French naval aircraft set on fire a *Skory*-class destroyer off Alexandria; and aircraft from HMS *Bulwark* attacked three torpedo boats off Alexandria, sinking two and allowing the damaged third to pick up survivors and return to port. After this, there was no significant activity by the Egyptian Navy.⁴⁴ An incident of mistaken identity occurred on 3 November when four swept-wing Israeli fighters, having just attacked Egyptian coastal batteries, strafed HMS *Crane* in the Red Sea, causing three minor casualties. The Admiralty believed that they had mistaken her for an Egyptian frigate of the same class; she took her attackers for Egyptian MiGs and shot down one.⁴⁵

On 1 November, Anthony Head (who replaced Monckton as Minister of Defence in October) informed the Cabinet Egypt Committee that the Egyptian Air Force would be 'practically eliminated' by the next day. The air campaign was therefore entering the second phase of attacking military and

⁴² COS (57) 220: para. 7; DOR No. 34, paras. 285-87; Mountbatten to Anthony Head, 18 December 1958, ADM 205/173; Kyle, 383, 608

⁴³ A/ACAS (Ops), 19 February 1957, paras. 11-13

⁴⁴ 'Air operations', First Sea Lord's Newsletter, Boxing Day, 1956, ADM 205/109: paras. 3-4; 'A short account of Operation Musketeer and its aftermath', ADM 205/150: p.1-3; 'Operation Musketeer – The Navy's Part', First Sea Lord's Newsletter, Taranto Day (11 November) 1956, ADM 205/109: para. 15

⁴⁵ 'A short account...', p. 5

oil targets in order to hamper armed resistance and to sway the population. However, he added that attacking oil installations would cause political difficulties with Arab and world opinion, while any civilian suffering would result in 'odium'. He therefore proposed to order that only targets 'directly related to any military operations' should be attacked; the Committee agreed.⁴⁶ This further tightening of political restrictions sounded the death knell for the Air Ministry's dream of winning by bombing alone. An Air Staff paper later complained that Phase II of the operation could not proceed as planned because of the Cabinet decision that only military targets could be attacked. Specific political restrictions included a ban on bombs heavier than 1000 pounds, a prohibition on attacking Cairo Airport due to the presence of American evacuees and delays in attacking Cairo Radio's transmitter, which was originally and incorrectly believed to be in the middle of the capital. There were also restrictions on attacking enemy vehicles on roads being used by refugees and strict requirements for identification of targets.⁴⁷ Even before the operation began, Phase II had been 'cut to vanishing point' for political and humanitarian reasons (for example, attacks on industrial plants were ruled out). Now it had become still more tightly circumscribed. During 2-3 November, the air effort was gradually switched to military targets such as barracks, tanks and artillery, radar installations and coastal defence sites, and communications targets such as bridges and marshalling yards. The time scale of the original plan, which envisaged two days of attacks upon the Egyptian Air Force and then six days of further bombing to bring about Egypt's surrender before an occupation, was accelerated, bringing forward the landings. An Admiralty report explained this as partly because Israel was pushing back the Egyptian forces to the Canal far more quickly than expected and partly due to concern at civilian casualties and property damage.⁴⁸ General Keightley wrote that even though no towns or villages were attacked, the bombing still evoked a hostile world

⁴⁶ EC (56) 37th, 1 November 1956, PREM 11/1104

⁴⁷ A/ACAS (Ops), 19 February 1957, paras. 14-16; 'A short account...', p. 4; Naval Report, para. 301. The airport signal is in AIR 8/2111.

⁴⁸ 'A short account...', ADM 205/150

reaction. He believed that the restrictions imposed did not jeopardise the operation, 'although the continued threat of bombing might well have caused EGYPT to capitulate before the Cease Fire'.⁴⁹

Phase III, the ground operation, began when parachute drops at both ends of the Canal were brought forward to 5 November. They were preceded by anti-flak strikes and given fighter cover by aircraft from Cyprus, and provided with close support by carrier-borne aircraft. Broader bombing in support of the paratroops was 'severely curtailed in the interests of creating a more favourable impression on World opinion', but close support was important against the heavy opposition encountered.⁵⁰ The following day the main assault took place with an amphibious landing, led by Royal Marines. Naval bombardment was reduced to minimise civilian casualties but proved useful in suppressing coastal artillery and tank fire. The other operation of 6 November was the first ever helicopter assault, in which a Royal Marine Commando was landed in 91 minutes from the hastily converted light carriers HMS *Ocean* and *Theseus*. Carrier aircraft remained on call overhead for air support.⁵¹ A ceasefire was called on the night of 6-7 November, when the military campaign was close to achieving its operational objective of securing the Canal.

Air power was a crucial element of the operation. It neutralised the Egyptian Air Force thereby securing air supremacy. It prepared the way for the airborne and seaborne landings by attacking enemy forces and communications, and provided close support for allied ground forces, which was essential in allowing them to overcome heavy opposition with few casualties. This was achieved at the remarkably low cost of nine aircraft, the pilots of all but one of which survived.⁵² However, air power did not achieve victory independently by shattering the enemy's will or ability to fight and in the circumstances could not have done so.

⁴⁹ COS (57) 220: para. 7

⁵⁰ A/ACAS (Ops), 19 February 1957, paras. 17-20; 'A short account...', pp. 6-8

⁵¹ 'A short account...', p. 9; Newsletter, Taranto Day 1956, paras. 18-19

Lessons of the Suez conflict

The crisis showed that, despite previous speculation, even tactical nuclear weapons were unuseable in limited war. The same applied to strategic bombing against civilian targets, which was ruled out for fear of its impact on international opinion. Such political constraints had become a reality that could not be ignored. Air Marshal D.F. Barnett, the Air Task Force Commander, suggested: 'It is extremely dangerous to draw military conclusions from an operation of this sort which was coloured and limited by political considerations from start to finish'.⁵³ He was incorrect, as others recognised. Keightley wrote: 'The one overriding lesson of the Suez operations is that world opinion is now an absolute principle of war and must be treated as such.'⁵⁴ The report by the Admiralty operational research department pointed out that the conflict could prove to be exceptional in several ways, including the lack of significant air or ground opposition, the inability of the enemy to use its modern equipment effectively, the short duration and limited area of the operation and the good weather. It identified one aspect, though, as characteristic of modern warfare, 'namely the overriding influence of political considerations on military operations'.⁵⁵

At the time of Musketeer, the redirection of British conventional forces towards limited war was an aspiration rather than a reality and numerous weaknesses were apparent. The conflict emphasised the effect of the declining number of overseas bases in British possession and increasingly restricted access to others, which meant that mobile forces were necessary for the envisaged operations. For the Navy, the conflict seemed to confirm the viability of a limited war role. Mountbatten wrote: 'The Suez crisis has enhanced the prestige of the Navy and has provided ample evidence of the need for maritime power to deal with foreseeable cold and limited war

⁵² Six Navy aircraft were lost, four to enemy action and two in accidents, and three RAF aircraft, two to enemy action and the third in an accident. 'A short account...', ADM 205/150. Helicopters proved very effective for rescuing downed pilots and evacuating casualties.

⁵³ 'Report on Operation Musketeer', 27 November 1956, AIR 20/10746, para. 46

⁵⁴ COS (57) 220, para. 4

⁵⁵ DOR No. 34, para. 290

emergencies.’⁵⁶ It offered the Admiralty valuable lessons regarding the Fleet and useful arguments to bolster its case in the defence review.

The operation indicated that amphibious forces could be immensely useful but that the current British capability was inadequate.⁵⁷ Much interest was aroused by the helicopter landing, which the 1957 Admiralty statement recognised as ‘an important development in the technique of amphibious assault’, and an American author described as ‘one of the few bright spots in the Suez intervention’.⁵⁸ There had been difficulties in mounting this pioneering operation because although it had been ‘repeatedly stressed that the helicopter has a great potential in the modern conception of an amphibious operation’, it was such a low priority that there had been no exercises or training before the crisis. In the eventual operation, the helicopter force was rather cobbled together, comprising four different types from all three Services.⁵⁹ The US Marine Corps had already been moving towards more reliance on helicopters, which had been used in a 1955 exercise to drop a company 1000 yards inland. In July 1956 the US Navy had commissioned the first helicopter assault carrier, the *Thetis Bay*.⁶⁰ The commando carrier concept had been circulating in the Admiralty for some time and Britain had now undertaken the first ever operational landing. In contrast to the interwar years, UK amphibious doctrine was now keeping up with the Americans.

The contribution of naval aviation in Musketeer was important in a number of respects. First, the number of aircraft it provided was a considerable proportion of the total force. Land-based aircraft on Cyprus and Malta included 23 Valiant medium bombers, 88 Canberra light bombers (including 27 marker and photo-reconnaissance aircraft), 50 Venom and 36 French F84F ground-

⁵⁶ Newsletter, Taranto Day 1956, para. 38

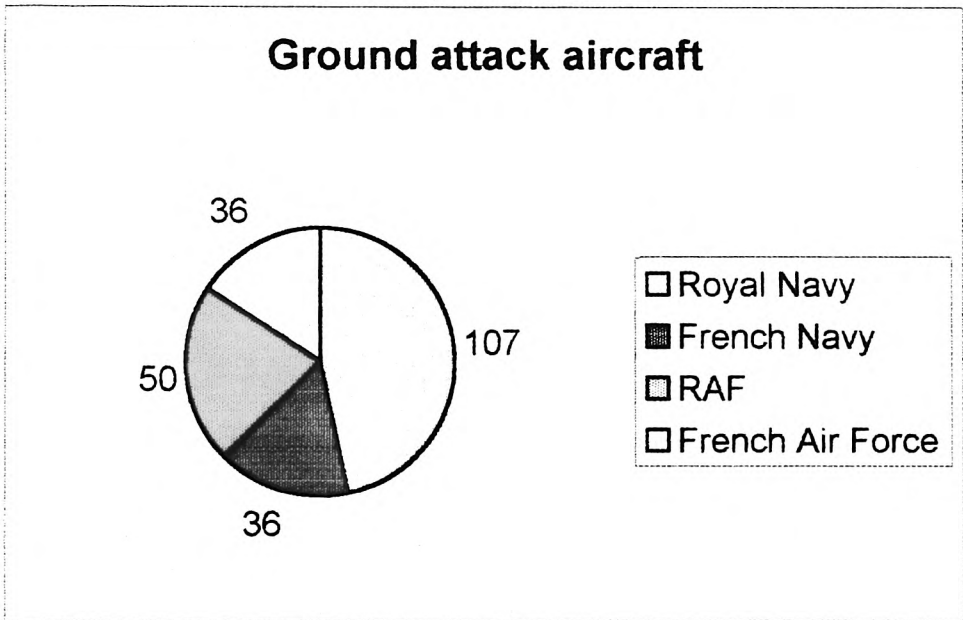
⁵⁷ Chief of Amphibious Warfare, ‘Amphibious warfare problems arising during the planning of Operation Musketeer’, 25 October 1956, ADM 205/118. Monckton explained that the shortage of landing craft resulted from the assumption that Britain would not undertake any operation requiring them but if it did, the US would provide them: Birkenhead, Lord *Walter Monckton* (London, Weidenfeld and Nicolson, 1969), 306

⁵⁸ *Cmd 151*: paras. 57-58; Snyder, W.P. *The Politics of British Defense Policy 1945-62* (Columbus, Ohio University Press, 1964), 26

⁵⁹ Report by Chief of Amphibious Warfare, paras. 8-9; Director of Plans to VCNS, 25 October 1956, ADM 205/118

⁶⁰ ‘Yearly Report by Chiefs of Amphibious Warfare’, COS (56) 404, 13 November 1956, DEFE 5/72

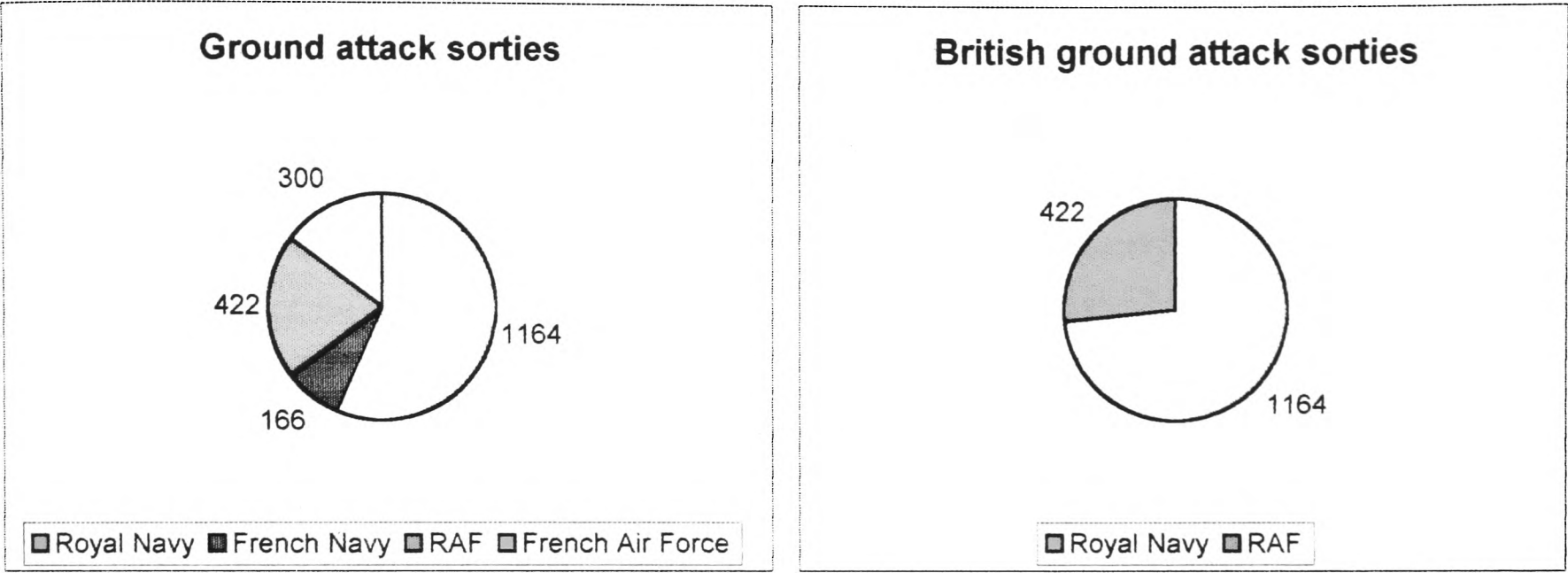
attack aircraft, as well as air defence fighters, reconnaissance, transport and maritime patrol aircraft. The three British carriers contributed a total of 73 Sea Hawk and 25 Sea Venom fighter-bombers, nine Wyvern strike aircraft and eight Skyraider early warning aircraft; there were also 36 fighter-bombers on the two French carriers.⁶¹ The most important and effective aircraft were the ground-attack types. Valiant and Canberra bombers were used largely from medium level, at night, against airfields but could not conduct accurate strikes or close support missions, which required fighter-bombers. Even against airfields, ground-attack aircraft were more effective: operational research indicated that bomber attacks on runways were ‘ineffective’ and did not damage any airfields enough to prevent flying.⁶² The most important contribution of air power in this operation was tactical, which gave particular significance to ground-attack aircraft, the majority of which were provided by carriers, as the following chart illustrates.



Not only did carriers provide a majority of the ground-attack aircraft, each naval aircraft also enjoyed several advantages. Based nearer the combat area than land-based aeroplanes, it could mount more

⁶¹ DOR No. 34, paras. 17-20; Naval Report, para. 267. Within this total it is significant that *Eagle*, the fleet carrier, had a total of 54 fixed-wing aircraft, *Albion* 31 and *Bulwark* 32.

daily sorties, carry a heavier weapons load (which could more easily be changed according to need) and spend longer over the battlefield.⁶³ As a result, naval aircraft accounted for a higher proportion of sorties flown than the raw aircraft numbers would suggest. British carrier aircraft flew 1164 offensive sorties, while land-based ground-attack aircraft from Cyprus flew 722 (of which 300 were by French aircraft). The relative contributions are shown in the following charts.⁶⁴



This was despite the fact that one of *Eagle*'s two catapults broke down at the start of the operation and remained out of action throughout the campaign, reducing the number of sorties she could mount.⁶⁵ The operational achievements of naval aircraft were impressive. They sunk six torpedo boats, put out of action at least 150 armoured vehicles, carried out some 60% of low-level attacks on airfields and were credited with 139 out of a total of 250 aircraft destroyed; even Air Ministry figures

⁶² DOR No. 34, paras. 285-87

⁶³ A/ACAS (Ops), 19 February 1957, paras. 23, 28-29; COS (57) 220: para. 7; Naval Report, paras. 331-33; *Cmd. 151*, para. 56; Grove, E. *Vanguard to Trident* (London, Bodley Head, 1987), 197

⁶⁴ The total number of British carrier sorties was 1616 fixed-wing and 495 by helicopter, with an additional 166 fixed-wing sorties from the French carriers. There were also 398 bomber sorties and 300 reconnaissance, maritime patrol and paratroop transport flights from Malta and Cyprus. DOR No. 34, p.1. Its statistics for land-based aircraft were from Bomber Command.

⁶⁵ COS (56) 106th, 30 October 1956, DEFE 4/91; Newsletter, Boxing Day 1956, para. 2. *Eagle* still had the old hydraulic catapult rather than the newer and more reliable steam catapult.

acknowledged that the FAA destroyed 55% of enemy aircraft.⁶⁶ According to Crowe, operational analysis concluded that low-level strikes by naval aircraft were more effective than high-altitude bombing by RAF aircraft, but that this was never published: 'The writer was told that the RAF had fought any suggestion to disseminate this conclusion.'⁶⁷ Other writers concur. Beaufre judged that Bomber Command aircraft designed to carry nuclear weapons 'proved relatively ineffective with conventional bombs', while Fullick and Powell wrote that high-level bombers were less effective than aircraft, mostly naval, armed with cannons and rockets.⁶⁸

A number of shortcomings were noted. The Admiralty operational research division concluded that naval aircraft had proved adequate but 'the inferiority of their combat characteristics to those of some of the hostile aircraft might have had serious consequences' if the Egyptian Air Force had offered greater opposition. The limitations of Wyverns in offensive operations 'makes it debatable whether these aircraft gave good return for the carrier space they occupied'; they also suffered relatively high losses to anti-aircraft fire.⁶⁹ Other weaknesses included disappointing weapons accuracy (described as 'comparable with that from a shot-gun rather than that of a rifle') and limitations in the reconnaissance and intelligence system. The former was due in part to obsolete weapons and could be improved with more training, whereas the latter was perceived as more serious. The failure to sink a block ship (the tank landing craft *Akka*) suggested a weakness in maritime strike and 'gives cause for concern as regards our ability to sink such ships as the SVERDLOV by air attack'. Three carriers proved 'about twice as useful as two', allowing a sustained effort over a much longer period, because one carrier could periodically withdraw for replenishment. Finally, the existing hydraulic catapult was so unreliable that it 'may well prejudice the success of planned carrier operations', though it was hoped that the new steam catapult would change this.⁷⁰ The overall

⁶⁶ DOR No. 34, paras. 291, 398; Naval Report, para. 319; Air Marshal H.L. Patch, C-in-C Middle East Air Force to CAS, 22 December 1956, AIR 8/2111

⁶⁷ Crowe, W. J. *The Policy Roots of the Modern Royal Navy, 1946-63* (Ph.D. thesis, Princeton University, 1965), 160, 173

⁶⁸ Beaufre, 87; Fullick and Powell, 120-21

⁶⁹ DOR No. 34, para. 295

⁷⁰ Ibid., para. 405; DOR to Fifth Sea Lord, 5 March 1958, ADM 1/27051; Flag Officer Aircraft Carriers, to Fifth Sea Lord, 17 May 1958, ADM 1/27051; Naval Report, paras. 259-62, 336; Newsletter, Boxing Day 1956, para. 16

conclusion was, as the 1957 Admiralty statement put it: 'The naval operations were a striking reminder of the versatility of sea/air power, demonstrating the advantages of the mobile carrier force'.⁷¹ A more impartial observer concluded: 'The effectiveness of seaborne aircraft had exceeded all expectations.'⁷² Cyril Falls discussed various military shortcomings and then added:

To turn to the brighter side, the brilliant feature is the performance of the carriers and their aircraft. These were, to put it delicately, not as youthful as they had been, but ideal for ground attack and close support of troops. They could in no way have been replaced because the RAF fighter-bombers were operating at extreme range.⁷³

The Air Ministry had been on the defensive about naval aircraft in Musketeer even before the operation began. One official argued:

Naturally the Admiralty make the most of 'Musketeer'. It does not follow that Egypt would necessarily have staged the present crisis if our own plans for the medium bomber force had been further advanced at the present time, or that, if she had, the same naval forces would have been necessary as have been currently deployed.⁷⁴

Given the apparent limitations of the Valiant bombers, it is difficult to see how more V-bombers would have deterred Egypt. Moreover, longer-range aircraft could not have replaced the carriers' contribution: the limitations imposed on bombers based on Malta would equally have applied to longer-range tactical aircraft there.

It was difficult for the Air Ministry to deny the utility of naval aviation. Even Air Marshal H.L. Patch, Commander-in-Chief Middle East Air Force, acknowledged that they had provided more than half of the total sorties and that until his command had an effective limited war strike aircraft, 'There is no doubt that ... carriers will have an important part to play in any limited war in the Theatre'. Nevertheless, he also stressed the 'vulnerability of a carrier force to attack by a more effective and determined land-based air force than the Egyptian' and the questionable availability of

⁷¹ *Cmd. 151*, para. 56

⁷² Darby, P. *British Defence Policy East of Suez 1947-68* (London, OUP for RIIA, 1973), 99

⁷³ Falls, C. (Captain, British Army) 'Operation Musketeer', *Brassey's Annual* 1957, 82

⁷⁴ R.C. Kent to Secretary of State for Air, 'Brief on Admiralty Policy Review Paper', 17 October 1956, AIR 19/855

carriers, which meant that they could be regarded only as a bonus in any plan. The response to the first point would be that his airfields in Cyprus would have been more vulnerable to a combative Egyptian Air Force than the mobile carriers, while the second point called for the provision of more carriers; indeed, Patch went on to state that 'some way of guaranteeing the availability of carrier effort in future operations must be sought.'⁷⁵ There was evident concern over the success of the carriers at Suez. Air Commodore Widdows accused the Admiralty of letting its thinking be coloured by 'deep-rooted, inter-Service prejudices' in its defence of the carriers and referred to 'erroneous conclusions ... such as the statements that carrier-borne aircraft are essential for such conflicts and that they possess certain advantages over land-based aircraft'.⁷⁶ It was feared that the Admiralty would use Suez to boost their arguments for the carriers; one officer quoted the naval Task Force Commander as writing that the Navy should be prepared to 'ram the carrier down the throats of the Air Marshals and Generals'.⁷⁷ This rather colourful language suggests that the Admiralty realised Musketeer could assist its case. Mountbatten wrote to Keightley: 'The whole question of the retention of *any* carriers is being questioned by the Minister. CAS and CIGS have been most generous in their support. Your report may make all the difference.'⁷⁸ Keightley's despatch was highly supportive of naval aviation. After setting out the problems of operating ground-attack aircraft from Cyprus, he continued:

It was in these circumstances that the aircraft carriers proved themselves so valuable. The constituted mobile airfields close in to the hostile territory enabled the aircraft from them to carry out ground attack tasks quite impossible from our nearest airfields which were 200 miles away.

He concluded that future such operations would require a balance between land and carrier air power.⁷⁹ Some officials in the Air Ministry objected to his conclusion, arguing that 'he has glossed

⁷⁵ C-in-C Middle East Air Force to CAS, 22 December 1956, AIR 8/2111

⁷⁶ A/ACAS (Ops), 19 February 1957, para. 30

⁷⁷ T. Huddleston to VCAS, 16 January 1957, AIR 8/1940

⁷⁸ Mountbatten to Keightley, 18 February 1957, ADM 205/162. The reference to CAS' support suggests that the Air Ministry was not united against the carriers.

⁷⁹ COS (57) 220: para. 7. See also JP (57) 142, 'General Keightley's despatch', 11 December 1957, DEFE 4/104: paras. 22-23

over the fact that in MUSKETEEER carriers had no air opposition', and: 'Had there been serious opposition the operation of the aircraft carriers might well have been much less effective.'⁸⁰

The Admiralty itself acknowledged that more resolute Egyptian opposition might well have hindered the carriers' operation. Vice Admiral M. Richmond wrote that their performance had been 'exemplary', but 'it must be remembered that the opposition was not substantial'.⁸¹ Had the Egyptian Air Force fought more effectively, its neutralisation would have taken longer and both the Cyprus airfields and the carriers would have had to devote more effort to self defence. The Admiralty could also argue that the conflict had been exceptional in the very proximity of British air bases; elsewhere, the role of naval aviation could be even greater. Vice Admiral Davis argued that 'political circles' did not appreciate the value of naval air power:

Without in any way denigrating from the substantial part the RAF must play in these operations, as indeed in all forms of warfare, I think this brings home that air operations of this nature could not be carried out without naval air. ... In parts of the world, such as the Far East, far from our own airfields, the air part of the operations would probably have to be performed entirely by Naval aircraft, as, for instance, in Korea.⁸²

There was considerable satisfaction that in the Mediterranean, 'which for strategic purposes almost ranks as an inland sea', with many British bases in the area, naval aircraft proved to have some advantages over land-based aircraft, and carrier air power had proved indispensable for the operation.⁸³

The Review continues

The direction of the defence review was already clear – increasing the emphasis on nuclear weapons as a deterrent and decreasing the forces maintained to fight a war if deterrence should fail.

⁸⁰ ACAS (P) to VCAS, 16 October 1957, AIR 8/1940; Brief for CAS, 'General Keightley's dispatch', 6 January 1958, AIR 8/1940: para. 11. The former paper described the limited war role of carriers as 'a live issue'.

⁸¹ Cover letter, Naval Report, ADM 1/27373

⁸² VCNS to First Sea Lord, 1 October 1956, ADM 205/118

In September, Monckton wrote a directive which envisaged total forces falling from 760,000 to 600,000 in 1959 (of which 110,000 would be in the Navy) and 500,000 in 1960 (100,000 naval). He added that no preparations should be made for global war against Russia. An Admiralty memorandum noted the change from lowest priority to no attention at all and remarked caustically, 'no provision should be made by the Navy against the contingency of a war against the only potential enemy who seriously threatens the existence of this country'.⁸⁴ In November, Macmillan argued that too much was being spent on global war in Europe, Fighter Command and the Navy since although these could be seen as the secondary deterrent, the country could not afford too many insurance policies. On 8 January, he told the Cabinet that he wanted a £200m cut in defence (from a budget of £1550m).⁸⁵ The following day, Eden resigned as Prime Minister. Macmillan succeeded him, so his views became increasingly significant.

The Admiralty had always resisted attempts to reduce the priority of preparations for global war and now faced the prospect of seeing them ruled out altogether. The Air Ministry continued to back the marginalisation of preparations for fighting global war and to argue that the Admiralty programme focused too much on it and was excessive for limited war requirements.⁸⁶ However, SACLANT still envisaged a two-phase war, with a first intense nuclear exchange 'followed by a subsequent phase of indeterminable length and lesser intensity', in which conventional forces would continue to fight. Alternatively, there could be a conventional phase of war before nuclear weapons were used. The JPS concluded that accepting his strategic concept might result in force requirements greater than the government sought.⁸⁷ The fact that one of the principal NATO commanders still believed that there could be a conventional struggle either before or after a initial nuclear exchange suggests that the idea was not so ludicrous as to be dismissed out of hand.

⁸³ Naval Report, paras. 335-36

⁸⁴ Memorandum B1102, 'Long Term Defence Review', 24 September 1956, ADM 167/146

⁸⁵ Chancellor of the Exchequer, 24 November 1956, AIR 8/2046. Also his CP (56) 247, 22 October 1956, CAB 129/83, and his comments in CM (56) 73rd Conclusions, 24 October 1956, CAB 128/30; CM (57) 2nd Conclusions, 8 January 1957, CAB 128/30

⁸⁶ Brief for CAS for COS Committee, 15 January 1957, AIR 8/2046

The Admiralty continued to question the assumption that no imports would be needed after the first week of a war, pointing out that it was not accepted by the US or NATO, nor by the USSR, judging by its vast submarine fleet.⁸⁸ The Soviet submarine threat loomed large in the review and in July 1956, the Chiefs of Staff agreed to reconstitute the Maritime Air Committee to examine why the USSR was building such a large fleet when war would involve nuclear weapons.⁸⁹ Its November report noted the increasing number and capability of Soviet submarines, particularly the increasing rate of production since 1950 and the concentration on longer-range boats, which suggested a change from a tactical defence to an offensive naval policy. This, it suggested, was due to the recognition that Germany had come close to defeating the Allies in two world wars by attacking shipping, and also to the desire to counter Allied nuclear-capable carrier forces.⁹⁰ The Air Ministry was suspicious of the Admiralty's motives and questioned why this single aspect of Soviet conventional strength should be singled out. It reiterated that Britain simply could not afford to prepare for a conventional war with the USSR.⁹¹

The Admiralty had already made considerable savings through the 'Way Ahead' programme of reducing shore establishments and the Reserve Fleet but more economies had to be found. Consideration was even given to the elimination of an entire function such as the Fleet Air Arm, the Royal Marines or the submarine service. As the Board was told, however, the need for the first two in limited war was 'self evident', and it also required an anti-submarine capability and hence submarines for exercises. Hence there was no alternative but to cut the Fleet, including destroyers, frigates and submarines, reducing cruisers from nine to three. The Board fought hard for the cruiser, emphasising its cold and limited war tasks, and its wartime role of providing cover for escorts

⁸⁷ JP (56) 173 (Final), 'Pattern of Naval Forces for NATO Control of the Atlantic During the Next Decade', 16 November 1956, DEFE 4/92

⁸⁸ Board Minute 5078, 20 December 1956, ADM 167/146; Board Minute 5083, 10 January 1957, ADM 167/149

⁸⁹ COS (56) 290, 30 July 1956, DEFE 5/70

⁹⁰ COS (56) 396/COS (MA) (56) 2 (Final), Report by Maritime Air Committee, 'The Role of the Russian Submarine Fleet', 2 November 1956, DEFE 5/72. The report was discussed at COS (56) 123rd, 23 November 1956, DEFE 4/92

⁹¹ Brief for Secretary of State and CAS for D (57) 1st of 3 January, AIR 8/2061

protecting shipping. Nevertheless, it agreed that if pressed it would accept cuts in cruisers and the cancellation of the planned guided weapon cruisers (as long as they were replaced by destroyers) in order to preserve the carriers. Still, the light carriers would be cut from two to one, which would have the 'crippling effect' of reducing the carriers from four to three. The effect of this would be partly offset by giving the commando carrier a secondary, hot war role as an anti-submarine helicopter carrier. Overall, the Active Fleet would shrink by a third, the Reserve Fleet by half, and no ship larger than a destroyer would be built for the foreseeable future.⁹² The Admiralty proposed that the *King George V*-class battleships should be scrapped (as they had in 1953, only to be overruled by Churchill). The Board judged: 'There is now no useful role which these battleships could perform under modern conditions.' They had no future as guided missile platforms, would have a short life and be too slow to hunt surface raiders even after expensive modernisation, and had inadequate anti-aircraft protection to perform the only remaining role of shore bombardment.⁹³

Further problems loomed as a result of reductions in the research and development programme. The Defence Research Policy Committee emphasised that smaller UK forces would need to be well equipped, including with nuclear weapons, and drew particular attention to the Navy's vulnerability to air attack in limited war. It therefore approved naval nuclear weapons and the Gannet early warning aircraft, which would help against low-flying aircraft and also against surface ships and submarines. The committee noted that the NA39 was the only strike aircraft in the programme and there was 'no possibility of the Navy being able to carry out its limited war functions unless this aircraft is developed.' It stressed that there were no strategic or technical arguments for cuts in the Navy programme, just financial reasons. However, although there was a 'very urgent need' need to develop adequate guided weapons, the budget would not allow it. Therefore, whilst the committee decided to continue with Sea Slug (which this was questioned by the RAF member), it recommended

⁹² Memorandum B1102, 'Long Term Defence Review', 24 September 1956; Board Minute 5053, 27 September 1956, both ADM 167/146; First Lord to Minister of Defence, 14 January 1957, AIR 19/856; Memorandum B1136, 'The Case for the Cruiser', 12 March 1957, ADM 167/150; Board Minutes 5105, 14 March 1957 and 5111, 11 April 1957, both ADM 167/149

cancelling the naval version of the long-range Blue Envoy surface-to-air weapon and the P177 fighter. It also pointed out that little would be saved while the cost would be to 'cripple the air defence of the Fleet for a decade and undermine its capacity both to support the Army in limited war and to fight the war at sea'.⁹⁴ When the Chiefs of Staff discussed this report, Mountbatten reiterated his concern about air defence, suggesting that the P177 should be reinstated. Brundrett shared his concern, as did Templer, who accepted the proposed reductions in the Army programme but remarked that 'he was extremely concerned at the lack of air defence of the Fleet.' Boyle, although insisting that the RAF would need *both* manned fighters and surface-to-air missiles, asked whether Sea Slug should be replaced by the P177.⁹⁵ As previous studies had shown, however, both systems were necessary for the Navy just as Boyle recognised they were for the RAF. The Navy continued to oppose the cancellation of the P177, stressing that no *military* reason had been given to drop this programme, without which the Fleet would be unprotected in the mid-1960s.⁹⁶

The role of naval aviation

The Admiralty's conception of the use of carriers in global war had been evolving. A series of Tactical School games examined 'the employment – and misemployment of carriers ... the answer looks like being something of a bombshell'.⁹⁷ The exercises pitted carrier strike forces against strong Soviet air and submarine opposition. Captain P.L. Saumarez (of the Tactical, Ship Requirements and Staff Duties Division) reported that as early as 1954 it was concluded that 'any carrier force close enough inshore to support the army would soon suffer intolerable losses'. Through 1955 and 1956 the growing Soviet air and submarine forces, armed with megaton nuclear weapons and supported by airborne reconnaissance radar, made carrier operations in the Greenland Sea increasingly hazardous. According to Saumarez, the only conclusion 'may well be unpalatable for the Royal Navy'. If it was

⁹³ Memorandum B1131, 'King George V class battleships', 25 February 1957, ADM 167/150: approved Board Minute 5101, 28 February 1957, ADM 167/149. *Vanguard* survived in the Reserve Fleet until 1960.

⁹⁴ DRP/P (56) 42, Report by Defence Research Policy Committee, 'Review of the Ministry of Supply Defence Research and Development Programme', 19 September 1956, Memorandum B1101, ADM 167/146

⁹⁵ COS (56) 95th, 25 September 1956, DEFE 4/90

⁹⁶ MISC/M (56) 129th, 27 September 1956, AIR 19/855

to participate in the strategic air offensive against the USSR without prohibitive losses, it would have to operate west of the Greenland-UK line, using in-flight refuelling:

This means that, owing largely to geography, the use of carriers in this strike role against the mainland of Russia is a most uneconomical use of the NATO nations' assets; the strategic offensive in this area could more economically be undertaken by shore-based air forces.⁹⁸

This conclusion was truly inimical and it is small wonder that Mountbatten wrote on the front of the paper: 'This must be kept VERY RESTRICTED in Admiralty and Tactical School'.⁹⁹

There were reasons for a cautious reaction to Saumarez's conclusions. Rear Admiral A.N.C. Bingley, Fifth Sea Lord, pointed out that the analyses ascribed to the USSR every technological advance it could possibly have but did not credit the allied force with US reinforcements or developments such as anti-submarine helicopters and early warning aircraft, nor make allowance for the effect of strategic air attacks. It had always been accepted, he argued, that land-based aircraft would be more economical while their bases survived. The appropriate targets for the Striking Fleet were tactical ones such as airfields and submarine bases, although 'after the opposing Strategic Air Forces have battered each other into the next world the carriers might become more "strategic".' He also recalled that pre-war Tactical School Games had concluded that German surface forces could cut Atlantic sea communications and that the Royal Navy could not operate in Mediterranean against the Italians (even without Germany):

Practically everything that we did in the 1939/45 war was, in fact, proved conclusively before the war to be impossible, and I believe the same conclusion would have been reached if MUSKETEER had been played as a tactical game.

⁹⁷ DCNS to First Sea Lord, 9 August 1956, ADM 205/109

⁹⁸ 'Employment of Aircraft Carriers', 6 September 1956, ADM 205/109

⁹⁹ Mountbatten, 9 September, ADM 205/109

He concluded that such exercises were useful in developing doctrine but should not be taken as proof that an operation was impossible.¹⁰⁰ Vice Admiral Davis argued that in global war there were bound to be casualties but even without counting the effect of strategic bomber attacks on Soviet air bases:

I would give the Striking Fleet a good chance of putting Russian bases out of commission before half of the fleet was sunk. This would represent victory as it would allow the remaining half a completely free hand.¹⁰¹

However, Vice Admiral E.G.A. Clifford, DCNS, commented that Saumarez's conclusions were 'in general agreement' with the views of the Naval Staff and Admiralty Air Defence Working Party. Although based on a worst case scenario, they suggested that 'NATO plans need revision if they are to be realistic as far as the British component of the Strike Fleet is concerned.' The global war role of British carriers required 'reappraisal', though the 'prime requirement for British Carriers, equipped with Strike Aircraft, is for use in Limited Wars'.¹⁰² A growing tendency to look away from global war roles and towards limited war as the carriers' main rationale had been discernible in Admiralty plans for some years. In the run-up to the 1957 review it became still stronger.

In 1956, the Tactical School conducted a game involving British carrier strikes against Soviet opposition before the arrival of US forces. The conclusion was much in line with previous analysis:

These three games all showed that the Russian capability in submarines makes such an operation by British forces alone unacceptably hazardous. In fact, in all three games all the carriers were sunk before achieving worthwhile strikes.¹⁰³

The Admiralty saw the principal danger as coming from Soviet submarines, which according to the games could knock out the carriers 'within a few hours of commencement of hostilities'. It rated submarines as a greater threat than air attack, as Mountbatten wrote to Arleigh Burke (US Chief of Naval Operations), because it expected Soviet long-range aircraft to be dedicated to strategic nuclear

¹⁰⁰ Fifth Sea Lord to First Sea Lord, 12 March 1957, ADM 205/169; Fifth Sea Lord No. 8332, 12 November 1956, ADM 205/109

¹⁰¹ VCNS to DCNS, 22 November 1956, ADM 205/109

¹⁰² DCNS to First Sea Lord, 26 November 1956, ADM 205/109

strikes rather than hunting warships. Burke disagreed, arguing that Allied task forces achieved good results against submarines in exercises, whereas he expected the USSR to use considerable numbers of aircraft against warships. Mountbatten, in turn, felt that in NATO exercises 'submarines are not given a fair chance to threaten the carriers', and wondered whether procedures should change.¹⁰⁴ This is not to suggest that the Admiralty dismissed the air threat. Tactical School games had clearly shown the danger from air attack, while the attention paid to Fleet air defences over the past few years indicate that the message had been received. In April 1957, Mountbatten reported Burke's warning that the Royal Navy underestimated the air threat and Rear Admiral J.G.T. Inglis, Director of Naval Intelligence, informed him that 'Russian maritime air had increased enormously in the last nine months.'¹⁰⁵ The debate concerned which was the greater threat: the problem for Britain was that both Soviet submarines and land-based aviation were becoming more sophisticated and stretching the Royal Navy's ability to perform its envisaged global war role. This unfavourable shift in the balance of forces was one of the major factors in the Navy's decision to emphasise the cold and limited war roles in its defence of the carriers. They were once again being called into question by Duncan Sandys, just as they had been during the Radical Reviews, only this time he was speaking with new authority. Macmillan had made him Minister of Defence and, no doubt spurred by his own experience in that office, had given the Navy's old nemesis increased authority over the Service programmes to drive through the desired cuts.¹⁰⁶

Sandys and the carriers

The Chiefs of Staff recommended that the deployment of British forces should change to reflect the fact that 'the centre of gravity of vital United Kingdom interests is in the area Persia, Iraq, the Arabian Peninsula, East Africa'. There would be an air barrier across much of the Middle East,

¹⁰³ First Sea Lord Newsletter, Cape St. Vincent Day (14 February) 1957, ADM 205/183: paras. 54-59

¹⁰⁴ Mountbatten to Burke, 22 January 1957; Burke to Mountbatten, 4 March 1957; Mountbatten to Burke, 1 May 1957, all ADM 205/169.

¹⁰⁵ First Sea Lord's Weekly Meeting, 10 April 1957, ADM 205/204

¹⁰⁶ 563 HC DEB, 24 January 1957, c. 396

and also possibly a sea barrier if the Suez Canal was closed to Britain. They envisaged a mobile Navy task group standing in for the withdrawn forces, providing 'a stabilising influence throughout the area'. Four Active carriers (including one refitting) would form the basis of task groups at Home, in the Mediterranean and east of Suez. The last would have a commando carrier in addition to the cruiser and escorts of the other groups. This deployment pattern would allow participation in NATO 'while providing in the Indian Ocean a highly mobile and flexible force, complete with its own ground and air element', which could not be affected by closure of the Canal.¹⁰⁷ Indeed, the utility of carriers in distant crises had been demonstrated again in October 1956, at the time of Beijing-inspired riots in Hong Kong. In Cabinet, Eden suggested 'a show of naval strength in Hong Kong waters'; including the two carriers in the Far East.¹⁰⁸

Sandys, however, still opposed the carriers. According to Darby, before Sandys became Minister he had 'privately indicated that the navy would have to bear a large share of the impending cuts and that the aircraft carrier would be the first candidate for retrenchment', and on taking office he told the Admiralty that he viewed carriers as too expensive and 'he intended to phase them out unless he could be convinced of their value.'¹⁰⁹ Crowe judged that Sandys 'seemed to accept all the arguments the Air Force had been directing at the Fleet Air Arm for many years'.¹¹⁰ According to Ziegler, Sandys 'came into office believing carriers to be expensive, vulnerable and largely irrelevant to national needs'. Rhoderick McGrigor wrote to Mountbatten in January 1957 to warn him that the new Minister believed that little in the way of a Navy was needed because H-bombs would do everything, it was a luxury that the country could not afford and 'Aircraft Carriers and Naval Aircraft

¹⁰⁷ JP (57) 4 (Final), 'Long Term Defence Policy', 11 January 1957 and JP (57) 8 (Revised Final), 1 February 1957, both DEFE 6/40; COS (57) 34, 'Long Term Defence Policy', 5 February 1957, DEFE 5/73

¹⁰⁸ CM (56) 71st Conclusions, 18 October 1956, CAB 128/30

¹⁰⁹ Darby, 111. He adds: 'During his period as Minister of Supply, Sandys and the Board had seldom seen eye to eye.' This was something of an understatement.

¹¹⁰ Crowe, 80-81. However, Crowe is quite wrong to describe this as 'the first time a Minister of Defence ... was attacking the Fleet's cherished capital ships', as they had been genuinely questioned during the Radical Reviews – not least by Sandys.

are unnecessary. The RAF can do it all and it is their job.’¹¹¹ It would be fair to describe Sandys as the embodiment of the 1950s anti-carrier case.

Sandys’ main argument was: ‘Naval forces in NATO do not contribute to the deterrent or to the “shield”. In fact, their only use is in global war – and then not until the second phase.’ He therefore believed that naval forces for global war should bear the brunt of reductions in order to minimise the cuts in the more important land and air forces.¹¹² He also doubted that carriers were needed in limited war. Britain would need naval forces only for cooperation with NATO, the Baghdad Pact or SEATO, he argued. Yet its naval contribution to the Baghdad Pact was not important, and ‘if Russian vessels get into the eastern Mediterranean, they could best be dealt with by land-based aircraft’, while although naval power would have a role in SEATO, Britain’s contribution could not be large due to the distance and expense.¹¹³ He described the proposed Mediterranean carrier group as a contribution to NATO and allied limited war operations there, both of which ‘seem desirable rather than indispensable.’ He therefore envisaged Britain’s naval contribution to NATO being confined to anti-submarine warfare and mine countermeasures, which would allow three rather than four carrier groups, one at Home, one east of Suez and one refitting.¹¹⁴

Some comments by Sandys in Parliament suggested that his mind was not quite made up, as he referred to distant limited conflicts in which ‘by virtue of its strategic flexibility and its mobile air power, the Navy undoubtedly has an important rôle to play.’ The more Britain reduced its overseas garrisons, ‘the more we must look to the Navy to protect our interests in those areas with their ships and floating airfields’.¹¹⁵ Yet the questions he asked the Chiefs indicated that the carriers were truly threatened. Having decided to leave the Navy, ‘which presents the most difficult problems’, to last, he asked what the Carrier Task Group in the Indian Ocean could do ‘that cannot equally well be done

¹¹¹ Ziegler, P. *Mountbatten: The Official Biography* (London, Collins, 1985), 550-52

¹¹² Sandys to Powell, 21 January 1957, DEFE 13/237

¹¹³ *Ibid.*

¹¹⁴ Powell to Sandys, 11 February 1957, DEFE 13/237

by land based aircraft or land forces' and inquired about the non-global war roles of the Home and Mediterranean carrier groups. He also asked whether, if the decision were taken that Britain would not survive a nuclear attack:

is it justifiable to retain aircraft carriers in the Fleet at all? Could not the requirements of situations short of global war be met adequately by other types of ship? Assuming that the British contribution to naval activity in global war were limited to the patrolling of the exits into the open Atlantic, could this function not be carried out satisfactorily by land based maritime aircraft, small anti-submarine surface ships, and anti-submarine submarines?¹¹⁵

An Admiralty Board Minute noted that Sandys 'had questioned the value of the Fleet Air Arm, and the heavy carrier in particular' and asked the Chiefs to consider whether the FAA was needed.¹¹⁷ The threat to naval aviation was clear.

The Admiralty believed it had a potential ally in the Army since the Fleet Air Arm had provided 'their only British air support in Korea and their only effective air support in Egypt: we helped them in Malaya and, in a small way, in Cyprus.' As Bingley wrote, Templer could probably be persuaded to support their case because: 'The Army will certainly be in the cart if Mr. Sandys kills the FAA'.¹¹⁸ However, the Chiefs of Staff Committee included Boyle as CAS and was chaired by his predecessor, Dickson. It is therefore striking that when Sandys questioned the need for the large carriers and the Fleet Air Arm, the Chiefs 'insisted on presenting a collective view on this question'.¹¹⁹ The Joint Planning Staff produced a paper on 18 February supporting the FAA which the Chiefs approved unanimously.¹²⁰ It noted that removing the carriers from the Striking Fleet would be a blow to NATO but concentrated its defence of naval aviation on limited war. It argued that carriers could operate where lack of airfields prevented other means of deploying air power (such as

¹¹⁵ 564 HC DEB, 13 February 1957, cc. 1313-14

¹¹⁶ Minister's notes for discussion with COS, 15 February 1957, DEFE 13/237

¹¹⁷ Board Minute 5096, 'Discussions between Minister of Defence and Chiefs of Staff', 20 February 1957, ADM 167/149; COS (57) 44, 'The Fleet Air Arm', 19 February 1957, DEFE 5/73: para. 1

¹¹⁸ Fifth Sea Lord to First Sea Lord, 14 February 1957, ADM 205/170

¹¹⁹ Board Minute 5096, ADM 167/149

¹²⁰ The JPS paper, JP (57) 20 (Final), was approved at COS (57) 14th, DEFE 4/95; it became COS (57) 44, 'The Fleet Air Arm', 19 February 1957, DEFE 5/73

the West Indies or the Falklands).¹²¹ Second, even where airfields existed (e.g. the Middle East or Far East), carriers might be the only means of operating short-range aircraft for air defence, ground attack and reconnaissance. Third, when the 'air barrier' prevented the movement of short-range aircraft, carriers could transport reinforcements. Fourth, they provided an alternative to bases which were liable to political restrictions on their use, including Bahrein, Sharjah, and Kuwait. Finally, carriers had naval roles, since they were the only means of air defence far from land, and were effective against heavy units, shipping and submarines. Carriers were increasingly important, the paper continued, for prestige and internal security as garrisons and air bases were reduced. As for limited war, even though the government had ruled out fighting a major war alone, it would wish to make a contribution in the Middle East (where there were few bases, and which was split by the air barrier, making reinforcement difficult) or the Far East (where operations might be required outside the SEATO area, including in Borneo or against Indonesia). The paper finished:

We conclude that there is a need to retain the Fleet Air Arm because it provides a means of applying or of reinforcing air power in areas where other means cannot be efficiently or economically used. We consider that, in the strategic circumstances with which we are faced, the carrier is the most flexible and valuable unit of the Fleet and that, if economies in naval forces have to be made, these ships should be the last to be reduced.¹²²

Aside from the perspicacity of envisaging operations in the South Atlantic or against Indonesia, the paper is remarkable in giving such strong backing to the carriers that it might have been written by the Naval Staff. Its strong support swayed Sandys, who 'accepted the Chiefs' surprising unanimity on the issue'.¹²³

Sandys therefore accepted the carriers and the Fleet Air Arm in principle and switched to secondary questions, proposing a reduction to three carriers with only two air groups and questioning

¹²¹ It also noted that since Argentina was acquiring a carrier, without British carriers 'it will no longer be possible to contemplate operations of any kind, however remote the need may now seem, in the Antarctic or in defence of the Falkland Islands or its dependencies'. *Ibid.*, para. 9

¹²² *Ibid.*

¹²³ Jackson and Bramall, 317

the need for the NA39 strike aircraft.¹²⁴ On the latter point, Brundrett insisted: 'Without the NA39, the aircraft carriers are not worth having'.¹²⁵ The Fleet Air Arm found some more surprising allies. Air Commodore A.V. Harvey MP, a long-standing critic of naval aviation, urged that any cuts 'should come in the main from the Army and the Royal Navy, excluding the Fleet Air Arm.'¹²⁶ Even John Slessor described carriers as 'immensely formidable' and conceded that 'there is a valuable role for them in the limited wars which in my view are the likely pattern of war in the near future.' Although he added that this was a passing phase because modern means of attack were outmatching air defences, this was a remarkable turnabout from his earlier opinions.¹²⁷

The final stages of the review

The White Paper's details were hammered out during discussions at Chequers and then approved by the Defence Committee on 27 February, before the full Cabinet considered a dozen drafts.¹²⁸ The total strength of the forces would fall to 380,000; naval manpower would fall from 111,000 to 80,000 (including 5000 Marines) for three carrier groups.¹²⁹ The Chiefs as a whole were dissatisfied with the results of the review, and as early as December had demanded that the White Paper should explicitly state that there were no strategic grounds for the reductions. In March they repeated that it should admit that the reductions were 'dictated primarily by economic needs.'¹³⁰

The Admiralty objected to the specific plans for the Navy. Davis pointed out that the envisaged Fleet would be about the same size as the French Navy, half the size of the existing Fleet and one fifth the size of the prewar Fleet. The Board noted that the reductions would preclude 'even

¹²⁴ Board Minute 5096, ADM 167/149; Powell to Sandys, 12 February 1957, DEFE 13/237

¹²⁵ Brundrett to Powell, 13 February 1957, DEFE 13/237

¹²⁶ 566 HC DEB, 7 March 1957, c. 575

¹²⁷ Slessor, J.C. *The Great Deterrent* (London, Cassell, 1957), 61. See also his draft letter to the Times, 15 October 1956, AIR 75/100

¹²⁸ D (57) 2nd, 27 February 1957, CAB 131/18; CC (57) 17th Conclusions, 12 March 1957, CAB 128/31. Successive drafts can be found in CAB 129/84 and 85, with Cabinet discussions in CAB 128/31

¹²⁹ Powell to Sir John Lang, 27 February 1957, ADM 1/27371

¹³⁰ Meeting, Minister of Defence with COS, 4 December 1956, DEFE 32/5; CC (57) 26th Conclusions, 28 March 1957, and CC (57) 28th Conclusions, 2 April 1957, both CAB 128/31

such a limited operation as MUSKETEER' and would lead to a further cut of a third in Britain's NATO contribution (which in total would have fallen by half since 1953). Moreover, it stressed that no other NATO country would replace these forces although Germany was currently forming an Army and Air Force.¹³¹ Yet Admiralty protestations proved no more effective than those of the Chiefs of Staff as a whole. Indeed, some felt that the cuts did not go far enough. Peter Thorneycroft, the Chancellor (and a future Minister of Defence) was dissatisfied and 'expressed concern about the cost of providing aircraft and guided weapons for the Royal Navy', particularly since the White Paper stated that most naval forces would not contribute to the deterrent. He was told that there would be 'very substantial reductions' in naval forces and that the Navy had an important role in limited wars, which required modern aircraft and guided weapons.¹³²

The 1957 Defence White Paper

There is broad consensus that the Sandys White Paper was not revolutionary but rather codified and confirmed tendencies that had been present in British strategy for some years. Stressing the deterrence of war by nuclear weapons rather than planning to fight it with conventional weapons, mainly as a means of saving money, had been a theme since 1952. What was new was that the full implications of this approach were put into effect and significant reductions in conventional forces were announced.¹³³ Even Sandys acknowledged that many of the ideas had been expressed before; what was new, he argued, was the decisions that were based on them.¹³⁴ The White Paper argued that since there was no defence against nuclear weapons, Britain should seek to prevent war rather than prepare for it. The UK 'must possess an appreciable element of nuclear deterrent power of her own', which would be provided by the V-bombers and, increasingly, ballistic missiles. It was no longer appropriate for every alliance member to have 'forces which are by themselves self-sufficient and

¹³¹ VNCS to First Sea Lord, 19 February 1957, ADM 1/27371; Board Minute 5097, 20 February 1957, ADM 167/149

¹³² CC (57) 26th Conclusions, 28 March 1957, CAB 128/31

¹³³ See, for example, Slessor, J.C. 'British Defence Policy', *Foreign Affairs*, July 1957, 551; Rees, W. 'The 1957 Sandys White Paper: New Priorities in British Defence Policy?', *Journal of Strategic Studies*, June 1989; Darby, 95; Navias, M. *Nuclear Weapons and British Strategic Planning, 1955-58* (Oxford, Clarendon, 1991), 1-4.

¹³⁴ 568 HC DEB, 16 April 1957, c. 1758

balanced in all respects' and although Britain would still contribute land and air forces, they would be on a smaller scale.¹³⁵ There was some Parliamentary criticism of the White Paper's reliance on nuclear weapons but Macmillan explained that relying on nuclear deterrence was required for a substantial reduction in the armed forces. They would have to increase if the country was to rely on conventional weapons.¹³⁶

The White Paper pronounced that: 'The rôle of naval forces in total war is somewhat uncertain.' A future war might be very short, with little role for naval operations, or the initial nuclear exchange might be indecisive, which would make the defence of sea communications important. Britain would therefore continue to contribute to NATO naval forces, though on a reduced scale.¹³⁷ The Admiralty 'spin' was that the uncertainty concerned the course of a future war, not the Navy's tasks. It stated that the Fleet required the ability to meet all threats in the air and both on and under the sea, which made the same forces suitable for limited or total war.¹³⁸ Selkirk, the First Lord, insisted that Britain should neither prepare for the last war nor have too set an idea of how a future war might arise: 'We must never make the mistake that the Germans made in 1914 when they had only one plan to put into operation and no alternative to it.' Some predicted that war would be fought by air forces alone, but the USSR and China also had large navies – the USSR would soon be able to keep three times as many submarines in the Atlantic as the Germans had been able to at the height of the war.¹³⁹ There was some criticism of the Navy's emphasis on global war. Both R.T. Paget and Lord De L'Isle complained that the concept of broken backed warfare was still implicit in the Admiralty statement. The former insisted that 'nobody will conduct a submarine war against us except the Russians and that will be an atomic war with an atomic answer'.¹⁴⁰ Slessor criticised what

¹³⁵ *Defence: Outline of Future Policy*, Cmd 124 (1957): paras. 11-23

¹³⁶ 568 HC DEB, 17 April, c. 2039

¹³⁷ Cmd 124, para. 24. After a long Admiralty campaign, the Cabinet agreed to revise the key phrase to state that the role of naval forces in war 'cannot be precisely forecast', only for Sandys unilaterally to change it back to 'is somewhat uncertain' in the final version – which apparently 'annoyed' the Admiralty. Norman Brook to Macmillan, 8 April 1957, PREM 11/1768

¹³⁸ Cmd 151, para. 10

¹³⁹ House of Lords Official Report Volume 203, 9 May 1957, cc. 549, 553 and Volume 204, 3 July 1957

¹⁴⁰ 570 HC DEB, 13 May 1957, c. 122; House of Lords Official Report Volume 203, 8 May 1957, c. 502

he saw as ambivalence, with the White Paper looking to deter rather than fight war but also devoting considerable effort to anti-submarine warfare.¹⁴¹

The White Paper mentioned anti-submarine operations in total war but concentrated on naval roles in limited war. Forces overseas would be reduced and replaced by a central strategic reserve backed by transport aircraft, and:

On account of its mobility, the Royal Navy, together with the Royal Marines, provides another effective means of bringing power rapidly to bear in peacetime emergencies or limited hostilities. In modern conditions the role of the aircraft carrier, which is in effect a mobile air station, becomes increasingly significant.

The Navy would therefore be organised in carrier groups (one of which would be deployed in the Indian Ocean), including reduced numbers of cruisers and escorts, some of which would carry guided weapons.¹⁴² Even Lord Swinton accepted that the Navy and its carriers would be useful in limited war.¹⁴³ Slessor concurred, writing that limited war required troops who would need air cover, 'a function not only of long-range shore-based aircraft but also – as laid down in the White Paper – of the carrier task forces of the Navy'.¹⁴⁴ Christopher Soames, Parliamentary and Financial Secretary to the Admiralty, stated that a principal lesson of recent limited wars had been, 'the great importance of being able to deploy air power from a mobile carrier, which can be first into action and which can be placed where you want it.' Thus, in Korea the first maritime air strike had been launched, by a British carrier, just six days after the invasion, while land-based aircraft did not enter the war for another three weeks for 'logistical reasons'. He also drew attention to the role of carrier aircraft in the Suez operation despite the proximity of major British bases. Air power would not be the only naval contribution, he noted, since although air transportation could cope with light equipment, heavy vehicles and logistic support would have to go by sea.¹⁴⁵

¹⁴¹ Slessor, 'British Defence Policy', 551-52

¹⁴² *Cmd 124*, paras. 33-39

¹⁴³ House of Lords Official Report Volume 203, 8 May 1957, 462-63

¹⁴⁴ Slessor, 'British Defence Policy', 560

¹⁴⁵ 570 HC DEB, 13 May 1957, cc. 56-57

The Admiralty was confronted by another significant technological innovation. It had been developing a nuclear-powered submarine for some years and in 1957 announced the order of the first one, to be called HMS *Dreadnought* to emphasise the revolution in warfare it was expected to inaugurate. As Selkirk explained, the name was chosen:

to indicate the inception of a completely new period. In future, it will be rare for a surface ship to fight a surface ship, except perhaps on isolated occasions. Ships on the surface will now normally fight aircraft or submarines, or support amphibious landings of some character or other.

Hence, he continued, the carrier had become the centre of the Fleet.¹⁴⁶ Exercises conducted in October 1957 with USS *Nautilus*, the first nuclear-powered submarine, showed that such boats could ‘disregard the threat from the air’ and, indeed, that without a major technological breakthrough, the only counter to it would be another nuclear submarine.¹⁴⁷ The Board of Admiralty agreed that nuclear propulsion would ‘change the strategy and tactics of naval warfare to at least the same extent as the introduction of steam propulsion’ and that it could eventually replace the strategic bomber as the guardian of Britain’s nuclear deterrent.¹⁴⁸ The nuclear submarine is another case of the Admiralty embracing rather than resisting technological change, even though it was recognised as a major challenge to the existing shape of the Fleet.

The culmination of the review involved some changes in the Admiralty programme. The cancellation of the guided weapon cruisers, which Soames described as the only project of major importance to be sacrificed, was announced along with the order of four guided weapon destroyers and progress with the *Tiger*-class cruisers. Afloat support would be improved and the Reserve Fleet reduced, which included scrapping *King George V*, *Duke of York*, *Anson*, and *Howe*. However, the carriers (described by Soames as ‘the capital ships of modern times’) would be strengthened by HMS

¹⁴⁶ House of Lords Official Report, Volume 204, 3 July 1957, c. 638

¹⁴⁷ First Sea Lord’s Weekly Meeting, 17 October 1957, ADM 205/170; C-in-C Home to First Sea Lord, 24 October 1957 and 30 October 1957, ADM 205/169

Victorious, which would be completed at the end of the year and would have a fully angled deck and new steam catapults, arrestor gear, radar and landing control systems. *Eagle* would be the next to be modernised and would be brought up to the same standard as *Victorious*, though for a far lower price since she was newer. It was noted, however, that not all the operational carriers would be similarly modernised because of the cost. The Admiralty statement listed the operational 'aircraft carriers' (no longer distinguishing between fleet and light carriers) as *Ark Royal*, *Eagle*, *Albion* and *Bulwark*. Work was continuing on *Victorious* and *Hermes*, *Centaur* was being modernised, *Ocean* and *Warrior* were being used for trials and training (the latter supporting the British hydrogen bomb test in May). Although the overall naval budget was falling by 10%, the amount being spent on aircraft was set to increase. The N113 Scimitar fighter would join the Fleet in mid-1958, while work on the DH110 and the nuclear-capable NA39 was continuing. An order had been placed for 'considerable numbers' of Whirlwind helicopters, which were primarily anti-submarine but could also be used for troop transport.¹⁴⁹ The Navy had emerged from the review better than might have been expected, particularly in the light of Sandys' previous hostility towards naval aviation. The White Paper had not finally settled these issues, however, as they continued to boil over the coming months. Yet far from being eroded the Navy's position actually improved.

The aftermath of the Sandys review

There was some concern in the Admiralty that the proposed carrier force would be inadequate. Vice Admiral M.L. Power argued that 'except against a very primitive foe the single carrier is of very little use':

The lesser breeds without the law have an awkward habit of possessing themselves of MIG 17s etc. However inefficient they may be at handling them, there is always the possibility of the odd bold and efficient one. Nothing could make us look sillier in the course of a police action than to have the only carrier put out of action by such means.

¹⁴⁸ Board Minutes 5161 and 5163, 15 October 1957, ADM 167/149

Britain 'might reasonably take a chance on one East of Suez', but any operation in the Mediterranean would demand two carriers, and it might not be possible to unite them via the Suez Canal. However, he realised that the priority was first to get carriers accepted.¹⁵⁰ Bingley felt that with four task forces it should be possible to move a second one through the Canal before Nasser closed it, although with only three (one of which would be non-operational) it would be more difficult.¹⁵¹ Mountbatten acknowledged that two carriers operating together were more than twice as effective as one alone and admitted that he had hoped to retain four carriers to allow the operation of two pairs, but the money was unlikely to be available.¹⁵² Nevertheless, having secured in principle the survival of the carriers, Admiralty attention could now be devoted to seeking gains at the margins. It undertook some discreet – and some more open – lobbying to improve its position. It made the most of allied objections to reductions in Britain's maritime contribution to NATO and encouraged Commonwealth governments and other UK government departments to make their concerns known. The effort included 'Fairlead', a conference held at Greenwich in late May, involving presentations to MPs and industrialists which sought with some success to explain the Navy's roles in global and limited war.¹⁵³

The Admiralty seemed to be pushing against a door which was at least half open. Sir Richard Powell (Permanent Secretary at the Ministry of Defence), who had been no great supporter of naval aviation during the review, wrote to Sandys arguing that additional large savings would require a major policy shift, such as abolishing the Fleet Air Arm. He rejected this option, however, because it:

would destroy the Navy and would, I believe, be unsound for military reasons. Though it may be difficult at the moment to foresee circumstances in which naval air power might be indispensable, it is the unforeseen situation (Korea and Suez) that is the problem and there must be some margin for contingencies.¹⁵⁴

¹⁴⁹ *Cmd. 151*, paras. 16-25, 31-38; 570 HC DEB, 13 May 1957, cc. 45, 53-55, 178

¹⁵⁰ Flag Officer Aircraft Carriers to First Sea Lord, 28 February 1957 and 8 April 1957, both ADM 205/169

¹⁵¹ Fifth Sea Lord to First Sea Lord, 12 March 1957, ADM 205/169

¹⁵² First Sea Lord's Newsletter, Battle of Sluys Day (24 June) 1957, ADM 205/183

¹⁵³ See comments by MPs and Lords, 570 HC DEB, 13 May 1957, cc. 93-100; House of Lords Official Report, Volume 203, 9 May 1957, cc. 604-05, and Volume 204, 3 July 1957, cc. 595, 622

¹⁵⁴ Powell to Sandys, 11 July 1957, DEFE 13/237

The Minister apparently accepted this line, informing the Cabinet Defence Committee that large-scale reductions in expenditure could not be achieved ‘without drastic amputations’, such as: ‘Abolition of the Fleet Air Arm, without which the Navy would be converted from a fighting fleet into a maritime police force’.¹⁵⁵ That such strident support of naval aviation appeared above Sandys’ signature is remarkable indeed. Mountbatten informed his colleagues of growing support in the Cabinet for scaling back the naval reductions, particularly from the Foreign, Colonial and Commonwealth Secretaries. He also believed that Sandys was looking favourably on Admiralty proposals for a modest increase in the naval budget and manpower to raise the number of frigates.¹⁵⁶

The government was still adamant in its marginalisation of plans to fight a global war. Macmillan argued that first priority was the deterrent, which included preserving NATO and the American presence in Europe, and questioned whether any resources should go to conventional preparations for total war.¹⁵⁷ Sandys inquired what could be saved:

if it were decided that Fleet Air Arm should not be equipped for global war, and that it would not in the next five years be necessary to provide our aircraft carriers with more advanced types of aircraft or to equip the Navy as a whole with any guided missile defences?¹⁵⁸

Accordingly, Macmillan requested a study of questions including ‘the whole role of the Navy, to determine its tasks in peace and in either limited or global war’.¹⁵⁹ This resulted in the ‘Autumn Naval Rethink’, which was something of a misnomer since the resulting paper retained the main recent themes of Admiralty strategic thinking and tinkered with how they were justified and explained. Indeed, it was something of a masterpiece of tailoring the presentation of policy objectives to fit a government’s preferences.

¹⁵⁵ D (57) 13, Minister of Defence, ‘Defence Expenditure’, 26 July 1957, CAB 131/18

¹⁵⁶ First Sea Lord’s Weekly Meeting, 17 July 1957, ADM 205/204. The Earl of Home wrote a supportive paper: D (57) 21, Secretary of State for Commonwealth Relations, ‘Implications for the Commonwealth of the Proposed Naval Reductions’, 22 August, CAB 131/18

¹⁵⁷ D (57) 6th, 31 July 1957, CAB 131/18. The same meeting approved the idea of increasing the number of escorts to allow greater coverage of the Far East and South Atlantic.

¹⁵⁸ Note for Prime Minister for Defence Committee, 1 August 1957, DEFE 13/237

¹⁵⁹ D (57) 7th, 2 August 1957, CAB 131/18

The paper maintained the Admiralty insistence that conventional preparations for global war were necessary, particularly against the ever growing Soviet submarine threat. However, the Board agreed to eschew reference to broken-backed warfare because the possibility 'commanded no respect in Government circles'.¹⁶⁰ The paper therefore justified conventional forces by the need for a significant contribution to NATO, which was itself a deterrent to war. Moreover, it stressed that the forces which would provide this indirect deterrent were the same as those needed for cold and limited war roles, on which the paper concentrated. It argued that given the limitations on aerial mobility caused by 'loss of staging posts and restricted overflying rights', carrier aviation would provide a 'mobile deterrent to the violation of our interests'. The paper therefore stuck closely to recent Admiralty arguments, stressing, first, carrier task groups and amphibious forces in limited war and, second, an anti-submarine contribution to NATO, though presenting them to appeal more to the government.¹⁶¹ According to Darby, 'Sandys was well pleased and considered the paper a major advance in Admiralty thinking.'¹⁶²

The road was not yet perfectly smooth. In October, when SACLANT praised the performance of the British carrier in 'Exercise Strikeback', Sandys retorted that 'the British aircraft carriers in the future would not form part of the striking force, as the submarine threat was the major one for this country to counter.' He also stated, contrary to Admiralty advice, that Sea Slug would replace manned fighters in air defence (which was not important because the USSR had no carriers and the risk of attack by long-range land-based aircraft was 'not very great') and that strike aircraft would not be required, since *Sverdlovs* were unlikely to go far out into the Atlantic and if they did, the RAF would deal with them. He wrote to Macmillan arguing that the British contribution to NATO would be 'two carriers equipped with anti-submarine aircraft and helicopters only'; Britain would not

¹⁶⁰ Board Minute 5155, 4 September 1957, ADM 167/149

¹⁶¹ The paper was sent to Sandys on 13 September and went to the Defence Committee as D (57) 29, 'Role of the Navy', 15 November 1957, CAB 131/18

¹⁶² Darby, 115

contribute to air defence and strike, which were far less important than anti-submarine warfare and should be left to the US Navy.¹⁶³ Mountbatten told the other Chiefs that he had received a minute from Sandys 'from which it appeared that he had reverted to his original view on the role of carriers' and which contradicted the conclusions of the Chiefs' February paper.¹⁶⁴

In early November, however, Sandys was persuaded of the Navy's case when he dined on HMS *Victory* and was entertained at the First Sea Lord's country house.¹⁶⁵ Mountbatten concluded that Ministers were becoming more sympathetic to the Navy and predicted that Sandys' forthcoming paper would accept the arguments for an additional carrier, the commando carrier, the NA39 and extra manpower. There would be a 'price', namely a greater proportion of anti-submarine aircraft on the Home and Mediterranean Fleet carriers and the closing of some naval air stations.¹⁶⁶ Sandys' memorandum (which was sent to the Defence Committee along with the earlier Admiralty paper) was much as Mountbatten expected. It stressed the east of Suez role yet accepted the need for a British contribution in the Atlantic and Mediterranean which, given the threat, would be based on two carriers, 'the equipment of which would be predominantly for the anti-submarine role'. However, they would still need some fighter and strike aircraft for protection against air attack and as backing for the Eastern Fleet carrier. The latter would have two fighter, two strike and one anti-submarine squadrons, while the western carriers would each have three anti-submarine, one fighter and one strike squadrons. Fewer Scimitars and Sea Vixens would be ordered, though some NA39 strike aircraft would be required (and to make its order and production economical, the RAF should adopt it as the Canberra replacement). Additional S58 anti-submarine helicopters would also be ordered. Sandys therefore accepted the case for a fourth carrier (to allow three in service with one in refit) as well as an additional £5m per year and 8,000 more men.¹⁶⁷

¹⁶³ First Sea Lord's Meeting, 8 October 1957, ADM 205/170: Sandys to Macmillan, 3 October 1957, PREM 11/1773

¹⁶⁴ COS (57) 77th, 9 October 1957, DEFE 32/5

¹⁶⁵ Ziegler, 553

¹⁶⁶ First Sea Lord's Meeting, 13 November 1957, ADM 205/204

The Navy had won the desired fourth carrier. Although a change of air group complements had been conceded, the western carriers would retain both strike and fighter aircraft, and all the aircraft projects would continue, even if in reduced numbers. Sandys' compromise was therefore a long way from proposals made during the Radical Reviews to reduce the carriers to a purely escort role. In any case, the Admiralty's concession on carrier air groups (which Grove describes as 'just a paper one')¹⁶⁸ was subsequently reversed by Harold Watkinson, Sandys' successor, who in 1959 approved an Admiralty proposal to even out the complements of carriers east and west of Suez.¹⁶⁹

The Air Staff was evidently most perturbed by Sandys' about face, describing the paper as 'highly unfavourable', because there were so few savings that the RAF might face reductions. They noted that the gap between Sandys' proposals and those of the Admiralty was very narrow: both suggested four carriers, one commando carrier and three cruisers, and although Sandys advocated fewer submarines (31 rather than 43) and minesweepers (18 rather than 27) than the Admiralty, he wanted an *additional* escort (49 as against 48).¹⁷⁰ At the Defence Committee meeting which considered the proposal, Sandys set out his arguments for 'balanced all-purpose naval forces with an appropriate air contingent' east of Suez, while in the NATO area:

The forces west of Suez should be so composed as to permit rotation of this air component with the Eastern fleet, but otherwise should concentrate primarily on an anti-submarine role, and should no longer incorporate a contribution to the allied naval strike forces.

The RAF representatives argued that maintaining naval forces for NATO contradicted the policy of preventing rather than fighting global war. They were told that withdrawing the UK contribution could jeopardise the survival of NATO and in any case, considerable cuts were being made in the

¹⁶⁷ D (57) 28, Minister of Defence, 'Role and Composition of the Navy', 14 November 1957, CAB 131/18; Sandys to Macmillan, 12 November 1957, PREM 11/1773

¹⁶⁸ Grove, 211

¹⁶⁹ D (59) 42, Minister of Defence, 'Fighter and strike Components of the Fleet Air Arm', 23 December 1959, CAB 131/22. approved at D (59) 13th, 31 December 1959, CAB 131/21

¹⁷⁰ Brief for D (57) 10th, 18 November 1957, AIR 8/2135

Navy, which the government would be hard pressed to persuade its allies to accept.¹⁷¹ Formal approval followed in December when the Chiefs of Staff and, on New Year's Eve, the Defence Committee ratified Sandys' proposals.¹⁷²

The Admiralty retained its belief in the need to prepare for global war in the face of government insistence that regardless of the strategic case, Britain could not afford to do so. Yet doubts about the viability of the envisaged role for British carriers in such a conflict had been growing within the Admiralty. While still defending a capability for protecting sea communications in total war, it was therefore more receptive to a new rationale than hitherto. As one door closed another opened: if nuclear weapons made total war less likely, they increased the probability of limited wars and also made it more important to prevent them escalating. The need to save money which called into question the Navy's global war forces also led to the abolition of National Service and the elimination of garrisons and air bases overseas, which had supported worldwide interests that the government continued to see as vital. The proven ability of carrier and amphibious forces to offer a mobile and flexible tool for cold and limited war contingencies filled this gap and provided a new focus for the Fleet. Air power in the form of strategic nuclear power had thrown into question the Navy's role in total war. Tactical, carrier-based air power provided a new role for it, which was sufficiently convincing to win the support of the leading Ministerial opponent of naval aviation.

Epilogue

The Admiralty ended 1957 in strong condition. Autumn 1957 saw four guided weapon destroyers ordered. The following year it was announced that HMS *Albion* would be converted to join *Bulwark* as a second commando carrier, while two new amphibious assault ships were ordered.¹⁷³

¹⁷¹ D (57) 10th, 18 November 1957, CAB 131/18

¹⁷² COS (57) 263, 'Role and Composition of the Navy', 4 December 1957, DEFE 5/80, which became D (57) 38, 4 December 1957, CAB 131/18 and was approved at D (57) 14th, 31 December 1957, CAB 131/18

¹⁷³ They would become HMS *Fearless* and *Intrepid*, which served in the Falklands War and are still in commission in 1999; replacements for them were announced in 1997 to be named, appropriately, *Bulwark* and *Albion*.

Although the P177 fighter was cancelled in July 1957,¹⁷⁴ the Sea Vixen and NA39 were still on course and the Scimitar was about to enter service. Thetford described the Scimitar, the first Fleet Air Arm aircraft capable of carrying nuclear weapons, as marking 'the beginning of a new era in naval air warfare'.¹⁷⁵ Moreover, the Navy had a generally accepted strategic role which secured its immediate future and would win an increased share of the defence budget over the next few years as further losses of bases and a succession of crises confirmed the need for a mobile force east of Suez and vindicated the Carrier Task Group in performing it.

Clouds could be discerned on the distant horizon, however. The failure of the Sandys review to analyse commitments as rigorously as the forces required to fulfil them became apparent as Britain's economy continued to falter. Indeed, in December 1957, just as the Defence Committee was approving the new vision for the Navy, the Chancellor was demanding a new round of defence cuts.¹⁷⁶ Moreover, the Admiralty programme contained an ominous hostage to fortune in the lack of new carriers: the wartime vessels would soon need replacement and the struggle for government approval of a new carrier would dominate Naval Staff attention over the coming years. This battle was fought against the bitter opposition of the Air Ministry which, faced with the removal of the nuclear deterrent from increasingly vulnerable V-bombers and its transferal to nuclear submarines, seized on the east of Suez role as a potential saviour of manned air power (shifting from strategic to tactical air power in the process). Nevertheless, the Navy's performance of this role was sufficiently convincing to win the first round of the campaign and a new strike carrier, CVA-01 (to be named HMS *Queen Elizabeth*), was announced in 1963.

Bitter inter-service arguments about the relative merits of land- and carrier-based aviation continued until a Labour government decided briefly in favour of the former, cancelling CVA-01,

¹⁷⁴ See AV1A 54/2172

¹⁷⁵ Thetford, O. *British Naval Aircraft 1912-1958* (London, Putnam, 1958), 30

before abandoning the east of Suez role altogether.¹⁷⁷ This decision was imposed despite the experience of the 1950s and 1960s, which demonstrated that naval aviation constituted an effective means of pursuing British interests and a valuable contribution to allied operations. Some naval aviation was preserved with the *Invincible*-class vessels which were intended for anti-submarine operations in the north-east Atlantic, the government and NATO having belatedly come to the conclusion that all-out nuclear war was not the only possible scenario. Initially intended as platforms for helicopters and an area air defence missile, these 'cruisers' also operated the pioneering Sea Harrier vertical take-off and landing aircraft. These ships were threatened by the 1981 defence review, which rested partly on the claim that surface ships were vulnerable to air attack and could largely be replaced by land-based aircraft and nuclear-powered submarines.¹⁷⁸ Once again an unexpected conflict, in the Falkland Islands, disproved these arguments in 1982. After the cold war, the *Invincible*-class carriers proved so useful in projecting power in support of British interests around the world – a role for which they had not been designed – that another Labour government announced their eventual replacement by two larger carriers. British naval aviation would therefore sail through stormy waters over the coming decades and would make several changes of course but the basis of the developments and debates that followed was effectively laid by 1957.

¹⁷⁶ C (57) 297, Minister of Defence, 'Defence Expenditure 1958-59', 30 December 1957 and C (57) 298, Chancellor, 'Defence Expenditure 1958-59', 31 December 1957, both CAB 129/90; discussed at CC (57) 86th Conclusions, 31 December 1957, CAB 128/31

¹⁷⁷ *Statement on the Defence Estimates 1966 - Part I: The Defence Review*, Cmd 2901 (1966)

¹⁷⁸ *The United Kingdom Defence Programme: The Way Forward*, Cmnd 8288 (1981)

Conclusions

Air power was undoubtedly an important factor in the evolution of British defence policy and the Royal Navy between 1945 and 1957. Arguments relating to it were central in many challenges to the Navy during the endemic post-war reviews. Naturally, other factors were also important. First among these was the financial stringency under which British defence policy operated, which created great pressure to reduce government expenditure and to divert it away from defence. The effect was to increase the importance of setting priorities and thereby to raise the salience of arguments that particular military means were obsolete and that others were more efficient or more economical. Arguments about air power were often the rationale used for attacks on naval power for which the principal motive was economic. The second additional element was other concurrent technological changes. Just as the first wave of theorists had to analyse air power alongside the radio, submarines and the tank, those attempting to understand its impact after 1945 had to take account of advances including guided weapons, ballistic missiles, jet propulsion and nuclear weapons. Each was connected with air power and was at times heralded as an additional challenge to navies. Other innovations which were added to the blend included the helicopter, airborne radar, electronic warfare, nuclear-powered submarines and vertical-take off aircraft (although the latter was still nascent at the end of the period under consideration). The Admiralty had to interpret their effect, navigating between the Scylla of overestimation and the Charybdis of neglect, and incorporate them into the structure and strategy of the Fleet. On both counts its record between 1945 and 1957 was impressive.

The policy process

The decision-making process depended on politics and personalities as well as on the strategic merits of specific issues. During the period under consideration, the Admiralty performed effectively in presenting its case against a background of continually changing UK strategy, despite

the fact that the arguments against it kept shifting. A great deal of autonomy rested in the Service departments, which provided the Admiralty with a strong voice in the policy process and the institutional position to assert its views. On the other hand, its various opponents also had significant institutional power, notably in the Air Ministry, the Ministry of Supply and (to a lesser extent) the Ministry of Defence, while the Treasury would always add its voice to calls for savings. There were frequent complaints in Parliament that the Services enjoyed too much ability to frustrate policy initiatives, resulting in a tendency towards compromise and equal budget shares at the expense of a unifying and effective strategic vision. It was certainly true that an individual department had a great deal of opportunity to object to a policy it found inimical but there was no veto and major changes of direction did occur. Each of the three Services successfully fended off some undesired proposals in these years but also had to accept a number of unpalatable policies. For example, the War Office and the Admiralty fought persistently against the government's marginalisation of conventional preparations for global war but were ultimately unsuccessful. The frustration of those whose more radical suggestions were not put into effect is natural but it would be inaccurate to ascribe such failures solely to Service obstructionism. The checks and balances of the policy-making process exposed any proposal to detailed scrutiny and offered the Services the opportunity to object and to delay. Yet they could be and occasionally were overridden. Macmillan's reforms of 1957 increased the authority of the Minister of Defence relative to the Service departments. Subsequent moves further towards centralisation increased the ability of the Minister to impose policies on recalcitrant Services; it did not necessarily improve the quality of these policies.

As this thesis has shown, to secure a change of policy or to defeat a proposal it was necessary to establish and maintain support outside the individual Service department. It proved important for the Admiralty to gain at least the acquiescence of the Air Ministry and preferable to have its support, as it did during the Sandys review. The War Office was more often of assistance to the Admiralty. The Minister of Defence could be an important ally, so the conversion of Lord Alexander to support

the carriers during the Radical Reviews was of great significance, as was the fact that Sandys finally backed the Navy against the Air Ministry and the Treasury in late 1957. Other useful allies could be found in Cabinet, the Civil Service, Parliament and overseas; it is clear that the Admiralty and the Air Ministry had close contacts with their counterparts in the US Navy and USAF, whose cold war at times drew in the British Services. Each of these elements was at times mobilised in support of the naval case.

The Admiralty was assisted by the strong personalities of McGrigor and Mountbatten, who provided strong and effective leadership and – especially the latter – were masterful Whitehall operators. It benefitted from the longevity in office of J.P.L. Thomas (later Lord Cilcennin), who was First Lord of the Admiralty for over five years, in stark contrast to the position of Minister of Defence, which was occupied by five men during his tenure. Of these Ministers, Lord Alexander seems not to have been a strong character and was overshadowed by Churchill, who was evidently reluctant to relinquish his tight grip on defence policy. Churchill had a significant impact, particularly in extending the life of the battleships beyond the Admiralty's wishes and in increasing the leverage of the carrier sceptics. Attlee and Eden each played a less prominent role than Churchill in defence policy. Macmillan was a more significant actor as Minister of Defence, when he oversaw the closing stages of the second Radical Review, and as Prime Minister when he unleashed upon the Admiralty its *bête noire* as Minister of Defence. Duncan Sandys was one of the most significant characters in the story told in this thesis. As Minister of Supply he was the main force behind the Radical Reviews (with Lord De L'Isle, his accomplice, taking a far more hostile line as Secretary of State for Air than any Chief of the Air Staff other than Slessor). It is difficult to conceive of a more challenging test for the Admiralty than Sandys' appointment as Minister of Defence, with heightened powers. He could be somewhat capricious and tended to excessive enthusiasm over innovations, including guided missiles and nuclear-powered submarines as well as land-based air power. His conversion to fulsome support of the Navy and the carriers was therefore a striking success.

The Admiralty enjoyed a certain amount of luck in events over which it had no control. Both the Korean War and the Suez crisis were immensely timely reminders of the likelihood of unexpected conflicts and of the value of naval power in them. These two major conflicts and a series of lesser crises and incidents greatly strengthened the arguments on behalf of the Navy. Similar external factors came to the Navy's assistance in 1981 and in 1997 – but not in 1964-66. Whatever the quality of arguments or the balance of opinion in Whitehall, good luck proved as important in the political process as it did in war. The Admiralty had a reputation for effectiveness in policy battles.¹ For the years 1945-57, this judgement seems well founded.

The challenge of air power

The Introduction to this thesis argued that the interwar challenge to navies posed by air power occurred on three levels: strategic, operational and tactical. A similar analytical division may be used for the 1945-57 period.

The strategic level

Strategically, air power threatened to marginalise British naval power. Its impact was felt in two ways. The first was that the potential threat from Soviet tactical air power and short-range surface-to-surface missiles was so great that it compelled Britain to take on a renewed 'Continental Commitment'. A British contribution in Europe of land and air forces was vital to help prevent the USSR from seizing air bases or launch sites within range of the UK and to increase the defensive depth for radar and fighters. There was still a role for the Royal Navy in helping to defend the sea communications on which the country and NATO forces in Europe depended. Nevertheless, adding

¹ 'There is little doubt that the Admiralty is the most effective of the three service headquarters. It is described as an "absolutely first-class organisation, in a class by itself".' Snyder, W.P. *The Politics of British Defense Policy 1945-62* (Columbus, Ohio University Press, 1964), 124-29; quotation, 124.

land forces to the air and naval forces which were already seen as necessary for the defence of Britain and her empire added another expensive strain to the defence budget.

The second and more obvious strategic challenge of air power lay in the advent of nuclear weapons, the immense destructive potential of which seemed to vindicate the claims of the interwar air theorists. In the late 1940s it was claimed that nuclear-armed strategic bombing would defeat the USSR and offset its conventional superiority. Once the Soviet Union acquired its own nuclear weapons, however, this strategy looked flimsy and was replaced by the idea that nuclear weapons would make war less likely, deterring any attack on the West. Towards the end of the period studied in this thesis, this became less of a purely air power argument as ballistic missiles began to supplant manned aircraft for delivery of nuclear weapons, and eventually submarines would become the preferred, mobile platform for them. Still, for most of this period nuclear weapons were interpreted as an extension of air power.

The priority attached to the nuclear deterrent combined with pressures on the defence budget to pose considerable difficulties for the Royal Navy. Medium bombers and the nuclear programme always had first call on resources, making the task of arguing for expenditure on the Navy more difficult. Simultaneously, doubts were raised over the role of naval power if wars were either to be deterred by or fought with nuclear weapons. The initial response of the Admiralty was to propose the concept of 'broken backed warfare', which envisaged a prolonged period after the initial nuclear spasm in which conventional warfare would continue. When thermonuclear weapons cast doubt on the idea of fighting on, the Admiralty argued that seaborne supplies would be needed for survival and to rebuild the country. There were legitimate doubts about this concept, notably that even if the Navy survived, the probable destruction of ports undermined the need for protecting shipping. The 'broken backed' term was not used publicly after the 1954 Defence White Paper although the concept clearly survived behind the scenes, but was marginalised because of the cost its acceptance would entail.

The Admiralty eventually recognised that it had lost the political battle and the term was dropped in the run-up to the 1957 White Paper. Nonetheless, the Admiralty clung to the belief that it was vital for the Royal Navy to be able to contribute to the defence of sea communications in total war.

Other strands of the Admiralty's strategic case were that there could be a non-nuclear war with the USSR, or at least a non-nuclear phase of a war, in which naval power would be important. Neither had been generally accepted by 1957, because of the assumption that the superpowers would inevitably use nuclear weapons in any direct war and the additional financial strain which adopting this concept would entail. There were some suggestions that the Navy could contribute to the nuclear deterrent and thus play a part in the strategic offensive, but the Royal Navy lacked the capabilities of the US Navy in this respect. Seeking to acquire them would inevitably have provoked the suspicion and determined opposition of the Air Ministry. The most convincing defence that the Navy offered was that some capability to protect shipping was itself a vital part of the deterrent, as well as indirectly important for the continuation and cohesion of NATO. This argument was successful and even convinced Duncan Sandys, the leading carrier sceptic and architect of the 1957 review.

Nuclear weapons had other effects on the Navy in changing its structure, with the rationalisation and pruning of shore establishments carried out under the 'Way Ahead' programme and huge reductions in minesweepers and the Reserve Fleet (because of the improbability of a prolonged period of mobilisation). But the Navy gained additional afloat support and received approval to acquire tactical nuclear weapons, although these were not in service by 1957.

As the 'total-war' case for the Navy began to look increasingly dubious, an alternative emerged in the form of cold and limited war tasks. This was linked to the central confrontation because of the strategic assessment that as thermonuclear weapons made direct East-West war less likely, so lesser conflicts became both more probable and more important to contain by early action.

This strategic case was reinforced by political pressures as the need for financial savings compelled a reduction in the size of the armed forces and hence a reduced reliance on garrisons. Simultaneously, overseas bases and overflight rights were lost or became liable to greater restrictions. The effect of these factors was to increase the attractiveness of mobile naval forces, carrying their own integral land and air elements, whose utility had been proved in the Korea and Suez operations. From the inter-service point of view this outcome was also appealing, since the RAF was satisfied with strategic air power and ready to see the Royal Navy take over limited conventional operations. The growing military sophistication of potential regional adversaries meant that the Admiralty's most cherished programmes would still be required albeit refocused towards the requirement of limited war. Routine deployment in unstable areas and limited power projection therefore became the central strategic rationales for the Royal Navy. The degree of change should not be exaggerated, however, as such operations had long been a naval concern, and both carriers and other components of the Fleet would continue to have a role in defending sea communications.

The operational level

The principal arguments of those challenging the Navy in this period lay on the operational level. They claimed that land-based aircraft could perform many naval tasks more efficiently and economically. Most prominent was a challenge for the Navy's strike role against warships and shore targets. Their case implied that land-based aircraft could replace not only naval strike aircraft but also the battleships and cruisers whose main purpose was countering enemy warships. This argument also had a financial aspect: since medium bombers were required for nuclear strikes, they could cost-effectively take on maritime strike roles as well. Such claims were pressed frequently and vigorously by the Air Ministry (especially under Slessor as Chief of the Air Staff and De L'Isle as Secretary of State) and found a sympathetic hearing from Ministers who were keen to find savings. The effect of acceptance of their views would have been to eliminate the fleet carriers, leaving only light carriers, remove the latter's strike aircraft and cancel the programme for the NA39 strike aircraft.

The Admiralty's rebuttal analysed the separate elements of the strike role. First, it argued that naval strike aircraft were needed against warships, notably the new *Sverdlov*-class cruisers. Britain needed a counter to these ships because the US Fleet would not reach the eastern Atlantic for the first two weeks of a war and politically it was important for Britain to make a significant contribution to the NATO Striking Fleet. The UK could meet the surface threat either with battleships and cruisers or with naval strike aircraft; the latter were preferable on operational grounds. Land-based aircraft would have many competing commitments and simply could not perform the maritime strike role, which required quick response and forces which were dedicated to, trained and armed for it. The Admiralty also sought surface warships as additional provision against enemy surface raiders (to cover the limitations of carrier aircraft at night or in bad weather), yet they were prepared to see the number of such ships decline drastically to preserve the carrier force. Once the case for naval strike aircraft for use against surface ships was accepted, the Admiralty could plausibly claim that performance of additional roles would add little to expenditure. Aircraft bought for use against warships could also attack shore targets, enjoying the advantages of mobility, accuracy, low vulnerability and the ability to circumvent and divert defences. The main power projection role envisaged by the Admiralty was 'attack at source' of enemy naval and air forces in their bases, which also contributed to the defence of sea communications. It argued that the Striking Fleet could also support ground forces and even contribute to the overall air battle but, unlike its American counterpart, saw this as a secondary role to be conducted once the primary objective of ensuring dominance at sea had been achieved. The Royal Navy attached an even lower priority to participation in the broader strategic air offensive, although this was mooted within the government. Here, too, the Royal Navy differed from the US Navy, which was in more direct competition with the US Air Force.

If the Admiralty case had been based on power projection alone, it may well have failed. However, even Sandys came to accept that strike aircraft were needed against *Sverdlovs*, and due to

improving Soviet naval air defences this role required an aircraft as sophisticated as the NA39. Once it was approved for anti-ship strike, it could then also be used for other roles, especially power projection in limited wars – for which Korea and Suez demonstrated that carrier aviation enjoyed significant advantages over land-based aircraft. These two conflicts were important, since before each there was widespread scepticism about the value of naval forces generally and carriers specifically, and in both cases, operational experience scotched doubts. Such limited wars required ground troops, which needed to be transported, protected, supplied and supported; land-based air power could not do this alone.

Some even claimed that land-based aircraft could replace naval forces in protecting convoys against air and submarine attack. They argued that with longer-range jet aircraft, the Navy did not need many – or even any – sophisticated fighter or anti-submarine aircraft, and fewer anti-submarine escort vessels. This argument was rare in government circles (Slessor was an exception with regard to naval aviation in this role), though it did appear occasionally in Parliament. Generally it was accepted that that Navy was important in countering submarines and air attack. Arguments that the Navy did not require expensive new aircraft were rejected because of the evidently increasing potential air threat. An incontrovertible lesson of the Second World War had been that warships or merchant vessels were vulnerable to air attack unless they had adequate fighter cover and even the Air Ministry accepted that land-based fighters could only provide protection close to shore bases.

This thesis has shown that the Navy in general and naval aviation in particular was subjected to sustained and serious criticism between 1945 and 1957: the future of carriers in the Navy which had done so much to pioneer them was truly in doubt on several occasions. In contrast to the interwar years in Britain and the post-1945 period in the United States, these intense and bitter debates were played out largely behind closed doors. Indeed, they were kept sufficiently far from public gaze that Admiral W.J. Crowe, a usually perceptive observer, working from open sources and interviews, could

state that before 1957, 'the Navy was never forced to justify its carriers or the way it intended to employ them – except in very general terms'. Crowe accepted that this might seem a controversial conclusion, 'but there was practically unanimous agreement on this point whenever it came up in interviews.'² His interviewees were either poorly informed or remarkably discreet, since his statement is quite untrue. The Radical Reviews, as was shown in chapters three and four, saw a concerted onslaught against the carriers. One area in which inter-Service rivalry was less prominent was the control of Coastal Command. Although the subject was broached, and elicited a prickly response from the Air Ministry when it was, the Admiralty seems to have been reluctant to mount a determined, full-blooded campaign to win control. The one occasion during the Radical Reviews when its transfer was formally proposed may with some justice be seen as a naval warning shot across the bows of the Air Ministry to encourage moderation in its support for the Secretary of State for Air, who often seemed more fervently anti-carrier than the Chief of the Air Staff. A parallel could be drawn with the other side of the 'Inskip decision', namely Admiralty control of the Fleet Air Arm; there were strategic arguments for and against its transfer to the RAF, just as there were for the reassignment of control of Coastal Command to the Admiralty. Yet the considerable weight of bureaucratic inertia and the desire to avoid an open inter-Service dispute (from which the Treasury would be the main winner) were powerful forces in favour of the status quo. Land-based aircraft continued to have a role in maritime operations but, as in the interwar years, they remained a low priority to an Air Ministry which was focused on bombing operations.

The tactical level

The tactical threat to individual warships posed by aircraft had been the staple of the air power case against navies between the wars. Between 1945 and 1957, it was surprisingly little used, particularly in view of various wartime incidents and further technological innovations which could be interpreted as increasing the threat, including radar reconnaissance, longer-range jet aircraft,

² Crowe, W. J. *The Policy Roots of the Modern Royal Navy, 1946-63* (Ph.D. thesis, Princeton University, 1965), 138, 168

guided weapons, nuclear warheads and radio counter-measures. Plausible counter-arguments could be offered, such as contradictory wartime experience, the improvement of naval air defences (as they too incorporated jet aircraft, guided missiles and advances in electronics) and the growth of air and ballistic missile threats to air bases on land. Arguments concerning the tactical air threat were periodically advanced by critics – for example, during the second Radical Review or, more selectively, when the Navy appeared to be making a claim for a major role in land attack. Generally, however, they were not prominent in Whitehall debates, though they were more common in Parliament.

Although neither Ministers nor the Air Staff made great play of the tactical air threat to warships, it was taken increasingly seriously by the Admiralty. Both Korea and Suez saw considerable worries expressed about the quality of Fleet Air Arm fighters against modern Soviet jets in regional conflicts. Subsequent Tactical School analyses extrapolated the trends of the Soviet naval air forces to reach alarming conclusions about the plausibility of the envisaged role of the British carriers in Striking Fleet. Indeed, these concerns were an important factor in the Admiralty's embrace of the east of Suez role. The fact that the Admiralty viewed the air threat more seriously than its critics, who based their opposition on other grounds, tends to confound allegations that it was inherently conservative.

The changing air threat had an enormous effect on the shape of the Navy, including the introduction of new types of escort such as Aircraft Direction frigates and radar pickets, guided weapons for air defence, jet aircraft and hence modernised and new carriers (with the various British-designed innovations which permitted carrier operation of jet aircraft) and a new type of aircraft for early warning. While there was debate over whether the submarine or air attack was the greater threat, the Admiralty was realistic in its assessment of both.

The broader impact of air power on the Royal Navy

There is no doubt that air power altered the role of the Royal Navy between 1945 and 1957. A considerable amount of attention was still devoted to the defence of sea communications in global war, indeed, more than might be apparent. This role still required both air defence and anti-ship striking capabilities but the emphasis on these had declined, and the primary remaining role of anti-submarine warfare was assigned increasingly to helicopters. This development held out the future prospect that smaller carriers, without sophisticated fixed-wing aircraft, could meet this requirement. Significantly, the aspiration to contribute to power projection in global war had been abandoned by 1957. Strike aircraft remained but their tasks in total war were confined to anti-ship operations. The principal focus of the Royal Navy had shifted to limited power projection east of Suez. The impact of air power was significant in this change: the priority and effect of nuclear air power at the strategic level made politicians downgrade the role of the Navy in total war; the tactical threat of improving Soviet land-based air power sowed doubts in the Admiralty about the plausibility of the Striking Fleet role for the Royal Navy; and the capabilities offered by task forces centred on naval aviation and amphibious units provided an alternative rationale which proved more tempting to decision-makers.

The shape of the Fleet had evolved in response to air power. Various changes in its shore structure, support and Reserves resulted from studies of the effect of nuclear attack. By 1957 battleships were all but gone from the Fleet and cruisers greatly reduced in numbers – though this was not due to the threat from air forces but rather to the alternative capabilities provided by naval air power and guided missiles. Forces to defend sea communications, such as minesweepers and frigates were a smaller part of the Fleet, while the post-1945 neglect of amphibious units was being reversed. Jet aircraft, guided weapons, early warning aircraft and helicopters were either in service in the Royal Navy or soon would be.

The most obvious change in the composition of the Navy by 1957 was the increased centrality of the aircraft carrier. Although even in 1945 it could be seen as the heart of the Fleet, it became still more important over the following years as it took over many of the roles of other large surface ships. When another platform could perform their roles, the significant cost of replacing battleships and cruisers proved decisive and their eventual exit from the British naval stage was imminent. The carrier was often described as having replaced the battleship as the 'capital ship' of the modern navy but this term (which was later applied to the nuclear-powered submarine) is now of limited utility. The capital ship was not simply the most important unit in the Fleet; rather it had a specific role of countering the enemy battlefleet. By 1957 this task was split between naval aviation, land-based strike aircraft and (in the US though not just yet in the Royal Navy) ship-borne guided weapons and nuclear submarines. The reason for the carrier's rise to prominence was not simply that it could better perform the tasks hitherto entrusted to battleships, but rather that it could do this as well as provide cover against air and submarine threats and provide a new dimension of capability in projection of power against the shore. It was able to do so by incorporating air power into the Navy.

The post-1945 apostles of the old interwar air theorists overlooked this important trend. They neglected the reactive dynamic of strategy and hence failed to foresee the strategic stand-off which ensued once the USSR acquired nuclear weapons. They also overlooked the fact that air defences would evolve alongside aircraft. (Ironically, a similarly flawed argument was directed against manned aircraft when it was claimed that ballistic missiles would replace them and guided missiles would pose a lethal threat to them.) They read 'air power' as 'Air Force', thus neglecting the possibility that navies could use air power to enhance traditional roles and to add new ones. They tended to assume that war would be total and hence did not expect the limitations in practice on the theoretical useability of nuclear weapons or conventional strategic bombing.

It was indeed becoming increasingly difficult for the Royal Navy to deal with the air threat, but not because it was inherently threatening to warships. Rather, it was because the costs of the sophisticated systems needed were becoming too great for a state such as Britain to aspire to the full spectrum of the most advanced capabilities. This still left many roles for the Royal Navy and the Fleet Air Arm. The increasing complexity and cost of military technology caused problems for Britain, as witnessed by a series of failed and abandoned aircraft and missile programmes, though this was a problem for its defence policy broadly, not just the Navy. Neither did such difficulties apply uniquely to Britain. In Korea and Suez, land-based aircraft had found it impossible to counter more modern or better equipped naval forces. The capability gap lay not between navies and air power but rather between first-rank and less advanced forces.

The fundamental failing of those who predicted that air power would eclipse navies was an underestimation of the importance and versatility of sea power. Responses to the various threats could be found if there was sufficient motivation for doing so. The claim that 'Land Power' was increasingly marginalising 'Sea Power', that Mackinder was trumping Mahan, had predated powered flight and originated in analysis of the effect of the industrial revolution. Air power was interpreted as magnifying the effect of railways and internal combustion engines to further erode the significance of sea powers relative to continental powers. Despite a plethora of premature obituaries, sea power retained its importance for Britain and other states, through two World Wars and one Cold War, and shows no sign of imminent demise thereafter. Indeed, far from administering the coup de grace to navies, air power restored much of their strategic significance in limited and total war, which the industrial revolution had thrown into doubt. Air power greatly affected the shape of and means used by navies but it did not change the basic fact that they were and are still necessary for states which seek to pursue national objectives at or from the sea.

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