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Land Based Air Power or Aircraft Carriers?

The British debate about Maritime Air Power in the 1960s

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Abstract

Numerous studies, books, and articles have been written on Britain's retreat from its former empire in the 1960s. Journalists wrote about it at the time, many people who were involved wrote about it in the immediate years that followed, and historians have tried to put it all together. The issues of foreign policy at the strategic level and the military operations that took place in this period have been especially well covered. However, the question of military strategic alternatives in this important era of British foreign policy has been less studied. This dissertation discusses such high-profile projects as the TSR.2 and F.111, prospective VTOL aircraft and not least the CVA-01 fleet carrier, but most of all it focuses on the issue of military strategy. The rivalry between the Royal Navy and the Royal Air Force was largely about the questions of *carrier aviation versus land-based air power* – and which strategic option would best answer the British need to maintain influence as the garrisons were being scaled down. The Royal Navy argued for replacement fleet carriers for their mobile seaborne strategy, while the Royal Air Force argued that land-based air power would be as effective and far less costly. By using this underlying strategic debate as the framework for understanding more specific debates on aircraft, ships and weapon systems, this dissertation aims to bring new light to our understanding of the dramatic restructuring and altered priorities these two military services saw during the 1960s. The story may be divided into three broad periods: From 1960 until mid 1963, it was a conceptual debate on 'Carrier Task Forces' and a concrete alternative 'Island Strategy'. This ended in July 1963 with a Cabinet decision in favour of new fleet carriers. However, the Royal Air Force and the Treasury kept fighting this decision. Their continued resistance, together with the new Labour Government with Denis Healey as Secretary of State for Defence, changed the decision of 1963. The highpoint of the debate on carrier aviation and land-based air power came during 1965-66, ending with the decision of February 1966 to cancel the CVA-01 and gradually phase out the existing carrier fleet. Denis Healey then used the arguments for land-based air power as a rationale for the decision. The dissertation rounds off with a discussion of the planned phase-out of the existing carrier fleet. However, the story saw a different end than planned, as new strategic challenges in home waters came about and the evolving VTOL Harrier aircraft and the 'through-deck cruisers' gave new possibilities. This is a historical study of the British debate about maritime air power and strategic alternatives in the 1960s. However, the detailed story and arguments used for and against both alternatives should clearly have relevance to any conceptual debates on carrier and land-based air power.

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Introduction

Traditionally we think of military forces in three main bulks; land, sea, and air power – with a natural extension of this thought into military organisations such as armies, navies and air forces. With such divisions, many conflicts between these military organisations, normally called services, arise. For the military services, we see this most evidently in the case of doctrinal focus and inter-service striving for resources and influence. Maritime air power, which includes both land-based and sea-based air power, constitutes such a field of military expertise which has suffered from being both sea and air power in nature and partly ‘owned’ by navies and air forces. In British modern military history, discussion regarding maritime air power has occupied much focus and laid the foundation for much controversy. This dissertation will examine the famous and much referred to 1960s British inter-service rivalry between the Royal Navy and the Royal Air Force.

From the First World War until the start of the Second World War, the debate on the influence of air power on maritime warfare was philosophically visionary, but also challenging for the organisations. In Britain the Royal Air Force was established in 1918, and officially held command of all military aviation from 1918-1937 despite many attempts by the Royal Navy to gain control of the maritime air forces. The organisational debate peaked several times; during the Belfour Sub-Committee of 1923, the Trenchard-Keyes Agreement of 1924, in 1925 as the Admiralty approached the Colwyn Committee, and again in 1928 and 1932–1933. However, there came no major changes until 1937, by when the Royal Navy finally managed to gain control of their own sea-based forces – and the Fleet Air Arm was established.¹ The Royal Navy soon acquired a greater amount of organisational influence over all maritime air forces, and in fact held the most prominent positions during the Second World War. During the war, a relatively effective command and control regime was established. However, at the end of the Second World War, as all existing military forces naturally were about to be decreased, two great inter-service issues emerged: Which of the services should be in control of the maritime air forces, and what was the true impact of the aircraft carrier, the new capital ship of the greater navies?

The first question was solved by the famous ‘Dickson-Lambe Agreement’ in 1946. The command of the maritime air forces was decided to be upheld in conjunction with the conclusions reached by the Defence Committee (Operations) of the War Cabinet in December

¹ Gjert Lage Dyndal, *Trenchard and Slessor; on the supremacy of air power over sea power* (Trondheim, Norway: Tapir Academic Press, 2007), pp.14-19.

1940. The command relationships of the maritime forces recognised that the naval command would normally be the predominant actor as of operations, but organisationally the Coastal Command would stay an integral part of the Royal Air Force. A similar debate was raised in the late 1950s, but also then decided to be upheld in the traditional British organisation from 1937, 1940/41 and 1946.² The organisational model was officially resolved, with both the Royal Air Force and Royal Navy holding stakes in the maritime theatre. However, this solution obviously gave, and still gives ground for inter-service rivalry over doctrinal focus and development.

The second question, regarding the true impact and importance of aircraft carriers was not so clearly resolved in British military circles. For the great navies the carrier had proven the principal weapon of war, the capital ship. In the immediate post-war years only the US Navy and the Royal Navy had carriers, but France, Canada and Australia were before long set up with former British carriers. The development of larger jet-aircraft soon required sizeable carriers, and the US Navy led the course. The American developments came as a result of the experiences from the Korean War and the ongoing war in Vietnam, where carrier aviation was a great augmentation to the land-based aircraft. In the case of the British Armed Forces, the carrier advocates had harder times. The Royal Air Force had all along been sceptical and in opposition to the carriers as means of providing air power. This is well captured in a note by Trenchard in 1946:

With regard to Navies; here I consider we must face a major change in our traditional outlook. We must get away from all preconceived ideas of prestige being enhanced or even dependent upon the number and size of battleships kept by the nation. The days of the big ship are past. They can no longer operate in the face of Air Power. Carriers were a passing phase and could only be used when one power ruled the air and was predominant over its enemy.³

However, as there were few greater investments required in the post-war period, this underlying difference in professional opinions did not spark any significant debates or inter-service rivalry. When debate on force structures emerged, it was rather about what should be phased-out. As for the individual services, the Royal Air Force and the Royal Navy, it came more to an intra-service debate over balancing of forces. The Royal Air Force focused primarily on strategic forces, while the Royal Navy focused mainly on traditional sea warfare. Largely, the individual service focus did not challenge the responsibilities of the other. As Grove explained:

² Ibid, p.18.

³ Hugh Trenchard, 'Air Power and National Security', in Gjert Lage Dyndal, *Trenchard and Slessor*, p.63.

The emphasis on the primacy of strategic air warfare was perhaps a little worrying for the Admiralty, but the requirement to fight a traditional sea war in defence of merchant shipping and troopships was enough to sustain naval force goals that were grand indeed.⁴

Up until the mid-1950s, the need for carriers rested with the Anglo-American focus on the Soviet Navy in the northern and eastern Atlantic, the Channel, the North Sea and the Norwegian Sea, as well as the Mediterranean and the Middle East. There was also some focus on the global role, not least with the Korean War. However, it became generally accepted that full scale maritime war or power projection was not possible without joint efforts with the US Navy. There were some discussion in 1954-55 about the need for fleet carriers, but as the span of responsibility was extensive the Royal Navy managed to argue their case.⁵ From the mid-1950s, several issues influenced and changed British thinking, both regarding policy and military strategy. Anthony Eden became the new prime minister and was not so occupied with maritime issues and the Royal Navy. The Suez Crisis, where especially the helicopter and commando/amphibious forces proved their worth, had consequences for both the political leadership and the military forces. Generally, the British placed even greater reliance on nuclear weapons for home-security, and the concrete Sandys Defence Review of 1957 charted the course for international focus, the missile age and the down-sizing of the Army and Air Force.⁶ All these issues sat the scene for the late 1950s, as the question about replacement programmes for the old wartime-design carriers came to the forefront. It was clear that a longer and more difficult period of inter-service rivalry was bound to occur. The upcoming conflict was ignited by a fight for limited resources for defence in a generally poor period for British economy, and the general accepted view is that the changes that occurred both to British policy and military structures may be explained by economic reasons. However, the core of the inter-service rivalry we saw in the 1960s by the Royal Navy and the Royal Air Force was a true and lasting difference in professional opinion on the use of air power forces – be it land-based or sea-based and the cost-effectiveness of the alternatives, as well as whether they should be controlled by the Royal Air Force or the Royal Navy.

The controversy over carriers was of course neither a new nor a purely British debate. It had been debated in the 1920-30s among most naval powers, and the US Navy for instance had to fight a long battle in the early 1950s for independence of their naval air force and their wish for

⁴ Eric Grove, *Vanguard to Trident* (Maryland: Naval Institute Press, 1987), p.33.

⁵ Ibid, pp.114-115.

⁶ Ibid, pp.174-175.

super-carriers.⁷ For the immediate post-war period, the US Navy rested their rationale for large carriers on the nuclear offensive strategic land attacks. This role was soon taken over by the development of the long-range bombers and missiles. Following, from the early 1950s, the US Navy started focusing on a containment role for the large carriers, including intervention and support operations. The FORRESTAL class of large carriers was developed in this era, as well as the ENTERPRISE, the world's first nuclear super-carrier, launched in 1961. These developments in the USA most likely influenced other nations, not least the British, to follow on with large carriers. However, there is no concrete evidence of the British actively relating to the US debates in the early 1950s, neither when arguing for new carriers in 1960-61, nor during the inter-service rivalry with the Royal Air Force throughout the 1960s.

The great question whether carrier aviation is effective, or cost-effective in relation to other alternative forces, has been an ever lasting discourse since the early days of military aviation. Arguably, the British debate in the 1960s on carrier aviation versus land-based air power is the widest ranging of them all. For the 1960s, poor economic outlook, several great military procurement programmes, changes in British leadership, as well as a gradual change in NATO strategies, much due to the rising Soviet threat, especially in the maritime theatre, set the scene for a great inter-service rivalry between the Royal Navy and the Royal Air Force over the this exact question. Both from military strategy and inter-service relationship perspectives, we may learn much from this historical case.

The scene for the British debate and rivalry

For the initial post-Second World War years the Royal Navy was balanced for a wide range of roles and responsibilities. The offensive strategic Anglo-American naval carrier forces were aiming at the Soviets, as well as becoming involved in the full scale war in Korea. However, by the mid 1950s the Royal Navy came to face a crisis of identity. With the development of nuclear strategic missiles and long-range bombers armed with nuclear weapons, the position of the Royal Navy sharply decreased in relation to the other services. As the Royal Navy largely lost their role in the home region, First Sea Lord Mountbatten turned the focus to the southeast, normally referred to as the East of Suez in British history. Under Lord Mountbatten the Royal Navy found

⁷ For the initial years and rise of naval aviation in the USA, see: W. Trimble, *Admiral William A. Moffett. Architect of Naval Aviation* (Washington: Smithsonian Institution Press, 1994). For the US Navys fight for independence, and not least for their fight for large carriers in the post- Second World War period see: J. Barlow, *Revolt of the Admirals* (Washington: Brassey's, 1998).

a role in the nuclear era; they became an East of Suez navy ready to fill the gap of influence by use of carrier sea-mobile forces as the colonies and British garrisons were gradually being built down. By the Royal Navy, the experiences of the early 'Malayan Emergency', the Korean War and the Suez Crisis were argued as evidences on the effectiveness of carrier aviation. The same happened after the outbreak of the 'Indonesia – Malaya Confrontation' in 1962. This 'East of Suez role' for the Royal Navy dominated in British defence debates during the 1957 Sandys's Defence Review, the annual Defence White Papers and the 1962 Defence Review. This strategic focus also continued within the naval circles into the dramatic years of inter-service rivalry over the great procurement programmes, as well as the debates on British defence policy and military strategic options in the 1960s.

On the other side, also the Royal Air Force had a history, and used to a large extent the same conflicts and small wars to argue their case. The general air forces had effectively fought in Aden and the early 'Malayan Emergency' in the late 1940s, in Kenya, Muscat, Yemen and Oman, as well as Cyprus in the first half of the 1950s. Also the V-bomber nuclear strategic forces saw good times in the 1950s. The days of the fighter communities on the contrary were hit by the Sandys's Defence Review in 1957, stating that: 'Fighter aircraft will in due course be replaced by ground-to-air guided missile systems'.⁸ It was a gradual decrease in the late 1950s, but the Royal Air Force first became truly concerned over their future influence and position when the decision came to acquire the USN Polaris system in the early 1960s – at the expense of the V-bombers. The Royal Air Force had lost much of their fighter community in the late 1950s and the strategic role of the V-bombers in the early 1960s – and were therefore fully committed to increase their range of roles, and definitively not ready to lose any more influence and responsibilities to the other services.

Throughout this post-war period, elements of inter-service rivalry followed the Royal Air Force and the Royal Navy. There were some peaks of discussion in the aftermath of the Suez Crisis, as well as after a missed attempt (again) by Lord Mountbatten and the Admiralty to include the Coastal Command within the Fleet Air Arm and the Royal Navy in 1958-59. However, until the 1960s, the inter-service fighting was managed and did not escalate to a level where it obstructed British military capabilities and strategic interests.

In addition, Britain's economic problems in this period influenced all aspects of foreign and defence policies. Even though there are disagreements on the true nature of the economic

⁸ PP, Defence Outline of Future Policy, HMSO 1957 (124).

constraints and the devaluation of 1967, it clearly occupied much attention at the time and was central to the political perceptions of most politicians.⁹ Neither the Conservative nor the Labour Governments could turn the economy around, and both governments tried to turn to Europe for closer economic co-operation. The Conservatives applied for EEC membership in 1963, and the Labour Government in 1967. Both attempts were vetoed by the French president, De Gaulle. However, the economic policies between the conservative and central labour politicians did not differ much. The most widespread understanding is that there was a national ‘consensus’ on economy policy. The Conservative Government’s policies before 1964 have also been described as ‘Labour policies’.¹⁰ This perspective has been questioned in later years, and ‘consensus’ is perhaps not the best description – but the differences, and the possibilities for differences, were not too great due to the continuous pressure on the economy. It is impossible to judge whether any great differences would have come about if there had been a different government in charge. The British economy was under strain, and the defence sector lost out for the demands of increased costs of living. However, this was a trend throughout Europe, the US, and Japan – and not solely a British concern. Therefore, it is hardly useful to get into a discussion on ‘what ifs?’, if the Labour Party had not won that marginal victory in 1964, if Gaitskell had come to power in Labour instead of Wilson, had Heath and the Conservatives won power in 1966, etc. As for the debate on maritime air power, land-based air power versus carrier forces, this was not influenced by party politics, but the widespread feeling of sustained economic crisis across the political parties was important. This set the scene for the inter-service rivalry examined in this dissertation.

Prevailing perceptions and sources

As of today there has not been written a thorough study of the exact topic of land-based air power versus carrier task forces of this period, despite the fact that this ‘inter-service rivalry’ controversy has often been referred to by others as both important and comprehensive.

However, much other literature exists, particularly concerning British imperial retreat and defence policy, as well as the famous technical programmes of the 1960s (e.g. the TSR.2 strike aircraft, the VTOL Harrier, and the CVA-01 fleet carrier). All these issues are full research items

⁹ I have based my review of the economy debate impact on: Alec Cairncross, *The British Economy since 1945* (Oxford: Blackwell, 1992), David Marsh ed., *Postwar British Politics in Perspective* (Cambridge: Polity Press, 1999) and Nicholas Crafts and Nicholas Woodward eds., *The British Economy Since 1945* (Oxford: Oxford University Press, 1991).

in their own right, and have therefore been limited to being ‘technological prospects’ for the conceptual ideas of carrier forces and land-based air power. Even though the dissertation necessarily touches on these central and complicated topics, their stories are not the aim of this research per se. Due to the complexity of the inter-service rivalry – it has been necessary to stay focused on the main question of land-based versus carrier air power for the primary source research, as well as for the review of existing literature.

Concerning British defence policy and empire retreat, a comprehensive body of literature exists. Much was written at the time, and some written by historians in retrospect. The most important works are Bartlett’s *The Long Retreat* and *The Special Relationship*. Carver’s *Tightrope Walking, British Defence Policy since 1945*, Darby’s *British Defence Policy East of Suez 1947-1968*, M. Dockrill’s *British Defence since 1945*, and Kyle’s *Suez, Britain’s End of Empire in the Middle East*.¹¹ Of the most recent books, S. Dockrill’s *Britain’s Retreat from East of Suez*, S. Dockrill and Hughes’s edited book *Cold War History* and Petersen’s *The Decline of the Anglo-American Middle East 1961-1969, A Willing Retreat*, give new insight based on recent released archival sources, though an overweighed focus on American sources and the ‘special relationship’. Further recent and good articles include: S. Dockrill’s ‘Britain’s Power and Influence: Dealing with Three Roles and the Wilson Government’s Defence Debate at Chequers in November 1964’, Lane’s ‘Third World Neutralism and British Cold War Strategy, 1960-62’, Ovendale’s ‘Macmillan and the Wind of Change in Africa, 1957-1960’ and Tomlinson’s ‘The Decline of the Empire and the Economic “decline” of Britain’. Further have Johnson’s book *Defence By Ministry*, Phythian’s *The Labour Party, War and International Relations, 1945-2006*, Snyder’s *The Politics of British Defence Policy, 1945-1962*, and Bradford’s PhD dissertation from 1999, *Political aspects of strategic decision making in British defence policy*, proved very helpful for giving an understanding of the general political processes in the period. This body of literature has been important for understanding the greater question about the retreat from empire, however, it does not provide much detailed information about the two alternative military concepts proposed and argued for by the military services. These studies which are focused on Britain’s changing foreign policy are little concerned with bureaucratic problems within the departments, e.g. the inter-service rivalry between the Admiralty and Air Ministry of the Ministry of Defence. This exemplified with a note by Saki Dockrill: ‘...the book confines itself to the debates at the highest levels, without getting bogged down in the details of

¹⁰ E.g. the chapter title; ‘Conservative governments with labour policies, 1951-64’, in Malcolm Pearce and Geoffrey Steward, *British Political History 1867-2001* (London: Routledge, 1992), p.463.

¹¹ See bibliography for full reference on the background body of literature.

inter-service rivalry or intra-service rivalries.’¹² This dissertation discusses whether this simplification, which seems to have become a general accepted view among those who have researched the 1960s in British defence and foreign policy history, is correct. The hypothesis for this dissertation is that the planned run-down of the garrisons, possibly replaced by mobile reinforcement forces – be it carrier task forces or land-based air power, had influence on the greater policy discussion.

As for the individual services and the specific procurement programmes, a great body of literature also exists. Concerning the East of Suez involvement and the story of the Royal Navy, the standard work for the last two decades has been Grove’s *Vanguard to Trident*. Additionally, Till’s latest *The Development of British Naval Thinking* and Hill’s *Lewin of Greenwich*, as well as Friedman’s *British Carrier Aviation* give an extensive overview of British naval thinking and the carrier programmes.¹³ Concerning the carrier controversy, Grove (as a naval historian) presents a critical examination of the choices made by the Royal Navy during this time frame, and presents a balanced view on the story. However, as Grove’s study also covers a far greater time frame, and has a purely naval focus, much detail regarding the carrier versus land-based air power debate is naturally missing. In fact, much of the archival sources available regarding the 1960s were not yet declassified when Grove conducted his important study. Grove based his research on secondary sources, open unclassified sources and interviews. Despite of the lack of archival sources at the time, the main conclusions from *Vanguard to Trident* regarding the specific cancelation of CVA-01 still stand. The conclusions and the greater story are also readily available from the annual Defence White Papers. However, there are also some factors that have been underrated by former researchers. For instance do most naval historians, Grove included, regret that Mountbatten stepped down in 1965, and suggest that the outcome could have been different.¹⁴ This research will discuss whether this would have been the case. A further general perception among historians is that the ‘Island Strategy’ was more a sidetrack and brief alternative to carrier task forces. However, a comprehensive review of the new archival sources clearly indicates that the Air Ministry’s conceptual ideas for the use of land-based air power were thorough and of a great magnitude. In fact, the Air Ministry’s numerous studies of and

¹² Saki Dockrill, *Britain’s Retreat from East of Suez* (New York: Palgrave Macmillan, 2002), p.7.

¹³ There are further many books on the Royal Navy of this period. I have had great pleasure of Donald and March’s *Carrier Aviation 1950 – Present*, Longstaff’s *The Fleet Air Arm*, Sturivant’s *British Naval Aviation*, and Sturivant, Burrow and Lee’s *Fleet Air Arm Fixed-wing Aircraft Since 1946*. *The Fleet Air Arm 1917-1990*, and of course Friedman’s thorough *British Carrier Aviation*. Harding recently came out with a good edited book, *The Royal Navy 1930-2000*. Hill’s *The Oxford illustrated history of the Royal Navy* and Hampshire’s *The Royal Navy since 1945* are also very readable and useful books on the history of the Royal Navy.

¹⁴ Grove, *Vanguard to Trident*, p.275.

correspondence with the leadership of the Ministry of Defence and the Treasury (and others) far exceeded that of the Admiralty. The hypothesis of this research is that by methodically approaching the study of the troublesome 1960s from a two-service perspective, the land-based air power versus the carrier option, rather than the common single service (navy or air force) or programme (e.g. CVA-01 or the Harrier) approach – new and additional aspects and explanations may expand or challenge our knowledge.

There are further a few specific articles on the CVA-01 project which use recent archival sources and offer ample insight: Bradford's *Thirty years on: reflections on CVA-01 versus TSR2* and Spellers article *The Royal Navy, expeditionary operations and the end of empire, 1956-75*.¹⁵ Bradford makes a good comparative study of the two services, but limits himself to the concrete procurement programmes. Speller's article gives a short, but satisfactory starting point to a debate on the inter-service rivalry. His conclusion suggest that the cancelation of CVA-01 and the planned build-down of the carrier force came to fruition because the tasks required changed and also because the Royal Navy did not, as opposed to the Royal Air Force, argue that their concept could alone meet the challenges of the future. This implies that the Royal Navy played a more gentleman's political game, not arguing for an unrealistic case. However, this dissertation argues that the Royal Air Force stance and policy were a sincere scepticism to the cost-effectiveness of fixed-wing carrier task forces, fleet carriers especially. Additionally, Beedall's 'CVA-01' from his website 'Navy-Matters' and Gorst's article 'CVA-01' in Harding's edited book *The Royal Navy 1930-2000* are based on new material. However, these two latter articles focus predominately on technical aspects of the carrier programmes, and focus little on the impact of the changing strategic framework and the inter-service rivalry. The above mentioned literature partly deals with my topic. However, they focus primarily on Royal Navy sources and only briefly examine the inter-departmental debates that took place in the period. Starting the study, I had a hypothesis that the influence of the opposition from (primarily) the Air Ministry and the Treasury must not be underrated when searching for an explanation of e.g. the cancellation of CVA-01 and the carrier fleet.

In the case of the Royal Air Force, fewer over-arching studies have been conducted. However, Armitage's *The Royal Air Force*, Lee's *Flight from the Middle East*, Hoffman's *British Air Power in Peripheral Conflict, 1919-1976*, and Treuenen's *The Royal Air Force – The Past 30 Years* from 1976 give insight into the general developments and focus of the Royal Air Force in

¹⁵ In Greg Kennedy, *British Naval Strategy East of Suez, 1900-2000* (London: Frank Cass, 2005), pp. 178-198.

this period.¹⁶ Regarding the background and conceptual content of the ‘Island Strategy’, there are no deep ranging studies dealing with these issues. This can probably be explained by the fact that that nothing came of the ‘Island Strategy’ proposal, as also the many procurement programmes needed for the alternative were cancelled in due course. Still, the conceptual ideas are interesting, both because they can be applied more generally to the ever lasting discourse, across countries, about land-based air power versus carrier air power, but also because the essence of the concepts argued was de facto used by the politicians when cancelling the CVA-01 in 1966. The debate clearly must have had influence. Additionally, this dissertation researches whether the Air Ministry policy, concepts and ideas had influence on the planned build-down of the Royal Navy carrier fleet. Broadly, the naval historians have naturally focused their studies from a naval perspective, and air force or air power historians have probably not found interest in and following hardly focused on the issue, because the consequences actually only hit the Royal Navy.

This dissertation discusses the rationale behind and the full content of the two alternative concepts. Especially the land-based option is discussed as this has received little attention by researchers in the past, and there has been no broad ranging studies comparing and analysing both the Royal Air Force and Royal Navy alternatives and policy for the 1960s. This gives valuable insight and knowledge about military strategy; land- and sea-based air power, but also shows which ideas gave alternatives for and influenced the political leadership.

The explicit study of the inter-service rivalry has been only partially researched in the past, and the hypothesis of this research is that such an approach will give new insight to many of the decisions there came in the 1960s. However much has been written on defence policy and procurement programmes, they are all only partially relevant to my focus. Therefore, this historical study relies heavily upon archival sources, most of which have been made available during the last decade. I started out with the Command Papers as these outline the grand narrative and the decisions made. Still, the main bulk of archives used for obtaining a full

¹⁶ As for more specific books on aircraft and the RAF, there are a great number of books available which also have proven useful: Ashworth’s *RAF Coastal Command: 1936-69*, Ball’s *The Bomber in British Strategy*, Bowyer’s *Fighter Command 1936-1968*, Gething’s *Sky Guardians, British Air Defences 1918-1993*, as well as Jefford’s book on the *RAF Squadrons*. Books on aircraft and ships have always had a great number of readers. Many of the studies are not professional historians’ work, but they are often very detailed and accurate. They are written by genuinely interested researchers. I have had great pleasure and use of: Bowyer’s ‘Six decades of jet fighters’, Flintham’s *Aircraft in British Military Service*, Gunsten and Donald’s ‘Fleet Air Arm 1960-69’, Hobbs’s, *Aircraft of the Royal Navy since 1945*, Hunter’s edited book *TSR2 with Hindsight*, Laming’s *Buccaneer*, Segell’s *Royal Air Force procurement: The TSR.2 to the Tornado*, Straw and Young’s ‘The Wilson Government and the Demise of TSR-2, October 1964-April 1965’, *JANE’s - All the worlds Aircraft 1969-70*, and Thetford’s *Aircraft of the Royal Air Force since 1918*.

understanding of the arguments for- and against land-based air power and carrier forces are from the Air Ministry, Admiralty, Ministry of Defence, Treasury, Cabinet, and Prime Minister files at the National Archives at Kew in London. These working-level and inter-departmental documents and correspondences best show how the debate evolved, officially and unofficially, and give us an understanding of the process and reasons behind the decisions that were made. Additionally, it soon became clear that national British maritime strategic thinking (relating to home-waters) had been reduced greatly in the era of nuclear deterrence. I therefore had to visit the NATO Archives in Brussels to examine NATO's maritime strategic developments. British strategy for home-waters and Europe primarily rested upon NATO, especially from 1956 onward. The NATO documents are today released up to 1974, and cover my period of research.

As this story unfolded more than 40 years ago, most of those involved are deceased. However, I have conducted interviews and correspondence with some who were involved: *Peter Hudson*, who was Assistant Secretary at S6 (Air), Air Ministry (1956-57), Head of Air Staff Secretariat (1958-61), Under Secretary of State, Cabinet Office (1969-72) and Assistant Under Secretary of State (MOD), 1975-76; *Sir Michael Quinlan*, who was Private Secretary to the Chief of the Air Staff from 1962-65. He has further been Private Secretary to the Parliamentary Under-Secretary of State for Air from 1956-58, and served in MoD and NATO positions up to 1992; *Admiral of the Fleet Sir Henry (Conyers) Leach*, who was Director of Naval Plans 1968-70, Commanded Commando Ship HMS ALBION in 1970, Assistant Chief of Naval Staff (Policy) 1971-73, and First Sea Lord 1979-82. These interviews and correspondence proved very helpful. They largely confirmed the picture I have made from the archival research, but also challenge some of my perceptions of documents. However, as they are few, they do not justify interviews as data-collection for a methodically balanced view. Sadly, I did not get the possibility of interviewing Denis Healey or get access to examine his personal papers. However, his books *The time of my life* and *When shrimps learn to whistle*, as well Pearce's *Denis Healey, A life in our times* set out his view on many of the questions raised in this dissertation. Other important persons include Mountbatten and Zuckerman, especially for the early 1960s. I got to review both the Mountbatten Papers at University of Southampton and the Zuckerman Archives at the University of East Anglia. As the interviews are few, the memoirs and books on the most central figures of the period have contributed to a better understanding of their perspectives. A pit-fall is of course that they are naturally subjective, and often give favour to their authors' participation in the processes. Especially useful, in addition to the books on and by Healey, were Zuckerman's

*Monkeys, Men and Missiles. An autobiography 1946-88, Wilson's The Labour Government 1964-1970, a personal record and Macmillan's At the end of the day, 1961-1963.*¹⁷

After an extensive review of existing literature, it is clear that the debate on land-based air power and carrier task force concepts have not been fully or explicitly studied. The greater story has been told and the decisions have been noticed, but former researchers have not made use of all the available documents to fully explain the underlying debate. It has been referred to by many as the great 'inter-service rivalry' in their studies of policy, navy and air force, or ship and aircraft history. Arguably, this was much more than an 'inter-service rivalry'. This decade long debate was comprehensive, vigorous and complicated. Even though the debate was motivated from a fight for resources, it was mainly *a conceptual debate*. And for all who are interested in the field of maritime air power, the essence of this historical debate is important.

Purpose of the dissertation

...the only satisfactory course from the Defence point of view is to have the matter out fully and frankly. I do not think that any formula or palliative will solve the current difficulties, for these difficulties are right at the hart of the matter. The central fact is that there is a deep and sincere difference of professional military opinion about whether strike carriers give value for money as weapons of war in present and likely future circumstances. This is a real issue of high importance, not just an inter-service squabble which can be solved by shelving or bargaining or knocking a few heads together.¹⁸

Michael Quinlan, 10 February 1965

The British maritime air power story of the 1960s has been referred to by many. Still, due to its complexity and previous lack of archival sources it has only been partially researched and understood. Former studies have for instance largely focused on the CVA-01 QUEEN ELISABETH story, and therefore offered little depth as regard the Royal Air Force perspectives.

The focus and purpose of this dissertation are twofold; to conduct a thorough study of the conceptual debate on land-based air power versus sea-based air power and secondly to examine the inter-service rivalry between the Admiralty and Air Ministry and the related discussion of

¹⁷ In addition, the following books are recommended: Heath's *The course of my life*, Hennessy's *The Prime Minister. The office and its holders since 1945*, Hill's *Lewin of Greenwich*, Mountbatten's *Mountbatten*, Murfett's *The First Sea Lords. From Fisher to Mountbatten*, Pearce's *Denis Healey, A life in our times*, Probert's *High Commanders of the Royal Air Force*, Wilson's *The New Britain: Labour's plan* and Ziegler's *Mountbatten, the official biography*.

policy and opinion. It was clear that the established global presence of garrisons and bases would be built down. However, the British still wanted global political influence and the Admiralty and Air Ministry became interlocked in a political fight over which of their military strategies or concepts could best meet the challenges of the future. During this decade almost all possible arguments were raised, both for and against land-based air power and carrier air power. Keeping in mind that much was at stake, the Royal Air Force and Royal Navy found use for all their experience from the Second World War and the many limited wars of the post-war period. In addition to the historical interest, this debate should have great relevance for the Royal Navy and the Royal Air Force, as well as other nations, for similar current and future debates. The dissertation has no intentions of fully explaining the British retreat from its former empire, however the alternative military concepts of land-based air power and carrier forces argued by the two military services were fully integrated with and possibly influenced the greater debates on foreign and defence policy and strategy.

Additionally, the narrative function of this dissertation should not be underrated. The comprehensiveness of the inter-service rivalry and the conceptual debate on land-based air power versus carrier aviation has not yet been fully laid out. This dissertation places the numerous studies on defence policy and military projects and suggestions, as well as the preliminary decisions and final decisions conducted throughout the 1960s, in order and context. This should be of great importance to other researchers studying British defence policy and military developments of the 1960s.

Methodical approach and structure of the dissertation

As for the methodical approach, both historical and theoretical perceptions of various social sciences could have been used for examining the problems raised in this dissertation. The rational actor's perception does contribute to understanding the British retreat from empire. However, in the case of internal British decisions on the procurement programmes and 'inter-service rivalry', it gives little insight into the politics and lobby leading up to the point of decision 'by the rational actors'. For these cases, organisational theory and governmental theory are more helpful. Organisational theory reminds us of the complexity of governance. The many groups within and attached to a government are bound to follow their own agendas, but are restrained by governmental rules and processes. The governmental theory rather emphasised the

¹⁸ NAUK AIR 8/2355, Aircraft carriers, intervention and threats to shipping: studies, 1963-1965. 'Strike Carriers',

leaders (often many central actors) and the bargaining of the many choices available.¹⁹ Both these latter theoretical perceptions contribute to an understanding of the political processes. Due to the fact that the main aim of the dissertation has been to bring forward the underlying debate on land-based versus carrier-based air power, a stringent historical method has been used. I have therefore not found it useful to apply a structure based on a theoretical foundation on e.g. decision-making, be it international relations 'rational actor', political science 'governmental' or 'comparative', economic or organisational theory approaches. However, this does not exclude their contribution to understanding the decisions that were made. The complexity and comprehensiveness of this decade long story is firstly in need of a complete research by historical method.

Broadly, the research has been conducted in a chronological structure. Towards the end of the introduction chapter, some background information on the national departments involved is provided. The first chapter takes as its starting point the late 1950s, when the Royal Navy wanted to modernise their carrier fleet. The existing carriers would last until the 1970s, but it was argued that new larger carriers were needed for operating new and larger jet aircraft. By 1960, this evolved into the concrete question of the building of new fleet carriers for the 1970s. This was initially generally accepted within political circles. However, as this clearly would involve great strains on an already pressed economic situation for the other military services, the Royal Air Force soon confronted the Royal Navy in a vigorous inter-service battle. In addition to the economic reason for this political battle, the Royal Air Force were genuinely convinced that carrier aviation was not a cost-effective way of exercising air power. The first chapter explains the views of the Royal Navy arguing for the carrier task force concept and how the Royal Air Force land-based air power argument developed. Strangely, the 'Island Strategy', which they argued for, has not yet been given its rightful attention by previous researchers. This concept became a concrete military strategic alternative to carrier task forces. Following these two military strategic options, a neutral study-group under the chairmanship of the Chief Scientific Advisor, Sir Solly Zuckerman, was established to compare the two options. The first chapter ends with the conclusions of this enquiry, as well as a review of the British land-based and carrier-borne air power capabilities in question. The second chapter takes the arguments of the

Michael Quinlan to AUS(AU), 10 February 1965.

¹⁹ The complexity and inadequacy of single theoretical perceptions are well argued and exemplified in Graham T. Allison, *Essence of Decision. Explaining the Cuban Missile Crisis* (New York: Harper Collins Publishers, 1991 (1.ed. from 1971). As he argues in his conclusion from his attempted theoretical approach to study the Cuban Crisis: 'A large number of puzzles about this most important event are yet unresolved – leaving a real need for a thorough

two services into debate. Broadly, the Treasury and Air Ministry criticised the carrier task force concept, while the Admiralty and the Chief Scientific Advisor criticised the 'Island Strategy'. By some, this may be seen as an 'inter-service rivalry' of little importance. I will argue that in order for a debate on land-based versus carrier-borne air power to be carried out, this outside criticism was crucially important in order to provide a comprehensive understanding of the question. The third chapter starts out with a short description of the change of government in October 1964, and a review of the NATO strategy debate and the British challenges East of Suez. However, the main bulk of the chapter reviews how the Royal Navy's carrier task force concept again came under fire during the two-phased defence review the new Secretary of State for Defence, Denis Healey, started in 1965. The fourth chapter follows the previous, and focuses on the controversial end to the CVA-01 story. For the debate on land-based air power and carrier-based air power, the decision in itself is not particularly interesting. However, the way the Government and Healey argued that land-based air power would fill the previous roles of the carriers is very interesting. The fifth and sixth chapters examine and discuss the Soviet naval build-up and NATO's changing strategies. I began my research with a hypothesis that the Soviet naval build-up in the High North influenced the British retreat from its global role. The sixth chapter also reviews the British forces' capability needs asked for by NATO. These two chapters are important for understanding the structuring of the British forces in the early 1970s, including the new 'through-deck cruisers' and the roles of land-based air power. The last (seventh) chapter unites those that came prior and brings together the British restructuring of the military forces, the retreat from the East of Suez decided by the Labour Government in 1966-68, the Soviet naval build-up, and NATO's changing strategies. In the end, the fate of the carriers and the land-based air power option became something other than envisaged in 1966-68.

Background of the main governmental departments involved

As the research focuses on the debate on land-based air power versus the carrier task force concept that took place in Britain in the 1960s, an introductory explanation of the main departments involved is necessary:

The Ministry of Defence

From 1946 until 1964, five Departments of State made up what we today know as the Ministry of Defence (MoD). In addition to the Ministry of Defence, there were then the Admiralty, the

historical study of this crisis'. (Allison, p.249.). This is also the case for my topic. The full story of the inter-service

War Office, the Air Ministry, as well as the Ministry of Aviation. The military services had great independent influence in this period. The Ministry of Defence, during the pre-1964 period, was a small ministry, intended to co-ordinate the activities of the others. The total civilian and military staff of the MoD only counted some 1,300 for the early 1960s. By comparison, the British staff at the NATO headquarters counted more than 3,000.²⁰ For my period of study, the Minister of Defence post was held by: Duncan Sandys (January 1957 – October 1959), Harold Watkinson (October 1959 – March 1962) and Peter Thorneycroft (July 1962 - 1964).

In 1964, under the Conservative Government of Sir Alec Douglas-Home, the single service ministries of the Admiralty, War Office and Air Ministry, were centralised in a new powerful Ministry of Defence.²¹ With the new organisation of 1964, the official title of its leader was changed to Secretary of State for Defence. Peter Thorneycroft, the current minister, became the first Secretary of State. He was succeeded by Denis Healey (October 1964 – June 1970) and Peter Carrington (June 1970 – January 1974).

Up to 1964, the heads of the Admiralty, War Office, and Air Ministry had made the Chiefs of Staff Committee. This was the military advisory group of the Prime Minister and the Government. The group was from 1958 onward led by a Chief of Defence Staff (CDS). This was a post that was intended to alternate between the services. Up to the unity of the MoD in 1964, the position was held by Marshal of the RAF Sir William F. Dickson (January 1956 – July 1959) and Admiral of the Fleet Earl Mountbatten of Burma (July 1959 – July 1965). With Mountbatten, the Chief of Staff became a more forceful factor in policy making. As described by Johnson: 'He was no longer at the minister's beck and call, but operated on more of a basis of partnership'.²² Mountbatten had been one of the key architects to create the new defence organisation. The vision was a closer integration of the services under 'a decisive Minister of Defence and a powerful CDS'.²³ The fragmented line of arguments by the services in numerous cases, which had caused much inter-service rivalry, was now to be co-ordinated and communicated from one man's authority. Despite the visions of Mountbatten, from 1964 onward the Chief of Defence lost direct influence and became more of an advisor to the new Secretary of State and less linked to the Prime Minister and the Government. The reorganisation of the Ministry of Defence, with more power to the political leader, was supported by both the Labour

rivalry and the conceptual debate needs to be covered by a thorough historical research.

²⁰ F.A. Johnson, *Defence By Ministry* (New York: Holmes & Meyer Publishers, 1980), p.91.

²¹ In addition, the Defence functions of the Ministry of Aviation were taken on by the MoD by 1971. In any case, the Ministry of Aviation department had limited influence throughout the 1960s. (Johnson, *Defence By Ministry*, p.87.)

²² Johnson, *Defence By Ministry*, p.70.

Party and Conservatives.²⁴ Following the reorganisation Mountbatten continued for a while, but was soon relieved by Field Marshal Sir Richard Amyatt Hull (July 1965 – August 1967). The Chief of Staff continued to be the corporate advisor to the Cabinet regarding defence strategy. However, for the initial years after the 1964 reorganisation of the Ministry of Defence, the Secretary of State, Denis Healey, had strong influence on all aspects of defence. The Chief of Defence Staff post was for the last period held by Marshal of the RAF, Lord Elworthy (August 1967 – April 1971), followed by Admiral of the Fleet Lord Hill-Norton.

The Defence Board was further a central group of the MoD. It was also created in 1958. This group consisted of the professional heads of the services, the service Chiefs, and senior officials. The group was renamed the Defence Council in 1964. After the centralisation of the power to the MoD the same year, the Defence Council took over the executive roles previously held by the three service ministries. The previous roles of the Admiralty were covered by the new Navy Board and the roles of the Air Ministry were covered by the Air Force Board, or often called the Air Board or just the Air Staff. These became sub-committees of the Defence Council, and lost much of their own civilian bureaucracy.²⁵

Another group of experts that gained great influence in the early 1960s was the Scientific Advisors. For this period, this meant Solly Zuckerman as well as the Defence Research Policy Committee (DRPC). This group was charged with advising the Minister of Defence and the Chief of Defence Staff on technical developments and cost, as well as how this related to defence policy.²⁶ For the period of the late 1950s and throughout the 1960s, great belief and emphasis was placed on scientific developments. Historical determinism stood strong. The Scientific Advisors gained great influence on research and development, but also on cost and strategy developments. For the early half of the 1960s, the Chief Scientific Advisor practically ranked at level with the Chief of Defence Staff.²⁷ As shown in this research, scientific developments and prospects very much set the scene for strategic thinking. (The evolving 'Island Strategy' being perhaps the best example.)

The Air Ministry

The Air Ministry was the civil service department of the Royal Air Force until the establishment of the greater MoD in April 1964. It was politically led by a cabinet level Secretary of State for

²³ Ibid, p.71.

²⁴ Ibid, p.94.

²⁵ After 1964-65, much service information are (in addition to the NAUK Admiralty (ADM) and Air Ministry (AIR) folders) found in NAUK Department of Defence (DEF) 7, 11, 24, 25, 68, 13 and 23 series.

²⁶ Johnson, *Defence By Ministry*, pp.80-81 and p.86.

Air.²⁸ The professional head was the Chief of the Air Staff (CAS). For this period of research, the post was held by: Sir Dermot Boyle (January 1956 – January 1960), Sir Thomas Pike (January 1960 – September 1963), Lord Charles Elworthy (September 1963 – April 1967), Sir John Grandy (April 1967 – April 1971), and Sir Denis Spotswood (April 1971 – April 1974). In addition to the Chief of the Air Staff, central posts of the Air Ministry included the Deputy Chief of the Air Staff (DCAS),²⁹ which was later abolished in 1968, and the Vice Chief of the Air Staff (VCAS).³⁰

As discussed above, the service ministries (Air Ministry and Admiralty in this case) lost autonomous and departmental power after the reorganisation of the Ministry of Defence in 1964. However, the Chief of Defence Staff position did not increase in influence at first. One reason for this was that the new Chief of Staff was ‘fragile’, meaning that the relatively good co-operation of the first years could easily be damaged. Mountbatten, as Chief of Defence Staff, deliberately tried to keep the most controversial inter-service issues out of his staff for this reason. The other reason, which particularly makes the 1964-66 period exceptional, was that Denis Healey actively played the services to get the arguments out in the open. It was possibly also a means of playing them off each other, thereby achieving, and pushing forward more easily, his politics. This controversial topic is discussed at length in this dissertation.

The Admiralty

The Admiralty was the civil service department for the Royal Navy until 1964. In addition, it was the operational headquarters dealing with e.g. foreign deployments. The Admiralty has traditionally occupied a special position among the service departments. It is the oldest of the departments, and represents great maritime and imperial traditions. The department consisted of a Board of Admiralty, which was led by the First Lord of the Admiralty, a governmental minister.³¹ The Board of Admiralty normally met once a month. From 1964, the Admiralty became the Navy Department and its governing body, the Navy Board, became subordinate to the Defence Council. The name ‘Admiralty’ was however often used even after 1964. According

²⁷ Ibid, p.86.

²⁸ For this period of study, the post was held by George Ward (January 1957 – October 1960), Julian Amery (October 1960 – July 1962) and Hugh Fraser (July 1962 – April 1964).

²⁹ Sir Charles Elworthy (November 1959 – June 1963), Sir Christopher Hartley (June 1963 – April 1966), H.E. Emson (April 1966 – January 1967) and Sir Peter Wykeham (January 1967 – 1968).

³⁰ Sir Edmund Hudleston (September 1957 – March 1962), Sir Wallace Kyle (March 1962 – November 1964), Sir Brian Kenyon Burnett (November 1964 – August 1967), Sir Peter Fletcher (November 1967 – August 1970) and Sir Denis Smallwood (August 1970 – November 1973). Also, the VCAS position was changed to the Assistant Chief of the Air Staff (ACAS) in 1985.

³¹ George Douglas-Hamilton, 10th Earl of Selkirk (1957-59), Peter Carrington, 6th Baron Carrington (1959-63), and George Jellicoe, 2nd Earl Jellicoe (1963-64). As the new MoD was established in April 1964, the post was ended.

to Snyder, the Admiralty organisation was by far the most effective among the services. 'In any discussion of the three services, the Admiralty is invariably the first mentioned and always first in any comparative ranking'.³² About the Air Ministry, Snyder concluded that the service was 'not credited with quite the same degree of strength and excellence as the Admiralty'.³³ These perceptions will be debated and seriously questioned in this dissertation. Generally, much points to an opposite conclusion.

The First Sea Lord was the professional head of the Royal Navy. He also held the title Chief of the Naval Staff (CNS). For this research period, the position was held by: The Earl Mountbatten of Burma (1955-59), Sir Charles Lambe (1959-60), Sir Caspar John (1960-63), Sir David Luce (1963-66), Sir Varyl Begg (1966-68), Sir Michael Le Fanu (1968-1970), Sir Peter Hill-Norton (1970-71) and Sir Michael Pollock (1971-74).

Also the Admiralty had a Deputy-Chief of the Naval Staff (DCNS)³⁴ and a Vice Chief of the Naval Staff (VCNS). The Admiralty's senior civil servant was the Permanent Secretary (PS)³⁵. He was in charge of the Secretariat and responsible for official correspondence.

The Treasury

Her Majesty's Treasury is the department responsible for the British economy and finances. Traditionally the Prime Minister holds the title First Lord of the Treasury. However, the HM Treasury is in reality led by the Chancellor of the Exchequer. For the period of study, the post was held by: Peter Thorneycroft (January 1957 – January 1958), Derick Heathcoat Amory (January 1958 – July 1960), Selwyn Lloyd (July 1960 – July 1962), Reginald Maudling (July 1962 – October 1964), James Callaghan (October 1964 – November 1967), Roy Jenkins (November 1967 – June 1970), Iain Macleod (June – July 1970), and finally Anthony Barber (July 1970 – February 1974).

For both the making of strategy and the procurement programmes of the 1960s, the influence of the Treasury should not be understated. The Treasury had great influence. If it could be avoided, none wanted to take on a discourse of the financial basis for future plans.³⁶ The Treasury was also somewhat different than the service ministries and later staffs of the MoD, as it had a far greater and more stable civilian bureaucracy. In British politics, the bureaucracy is not shifted with the change of government (as e.g. in American politics). This fact is important for

³² William P. Snyder, *The Politics of British Defence Policy, 1945-1962* (Ohio: Ohio University Press, 1964), p.124.

³³ Ibid, pp.137-138.

³⁴ The DCNS was called the Assistant-Chief of the Naval Staff until 1957, by when it was merged with the Fifth Sea Lord (naval aviation).

³⁵ Permanent Secretary to the Royal Navy: Sir John Lang (1947-1962).

understanding the relatively stable attitude of the Treasury across the 1964 shift of government in Britain, as will later be discussed.

In 1961, the Chief Secretary to the Treasury³⁷ post was established to support the Chancellor. The Chief Secretary became second in position in the Treasury, and was also normally given a junior position in the Cabinet. During the 1950-70s, the Paymaster-General³⁸ was also organised under the Treasury. He was responsible for holding the working balances of government departments and other public bodies in high-level accounts at the Bank of England. The Paymaster was third in rank, after the Chancellor and the Chief Secretary, in the Treasury.

³⁶ Johnson, *Defence By Ministry*, p.84.

³⁷ Henry Brooke (October 1961 – July 1962), John Boyd-Carpenter (July 1962 – October 1964), and John Diamond (October 1964 – June 1970).

³⁸ Reginald Maudling (1957-1959), Lord Mills (1959-1961), Henry Brooke (1961-1962), John Boyd-Carpenter (1962-1964), George Wigg (1964-1967), (Vacant 1967-1968), Lord Shackleton (1968), Judith Hart (1968-1969), Harold Lever (1969-1970) and Viscount Eccles (1970-1973).

Chapter 1: Carrier Task Forces and the Island Strategy, 1960-63

...having no land base between the United Kingdom and Australia, there will be a need for aircraft carriers to provide floating airfields from which British air power can operate irrespective of whether this power is provided by the Royal Air Force or the Fleet Air Arm.¹

Lord Mountbatten, 1961

The first part of this chapter deals with the carrier replacement programme, which saw light at the end of the 1950s in the naval community. The need for new carriers gradually reached the political scene in 1960-61. As the review of British defence policy continued the increased focus on the East of Suez challenges had made the carriers ever more important. However, as the dimension of the programme was realised, the Royal Air Force and Air Ministry came up with an alternative concept – the Island Strategy. The second part of this chapter therefore discusses the origins of the Island Strategy and how it became a direct and competing alternative to the Royal Navy's carrier task force concept. As there now were two clear alternatives, the inter-service rivalry escalated greatly during the last months of 1961, and this was a struggle which continued until the summer of 1963. In fact, the intricate inter-service rivalry over strategic concepts available to the British as the garrisons were steadily scaled down, and the new foreign and defence policies, occupied most of the defence debate of 1962-63.

Due to inter-service rivalry, a common and neutral study comparing the alternatives had to be made. A study-group was formed with the Chief Scientific Advisor, Solly Zuckerman, in 1962. The third part of this chapter therefor examines the content and focus of this important study.

As a final part of this chapter, a brief examination of the status of the British forces concerning air defence, anti-surface and amphibious capabilities has been made. These three capabilities were those mainly in focus at the time, also for Zuckerman's study.

¹ NAUK DEFE 7/2353, Defence policy review: modernisation of aircraft carriers, 1959-1963, Letter from Chief of the Defence Staff to the Minister of Defence, 20 December 1961.

Chapter 1-A: Carrier Task Forces

The need for new carriers

The first discussions on replacement carriers came about in naval circles in the late 1950s.² However, the question of new carriers did not reach the political scene until late in 1960.³ By then the fleet consisted of seven HMS ships: CENTAUR, VICTORIOUS, ARK ROYAL, EAGLE and HERMES,⁴ as well as BULWARK and ALBION which had just been converted to commando carriers. The quest for replacement came as a consequence of the increased interest in the East of Suez missions as well as the ageing of the current fleet, and not least the limitations of the current carriers for operating modern and larger jet aircraft. Previously, the naval forces had had a less important role in the doctrinal concepts for East of Suez missions than the Army with its garrisons and the RAF with the Transport Command. Now, by the early 1960s, there was a concept of naval task forces as well, especially mobile land forces and commando ships. By 1962 HMS ALBION, the second commando ship, joined the HMS BULWARK in service East of Suez.⁵ These new, or revitalised⁶, requirements and operations evolved in parallel to the question of replacement of HMS VICTORIOUS.⁷ These forces were very much shield-off due to their success. As the Minister of Defence stated: ‘...I can not think of any better way of having a kind of mobile fire brigade which could be poised in any place where there might be trouble brewing’.⁸

Presentations on the need for new carriers and the new construction programme were made on several occasions during the 1959-60 timeframe. By 1960, the question also reached the House of Commons. For instance Mr. Orr-Ewing, the Civil Lord of the Admiralty, spoke on the need to replace the existing fleet during a discussion in the House of Commons in November 1960:

² The Admiralty Ship Department stated that the first serious considerations for the replacement of the existing Fleet Carriers commenced in 1959. All the four ships were then envisaged to be replaced with two years interval, starting in 1970. See ‘Brief history of the project’ in NAUK ADM 1/29108, ‘Discussion, decision on timing, size, costs etc of proposed new Aircraft Carrier’, 1963-66, 16 December 1963.

³ NAUK ADM 1/29108. See historical cut-outs from carrier debates.

⁴ HMS CENTAUR (1953/22,000 tons), HMS VICTORIOUS (1941-58/30,000 tons), HMS ARK ROYAL (1955/43,000 tons), HMS EAGLE (1951 (under modernisation for 1964) /44,000 tons) and HMS HERMES (1959/23,000 tons).

⁵ NAUK DEFE 7/1677, Defence policy review: Admiralty provision of a second commando carrier, 1960-1962.

⁶ For a good discussion on this history, see: Ian Speller, ‘Amphibious Renaissance. The Royal Navy and the Royal Marines, 1956-1966’, in *International Journal of Naval History* (Vol.1, April 2002).

⁷ See for instance NAUK DEFE 7/2354, ‘Replacement of aircraft carriers’, 1959-1963: Record from meeting between the Minister of Defence and the Admiralty, 25th January 1962, as well as letter from Chief of defence Staff to Minister of Defence, 15th January 1962,

⁸ NAUK DEFE 7/1677, Quote from Hansard 29 February 1960.

Four of our five operational carriers are comparatively new ships and the fifth, the 'VICTORIOUS', was completely rebuilt a few years ago. They should all, therefore, be capable of playing a full part with the fleet until the 1970s. Nevertheless, we are considering the requirements of the ships which will succeed them.⁹

The replacement was intended for the 1970s. The Admiralty planned from the beginning to build four new carriers, of about the size of HMS EAGLE and HMS ARK ROYAL. The initial proposal was to lay down the first ship at the end of 1964 and complete the fourth by 1975.¹⁰ Still, outside the Admiralty, studies for replacement carriers and the discussions on the future of carrier policy did not really commence until the second half of 1961. Mountbatten, the Chief of the Defence Staff and the former leader of the Admiralty, was supposed to lead this process. With his history and heritage, he had to balance his official support delicately. Still, in 1961, as the inter-service rivalry had not yet fully peaked, he clearly and officially supported the Admiralty's aim of four new fleet carriers. He brought the argument for three sea-borne task forces, supported by a modern Transport Command and mobile forces, directly to the Prime Minister.¹¹ Solly Zuckerman, the Chief Scientific Advisor and a close friend, wrote to Mountbatten and explained his concerns about the Admiralty led lobby and independent studies.¹² Zuckerman stated he was in favour of the carriers, and even argued they had expanded usefulness in the East of Suez region. However, he proposed that a broad study-group be established to discuss this issue, and thereby make it a 'properly backed Ministry of Defence view'. Mountbatten and his private secretary were reluctant to get into this issue. As the secretary wrote to Mountbatten;

The handling of this matter is tricky. On the one hand if you go ahead as suggested there will be trouble with the Admiralty. On the other hand if you take no action in the matter the news will soon spread round what has happened and that you are backing the Navy.¹³

Clearly, Mountbatten was under pressure in his dual position; as the joint Chief of Staff and simultaneously a dedicated naval officer, having been the former First Sea Lord. It ended up, not unsurprisingly, that Mountbatten kept close ties with the Navy, and as the First Sea Lord, Caspar

⁹ NAUK DEFE 7/2353, House of Commons extract from 16th Nov 1960.

¹⁰ NAUK DEFE 7/2354.

¹¹ MB1/J102, Minister of Defence and defence organisation 1959-64. Mountbatten to Prime Minister, 6 September 1961.

¹² MB1/J56, Carriers: vulnerability of, 1961-4. Zuckerman to Mountbatten, 20 September 1961.

¹³ MB1/J56, PSO to Mountbatten, September 1961.

John wrote to Mountbatten; 'In any study you organise, I hope the Admiralty may be closely associated...'.¹⁴

By the autumn of 1961 the demands for rationalisation were again central. The services were forced to co-operate on the issue of new carriers and look into the possibility of common grounds for training, as well as the operations of organic air power.¹⁵ As for the Air Ministry, it was already clear that they would oppose the building of new fleet carriers. It was the view of the CAS that by the 1970s-80s, for which time the new carriers were intended, future long-range strike aircraft would simply render the aircraft carrier obsolete.¹⁶ Francis Festing, who was Chief of the Imperial General Staff and thereby assessed to be 'neutral' to the conflict between the Admiralty and the Air Ministry, was asked by the MoD to look into possible rationalisations, and was invited to propose a solution to the question of replacement carriers. Festing's paper 'Future Air Strike Policy in Limited War Outside Europe'¹⁷ was the first study looking into the question of carriers versus land-based air power. Both the Admiralty and Air Ministry put forward their arguments, but Festing did not really put forward clear support to either case. His conclusion was that any British '...air strike capability outside Europe should be either one hundred per cent shore based or one hundred per cent carrier-based'.¹⁸

In December 1961, First Sea Lord Caspar John wrote a memorandum on 'Aircraft Carrier Replacement' to the Chiefs of Staff Committee. This memorandum briefly discussed the costs, size, and requirements for the 1970s and 1980s. But the Navy's great challenge was obvious; the memorandum came simultaneously with two other programmes; the construction of nuclear submarines and the escort cruisers¹⁹. Caspar John, the First Sea Lord, was aware of the overall cost of the naval construction programmes, and the challenges there were to follow. As for priority, he argued that the most important step was for the Navy to build a nuclear submarine fleet. The importance of the new cruisers was less critical, while the case for replacement carriers

¹⁴ MB1/J56, Caspar John to Mountbatten, 30 November 1961.

¹⁵ NAUK ADM 205/214, Aircraft carriers: future role: RAF participation in carrier flying, 1959-1961: NAUK AIR 2/15915, Aircraft operations from carriers, 1961-1965. Actually, the case for joint operations had also been discussed in 1959, as a consequence of the RN's attempt to take over command of the Coastal Command.

¹⁶ NAUK AIR 20/11506, Future aircraft carriers: joint Admiralty/Air Ministry study, 1961-1962. Letter by Butler (P.S. to Chief of the Air Staff), 11 October 1961.

¹⁷ NAUK AIR 19/997, RN aircraft carrier force: island base strategy, 1961-1965. Containing a copy of the Memorandum by Festing, December 1961.

¹⁸ Ibid.

¹⁹ NAUK DEFE 19/20, Enquiry into Naval carrier task forces, 1962-1965. See copies of the Memorandas on 'Escort Cruisers', and 'Nuclear Submarines' of 18 July 1962, as well as the Memoranda on 'Carriers and national Commitments in the 1970s' of 20 July 1962.

was more of a demand for the future.²⁰ As for the rationale for the replacement carriers, the focus on the world-role and limited war, as well as support to the Army ashore, were all central arguments from the outset.

Caspar John ended the carrier replacement memorandum by recommending to the Chief of the Defence Staff that he endorsed the continuing requirement for aircraft carriers and start working for a replacement for HMS VICTORIOUS. The first should be ordered by 1962/63.²¹ The Chief of Staff, Mountbatten, followed his suggestion and wrote directly to the Prime Minister arguing for the carriers, and simultaneously trying to undermine the new alternative of land-based air power:

...since the extent to which reliance can be placed in the next twenty years or so on fixed bases is at best very uncertain and we may in this period be faced with having no land base between the United Kingdom and Australia, there will be need for aircraft carriers to provide floating airfields from which British air power can be operated irrespectively of whether this power is provided by the Royal Air Force or the Fleet Air Arm.²²

The discussion of replacement of the carriers, and finally over the fate of carrier forces for the British, had then reached political circles.

The issue of new carriers soon became part of the general re-examination of British military strategy. It was particularly the Treasury²³ that was occupied with this crucial link of future strategic developments and the need for carriers. The cost of the 'obligations East of Suez' for the 1970s was an important framework by 1962²⁴, and would be even more so in 1966-67.

During December 1961 and early 1962, the first major studies came about: The Chiefs of Staff, with both the Admiralty and Air Ministry, worked with the question of 'Future Aircraft Carrier Policy'. A 'Joint Admiralty/Air Ministry Carrier Study Group' was also established.²⁵ As stated in a Admiralty note of 1961: 'It is necessary to start "now" (more or less) if we are to have Fleet

²⁰ NAUK AIR 8/2354, Island Strategy and the carrier force, 1962-63. Copy of Chiefs of Staff Committee Minute COS(62)3rd Meeting, 9 January 1962.

²¹ NAUK DEFE 7/2354. First sea Lord to Chiefs of Staff Committee, 5th December 1961.

²² MB1/J61, Carriers: replacement programme and long term defence strategy, 1962-64. Mountbatten to Minister of Defence, 20 December 1961.

²³ HM Treasury: During the 1950s and early 1960s several reviews of Treasury control were undertaken, and there were an increase in the authority delegated to departments to spend within predetermined totals. Between 1964 and 1969, some of the responsibility for economic planning and growth was transferred to the new Department for Economic Affairs. http://www.hm-treasury.gov.uk/about/about_history/about_history_history.cfm Accessed 5 April 2008.

²⁴ NAUK Treasury Office (T) 225/2156, Admiralty: replacement and modernisation of the present generation of aircraft carriers: review, 1962-1963. Note by Peck, 16 August 1962.

²⁵ NAUK AIR 20/11506. Several documents, notes and correspondence.

Carriers and aircraft in the 1970s...'²⁶ It was by then a common view within the Chiefs of Staff Committee that British reliance on the current concept of fixed bases would not be sufficient in the future; it was at best 'uncertain'.²⁷

The Chiefs of Staff and the Minister of Defence, believed that HMS VICTORIOUS needed to be and would be replaced. However, the Minister of Defence was not satisfied with the strategic rationale presented by the Admiralty. They fell back on political polemic too easily. For instance, in reply to a question about the rationale of carriers the First Sea Lord answered:

The First Sea Lord of the Admiralty expressed surprise that there should still be doubts about the future of the aircraft carrier, following the Admiralty presentation in mid-1961 and the subsequent evolution of a mobile strategy which depended on the carrier.²⁸

The Admiralty had a problem with getting its message out throughout the 1960s. As Admiral Henry Leach described it; the Admiralty tended to be arrogant, too self-centred and naive in this period.²⁹

Another parallel and closely linked issue was the proposal for a common, or 'joint' vertical-take-off and landing (VTOL) fighter aircraft for both services. It was by early 1962 a widespread political view that one would opt for a new joint VTOL fighter/ground attack/strike/reconnaissance aircraft for any new carriers.³⁰ This demand for a joint VTOL aircraft between the services of the Armed Forces was maintained by the Minister of Defence, despite scepticism from the Air Ministry and Admiralty,³¹ as well as Chief Scientific Advisor Zuckerman.³²

A short de-tour to examine the P.1127 project is required here: The story of practical applied vectored thrust fighter aircraft started in 1956 in Britain with studies made by the Bristol Siddeley Engines Company, followed up by a co-operation between Bristol Siddeley and Hawker Aircraft. This private venture evolved into the design of the P.1127. It was an industry driven process, not initiated by the military services. The Royal Air Force first became interested

²⁶ NAUK ADM 205/214. Note on the 'Political Considerations affecting the future of the R.N. and R.A.F.', October 1961.

²⁷ NAUK DEFE 7/2353. Chief of the Defence Staff to the Minister of Defence, 20 December 1961.

²⁸ NAUK ADM 205/193, 'Naval Staff presentations and studies on carriers, escort cruisers and nuclear submarines', 1961-63. Record of Meeting, 24 January 1962.

²⁹ Interview with Sir Henry Leach, 27 January 2007.

³⁰ NAUK DEFE 7/2354. From several Chiefs of Defence Staff meeting reports and correspondence from December 1961 to February 1962.

³¹ NAUK ADM 1/29108. 'V.T.O.L Aircraft', note of MoD meeting, 17 June 1963.

in the project during the summer of 1958. The first draft requirement for a tactical support and ground attack fighter aircraft (GOR.345) came about in January 1959, soon followed by a contract for the production of two P.1127 aircraft issued by the Ministry of Aviation.³³

The new aircraft was deemed necessary for limited war roles, as well as for CEATO and NATO. The Royal Air Force needed the new aircraft to fill a range of roles:³⁴

- Reconnaissance for all tactical purposes
- The creation and maintenance of a favourable air situation
- Isolation and interdiction of the tactical area, including destruction of enemy naval forces
- Support of land forces including, in limited war only, close support with conventional weapons in the battle area

Already from the beginning, the Air Ministry tried to propose the new V/STOL fighter as a complimentary aircraft to the planned TSR.2. They argued that no existing or projected aircraft could fill these major roles satisfactorily, and that it would be too expensive to design one aircraft (as the Admiralty was asking for).

The Royal Navy on the other hand was reluctant to accept the P.1127 aircraft from the beginning. The Royal Navy wanted large carriers, and with that, a capable all-round fighter aircraft. The sub-sonic P.1127 simply did not fulfil any of their requirements. The Admiralty also argued that the Air Ministry had a hidden agenda in respect of this project, namely the TSR.2 project.³⁵ According to the Admiralty, the Air Ministry simply could not jeopardise the high profile project by ordering another aircraft which could fill many of the roles of the TSR.2. It was simply therefore that the Air Ministry made the requirement for a sub-sonic 'cab-rank' aircraft. However, later as the TSR.2 seemed to be in place, the requirement for a supersonic fighter could be argued.³⁶

It is hardly possible to judge these views right or wrong, but by 1961 the Air Ministry decided that the sub-sonic P.1127 would not be a satisfactory close support aircraft. During November – December 1961, the Defence Committee requested the MoD to come up with a joint requirement. The first draft requirement for a joint Royal Navy and Royal Air Force supersonic

³² SZ/Chief Scientific Advisor/106, Correspondents H 1959-1968, Zuckerman to Healey, 2 July 1965, SZ/Chief Scientific Advisor/106/4/6.

³³ NAUK Ministry of Aviation (AVIA) 65/1746. 'The Harrier Project: historical summary', 1965-1971.

³⁴ NAUK AIR 2/17112, 'TSR.2: operational requirements', 1960. Note: 'Aircraft Requirements for Tactical Strike, Reconnaissance and Offensive Army Support' (VCAS doc nr.2394).

³⁵ NAUK ADM 1/27845. 'P.1127 (Hawker Kestrel) development: Cabinet and Ministry of Defence meetings', 1961.

³⁶ Ibid. Various internal correspondence, 1961.

V/STOL fighter aircraft (NO.356) came in January 1962.³⁷ The work on the joint requirement continued, and led to the P.1154.

Evidently, such a joint aircraft would not fulfil all the requirements of either service. However, there was a strong case for RAF pilots and aircraft operating from carriers as a means of a more rational and cost-effective way of operating British aircraft.

The maritime strategy East of Suez

The strategic framework underpinning the Admiralty's arguments for new carriers for the 1970s was largely in place by 1962. Two important documents outline their understanding: 'Carriers and National Commitments in the 1970s', of which a revised final version was presented in September 1962, as well as a larger document called the 'Comprehensive Carrier Paper' of December 1962.³⁸ Here, the Admiralty argued that the challenges of the 1960s were manageable by limited modifications to structures and deployments, even though the defence budget was to be reduced. The issue was the 1970s. As it was clear that most of the bases would be abandoned, carrier task forces would be needed for the British to uphold some flexibility to project power East of Suez.

During the 1950s and early 1960s many bases had been available, and the Army, Air Force, and Navy had been well represented in the East of Suez area. Maritime strategies had therefore also been joint endeavours. However, economic realities suggested that any duplication of capability had to be discarded. For instance, tactical air power should only be used from land-bases or from seaborne forces. According to the Royal Navy, it was clear that the progressive diminution of bases and increasing challenges to overflying routes would favour a carrier task force concept. A mobile maritime strategy, based on a carrier task force, would be an economically feasible solution. Substantial savings would be had from the reduction of (land-based) air forces and army forces, not least due to their large network of accommodation and support commitments.³⁹

The fleet carrier and amphibious forces were central to this mobile maritime strategy argued for by the Royal Navy. The amphibious forces should consist of a commando ship carrying some 850 troops, an assault ship carrying some 350-700 troops, as well as tanks and guns, and perhaps a landing ship (logistics) able to carry a limited number of troops. Under cover of a carrier task

³⁷ NAUK AVIA 65/1746.

³⁸ NAUK ADM 205/193. Copies of both documents are within this file.

³⁹ NAUK ADM 205/193. Note: 'The Comprehensive Carrier Paper', 2 November 1962, p.13.

force (including escorts), such an amphibious force would be able to project power against most contingencies (except those of a Normandy scale).⁴⁰

By 1962, the Admiralty rationale for a mobile maritime strategy, and with this the need for carriers, came down to three main arguments:⁴¹

- The ability to intervene in land operations outside Europe could be preserved in the 1970s at a lower cost than at present, if one would eliminate the duplications of the existing strategy, which required land-based aircraft as well as carriers.
- Only a strategy based on the carrier and the amphibious group would offer the certainty of being able to force an entry for land forces under effective air cover wherever needed. This would at least be doubly true as the tropical bases had been abandoned.
- In the 1970s, a maritime strategy in the Indian Ocean or the Pacific would have to be founded on an Australasian support area.

According to the Admiralty, simply no combination of forces or weapon-systems could possibly assume the many and varied roles performed by carrier task forces, be it in support of land operations or for sea control and the protection of shipping.

The case for carriers

The main Admiralty argument for carriers was that such forces were needed to effectively deploy tactical air power around the world in the 1970s. With carriers the UK would have a force operating in the politically free arena of the seas. The Admiralty argued that the principal specific commitments, on which the requirement for aircraft carriers rested, were the safeguarding of shipping world-wide, and the provision of air strikes and support for national, as well as allied purposes. In many situations, the Admiralty argued, this could not be achieved from shore bases. Mobile and flexible tactical air power, by carriers, could be delivered in whatever part of the world the UK policies required. From these prospects, the Admiralty argued the cost effectiveness of carriers.⁴² The Admiralty also got full support from the Chief Scientific Advisor Zuckerman, as he wrote to Minister of Defence Watkinson, arguing that mobile forces clearly would be the best way of maintaining military power, especially since the overseas bases were ‘dwindling away’.⁴³

⁴⁰ Ibid., pp.14-16.

⁴¹ Ibid., p.29.

⁴² NAUK AIR 20/11423, Future aircraft carriers and the island strategy: Admiralty/Air Ministry study, Jan-Feb 1963 (declassified TOP SECRET). Reply letter from the Admiralty, 15th January, 1963.

⁴³ SZ/Chief Scientific Advisor/117, Correspondents W 1945-67. (SZ/Chief Scientific Advisor/117/2/4, Zuckerman to Watkinson, 24 September 1961).

The principles for deployment of the carriers East of Suez were based on a ‘double stance’ concept of two task forces after a decision by the Minister of Defence in February 1963. One carrier was intended to be stationed in the Middle East or Indian Ocean, while the other should normally operate in the Far East. The carriers should normally be no more than seven days steaming from the troublespots at the time.⁴⁴ Until 1963, there had been one Fleet Carrier operating East of Suez. This one had had a balanced complement of strike-fighter and anti-submarine aircraft, while the two carriers operating in the Western NATO theatre had been focused on anti-submarine warfare.⁴⁵ The anti-submarine capability thus decreased with the ‘double stance’ East of Suez.

Chapter 1-B: The Royal Air Force ‘Island Strategy’

The original concept of safe transport routes

The background for what later was to be known as the ‘Island Strategy’ may be traced back to the question regarding safe and available air-transport routes to and from the Far East in the aftermath of the Suez Crisis. Prior to this, important links to the many outposts had been possible with relatively short range aircraft using only RAF staging posts. Following the Suez Crisis, as well as the overthrow of the pro British regime in Iraq – the problem of what would be known as the ‘Arab Air Barrier’ became acute.⁴⁶ As the Arab countries denied the British over-flight rights for military aircraft, the routes had to be directed around great parts of Africa.

As a consequence of this, the decision was made to develop a new airfield at Gan.⁴⁷

Coincidentally, the US approached the British with the proposal that they should develop the airstrip on Ascension Island for the case of their rocket activity at Cape Canaveral. The British, with the advice of the Air Ministry, agreed to this, with the understanding that they should have full staging rights.⁴⁸ (A decision which would later prove very important during the Falklands War). For these initial years, it was all about routes for Transport Command to support all British interests in the Far East. Even the Royal Navy was much in debt to these services. These were

⁴⁴ NAUK ADM 1/28638, ‘Aircraft carriers: deployment east of Suez’, 1963. Memorandum by the First Sea Lord, 21 October 1963.

⁴⁵ NAUK ADM 205/214. Minute of 31 May 1961.

⁴⁶ Interview and correspondence with Peter Hudson, December 2006. Peter Hudson worked in this period as: *Assistant Secretary at S6 (Air), Air Ministry, 1956-57; Head of Air Staff Secretariat, 1958-61.*

⁴⁷ The Island of Gan is the southernmost atoll of the Maldives in the Indian Ocean. The Maldives gained independence in 1965, while the Gan airbase remained with the British until 1976.

the ideas of Air-Marshal Hudleston, the man who came up with and fought for the concept during his post as the Vice Chief of the Air Staff from 1957 till 1962.⁴⁹ He did not intend the concept to be used as a counter to increased naval activity or future plans and strategies for the region.⁵⁰

The Island Strategy as a alternative to carriers

The well known term ‘the Island Strategy’⁵¹, came out of the Air Ministry in 1962. But by then, Hudleston was about to leave the Air Ministry – and the ‘extended ideas’ which would develop during the Autumn of 1962 were far beyond what originally was intended with the concept of staging islands for politically safe air-transport links.

The first records of the Island Strategy becoming a direct alternative to the carrier task force concept date from January 1962.⁵² The concept was then used in conjunction with criticism of the Navy’s carrier replacement programme by the Air Ministry in a brief for the Defence Committee. The general perception within political circles and the MoD by December 1961-January 1962 was in favour of a carrier replacement for HMS VICTORIOUS, however, the Air Ministry was awaiting an opportunity to halt the project. As a staff recommendation to the Chief of the Air Staff before the coming Chiefs of Staff meeting stated:

I would not recommend you to oppose this paper strongly, but much depends on the climate of opinion within your Committee. Your most effective intervention would probably be an indirect one in terms of ‘island strategy’ should the opportunity arise.⁵³

The question of replacement carriers was of course an important one for the Chiefs of Staff in 1961-62. From the beginning the Air Ministry was sceptical about the enormous investment which this obviously would include. It was a general view within the RAF and Air Ministry that carriers were not a cost-effective use of air power resources. The main arguments against carriers were summarised thus by the Air Ministry; the increasing vulnerability of carriers to submarines, surface and air attacks, the limited number of the carriers’ offensive aircraft, the inherent cost and difficulty of sustained carrier-borne air operations, and finally the disproportionate effort

⁴⁸ Interview and correspondence with Peter Hudson, December 2006. See also: NAUK AIR 20/11424, Future aircraft carriers and the island strategy: Admiralty/Air Ministry study, Mar-Jun 1963. Island Strategy note by Dunne of 18 June 1963.

⁴⁹ Air Chief Marshal Sir Edmund Hudleston. 1956: Chief of Staff (Air), C in C, ‘Operation Musketeer’. 16 Sep 1957: Vice Chief of the Air Staff. 30 Apr 1962: AOC in C, Transport Command.

⁵⁰ Interview and correspondence with Peter Hudson, December 2006.

⁵¹ Sometimes called ‘the Island Stance’, or ‘the Island Stance Strategy’.

⁵² NAUK AIR 8/2354. AUS (A) (Quinlan) to Chief of the Air Staff (Pike), 31 January 1962.

required to land a very small force bearing in mind that this was a requirement seldom if ever likely to arrive.⁵⁴ The economy of the defence sector was tight already, and everyone knew that a carrier programme would have grave negative implications for the other services. As Michael Quinlan noted in an interview: ‘Since a carrier programme included both money and air power – the Air Staff had to have a view!’⁵⁵

By late summer 1962, the RAF’s alternative of the ‘Island Strategy’ was raised in various meetings, and gradually became known to the Ministry of Defence. Also the Colonial Office became involved in the evaluation and survey of islands about this time.⁵⁶ A more official approach would come as a consequence of an Admiralty paper entitled ‘The case for carriers’ in August 1962. The Air Ministry found it needed to respond with a reply to this paper, outlining the implications of meeting the commitments by the use of land-based aircraft and island bases instead of carriers. The Secretary of State for Air, Hugh Fraser, first sent a note of his views on the aircraft carriers on 4 October 1962. Peter Thorneycroft, the Minister of Defence, then wrote a memorandum on 9 October 1962, after the new solution had been verbally discussed as an alternative to fleet carriers:⁵⁷ ‘I have in recent weeks heard numerous references to what appears to be generally known as “The Island Strategy”’. He continued: ‘I would like to know more about it’. He then asked to have a paper on the concept within a week, and also an outline of a two-service meeting and discussion on the subject to follow in due course. This memorandum by Thorneycroft was often referred to as the starting-point of inter-service rivalry. The requested follow-up note on the ‘Island Strategy’ came from the Air Ministry to the Minister of Defence by 18 October 1962. This was the first specific, thorough document on the RAF proposed concept of staging and mounting bases for the sake of fighting limited wars. After his review of the paper, the Minister of Defence decided by late October 1962 that the ‘Island Strategy’, which possibly could fill the roles more ‘effectively and economically’, should be included as part of the Scientific Panel’s enquiry.⁵⁸ Still, the ‘Island Strategy’ paper was not released to the study-group until January 1963.⁵⁹ With this, we see how the Island Strategy became politically accepted as an alternative to the aircraft carriers – and led to the great inter-service rivalry of 1963.

⁵³ Ibid.

⁵⁴ NAUK AIR 8/2354. Note by AUS (A), 12 March 1962.

⁵⁵ Interview with Sir Michael Quinlan, 5 October 2006.

⁵⁶ NAUK DEFE 7/1782, ‘The Island Strategy’, 1962-1963.

⁵⁷ NAUK DEFE 7/1782. Memoranda by Thorneycroft, 9 October 1962

⁵⁸ NAUK DEFE 19/20. Note from Peter Thorneycroft to Secretary of State for Air, 31 October 1962.

⁵⁹ NAUK DEFE 19/20. Note from the Assistant Chief of Naval Staff to Zuckerman, 2 January 1963. The ACNS was sending forward the admiralty’s great scepticism to this new concept.

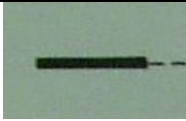

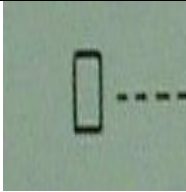
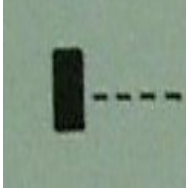
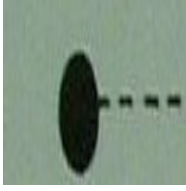
Symbol	Description
	OR.351 radius of action (assault) 1000 NM. (The operating range with full load for an 'invited' operation i.e. with airfield facilities and fuel available at forward end is 3000 NM. Using the airfields shown this covered all of Africa South and South East Asia.
	T.S.R.2 combat radius 1.250 NM. (Could be extended by in-flight refuelling).
	'Island Stance' airfields (Singapore was shown for possible use 'on invitation' by Malaysia; Cocos was required if the UK had a base in Australia).
	'Island Stance' airfields with stockpiles available for operations.
	The stockpiling of equipment and use of facilities at Manila would be by arrangement and was alternative to the provision of similar facilities, under similar arrangement, in Thailand.

Figure 2: Island Strategy Map, 1962. Symbol explanation.⁶¹

An operation such as the Island Strategy could according to the Air Ministry be maintained independently by the Air Force for up to 28 days.⁶² By then seaborne reinforcements would become increasingly necessary. Tanks and other heavy vehicles would not be available to the ground forces until a beachhead could be established and supplies from the sea brought in. In some later discussions, the Air Ministry made a note of the fact that this was to be done by transport ship, and not by carriers. This was beyond the capacities of carriers they argued. This was also agreed on by the Admiralty.

⁶¹ NAUK AIR 19/997.

⁶² NAUK AIR 20/11423. Interim report of Chief Scientific Advisor's enquiry into Naval Task Forces, 7 February 1963.

As the Island Strategy evolved into two different concepts; first the quest for safe transport routes and later the extended concept of staging and mounting bases for offensive operations, some complications arose. The new Chief of Transport Command, Hudleston, who in fact was the original ‘father’ of the concepts, appeared in the media promoting the ‘secret’ concept. He had publicly discussed the use of a series of bases around the African continent with a group of journalists who had flown with the RAF to the Far East. The essence of the concept he envisaged appeared in *The Guardian* on 4 November 1963, and caused an uproar within the Ministry of Defence. The Minister of Defence, Peter Thorneycroft, called the Chief of the Air Staff for a meeting and required an explanation of their reasons for bringing this out to the public.⁶³ The Air Ministry’s explanation was that Hudleston was concerned solely with the problems of communication; ‘...it was in no way an exposition of the “Island Stance” strategy, of which the cardinal feature was the use of islands as mounting bases’.⁶⁴

‘Air Cover for the Army in Limited War’

As the general concept of an Island Strategy had been established, more detailed studies were conducted to examine to what degree the concept could conduct air-land warfare and give effective support to the Army.⁶⁵

The greatest challenge to the concept of the Island Strategy centred on how and how effectively the RAF could support the Army from bases hundreds of miles away. The Army was dependent on air support for ‘close air support’, defensive ‘air cover’ and offensive ‘air strikes’ against enemy forces. Strikes against permanent enemy installations and pre-planned targets would be easily conducted by the RAF bombers. This would be handled by TSR.2 strike aircraft and V-bombers directly from the mounting bases. In solid RAF tradition, they argued: ‘It would clearly be in our interest to make the fullest possible use of pre-emptive air strike to neutralize the enemy air forces.’⁶⁶

The Air Ministry argued the capabilities of the future projects of the RAF to fill the above mentioned tasks with a force of two squadrons of P.1154s, two squadrons of TSR.2, one squadron of Victor tanker aircraft, as well as OR.351 medium tactical transport aircraft. Both the P.1154 and OR.351 were projected as V/STOL aircraft. Before continuing the debate on

⁶³ NAUK DEFE 25/40, Island strategy, 1962-1965. Thorneycroft to the Chief of Air Staff, 4 November 1963. Also see NAUK DEFE 7/1782 and several newspaper cut outs and correspondence in NAUK AIR 8/2354.

⁶⁴ NAUK AIR 8/2354. Advice from the P.S. to Chief of the Air Staff, 6 November 1963.

⁶⁵ The Air Ministry simultaneously delivered critical studies of the carrier options prospects of delivering the same capabilities. See e.g. NAUK AIR 19/977 for a Air Ministry paper on: ‘Availability of Carrier Aircraft over an Assault area’.

⁶⁶ NAUK AIR 19/997. Air Ministry note: Air Cover for the Army in Limited War, of 15 February 1963.

conceptual alternatives, it is helpful to briefly examine these two V/STOL projects for fighter and transport aircraft, which clearly must be understood in relation to the 'Island Strategy'.

The P.1154

The Royal Air Force GOR.345 requirement, practically the P.1127, was overtaken by the political demand for a new joint aircraft by early 1962.

The joint RAF and RN P.1154 aircraft was designed and equipped according to the No.356 requirements. This described a modern aircraft for strike support to ground troops, as well as high performance air defence and interceptor capabilities. It was to be operated from both land bases and carriers. The broad performance of the aircraft was 225 NM. radius for low-low strike missions and 390 NM. for a mixed profile strike radius. The aircraft needed to be super-sonic, and V/STOL capable. It was not a full vertical take off requirement (as this reduced the performance), but what was referred to as a 'Rolling VTO'.⁶⁷

The Royal Air Force and the Royal Navy tried to work out a common requirement after pressure from the Defence and Overseas Policy Committee (DOPC), but did not succeed. By the autumn of 1962, the requirements for two different versions were proposed by the services: The first was a V/STOL strike/reconnaissance aircraft to be developed for the Royal Air Force. This aircraft was called the P.1154a, and was intended to be operational by 1968. The Royal Navy version, the P.1154b, was to be a more advanced all-weather version. This aircraft could be operational by 1970, in time for the new carriers. However, due to political pressure, the debate over whether it was possible to produce an agreed joint aircraft continued throughout 1963. The recommendation by the services by late 1963 concluded that the P.1154a should be produced for the Royal Air Force as a replacement for the Hunter by 1969, while the P.1154b should be cancelled and replaced by an order of American Phantoms.⁶⁸

This recommendation was accepted by the DOPC, and announced in the Defence White Paper of February 1964.⁶⁹

The No.356 requirement was re-worked to fit the Royal Air Force demands instead of being a joint project. The No.356 (issue 2) was accepted by the Ministry of Aviation by May 1964. However, the P.1154 for the Air Force was soon cancelled by the new Government that took office in October 1964. The Defence White Paper of 1965 announced that the Royal Air Force

⁶⁷ NAUK AIR 65/488. 'Hawker Siddeley P.1154 V/STOL (vertical/short take off and landing) tactical strike/reconnaissance fighter to Air Staff Requirement No 356: Volume 1, description of aircraft', July 1964.

⁶⁸ NAUK AVIA 65/1746.

⁶⁹ PP, *Statement on Defence 1964*, HMSO 1964 (2270).

was to go back to the previous P.1127 design, now made into the Kestrel evaluation aircraft.⁷⁰ This was a far cheaper and less technologically demanding project than the P.1154.

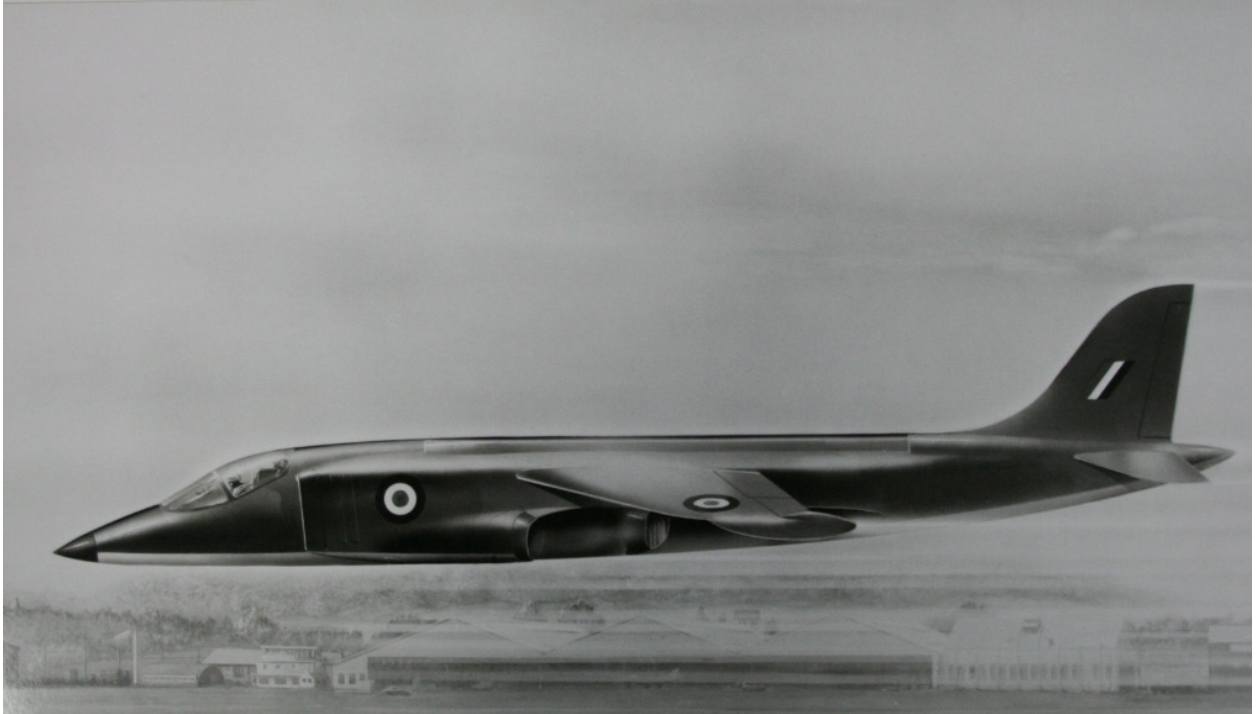


Figure 3: P.1154⁷¹

The Beverly transport aircraft replacement had first been approved in 1957. It had then been planned as a short take-off and landing aircraft (STOL).⁷² The project did not move along quickly, like many others in the years following the Sandys Defence Review of 1957. However, by 1961 the project was picked up again. In addition to the previous requirements, the RAF and the Army now started arguing for a vertical take-off and landing capability for the new medium transport aircraft. It was by then known as the 'Hastings/Beverly Replacement', and both the designations STOL and V/STOL were used in project studies. The Royal Air Force argued that if the Army needed to be inserted into an area at short notice and close to a concrete theatre, they should not be dictated by the availability of 'suitable' bases. As the VTOL technology was much discussed in this period, visionary thoughts of new possibilities came about. It was the RAF and Army's view that a capability to operate from an unobstructed area of 1,500ft. long should be an operational quality. They believed this was a practical and feasible requirement.⁷³

⁷⁰ PP, *Statement on the Defence Estimates 1965*, HMSO 1965 (2592).

⁷¹ NAUK AIR 65/488.

⁷² NAUK AIR 20/10645, 'Beverley medium range transport aircraft replacement (OR 351)', 1960-61. Reference to C.O.S.(56)445.

⁷³ NAUK AIR 20/10645.

It was in this context that the Air Ministry came up with the argument that future operations could be mounted from bases involving forward carriage over a distances of 1,000 NM. or more, to likely combat areas. The technical prospects of VTOL technology must here be seen in relation to the previous discussed ideas of an 'Island Strategy'. Strategic aircraft would bring in the troops and equipment to the staging bases – but a VTOL medium transport was needed for bringing them into the combat theatre. The prospective aircraft needed to be dimensioned for tactical transport and support of both own RAF and Army combat forces. The OR.351 needed to carry heavy transport vehicles and equipment, as well as ground equipment for the forward air forces, and not at least RAF surface-to-air missiles, helicopters, air-radars and communication systems for establishing effective forward bases. It was a substantial requirement of V/STOL technology.

Four design proposals were submitted. Two by the British Aircraft Corporation, one by Hawker Siddley Group and one by Shorts.⁷⁴ The BAC.222 turbo-prop, derived from the American C.130 Hercules, did not meet the original STOL requirements, and was immediately eliminated as an alternative. The BAC.208 and the Hawker Siddley A.W.681 were turbo-jets, and could be adapted to a full VTOL design. They both proposed a design with four Bristol BS.53 engines, the same as in the P.1127 VTOL aircraft. They both proposed cruising speeds of more than 400 knots. The fourth aircraft, the Shorts SC.5/21B, was a turbo-prop based on the Short Belfast. All the prospective aircraft were estimated to come to a cost of about £85-100 million⁷⁵ for 30 aircraft.⁷⁶

As for the Air Ministry evaluation of the alternatives, they found no great differences as to range, but still argued that the jet alternatives were faster and could therefore deliver more over a given period. And of course, the Air Ministry envisaged a VTOL: 'Bearing in mind that the aircraft we choose will be with us until at least 1980, I consider that we should be ill-advised to bring into service an aircraft which was not potentially capable of V.T.O.L.'⁷⁷ As for the choice between the two jet-designs, the BAC.208 and the A.W.681, the Air Ministry saw few differences as of operational function, and thus initially recommended that industrial implications should be taken

⁷⁴ Ibid.

⁷⁵ £100 Million (1966), would in 2006 prices (share of GDP) equal £3,411,170,896.

GDP: the economy's total output of goods and services in money terms, is the best measure for large-scale projects or expenditures, such as the construction of a bridge or government expenditure on health care. Copyright © 2008 Institute for the Measurement of Worth. All rights reserved. This work may be copied for non-profit educational uses if proper credit is given to the Institute. (<http://www.measuringworth.com/ukcompare/> Database used July 2008)

⁷⁶ Ibid. See various documents from the Defence Research Policy Committee of 1961.

⁷⁷ NAUK AIR 20/10645. 'The S.T.O.L Transport Aircraft', note by the Deputy Chief of the Air Staff, undated (appx November 1961). The Chief of the Air Staff supported his arguments in related notes in same file.

by the Ministry of Aviation. Later, by the autumn of 1962, the Royal Air Force officially supported the A.W.681 as their preferred option. The Air Ministry argued it would need 62 aircraft delivered by 1968/73. The estimated gross cost was £140-160 million.⁷⁸

The greatest question subject to debate became the actual need for VTOL technology for the transport fleet. As for the Royal Air Force, clearly this had a rationale to be found with the concept of the 'Island Strategy'. There were essentially four main roles argued for the new tactical transport, where the second made specific reference to the Island Strategy:⁷⁹

- Intra-theatre carriage of passengers and freight
- Airborne and air-landed assault
- Supply dropping, including medium and heavy platforms
- Aeromedical Evacuation

The Admiralty was opposed to the OR.351, especially after it was officially discussed in conjunction with the 'Island Strategy' concept during the summer of 1962.⁸⁰ Clearly, the Chief of the Air Staff's statement that the OR.351 and the 'Island Strategy' would make naval forces redundant, made an impact.⁸¹ As for the Chief of Staff, Mountbatten saw that before the OR.351 could rank for consideration in the defence costing, Ministers would require background directly linked to the likely strategy to be pursued in the 1970s. As the link was obvious, the question of the OR.351 therefore had to be officially considered in conjunction with the 'Island Strategy' studies, as well as the NATO requirements for the smaller tactical VTOL transport aircraft (NBMR.4). Generally, Lord Mountbatten was critical of the OR.351, even though he saw the need for replacement transport aircraft.⁸²

The visionary thoughts and proposals did not manage to convince sceptics. In late 1962, the Chief Scientific Advisor, Zuckerman, visited Washington to discuss the needs for new transport aircraft.⁸³ The Americans had already taken into service the C.130 Hercules. As this aircraft did not meet the STOL requirements of the British, as well as the fact that the Americans were also interested in the prospects of STOL and VTOL aviation, the discussions sought to come up with a common project. However, in the end no agreement came about. Three alternatives for the British were left; develop and produce an aircraft to satisfy the OR.351 requirements, put the

⁷⁸ NAUK AIR 19/988. 'Aircraft: OR 351', 1961-62.

⁷⁹ NAUK AIR 19/988. 'Air Staff Requirement No. O.R./351 for a S.T.O.L Transport Aircraft', Air Ministry, 13 march 1961.

⁸⁰ NAUK AIR 19/988.

⁸¹ NAUK AIR 19/988. Internal (unsigned) notes of the Air Ministry, 16 July 1962.

⁸² NAUK AIR 19/988. Note on Tactical Transport Aircraft Requirements, COS meeting, 3 July 1962.

project on hold and buy some interim quantity of C.130s to satisfy immediate requirements, or to continue the effort to establish a joint UK/US long term V/STOL medium transport aircraft.⁸⁴

It gradually became a conviction that the costs and risks were unmanageable for independently producing such a visionary aircraft; buying American C.130 aircraft steadily became the most discussed option. These discussions were all brought to the attention of the Prime Minister in this final stage. Prime Minister Macmillan saw the urgent need for new transport aircraft, but underlined the need to reduce the costs by working out a joint Anglo-American scheme.⁸⁵

During the winter of 1962-63 many 'preliminary decisions' were discussed and made: Studies of C.130 were undergone in a hurry, and the possibility of changing the requirements for fitting this option were discussed.⁸⁶ However, the V/STOL aircraft remained as an option.⁸⁷ Despite the C.130 being the most discussed option in this period, it was actually 'decided' at a Chequers meeting in early February 1963 that the new transport aircraft would be based on the OR.351 requirements.⁸⁸ Following, on 15 February 1963 Thorneycroft wrote to Mr McNamara announcing that the British would not buy the C.130 aircraft.⁸⁹

However, it was becoming clear that even though this was the option preferred by Thorneycroft and the Air Ministry, the political focus on costs kept pulling towards the American Hercules C.130 option. As the prospects of getting VTOL aircraft diminished, the Air Ministry desperately sought alternative solutions; perhaps a modified Belfast, or a mix of C.130's and some new British VTOL designs?

In the end, after much indecision, the safe option of the Hercules C.130 was chosen over the visionary thoughts of a medium size VTOL transport aircraft.

⁸³ NAUK AIR 8/2378. 'OR 351: Hastings/Beverley replacement', 1962. Memorandum for the Minister of Defence (UK) and the Secretary of Defence (US), December 9, 1962. See also 'Joint Requirements for Tactical Transport Aircraft', UK/US report of 7 November 1962.

⁸⁴ NAUK AIR 8/2378.

⁸⁵ NAUK AIR 8/2378. Various letters to-and from the Prime Minister office of October 1962. For further correspondence, see also: NAUK DEFE 25/14, 'Hastings-Beverly replacement (OR 351): V/STOL tactical transport', 1962-63..

⁸⁶ NAUK AIR 8/2378.

⁸⁷ NAUK AIR 8/2379. 'OR 351: Hastings/Beverley replacement', 1963.

⁸⁸ NAUK DEFE 25/14. Copy of internal MoD note referring to this, signed by A.P.Hockady, 15 February 1963.

⁸⁹ NAUK DEFE 25/14.

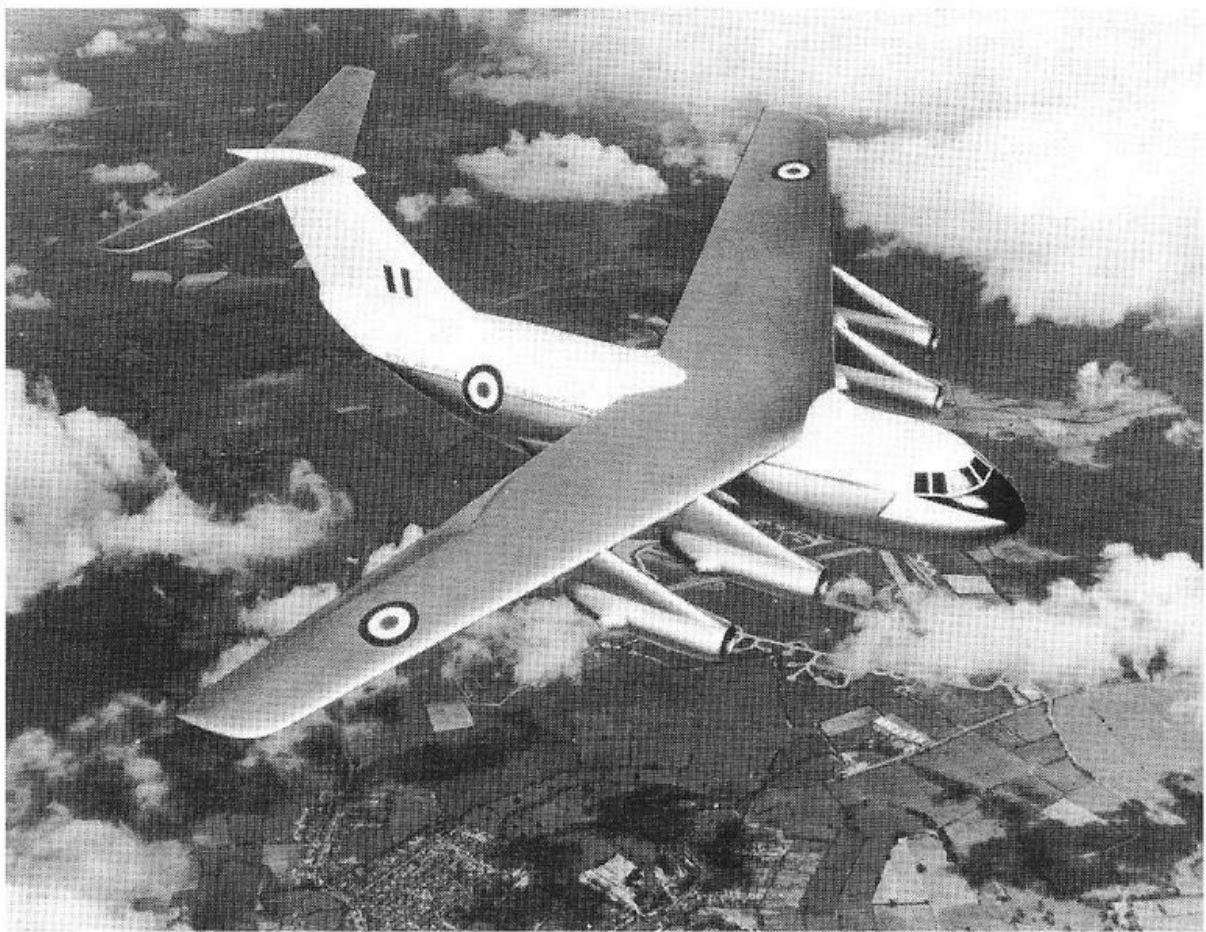


Figure 4: OR.351, AW 681.⁹⁰

The coverage

Normally, airfields would be available for the forces. In the worst case, if any airfields were not be available – the operations would be possible via the V/STOL aircraft. One squadron of P.1154s and a simple radar system would go in with the first troops and thus be stationed close to the ground-troops. Still, the bulk of air support would be provided from the mounting bases.

From the mounting bases, a good coverage could be maintained from as far as 1000 NM. For air cover missions, a P.1154 fighter with two Red Top missiles, two 300-gallon external fuel and a refuel of 7500 lbs. from the Victor tankers; could maintain 2 hours and 35 minutes on-station. The total sortie time would be approximately 6 hours and 45 minutes. One Victor tanker could support six P.1154. For a 1000 NM. operational radius and a twelve hour continuous coverage by six fighter aircraft, a total of five formations of six fighters and one Victor tanker would be required. If the task was close air support, the primary aircraft would be the TSR.2 (and V-bombers), but also the P.1154 would be able to carry 2000 lbs. of strike weapons (bombs or

A.S.30 air-ground missiles). The rationale for and mix of air cover and ground support aircraft would be up for the commander to decide as of the demands of each operation.

Again, as the Air Ministry stressed, this was a worst case scenario. Most conflict areas were much closer to the mounting bases and even better coverage would be possible. With this, a clear alternative to the expensive carrier task force concept had emerged and made its position among both the politicians and the public.

The RAF was also searching for a role

As the Polaris submarines were to take over the deterrent from the V-bombers, and the deterrent was deemed to be the main home-defence capability – the prospects for the traditional RAF air defence forces also became somewhat uncertain. The cut in aircraft inventory which had started with the Sandys Defence Review of 1957, still continued in 1960. Fighter Command was steadily being reduced from 400 to 200 aircraft. The Minister of Defence stated that they had to ‘...look carefully at the future of air defence when there are no fixed deterrent bases to protect’⁹¹. As cuts were demanded, the Air Staff had proposed to cut expenses by reducing the homeland forces by one squadron of aircraft, as well as the Bloodhound III project of long-range missiles. However, these suggested changes were deemed insufficient. As the Minister of Defence responded to the Air Staff suggestion: ‘...these alterations do not really seem to reflect the big change in the nature of the threat’. The Minister continued: ‘With the introduction of missiles, manned aircraft are going out for certain purposes’, and concluded that; ‘The shape of the RAF may have to change in the light of strategic developments’.⁹² Chief of the Air Staff, Pike, tried unsuccessfully to withdraw these statements from the records.⁹³

However, we clearly see that the RAF was under great pressure at the beginning of the 1960s. Both the RN and the RAF needed to fight for their relevance in a time of great changes. By 1960, there were still great cuts to forces in Britain and to forces attached to NATO – on behalf of a relative increase in focus towards East of Suez.

⁹⁰ Unk copyright. Downloaded from MSN ‘TSR.2 Studygroup’, downloaded March 2008.

⁹¹ MB/J67, Chief of Staff objections to the Minister of Defence’s minutes of a meeting on air defence, 7 March 1960.

⁹² Ibid.

⁹³ Ibid.

Chapter 1-C: The 1962-63 Enquiry

The 'seaborne/airborne mobile strategy' was conceived in 1961 by Minister of Defence Watkinson, and supported by the Chief of Staff, Mountbatten. To be able to get this concept established in this time of inter-service rivalry, they needed, according to Mountbatten, to get a 'soldier' (Army) to lead a study which would conclude on what they already agreed. Mountbatten told Watkinson he had already talked to Francis Festing from the Army, and recommended him for the job. He also suggested that Watkinson should get Macmillan to initiate the study, thereby giving it more legitimacy.⁹⁴ Festing was chosen to lead the studies on the issue, and delivered his papers on the 'Rationalisation of British tactical air power' and 'Future Air Strike Policy in limited War Outside Europe' in December 1961. However, Mountbatten was extremely disappointed with the outcome. He felt that it had become so political that it did not discuss the real issues. Mountbatten summarised the outcome of the study retrospectively:

...by that time the feeling between the Royal Air Force and the Royal Navy over the question of the future of the Fleet Air Arm had become so bitter that the Committee were anxious not to exacerbate the situation in their report.⁹⁵

The main ideas emerging from these studies were the questions of joint aircraft programmes and joint operation of carrier aviation. These thoughts became important frameworks for the military strategic debate of the early 1960s, not least with the politicians.

As the Island Strategy option had become a direct alternative to the Admiralty's replacement programme of carriers, the inter-service rivalry inevitably intensified. Mountbatten, as the Chief of Staff, was constantly under pressure. As the former leader of the Navy he clearly wanted to support the Navy. He had, during his post as First Sea Lord, largely been the architect behind the Royal Navy's turn to the East of Suez in the late 1950s. On the other hand he had to step forward as the common leader for all the services. From his personal papers, we clearly see how he constantly tried to balance these roles. Often with good fortune, he helped the Navy (mainly unofficially), but also did important work to establish a common and stronger central control. Some of his unofficial politics may be extracted from a letter from Caspar John to Mountbatten at the height of the 1963 inter-service battle. Mountbatten, as the diplomat and Chief of Staff, tried to end the battles between the Air Ministry under Thomas Pike and the Admiralty under

⁹⁴ MB1/J102. Mountbatten to Watkinson, 1 August 1961.

Caspar John in January 1963. However, Caspar John was clearly angry with Mountbatten for this turn:

But, with respect, what you seem to have forgotten is our personal conversation a month or two ago, when I asked whether you felt I was right not to compromise with Tom. Your answer was to the effect “Don’t compromise – fight him to the death”. I have acted accordingly – hence the log jam.’ ... ‘May I also, with respect, remind you that it is you – not me – who has personally stimulated Tom to return to the charge with his Island Strategy and anti-carrier papers – adding fuel to already robust flames.’⁹⁶

As the carrier replacement programme was brought out from naval circles and over to the Ministry of Defence and the Treasury, it was naturally linked to the greater questions of defence policy. Then there was the alternative strategic concept raised by the Air Ministry, the Island Strategy. To study these alternatives, an independent study-group under the Chief Scientific Advisor, Zuckerman, was put together by September 1962 for the ‘Enquiry into Naval Forces and Anti-Submarine Warfare’.⁹⁷ The study-group consisted of Sir Solly Zuckerman as Chairman, as well as a group of independent university academics: Dr J.C. Kendrew as Deputy Chairman, Professor H. Bondi, Sir E. Bullard, Sir W. Cook, Dr. M.N. Hill and Professor R.V. Jones. The group was actually put together by the Admiralty, as the study was initially concerned with naval support for Army operations in limited wars and anti-submarine warfare.⁹⁸ But as the group was set up, the task was shifted by the MoD, due to the newly raised prospects of the Island Strategy, to also examine the Carrier Task Force concept versus the potential of the Island Strategy.

There were also several other studies conducted in parallel, but most of them were single service studies arguing the ‘extreme’ solutions, e.g. ‘Carriers and National Commitments in the 1970s’ written by the Admiralty, and ‘Air Cover for the Army’ by the Air Ministry. The services were also invited to write papers on the other service’s ideas, e.g. the Air Ministry’s paper ‘Naval Task Forces’⁹⁹, and the Admiralty’s paper ‘The Island Strategy’. Obviously, these would be rather critical – which of course was also the rationale for the MoD to give them these tasks. There were also some studies which were intended to be joint efforts. But, even though these

⁹⁵ SZ/GEN/72, Mountbatten.

⁹⁶ MB1/J172, First Sea Lord: correspondence mainly with Admiral Sir Caspar John and Admiral Sir David Luce, 1960-63. Caspar John to Mountbatten, 16 January 1963.

⁹⁷ NAUK AIR 20/11424. Copy of report by the study-group of 22 April 1963. Note: The study was also called by several other, but still related names, e.g. the ‘Enquiry into naval forces and carrier task forces’, or ‘Naval Task Forces and Islands’. Towards the end it was often, and more correctly, called the ‘Enquiry into Naval Forces’ – and in the end ‘Enquiry into Carrier Task Forces’.

⁹⁸ NAUK DEFE 19/20. Note from Zuckerman to the Minister of Defence, 29 October 1962. From this origin of the group structure, the study-group was criticised of being ‘all naval’ from the Air Ministry from the beginning.

‘joint studies’ normally had a lead service, that lead service would only approach the other service for the most intricate and least important technical questions. In reality, these studies became nothing more than single service ‘extremes’ as well. The following sub-chapter follows the structure of the Chief Scientific Advisor’s ‘Enquiry into Naval Forces and Anti-Submarine Warfare’ study, with supplementary arguments and discussion from the other parallel and linked studies.

As the interim report of the study from the Chief Scientific Advisor’s group was presented in February 1963, both the Air Ministry and Admiralty put forward their criticisms – and not least started a great inter-service debate. But first of all, Chief of the Air Staff Pike argued that the two cases, the Island Strategy and the Carrier Task Forces, should not simply be viewed as alternatives. They should be viewed as complementary.¹⁰⁰ Not least did all forces – naval included – rely upon the availability of air transport from the UK. The Air Staff argued that if there were a question to be asked, it was whether carriers were needed in addition to the staging islands, which in any case was necessary.

Threats and scenarios

The first controversial issue Zuckerman’s study-group looked into, was in what cases would intervention by military forces be necessary? They found the ‘intervention by invitation’ by threatened regimes or for internal security purposes the most likely scenarios arising. With these types of scenarios, airheads would be available and the threat would most likely be low. Thus, the ‘Island Strategy’, as the much cheaper, would be a viable strategic concept. But certainly this could be managed without fleet carriers and the full network of bases envisaged. The Army and RAF Transport Command would de facto play the most significant roles.

In case of scenarios of ‘threats of moderate opposition’, the establishing of airheads would most likely be difficult. In these scenarios, the carrier concept clearly was the preferred choice. The study-group found these scenarios to be less likely, but argued that the UK should be prepared to carry out such tasks. This was a complicated and central question, and the study-group of scientists pointed out that it was relevant to ask how frequently this country would conduct armed interventions overseas in the 1970s? First Lord Carrington commented to the Minister of Defence on this matter and concluded that:

⁹⁹ NAUK AIR 20/11424. Copy of the final report from the enquiry, 22 April 1963.

¹⁰⁰ NAUK AIR 20/11423. Note by Chief of the Air Staff, 14 February 1963.

It seems to me that if we want to conduct such an operation once in the decade and cannot undertake it, or fail in undertaking it, our position in the world may be undermined as a result. Conversely, and I would suggest even more important, if we are known to be capable of such an operation we may never be called on to undertake it, but our position about the world remains secure. I believe it is the deterrent value of this intervention capability that is of the greatest importance.¹⁰¹

In case of situations of ‘strong opposition’, the study-group doubted both the effectiveness of the Island Strategy and the carrier option. Even a two-carrier task force, also known as the ‘double-stance strategy’, would, due to the great vulnerability of carriers, not be able to fight such a war without the participation of US forces.

Availability of carriers

Initially, the study-group supported the Navy’s arguments for a carrier force of four fleet carriers. A fleet of four was needed to keep a ‘double stance’ East of Suez, as one would always be in for maintenance and another needed for the North Atlantic and home waters. The study-group thus recommended four carriers, (if carriers would constitute the strategic choice over land-based air power) and actually went as far as stating that if so; ‘anything less would be a compromise’ and not cost-effective. The Chief Scientific Advisor was very clear that a compromise solution would be a useless one. (By the summer of 1963 this was changed to three carriers by the MoD, a number which has remained unchanged.)

Concerning the question of the availability of carriers, the Air Ministry argued that a carrier force could only sustain operations for a short period. This was easily countered by the Admiralty, which stated that a carrier task force would be able to sustain operations for 2-3 months without returning to an advance base. Maximum activity could be upheld for 3-4 days without pause. As a direct counter-argument against the Island Strategy, they stated: ‘Many of the replenishment problems applying to a carrier would apply equally, and often with greater force, to an airhead ashore in the forward area, and also to a mounting base’.¹⁰²

Not all arguments were relevant. Among others, the Air Ministry made a point of the fact that carriers needed overhauling. The Admiralty ironically replied that: ‘No mobile vehicles, be it tank, aircraft or ship can spend all its life operational on station: all need to be refitted or

¹⁰¹ NAUK DEFE 7/2354. Letter from Carrington to Thorneycroft, 1 May 1963. See also NAUK ADM 1/29108, Discussion, decision on timing, size, costs etc of proposed new Aircraft Carrier, 1963-66.

¹⁰² NAUK AIR 20/11423. Reply letter from the Admiralty, 15 January, 1963.

overhauled periodically, and the carrier is no exception to this rule. Even men require roulement'.¹⁰³

Vulnerability of carrier forces

All operations of war entail some risk and all bases are to some extent vulnerable; but an aircraft carrier is very far from being unacceptably so. In a properly constituted force it is hard to pinpoint, hard to hit, and even if hit, extremely hard to disable.¹⁰⁴

Caspar John, December 1962

The vulnerability of the carriers has since the beginning of carrier aviation been a main argument against these costly ships and aircraft. The case of carriers' vulnerability was now put on the agenda. Zuckerman wrote to the Minister of Defence in January 1962; 'The bigger the carrier, the more it can do and the easier it is to operate; but the more there is at risk'.¹⁰⁵

The Air Ministry argued that if the carriers were to be stationed close to the coast of the conflict area, this would require more forces just to protect the carriers from the threat from fighter, strike and bomber aircraft, as well as from enemy ships and mining operations. This critique of the Admiralty is only partly relevant, since most low-level conflicts and crises would be against nations without any significant air power strike capability or larger naval ship which could lead to a need for 'carrier protection by other carriers' as the Air Ministry argued. Still, the Admiralty was put under pressure over the question, and was in time given the task of writing a specific paper on this. The paper 'Vulnerability of the Aircraft Carrier in a Task Force' was delivered from the Admiralty by mid January 1963¹⁰⁶. However, the Admiralty had already a year earlier made and unofficially distributed copies of a similar paper to among others Chief Scientific Advisor Zuckerman.¹⁰⁷ The official Admiralty paper of 1963 on the question of 'vulnerability' was also distributed as an enclosure to other broader ranging documents in 1963, e.g. by Admiral David Luce.

The Admiralty paper sought to explain that a carrier both contributed to the defence of the task group and simultaneously derived its protection from it. Normally, a carrier was regarded as the most valuable ship of a force, and consequently the carrier was positioned and manoeuvred so that it was safeguarded by the other ships. Therefore, the vulnerability of a carrier had to take

¹⁰³ Ibid.

¹⁰⁴ NAUK AIR 20/11423. Memorandum by the Chief of the Naval Staff, December 1962.

¹⁰⁵ NAUK DEFE 7/2353. Zuckerman to Minister of Defence, 23 January 1962.

¹⁰⁶ NAUK AIR 20/11423. Appendix to COS.20/63, from Admiralty, 15 January 1963. See also NAUK ADM 1/29108, Discussion, decision on timing, size, costs etc of proposed new Aircraft Carrier, 1963-66.

¹⁰⁷ NAUK ADM 205/193. Internal Admiralty note by Deputy Chief of the Naval Staff, 10 April 1962.

into account the total defence capability of a task force. Normally this would comprise one cruiser or destroyer and up to six frigates, including air defence pickets. Further, a task force might be formed rapidly as a concentrated or as a disperse force to meet the nature of the threat. For an enemy to attack a carrier, he would first have to locate the task force, and then locate the carrier within this force. This would be a challenging task for a naval surface force, especially finding the carrier within the protective force. It was argued that a submarine force normally made their way inside the force and could often take out the carriers. The Admiralty disregarded this argument, as it thought that the new technology of noise makers would compel the submarines to use active means of detection, such as radar and active sonar. It must be noted that such technology has never been proven to be very effective. According to the Admiralty, the submarine threat would be taken care of by the Type 184 long range hull mounted sonar (25,000 yards detection range) and the new Type 195 dunking sonars of the helicopters. These would also be equipped with Mk.44, later Mk.46 torpedoes. From 1970, the units would also be equipped with nuclear depth charges for ASW. Most of these argued capabilities never came about as realities. However, it was still clear that a carrier task force would be very vulnerable to submarine attack. This issue came up later as a thorough independent study ‘Anti-submarine Defence of a Carrier Task Group’ conducted by the Chief Scientific Advisor’s Naval Panel.¹⁰⁸ It was a broad-ranging study, stating that a carrier group would be vulnerable to a submarine threat. As for the air raid threat – this was a case to discuss. In its arguments, the Admiralty noted the strong progress in ECM technology – and concluded that: ‘Against a force employing echo enhancers, decoys and noise jammers, identification range would be much reduced, and might well be restricted to visual identification’. This was tried during several specific trials in NATO, but subsequently disregarded as normal tactics.¹⁰⁹ NATO, including Royal Navy, found the realities quite different. Modern aircraft with ESM equipment would, by ESM triangulation, seldom have difficulties locating an aircraft carrier within a task force. Normally, a carrier would be equipped with the best air warning radars, and seldom operated as ‘silent’ ships. But, as the Admiralty noted, opposition they would meet in the limited wars and conflicts in the East of Suez region would not normally have such capabilities. As they in an apolitical way expressed it: ‘In the context of limited war against second class powers with virtually no experience of maritime air operations...’.¹¹⁰ This must still be regarded as a somewhat arrogant argument of

¹⁰⁸ NAUK DEFE 24/132, ‘Anti-submarine defence of a carrier task group: report of the ASW Working Party to Chief Scientific Advisor’s Naval Panel’, 1964.

¹⁰⁹ NAUK ADM 1/28629, ‘Exercise POKERHAND: air defence, air strike and Airborne Early Warning (AEW) aspects’.

¹¹⁰ NAUK AIR 20/11423. Appendix to COS.20/63, 15 January, 1963.

little value for a future concept that should cover all limited and total wars. In any case, the Admiralty argued that such a carrier force would in most cases, against enemies of limited capabilities, be able to destroy enemy aircraft, surface forces and submarines, as well as supporting facilities, before they could pose a threat to the carrier.

As for the air defence capacities of the carrier task forces, the Admiralty was very enthusiastic and optimistic. The much disputed 200 miles range of the new radars for the carriers was perhaps realistic against large bomber and strike aircraft at height, but not a practical reality against the 1 sq. metre targets proposed in the studies. The normal detection ranges of the organic AEW aircraft were less than 100 miles, while the Admiralty in their arguments spoke often of more than 150 miles from sea level – and even ‘much greater ranges’ when flying at altitude. With these systems, the 25 miles range Sea Slug and short range point defence Sea Cat missiles, air defence would be resolved. In addition, the P.1154 would be able to take out Mach 2.5 enemy aircraft up to 65.000 feet, and the OR.346 targets up to 3.0 Mach and 80.000 feet. As we see here, the Admiralty was ‘stretching the realities’ in their optimistic belief in future technology, or just arguing for the purpose of being politically attractive. It must be noted that this was the habit of both services in their struggle to gain influence.

The scientific expert group, led by Chief Scientific Advisor Zuckerman, which had been set up by the Minister of Defence in October 1962, delivered its final results by April 1963. The group was firmly in favour of a carrier task force, given the assumption that the British wanted to uphold a capacity for future independent military intervention in the East of Suez region.¹¹¹

Chapter 1-D: The capabilities in question

In the early 1960s, the debate on land-based air power and carrier task forces dealt mainly with the future needs, be it land-based or carrier-based forces. This was also the case with Zuckermans study group. In addition, the focus was primarily on the capabilities of air defence, anti-surface and amphibious warfare. This short sub-chapter evaluates the status of these three capabilities at the time.

¹¹¹ SZ/Chief Scientific Advisor/56, Defence Review – 1966, 1960-1966. This was obvious all along during the work with the study. See for instance correspondence between Zuckerman and First Sea Lord Caspar John in subfile SZ/Chief Scientific Advisor/56/1/2.

The Air Defence capabilities

British air defence ships did not have any long-range missile systems, and were consequently used in a warning and intercept role. These ships had practical radar ranges up to 170 miles when detecting large aircraft flying in formations.¹¹² A British (or NATO) naval force would typically use such Air Defence ships as 'radar pickets'.¹¹³ They were placed some 100-200 NM. from the force, in the threat-direction. These ships were essential for giving early warning of long-range Soviet strike aircraft armed with missiles of more than 100 NM range.

The best and principal organic air surveillance radar was the Type 984. This 3D radar was mounted on HMS VICTORIOUS and HMS HERMES by 1960. It was also later fitted to HMS EAGLE. Due to its size, it was not possible to fit it on the Air Defence ships. Even though this was one of the best radars used by western naval forces in the 1960s, it had a great shortcoming. It was not designed to handle aircraft with jammers, which became more and more common.¹¹⁴

A global problem for all ship (and land) based surveillance radar systems is the obvious limitation of line of sight due to the earth's curvature. This crucial gap was to be filled by the AEW aircraft of the first generations. About their capability, these early AEW aircraft had belly-mounted radars and did not have the capability of modern AEW aircraft to simultaneously search all heights for targets. This was the reality for the UK, as well as the US and Soviet forces until the E3 Sentry and the Soviet Mainstay came about in the 1970s.

In 1962, a large air defence exercise was conducted in the Mediterranean for the purpose of evaluating the effectiveness of the total capacity.¹¹⁵ This 'Exercise Poker Hand' included the Commander-in-Chief Mediterranean and the US Sixth Fleet. The ships included the carriers FORRESTAL and HERMES, and a number of escorts. Aircraft such as the Vixen, Phantom and Scimitars took part as attackers. The disposition (tactic) of the forces was standard for the time: The carriers were 50 miles apart at right angles to the AAW axis, two escorts supporting each carrier. Three radar pickets and three AEW barriers were placed in front. This disposition was expected to give sufficient warning, but reports proved they had real problems maintaining a good overview in this area which was heavily coloured by commercial traffic. They also examined tactics where the carriers and most escorts were silent, but about two out of three enemy attackers reached bombing position. The tactics proved unsuitable against strike aircraft

¹¹² NAUK ADM 219/626, 'Air defence of Atlantic shipping'.

¹¹³ Naval War Manual (1957/1961), p.119.

¹¹⁴ NAUK DEFE 7/2353. Note on 'Naval Radar for Air Tracking and Surveillance' from Admiralty to Ministry of Defence, Defence Research Policy Committee.

¹¹⁵ NAUK ADM 1/28629.

armed with missiles. Following this, large naval NATO forces have since tried to extend their early warning coverage by actively using all sensors.

As for the airborne early-warning aircraft, the Fairey Gannet AEW.3 had replaced the Skyraider AEW.1 in active service by November of 1960. The Fairey Gannet, initially designed as an organic ASW aircraft, was converted to have an AEW role and equipped with the APS-20 radar from the Skyriders. The APS-20 radar was slightly improved by 1967-68 to reduce clutter.¹¹⁶ The radar had some 100 NM detection range on large targets.¹¹⁷ On the Gannet, it was mounted in a radome underneath the centre of the fuselage. The Gannets were old aircraft, but were kept for the organic AEW role until the HMS ARK ROYAL was paid off in the late 1970s.

Air Control Warfare is first of all crucially dependent on effective air surveillance. This was a hard lesson for the British forces to learn during the Falklands War. But, having this in mind, it is further necessary to discuss and describe both organic and land-based fighter aircraft. In the British case, it was clear that also shore-based fighter aircraft of this era had a role in air defence of shipping.¹¹⁸

The Hawker Sea Hawk was designed at the end of the Second World War, but an operational design was not available for the Korean War. The aircraft was finally operational by 1953, with never ending modifications until its early retirement after the Anglo-French Suez operations in November 1957. The aircraft had been the backbone of the FAA for most of the 1950s, but was just too underpowered to keep up with more modern jet-designs in dogfights. The British were continuously chasing the developments of the USA and the Soviet Union for aircraft design in this era. The De Havilland Sea Venom was designed for fighter and escort roles; and had night- and all-weather capability. They had canons in the nose and some later versions were capable of carrying the Firestreak air-air missile. This early British heat-seeking missile moved air combat into a new era. The Firestreak had an effective range of 4 miles, but were solely for rear hemisphere attack. The missile was still so successful that for the first 100 launches, the engineers learned practically nothing new about any potential weaknesses of the new weapon.¹¹⁹ The Sea Venom could also carry a small number of bombs and rockets. The aircraft first flew trials from HMS ILLUSTRIOUS in July 1951 and the first front line aircraft flew in 1953 – followed by the first operational squadron, the 809s, by the next year. The Sea Venom replaced the Sea Hornet in the night fighter role, and saw extensive combat missions in the Suez operation

¹¹⁶ NAUK ADM 335/83, Fleet Air Arm Newsletter 1967.

¹¹⁷ M.Gething, *Sky Guardians, British Air Defences 1918-1993*, p.141.

¹¹⁸ Naval War Manual, p.121.

¹¹⁹ http://www.pmulcahy.com/aams/british_aams.htm , March 2004.

of November 1956. The Sea Venoms had to take much of the air cover and escort roles of the RAF, due to the long transit they had from Cyprus and Malta. The Sea Venoms operated from the HM Ships EAGLE, ALBION and BULWARK during this conflict. The Sea Venoms, some finally with the modern Firestreak, did their first line duty from 1954 to 1960, by when all were replaced by the Sea Vixen.

The navalised De Havilland Sea Vixen first flew in 1957 and was fully operational by 1959.¹²⁰ It was a promising air-to-air combat aircraft for the FAA. It was some ten years behind the US equivalent F3D Skynight, but able to match most enemies. The Sea Vixen FAW.Mk.1 was the first FAA fighter not equipped with guns. It was to rely fully on the new AI18 radar system and air-air missiles. This was a successful, modern, multi-role aircraft for the FAA until 1972. By 1963 an improved Sea Vixen FAW.2 variant had become operational. It had improved ECM capabilities, as well as the capability to carry the Red Top missile. The Red Top missile was initially an upgraded Firestreak (originally called the Firestreak Mk IV). It had improved range, warheads and a limited all-aspect infrared seeker head to intercept the target. The Red Top was, in addition to the Sea Vixen, deployed on the RAF Lightning until her retirement in 1988.¹²¹ The Sea Vixen, though subsonic, was the main FAA organic fighter for air combat throughout most of the 1960s. The aircraft made its mark during the Kuwait crisis of 1961. The aircraft onboard the carrier HMS CENTAUR also made a tremendous effort in January 1964, supporting air cover for the marines' landing troops in Tanzania, as well as the RAF transports flying in. The final operational tasks of the Sea Vixen were to oversee the withdrawal of British forces from Aden in 1967, operating in co-operation with the Buccaneers. The Sea Vixen was retired from first line service in 1972 with the HMS EAGLE, and replaced by the McDonnell Douglas Phantom.

In the case of the RAF, the Air Ministry fought to acquire a fighter interceptor capable of taking on the increasing number of modern Soviet bombers. Two separate designs, one day- and one night-fighter were envisaged. The day-fighter's requirements led to the beautiful Hawker Hunter. It became operational just prior to the Suez crisis of 1956. The aircraft were stationed at Cyprus to fly escort for the RAF bombers. Due to the long transit they did not really play any significant role, and the organic fighters of the FAA became important additions for the escort and air combat roles. The range was one flaw in the conventional gun-armed Hunter; another became obvious when operating with other NATO countries: the American F-100 Super Sabre easily

¹²⁰ B.Gunston and D.Donald, 'Fleet Air Arm 1960-69', pp.188-189.

¹²¹ <http://www.skomer.u-net.com/projects/redtop.htm>, March 2004.

outperformed it by the late 1950s. The design of the Hunter was not supersonic – and it soon had to give way as an air-air fighter by 1960.¹²² As for the night and all-weather requirements of the RAF, the Gloster Javelin came into service in the 1950s. It was produced in numerous versions, but was not truly an operational asset until the early 1960s, and then soon retired from Coastal Command by 1964. The Javelin was the RAF's delta-wing fighter, and the first missile armed interceptor. It had good air radar for its time, and was put in a pure intercept role to guard Britain against the Soviet bombers.

The cry for a supersonic fighter to replace the Hunters and the Javelins came from the beginning of their operational service. The project of the English Electric Lightning¹²³ emerged early in the 1950s. The Lightning was operational by 1960 and was the first and only designed and built supersonic interceptor of the RAF. The aircraft gradually replaced the Hunters and the Javelins for the air combat role. The Lightning was equipped with two Firestreak infrared homing missiles and guns. Though supersonic, and ranked as one of the greater British fighter designs, this aircraft had significant flaws. In an air combat role, the Lightning had a disadvantage with the inlet-design and the nose of the aircraft, resulting in poor radar performance.¹²⁴ This was a great disadvantage for advanced air-air combat, but the aircraft was intended to receive radar-guidance by a ground station to intercept the Soviet long-range bomber and strike aircraft fleet. For this role the GCI sighted the bombers and scrambled the Lightning from alert. The Lightning used most of its fuel to climb to 35,000 feet, accelerate to 1,5M, then to be directed for a one-pass stern intercept to engage with the Firestreak missile (or the Red Top from F3 batch).¹²⁵ The Lightning then only had enough fuel to return to base.

In the time period 1957-62, Air-Air Refuelling (AAR) became an accepted and important part of air control warfare, and the British built their tanker force from converted V-bombers.¹²⁶ This was a reality that had great importance for maritime air power in general, but also for the relationship between the FAA carriers and the land-based forces. The RAF could now offer, or at least argued for, a largely extended range for its aircraft, e.g. a full coverage of the North Sea by land-based air power. This capability increase is important regarding the prospects of land based air power. In Britain, the first standard AAR aircraft was the Vickers Valiant. These were only operational until 1964, by which time they were exposed to fatigue damage, and replaced by six

¹²² The Hunter had a short career as an air-air fighter, and was soon converted to ground attacker for army support.

¹²³ English Electric Lightning became British Aircraft Corporation (BAC) Lightning by the 1960s.

¹²⁴ The new A123 radar system was advanced by the time, but inlet design limited its size as well as limited the view sector.

¹²⁵ M. Gething, *Sky Guardians, British Air Defences 1918-1993*, p.124.

¹²⁶ NAUK AIR 41/85, 'The RAF in Post War Years: The Bomber Role, 1945-1970', pp.93-99.

Victor B(K)1As by the following year. 24 Victor B1s were converted to tankers from 1966 onwards. These had an operational range of 2500 miles and were capable of night operations. With these aircraft and their technical capabilities, land-based air control capabilities have to be included in discussions on maritime air power. Ground-controlled intercepts, AEW support and refuelling made them capable of taking part in conflicts at sea to a far greater extent than previously. The Lightning made an important interceptor capability for the maritime theatre surrounding the British Isles.

As regard the British naval surface-to-air systems of the 1950s and 1960s, these were designed as point defence systems. In the 1950s, the gun had the main role in this defence; later the Seacat short-range missile replaced most of the traditional anti-aircraft guns. The Seacat system entered service on HMS Devonshire in 1962. The missile had a maximum range of 4.75km and was steered by radio-command guidance and the target could be tracked visually or by radar. The Seacat system provided a simple but effective close-range air defence system, and was gradually fitted to almost all British and some foreign warships. Air defences for British ships became more effective by the 1970s. The medium-range Seadart was introduced for testing in the late 1960s and proved effective. In addition, rocket launched chaffs became operational for confusing incoming radar-guided missiles.

The capabilities of the British early warning systems to detect and give early warning on strike aircraft with long-range missiles were good. This was true for both the ground stations, the naval 'picket ship' concept, as well as the naval organic AEW aircraft. On the other hand, the British FAA fighter aircraft and the land-based fighters were not nearly capable of securing the Norwegian Sea from Soviet air strikes on the British surface forces, nor of stopping the Soviet air armada of strike aircraft aiming for the British Isles. As Gunstan and Donald stated: 'In the early 1960s the FAA had no fighter of a kind that might be expected to win in close combat, for example against a Mirage, F-5 or Mig-21'.¹²⁷ In addition the numbers, especially in case of the RAF, were far too limited.

The total maritime air defence concept was examined by a study of the Admiralty in 1960.¹²⁸ They looked at the proposed 'second phase', following the initial nuclear strikes. This was the proposed scenario of maritime warfare. The Admiralty expected that a large number of the long-range bombers would be destroyed in the initial strategic exchange. Consequently, they examined their forces up against an attacking force of 50 Mach 2 bombers. These remaining

¹²⁷ Gunston and Donald, 'Fleet Air Arm 1960-69', p.197.

¹²⁸ NAUK ADM 219/626.

Soviet maritime air strike forces would not be able to halt all communication to the British Isles. However, the challenge was to get the expected sinking rate down to a 'tolerable number', assessed to be e.g. 400 ships a year. Convoys of 300 – 600 ships were considered, but this would again give a too great a target for the air strike forces with long-range nuclear missiles. As for the argued and recommended tactics for effective air defence, an attack on the bases (in good RAF tradition) was considered most effective. Still, this was not likely to be effective since the Soviet forces were so spread out. The second alternative was to provide air defence barriers of carriers, missile ships and land-based aircraft in the gap north of Scotland. As for the carriers and missile ships, these would be intolerably vulnerable to the great submarine threat. The solution had to be large convoys escorted by large and balanced forces, but the outer 'radar pickets' for early warning would still be very vulnerable to submarine attacks. The British surface-to-air missile systems were assessed as not adequate, and one carrier was proposed for a 100-ship convoy and two carriers were required for up to 600-ship convoys.¹²⁹

In lieu of the threat posed by the Soviet air strike forces, and the performance and numbers of British air-air combat aircraft - it is hardly possible to say that British air defence aircraft were adequate to protect British territory. The British aircraft could barely compete with the powerful land-based strike aircraft of the Soviet Navy. As for the maritime communication lines, it was assessed that the British forces in co-operation with NATO could possibly defend one 300-600-ship convoy at a time.

The Anti-Surface Warfare capabilities

Surface Warfare is very much concerned with sensors and weapon systems. A large number of aircraft, or aircraft with great performance does not necessarily give operational quality. The air-to-surface missiles used by the British strike aircraft were modern in design and operational capability. The most widely used short-range system; the American Bullpup air-to-surface missile was introduced in 1959. The missile was a short-range weapon with range of 10 NM and it was radio-guided. The missile was also produced to be equipped with a tactical nuclear warhead. The FAA operated the missile on the Sea Vixen by the mid 1960s, as well as the Scimitars and Buccaneers. The equivalent French AS-30 air-to-surface missile was later introduced to some British aircraft. During the 1960s a programme for a medium-range missile went on as a joint programme of the Admiralty, Air Ministry and the Ministry of Aviation.¹³⁰

¹²⁹ Ibid.

¹³⁰ NAUK ADM 1/28518, 'Air-to-surface strike weapon: Naval/Air Staff target and Staff requirement: submission to Defence Research Policy Committee (DRPC)'.

The naval side held up a requirement to hit a KYNDA-class ship, or any equivalent air-to-surface guided-missile ship, and a 20-mile requirement was demanded. The missile became the Martel with a 60-mile range, but it was not operational until the early 1970s. Blue Steel was the first operational British stand-off missile, though it was mainly intended for land-attack. It was operational from 1961 until 1969, when the Polaris took over the deterrent role. The missile was made for the V-force, Vulcan B2 and Victor B2. Blue Steel had a 1MT warhead¹³¹ and a range of 100 miles in order for the attack aircraft to launch with less chance of interception. Later in the 1960s updates slightly extended its range and low-level flight performance.

For the aircraft, this era of jet propulsion and integration of computer technology was truly revolutionary. New aircraft designs came along before many production lines were completed. The US and the Soviet Union led this rapid evolution, and the British fought to keep up with a national capability to produce modern designs.

The 1950s and early 1960s saw numerous designs, some successful – but many faulty. The turboprop Westland Wyvern torpedo bomber and strike aircraft was operational from 1953, via the Suez crisis, until its early retirement by 1958. One aircraft intended to become the multi-role fighter of the FAA was the Supermarine Scimitar, operationally introduced by 1958. In the ASuW role it could carry the Bullpup air-to-surface missile. Some 70 aircraft were delivered to the Royal Navy from 1958. The last 24 ordered were never produced due to its unsuccessful history.¹³² It was an early generation jet aircraft, haunted by technical flaws. It was well known for standing on the deck – leaking fuel in numerous buckets under its fuselage. For the ASuW role, the famous Buccaneers soon replaced it.

The Blackburn Buccaneer is probably one of the most successful British aircraft. The aircraft were purpose-built for the ASuW and land-attack strike roles, and the core feature was long range at high speed – low level. The experiences of FAA in Korea led to the requirement for a specialised low-level attack aircraft, but it has also been said that this aircraft was a purpose-built ‘SVERDLOV Killer’. The first development batch of 20 Buccaneers was ordered in 1955. By 1958 the first prototype flew, followed by the first deck landings on HMS VICTORIOUS the year after. The aircraft were operational with the 700Z out of RNAS Lossiemouth from March 1961. The improved Buccaneer Mk.2 went on to successful trials on HMS VICTORIOUS in 1966. The aircraft were operational until late 1978. The Buccaneers were capable of carrying

¹³¹ Armed with a 1MT nuclear warhead called Red Snow, based on US Mk.28 physics package.

¹³² Hobbs, *Aircraft of the Royal Navy since 1945*, p.46.

nuclear bombs internally, as well as carrying anti-surface missiles; first the Bullpup and later the Martel missiles.

For two decades, from the early 1950s, the Canberra filled the roles of reconnaissance and strike against enemy forces, mainly in the land-theatre – but also in the maritime theatre. In the mid 1960s, several air-sea exercises saw the use of the Canberra in low-level attacks on naval forces.¹³³ The aircraft proved remarkably versatile. From 1965 onward it carried the French Nord AS-30 missile in addition to the rocket projectiles.¹³⁴ Strikes by light bombers against shipping were according to the naval doctrine clearly a role for land-based aircraft.¹³⁵

The V-force also had a strike role against enemy offensive forces in the 1960s. Armed with nuclear weapons, even a naval moving target could be effectively hit. This maritime strike role was officially noted in the 1966-defence review.¹³⁶ Also the naval doctrine noted that kiloton nuclear bombs could be used for both land and ship targets.¹³⁷

The Skyraider AEW.1 with its APS-20 radar was also a significant asset for ASuW. The aircraft was labelled AEW, but was significant also in ASuW with its surface reconnaissance and targeting capabilities. The radar was down-looking, designed to cover the blind zones of the surface ship radars. Developed to give warning on low-level strike aircraft, it was well suited for detecting surface targets as well. The Skyraider on area surveillance usually had both the role of detecting aircraft and surface forces simultaneously.

The new helicopters of the Royal Navy also had a role for reconnaissance and strike. The Navy was introduced to the tactical helicopter in 1952,¹³⁸ by which time the US supported some Whirlwinds. They were mainly used for ASW, but were still utility helicopters also used for surface reconnaissance - and thereby part of the surface warfare capability. (The Whirlwinds are further described in a later chapter on British ASW forces). The more advanced Wessex had a crew of three and a whole range of weapons compared to the Whirlwind. For surface warfare purposes it could carry machine guns, rockets, as well as missiles. Initially it was equipped with the primitive Nord SS.11 wire-guided missile¹³⁹ and later the more capable short-range AS12

¹³³ NAUK AIR 41/85, p.71.

¹³⁴ NAUK AIR 41/85, p.69.

¹³⁵ Naval War Manual, p.121.

¹³⁶ PP, Statement on the Defence Estimates 1966, Part I: The Defence Review, HMSO 1966 (2901).

¹³⁷ Naval War Manual, p.123.

¹³⁸ Prior to the British licensed build aircraft, 25 Sikorsky Whirlwinds were given to RN from the US under the Mutual Defence Aid Plan in 1952. This was to give the RN helicopter experience. From 1954 the 845 Squadron used these helicopters to evaluate helo ASW tactics and concepts. (D.Hobbs, *Aircraft of the Royal Navy since 1945*, p.40).

¹³⁹ Gunston and Donald, 'Fleet Air Arm 1960-69', p.192.

guided missile. The Wessex was initially produced as a HAS.1¹⁴⁰ utility helicopter, of which 129 were delivered.¹⁴¹ The Commando Assault role was taken over by the specialised HU5¹⁴² by 1966, while an improved HAS.3 was operational by 1967 for ASW and surface warfare. This HAS.3 introduced radar onboard naval helicopters, and was consequently assessed to be a truly new resource for surface warfare. The sad fact was that the HAS.3 had grown too heavy, and even with new and more effective engines, it was beset by technical difficulties. The Wessex HAS.3 was the first complete maritime tactical helicopter, but problems such as its short endurance pressed for a new helicopter. The Wessex was replaced by the much more capable Sea King airframe by 1969-1970.¹⁴³

The Westland Wasp was the third British maritime helicopter of this era. The Wasp was the first British helicopter designed to operate from ships other than carriers.¹⁴⁴ Of these surface ships, the HMS LEANDER was the first to operate a flight of Wasp. 98 helicopters were delivered to the FAA from 1963 onward. This was a light general-purpose frigate helicopter. For the ASuW role against Fast Patrol Boats it was capable of carrying AS-12 wire-guided missiles from the late 1960s.¹⁴⁵

The large number of Shackletons gave considerable surveillance and reconnaissance capability, a necessity for effective anti-surface warfare. Also the strike aircraft were capable of offensive operations. The forces still lacked the long-range weapon systems against maritime threats, such as that of the Soviet Union. This technical limitation of the British forces would probably lead them into a defensive position in any battle for sea control or denial in the northern Norwegian Sea. From 1957 the RAF was allowed to carry US nuclear weapons (of which 60 weapons were kept in US custody at RAF bases)¹⁴⁶, and the use of such weapons were defined in the doctrines as a means of destroying naval targets. Still, these weapons were clearly meant for strategic nuclear deterrence, the prime focus of British forces after Sandys in 1957 – and it is doubtful if they ever would have been used for maritime warfare.

¹⁴⁰ HAS: Helicopter Anti-Submarine.

¹⁴¹ 43 HAS.1 were converted to HAS3.

¹⁴² HU: Helicopter Utility.

¹⁴³ The Westland Sea King helicopter buy had been approved in 1966, and entered service onboard HMS ARK ROYAL by 1970.

¹⁴⁴ Hobbs, *Aircraft of the Royal Navy since 1945*, p.64.

¹⁴⁵ NAUK ADM 335/83.

¹⁴⁶ R.Moore, 'British Nuclear Warhead Design 1958-66: How much American help?' in *Defence Studies* (Vol.4, nr.2, Summer 2004), pp.207-210.

For operations in the littorals and for small-scale conflicts, the ASuW aircraft and conventional weapon systems were excellent. Not least helicopters easily available for the surface forces became important for these types of operations.

The Amphibious Warfare capabilities

Force projection by maritime air power can be divided into two categories. Firstly, strike by delivering weapons against maritime targets at shore and attack on naval vessels at port – and secondly, force projection by landing forces ashore.

The latter, amphibious warfare, has a solid position in British military thinking. This much was clear in this period as several carriers were more or less permanently used as assault ships after the introduction of the helicopter in the late 1950s. The two best known, the HMS BULWARK and HMS ALBION made great efforts in Kuwait in 1961, Brunei in 1962, as well as in Borneo from the early 1960s until 1966 with their commando troops and helicopters. The operation against Kuwait's new airfield in 1961 is a good example of force projection by maritime air power. The Whirlwind HAS.7s of 848 Squadron rushed in the No.42 Royal Marine Commando from BULWARK. The Marines then secured the airfield for the RAF Hunters to move in for deployment.¹⁴⁷ The operation in Brunei came after the Sultan asked for help against guerrilla attacks from Indonesian territory. HMS ALBION was heading for Singapore with the No.40 Royal Marine Commando at the time, and was immediately re-routed to assist by landing its forces ashore.¹⁴⁸

As for delivering weapons on maritime facilities and attacking ships at port, in an operational sense, this is very much the same as conducting ASuW. The targets are mainly the same mobile forces and threats as in all normal operations in the littorals. Still, this is a diffuse and hazy area between maritime air power and air power theory and concepts in general.

In the case of the FAA, their Hawker Sea Hawks made a great contribution as an air-ground attacker against the Egyptian shores in the 1956 conflict. They were operated from HMS EAGLE, ALBION and BULWARK. Even so, the Sea Hawk was obsolete by modern standards of aircraft design and was soon retired. The FAA's next strike aircraft for force projection was the Scimitar. This technically unsuccessful¹⁴⁹ multi-role aircraft had its only operational role in ASuW and strike on land targets. Both the Sea Vixen and the Scimitar were announced to be

¹⁴⁷ Gunston and Donald, *Fleet Air Arm 1960-69*, pp.199-200.

¹⁴⁸ Sturtivant, *British Naval Aviation. The Fleet Air Arm 1917-1990*, p.192.

¹⁴⁹ NAUK ADM 335/82, Fleet Air Arm Newsletter 1966.

equipped with tactical nuclear weapon for the force projection strike role. However, no such weapons were ever issued to the Squadrons.¹⁵⁰

Accepting this as a grey area, it is also clear that the ordinary RAF bombers and strike aircraft played an important role. The V-bombers became a true resource for maritime war, especially after they had lost their nuclear deterrent role with the cancellation of the Skybolt in 1962, and the introduction of the Polaris. The Buccaneer was the principal ASuW and land-attack strike aircraft of the FAA. By 1966 it had relieved other aircraft of this role.¹⁵¹ The Canberra strike aircraft was further an important asset of maritime air power in this regard. These aircraft, the V-bombers, the Buccaneers, and Canberras have been well covered in the previous sub-chapter on surface warfare.

Force projection by amphibious warfare is one of the more advanced forms of warfare. An amphibious operation is fully dependant on the other core capabilities of information exploitation, surface and subsurface warfare, and not least air defence – both prior to and during the operations. As for the amphibious landing specifically, maritime air power became an important factor after the introduction of the organic helicopters for landing troops, as well as evacuation. The assault role of the Whirlwind and the Wessex proved its existence from the beginning. The Whirlwind HAR versions for troop support and utility successfully conducted the first helicopter assault landings during the Suez crisis of 1956. The 845 Squadron operating from HMS OCEAN landed men from the 45 Commando Royal Marines.¹⁵² This was such a success that the concept was persuasive, and from 1960 onwards Whirlwinds equipped specialist Commando Assault squadrons on the converted carriers HMS BULWARK and HMS ALBION. As for the Wessex helicopters, the first batch of HAS.1 was truly multi-role, and was used for the assault role in the Far East during the confrontations with Indonesia in the early 1960s. From 1966 onwards, a specialised assault version, the Wessex HU5, was taken into service for this role.

Chapter conclusion

As regard the conceptual question on land-based air power versus carrier aviation, the debate of 1961-63 is perhaps the most interesting of all such debates. The Royal Navy successfully linked the strategic rationale for carrier task forces to the East of Suez roles, which in the early 1960s was still undisputed. Even though garrisons were shut down and former colonies were given

¹⁵⁰ Gunston and Donald, 'Fleet Air Arm 1960-69', p.193.

¹⁵¹ Hobbs, *Aircraft of the Royal Navy since 1945*, p.46.

¹⁵² Ibid., p.58.

independence – the British still wanted influence, both politically and economically in its former empire.

Summarised, the Admiralty's rationale for a mobile maritime strategy, and with this the need for fleet carriers, came down to three main arguments: First; the ability to intervene in land operations outside Europe could be preserved in the 1970s at a lower cost than at present, if one would eliminate duplications of the existing strategies, which required land-based aircraft as well as carriers. Secondly; only a strategy based on the carrier and the amphibious group would offer the certainty of being able to force an entry for land forces under effective air cover wherever needed. This would at least be doubly true as the tropical bases had been abandoned. Thirdly; in the 1970s, a maritime strategy in the Indian Ocean or the Pacific would have to be founded on an Austral-Asian support area. Arguably, with carriers, the UK would have a force operating in the politically free arena of the seas, and safeguard shipping world-wide.

The Royal Air Force, who practically had always been against costly carrier aviation, were deemed to go against this due to the fact that such a programme would clearly have grave implications for their position and future investments. The Royal Air Force 'Island Strategy' concept for use of land-based air power for fighting limited wars and protecting British maritime trade became a direct and competing alternative to the Royal Navy's carrier task force concept. The Air Ministry argued the increasing vulnerability of carriers to submarines, surface and air attacks, the small size of the carriers' offensive aircraft compliment, and the inherent cost and difficulty of sustained carrier-borne air operations. Finally, the disproportionate effort required to land a very small force was a disadvantage of a carrier force, bearing in mind that this was a requirement seldom, if ever likely, to be asked for. The concrete 'Island Strategy' concept proposed in this period is comprehensive, visionary, and arguably still a potential concept for independent land-based air power for maritime warfare. Since the earliest days of aviation, air power advocates have argued such ideas – but they have not been presented and argued in such a structured and compelling manner. However, the visions of the 'Island Strategy' rested upon a probably over-optimistic belief in future aircraft and weapons technologies. This optimism was in fact quite widespread. It was a time of 'revolution in military affairs' argued in most countries, not least the United States and the Soviet Union.

The 1960-63 debate ended in July 1963. The Royal Navy won their case for carrier task forces versus the Royal Air Force's 'Island Strategy' alternative. The building of new fleet carriers was then decided by the Cabinet. The debate on land-based air power versus carrier aviation was linked to the technical developments of the time: First of all, the promises of very capable and

long-range air-air refuelling for land-based aircraft, but also the generally poor capabilities of the Royal Navy as regard missiles against both aircraft and surface vessels. By tradition, the Royal Navy had become, and stayed focused on, fixed-wing aircraft for such roles. Additionally, the development of amphibious forces, not least proved by the Suez Crisis, influenced the general positive perception on the flexibility of naval carrier-borne forces. As there clearly was a professional difference of opinion between the 'expert advisors' from the military services, a neutral study-group was created in 1962 under leadership of the Chief Scientific Advisor, Solly Zuckerman. Largely, Zuckerman's group argued in favour of the proven concept of carrier task forces, despite the fact that the 'Island Strategy' was perceived as a far cheaper alternative. The scientific advisors simply did not believe in the realism of the Royal Air Force's visionary alternative. This inter-service victory for the Royal Navy may first of all be explained by the fact that they successfully managed to link the carrier replacement programme to the greater question of foreign and defence policy. Additionally, the decision was probably influenced by important players: First Sea Lord Caspar John emerged as an active and strong leader, arguing passionately and well for carrier aviation. Lord Mountbatten, as a former First Sea Lord and a true believer in carrier aviation and the East of Suez focus, had great influence with all the Ministers of Defence, and also had a close relationship with Zuckerman. They clearly shared much time and ideas. Chief of Staff Mountbatten and Chief Scientific Advisor Zuckerman had great influence in the early 1960s.

Chapter 2: The debate on Carriers and the Island Strategy

Our present aircraft carriers will last until the 1970s. But if we are to on deploying air power around the world after this, I believe we must replace them: not to substitute for fixed land bases – for there are certain tasks which land-based aircraft will always do better – but to combine with them, as we did in Kuwait. But ships of this size and complexity, as the noble Lord said, take about eight years to design and build. So, if we are not to renounce here and now our ability to deploy air power by sea in the 1970s, we must start preparing to replace our carriers at once. This is what we are now doing by getting ahead with the first phase of design; this must in any case precede any question of ordering.¹

Lord Carrington, 11 June 1962

There were now two alternatives proposed to fill the needs of the British as they withdrew from their former colonies and garrisons. This chapter explains the political debate that arose following the two alternatives and the ‘neutral’ study made by the Chief Scientific Advisor.

The first part of this chapter deals with the steps towards the costly carrier replacement programme. The second and third parts focus on the criticism raised between the services. The fourth part discusses the debate which followed from the Chief Scientific Advisor’s study. As there was no clear-cut conclusion to this debate, the fifth part discusses the many ‘alternative navies’ proposed. However, in the end, the carrier replacement programme was politically decided upon in July 1963. The last part of the chapter reviews and discusses this decision.

Chapter 2-A: Scepticism from the Treasury

As a carrier replacement programme clearly would put a heavy burden upon the defence expenditure for the next decades, the Treasury became a central actor against the carrier advocates. In addition to the Admiralty, these included the network around Mountbatten. Mountbatten had much correspondence with both Thorneycroft and Watkinson, and they clearly had good relations and shared common ideas. Watkinson asked Mountbatten for advice on the most central issues on several occasions, e.g. numbers of carriers for the future fleet, the seaborne/airborne mobile forces and a deployment pattern shifting to the East of Suez.²

¹ NAUK ADM 1/29108.

² MB1/J102. Several correspondence. See also MB1/J169, First Sea Lord: newsletters 1959-63: and MB1/J676, Viscount Watkinson, 1961-64.

Thorneycroft was in the beginning sceptical of the carrier programme due to the costs involved. However, he clearly supported the carrier option by the spring of 1963. Mountbatten also had a very close relationship to Zuckerman throughout the 1960s.

By early 1963, the year of the greatest debates on the issue, general scepticism over the need for large fleet carriers was obvious.³ The cost estimations varied, depending on the politics behind the numbers. The initial estimates came to a total of £ 600-800 Million⁴ (for four carriers), depending on complements. The estimates were later argued, in some internal Treasury notes, to be closer to £1000 Million⁵, and even more, perhaps up to £1300 Million⁶ over a ten year period.⁷ However, the first thorough joint Treasury/ MoD/ Admiralty estimation of the capital costs of the ideal carrier replacement programme in 1963 came to £620 Million⁸, spread over 14 years. This was a comprehensive figure which included ships, aircraft, shore and afloat support. The Admiralty criticised the fact that the Air Ministry's Island Strategy had not been put under any such examination of costs from a joint group. The cost, which was estimated to about one-sixth of that of the carrier option, was merely an Air Ministry rough estimate.⁹ The Admiralty argued that the true cost of the Island Strategy was underestimated. The Admiralty drew parallels to the costs of the Aden airbase of £75M, and questioned if more such expensive bases would be required, and if this needed to be the cost of an island base. This was rejected by the Air Ministry, where they argued that the Aden base was in a special position, and that these £75M included a regional headquarters, permanent deployment of aircraft and personnel – including family quarters, mess, schools, and hospitals. The Air Ministry stated that only one such base was needed¹⁰. Full of confidence, Chief of the Air Staff Pike welcomed the Ministry of Defence or any other enquiry group to do such a cost-study.¹¹ To take the discussion to the case of costs was probably a bad decision by the Admiralty – as the carrier replacement programme was clearly the far more expensive of the two strategies.

Within the Treasury, most of the Admiralty's arguments were questioned, or even disregarded as fallacious. They were simply against carriers due to their costs, and consequently found arguments and criticism to fit their case. But, even though this was the case as far as most of the

³ NAUK T 225/2156. Various correspondence involving; Bretherton, Peck, Harris, McKean, Dodd, Rampton.

⁴ £ 800 Million (1966), would in 2006 prices (share of GDP) equal £27,289,367,174.

⁵ £ 1000 Million (1966), would in 2006 prices (share of GDP) equal £34,111,708,968.

⁶ £ 1300 Million (1966), would in 2006 prices (share of GDP) equal £44,345,221,659.

⁷ NAUK T 225/2788, 'MOD. (Navy Dept.): Replacement and modernisation of the present generation of aircraft carriers', 1964-65. Bell to Isaac, 18 December 1964.

⁸ £ 620 Million (1966), would in 2006 prices (share of GDP) equal £21,149,259,560.

⁹ NAUK AIR 20/11423, Note from the Admiralty.

¹⁰ NAUK AIR 20/11423, Air Ministry reply to the Admiralty critic of February 1963.

¹¹ NAUK AIR 20/11423, Note by Chief of the Air Staff, 1963.

civil servants of the Treasury were concerned, the Chancellor of the Exchequer¹² was not so outspoken in his politics. Traditionally, the Treasury had been against (any) such great procurement programmes. What was somewhat special was that the current Chancellor at the time, Maudling (1962-64), had aspirations for the Conservative leadership, and did not want any enemies at this stage. Because of this, he personally was not in strong or open opposition to decisive work on new carriers in his period as the leader of the Treasury. Direct and outspoken criticism of carriers would put him in an awkward situation.¹³

However, the Treasury and Board of Trade were clearly against the carriers. The main lines of arguments put forward by January 1963 were:¹⁴

- The whole Admiralty concept was really a legacy of the 19th (or at best early 20th) century.
- In time of peace (in the 1970s) Britain did certainly not need to plan – any more than other Western European country – to have to protect their maritime trading interests by an exceedingly expensive naval armoury. The ‘freedom of the seas’ would not, by the 1970s, be a special British interest to which they should devote large resources.
- It was further argued that a tiny fleet of carriers would be no good in any greater war, and in case of conflicts the Commando ships, Surface-to-Air Missile ships, and long range air power would provide a ‘formidable armoury’.

As a consequence of the great complaints about costs, the Admiralty came up with a ‘scaled-down programme of carrier replacement and aircraft purchase’ by February 1963. The basic proposed changes from the Admiralty included an abandonment of the Buccaneer replacement (OR.346), a commitment to build smaller carriers, to adjust the establishment accordingly, as well as an attempt to postpone the carrier programme for a few years.¹⁵ These adjustments were expected to decrease the cost of the project by some £200-225 Million.¹⁶ The new carrier was by the summer of 1963 designed to carry 30 strike/fighter aircraft, 4 AEW aircraft, 5 large ASW helicopters, and 2 SAR helicopters.

¹² The Chancellor of the Exchequer is the Cabinet Minister who controls the HM Treasury. Often called The Chancellor. For this period of research the Ministers were: Selwyn Lloyd (1960-1962), Reginald Maudling (13 July 1962 – 1964), James Callaghan (16 October 1964 – 1967), Roy Jenkins (30 November 1967 – 1970), Iain Macleod (20 June 1970 – 20 July 1970), and Anthony Barber (25 July – 28 February 1974).

¹³ Interview with Sir Michael Quinlan, 5 October 2006.

¹⁴ NAUK T 225/2156. Internal Treasury note ‘Aircraft Carriers’ by Peck, 21 January 1963.

¹⁵ NAUK T 225/2157, ‘Admiralty: replacement and modernisation of the present generation of aircraft carriers: review’, 1963. Carrington to the Ministry of Defence, 12 February 1963. For detailed technical studies of CVA-01 by 1963, see also: NAUK ADM 1/28876, ‘New Aircraft Carrier: Staff Requirement’, 1963.

¹⁶ £100 Million (1966), would in 2006 prices (share of GDP) equal £7,675,134,517.

Even though the Admiralty had lowered the cost proposals quite radically, Treasury calculations and internal debates still argued that greater reductions to the planned programmes (carriers, TSR.2¹⁷, and OR.351 (medium VTOL transport aircraft)) were necessary – if the defence expenditure was to be kept within 7 per cent of GNP.¹⁸

Chapter 2-B: The Air Ministry critique of the Carrier Task Force concept

Both the Air Ministry and the Admiralty brought criticism to the study conducted by the Chief Scientific Advisor in the winter of 1963. Both services tried to undermine the strongpoint of the other and argued their superiority and ability for fulfilling the required tasks. There were still some common grounds between the two concepts, which would not create too much debate. These included the debated questions of tanks, supplies, airheads, and not at least the speed of reaction. Regarding tanks, the Army stated that these were absolute requirements, and the size had to be a minimum of 35 tons. As for this requirement, non projected aircraft could support it. They had to be brought in by support ships, and thus also the Island Strategy was dependent on a level of ‘sea-tail’. On the other hand, to be able to bring these inland, bigger aircraft were needed. But then, on the other side, neither the existing or planned carriers could carry these tanks either. By these proposed Army requirements, none of the services could really play this card. As for the questions of supplies and airhead, there were not many differences between the concepts other than argued by the services themselves. On the question of speed of reaction, the Air Ministry solution was favoured, with an argued 4 day warning period, while the Navy could well need an additional day. But again, there were no big differences between the concepts.

The Air Ministry’s main critique centred on the ‘necessities of carriers’. The main reason was economy and thus the cost-efficiency of carriers. However, as the Island Strategy had been generally accepted as the less expensive, this issue was therefore not an argument often used in detailed debates. This upper-card was more used by the Air Ministry and those in favour of the land-based air power option as a concluding remark after other discussions, as well as for public debates. The critique most used by the Air Ministry of the Carrier Task Force concept and Chief

¹⁷ SZ/Chief Scientific Advisor/120, Aircraft 1970. The story of the TSR.2 programme is quite interesting: It saw light under the code name Gor 339, and was estimated to cost £35 Million R&D by its protagonists, but this was challenged by the Treasury from the start. Approval of the project came in 1959, then estimated to £35M + £120M for the production of 100 aircraft. By the end of the year the R&D was re-estimated to £62M, soon after to £90M. The estimates kept on rising for the next years, ending up at £250M by 1963. (SZ/Chief Scientific Advisor/120/2).

¹⁸ NAUK T 225/2157. Note on ‘Defence Budget Targets’ by Dodd, 25 April 1963.

Scientific Advisor's study centred on a disregard of 'carrier essentiality', the issue of 'reaction speed', the true effect of 'naval diplomacy', and finally the greater 'military practicability' of carriers.¹⁹

The Air Staff argued that the conclusion of 'carrier essentiality' in the Chief Scientific Advisor studies was mainly made up of some 'arbitrary escalation of ideas'. The Air Staff attacked the document's question; 'Would the Army be prepared to fight with air cover provided and controlled from a base 1,000 miles away?'²⁰ This assumption that the RAF air cover would always be 1000 miles away was fallacious. This would hardly be the case according to the Air Staff, where they referred to the maps of air cover presented by the Air Ministry on 14 November 1962. Regarding carrier essentiality, the Air Staff pointed to the fact that the carrier task force could not realistically hope to be positioned closer than 2-300 NM to the shores of the conflict area due to threats that could be posed by countries 'of moderate opposition'. The Air Staff made reference to the fact that the Admiralty themselves stated this in previous documents.²¹

As for the question of the 'reaction speed' of the RAF and RN air power concepts, the Chief Scientific Advisor study found that there would be no big difference in the alternatives. The Air Ministry agreed with this, but questioned whether the carrier strategy would be able to deliver heavy equipment and tanks. This was clearly miscalculated according to the Air Staff. Either these heavy forces needed to be stockpiled in the region, or brought over from the British Isles. In the first instance, other ships needed to transport these – and the two RAF and RN strategies would make no difference. In the second case, air mobility would clearly be the more effective way of bringing in heavy equipment. In any case, military personnel and equipment had to be brought into the region from the British Isles. With this in mind, the Air Staff argued that it was ridiculous to build some of the bases for Island Stance only as 'staging-positions' for transport aircraft, and not do the little extra for making the entire Island Strategy a reality with both 'staging-positions', as well as 'mounting-bases' for offensive operations. This latter was a reasonable argument – many of the bases were needed in any case.

Another Air Staff criticism of the Carrier Task Force strategy was the use of this force for military presence or 'naval diplomacy'. Such employment of naval forces was argued as a risky use of resources, as the threat posed by mines and other forces could actually sink the British

¹⁹ NAUK AIR 20/11423. Loose Minute, Science 2/1011/s72.

²⁰ NAUK AIR 20/11423. Interim report of Chief Scientific Advisor's enquiry into Naval Task Forces, 7 February 1963.

²¹ NAUK AIR 20/11423. DGR/D/177/62

forces before an operation. The larger the carrier, and thus fewer carriers – the larger the strategic catch would be for an enemy. Still, this criticism from the Air Staff does not hold ground for discarding this role of naval forces entirely. The need for presence is a classic naval and defence policy objective. It must be remembered that military forces – with their presence as a tool of naval diplomacy – in most cases actually do stop possible conflicts from coming to military confrontation.

Finally, after debating the general questions, the discussions came to detailed examinations of the ‘military practicability’ of the two alternatives. The Air Ministry argued especially against the air defence, ASW, and air strike capabilities of the Carrier Task Force concept.

The first Air Ministry’s criticism of the military practicability of carriers centred on the air defence capabilities. The Air Ministry fully rejected the carriers’ ability to provide air cover for other forces on land. The argument was that most carrier aviation simply had to concentrate on self-protection of the carrier and thus was not cost-effective. The Air Ministry soon left the line of constructive criticism and went on arguing their own better capabilities. The land-based aircraft were much better, of course. But even the early warning capabilities could be better solved by mobile forces. The Air Ministry argued that such a mobile system was easily set up; an early warning radar of the UPS-1 Type could be landed or dropped with the first troops, giving air traffic warnings up to 150 NM.²² This system could be operated within one hour. As for communication, this could be done in the same time and place. Shortly after, the more capable TPS-34 radar could be brought in and could be operational within 10-15 hours. This radar would give an effective range of 250 NM for early warning and fighter control.

As for the ASW capacities, the Air Ministry argued for the excellence of air power over surface forces on several occasions, as they had since the Second World War. It was clear; the speed and passive sonar ranges of modern submarines required aircraft to hunt them. Among others, the Air Ministry referred to joint reports from the Commander-in-Chief, Home Fleet and Coastal Command of 1957 and 1962, in which were found the same conclusions.²³ The Air Ministry also noted that the Admiralty had never refuted these conclusions. ASW was simply best served by aircraft. Another issue was the capacities of the missile firing submarines, a further new threat that pointed in the direction of land-based aircraft for the role, which would be able to cover large areas outside the range of the surface forces.²⁴

²² NAUK AIR 20/11423. Note by Chief of the Air Staff, 14 February 1963.

²³ NAUK AIR 20/11423. Loose Minute from Air Staff, 22 January 1963.

²⁴ NAUK AIR 20/11423. Note from the Air Staff on Fixed Wing Carrier forces after 1970, 17 January 1963.

Concerning force projection by air strike capabilities, the Air Ministry and Chief of the Air Staff Pike argued that the new planned aircraft, the TSR.2 and the P.1154 with its V/STOL capability, would give flexible and ‘at hand’ capabilities – even some 1000 NM from the mounting base. This range capability, as well as the fact that they could station and maintain a patrol of up to 6 P.1154 V/STOLs over the area at any time, made a strong argument. Still, the fighter and ground attack operations described in the concept were designed only for the initial hours of an attack. About one half of a squadron of the V/STOL aircraft, as well as the necessary radar system, would be moved in with transport aircraft. Chief of the Air Staff Pike argued that this was well within the capabilities of Transport Command.²⁵ Another option was that TSR.2 reconnaissance aircraft could find alternative landing sites for the V/STOL fighter support closer to the action area. The Air Ministry particularly attacked the carriers’ inability to conduct or support intervention operations far inland. Even if the Royal Navy could deliver forces to the coast, they still had the logistical challenge of bringing them inland. The Admiralty did not find much substance in this criticism, as they said they had never claimed that carrier forces were required for such purposes.²⁶

This ‘Carrier versus Island Strategy’ debate peaked between January and May of 1963. The carrier option was assessed as the more flexible, viable, and realistic option. Still, the Air Ministry and Chief of the Air Staff Pike never gave up, and continued the strategy of counter-arguing all the strong-points of the carrier solution: ‘The Air Ministry concept demonstrates true flexibility, with forces sitting tight at home, ready to hand, and uncommitted until the last moment before the decision is taken to intervene’.²⁷

‘The case against carriers’

The Air Ministry, at the hand of Michael Quinlan, kept trace of all the arguments they came across in a ‘black paper’ document called ‘the case against carriers’. Through the years of the carrier replacement programme, from 1962 until 1965, 18 versions of this document were produced.²⁸ The set of arguments from this document were constantly used and slightly adjusted to the situation currently discussed. As of July 1963, they attacked the Royal Navy carrier programme on three main points:²⁹

²⁵ NAUK AIR 20/11423. Note by Chief of the Air Staff, 14 February 1963.

²⁶ NAUK AIR 20/11423. Reply-note from the Admiralty.

²⁷ NAUK AIR 20/11423. Note by Chief of the Air Staff, 14 February 1963.

²⁸ Interview with Sir Michael Quinlan. From memory, he recalled some 18 versions produced over this period.

²⁹ NAUK AIR 20/11425, Future aircraft carriers and the island strategy: Admiralty/Air Ministry study, Feb 1963–May 1965. This is a abstract of the arguments raised by the ‘black paper’; ‘The case Against Carriers’, attached to

- The very heavy expenditure would produce only a very modest ‘punch’. The carrier task force envisaged would at best be able to operate some 50 aircraft on station. With the costs envisaged, this could not possibly be a cost-effective use of air power.
- The operational use of carriers was subject to grave limitations: Carriers move slowly, they would be vulnerable, they could not bring force to bear far inland, they could not operate under any major land-based air threat, their deployment would be hampered by politico/geographical barriers, they would need base facilities, their operational endurance would be limited, their use would be more subject to weather limitations than that of land airfields, and last but not least – carrier operations would require special aircraft features which would affect performance.
- The roles advanced for carriers were all related at best to vague and unlikely contingencies. The Admiralty argued that the carriers were needed for three main roles: Deterrence against limited aggression, sea control for naval forces and merchant shipping, and to support land and air forces at shore. As for ‘deterrence to aggression’, the Air Ministry argued that any educated trouble-maker would be able to exploit the operational limitations of a small carrier task force. As for ‘sea control’, the Air Ministry argued that during the 50 or so conflicts the British had taken part in since 1945 – none of them had required carriers for any sea control role. As for support of land-operations, the Air Ministry argued that this only would be relevant for an amphibious landing on a coast. The effectiveness of a carrier supported landing would also assume that the carrier would be there in time, that there were little air opposition, and that the entry point would be within reach of the land-based transport aircraft in order to get forces in.

The black paper ‘the case against carriers’ summarised the general perception about carriers that had evolved within the Air Ministry. With the political ambition to get defence expenditure down to 7% GNP, it was clear to anyone that the Armed Forces could not possibly afford the new carriers without significant reductions in other parts of the forces. The Navy had got the *Polaris*, and a level of escorts would in any case be needed for protection of the carriers – so it would be the other services that would take the bill. The strategy the Air Ministry followed was a ‘value for money’ discussion. The Air Ministry truly believed that carriers were not a cost-effective use of air power, or the scarce resources available to the defence sector. The concluding remarks of the ‘the case against carriers’ black paper of July 1963 stated that:

We can have no military influence in areas where there are no land bases available to us. In such circumstances carriers are just expensive white elephants. If we leave overseas bases we shall become a purely European power; carriers will not restore the situation.³⁰

internal Air Ministry letter by M. Quinlan, 19 July 1963. NAUK AIR 20/11561, ‘Aircraft carrier study’, 1965. Personal and in confidence letter by Quinlan, 14 May 1965.

³⁰ NAUK AIR 20/11425. Copy of ‘The case Against Carriers’, attached to internal Air Ministry letter by M. Quinlan, 19 July 1963.

Chapter 2-C: The Admiralty critique of the Island Strategy

To the Admiralty, it was clear that the RAF Island Strategy was fully dependant on a sufficient number of bases. The Admiralty was very sceptical about the realities of building and maintaining such a network. The last two decades had clearly show the political difficulties of upholding political ties to many of the former colonies, and thus the former bases which had been so important. The first question raised by the Admiralty was whether the UK wanted to be dependent on such a network of bases. They argued that the implications would often be more commitments in relation to the host nations and conflicts in the regions. If the British were to lose control of one or a few bases, this would leave British power in ruins across a large area. In a wider perspective, the main argument of the Admiralty was the greater flexibility of the carrier force, a strategy they argued would make the UK largely independent of bases and thus political commitments. The Admiralty wrote a paper entitled ‘The Island Strategy’ in January 1963, which brought forward a broad set of critical comments.³¹ The criticism centred on the ‘strategic reality’ and ‘political feasibility’ of the Island Strategy, as well as some technical/tactical questions on the military practicability of the concept of using solely land-based air power.

As for the ‘strategic reality’ of the Island Strategy, the Admiralty argued that the concept was inherently inflexible. The strategy assumed that the conflicts would follow the patterns of the ongoing conflicts. As the challenges would most likely be different in the future, the islands and their bases could not be moved around. This critique was far-reaching, as the Island Strategy clearly was based on a wide spread network of bases. Even if the conflicts most likely would be different in future, as argued by the Admiralty, Africa, the Middle East and the Far East would still be the same. On the other hand, the Falkland Islands, which would be at stake two decades later, were not fully covered by the ‘Island Strategy’ bases. The carrier task force clearly proved the most flexible in this case.

The concept was further dependent not just on the islands in the Indian Ocean, but also bases with maintenance, operation facilities, and equipment around the African continent. This was due to the previously mentioned ‘Arab Air Barrier’, where overflying rights were not given. The Admiralty had special concerns over Masirah, Aldabra and Thailand. This critique of ‘feasibility’ was of little importance – as the costs of running these bases were covered by the Air Ministry’s greater concept of the ‘Island Strategy’.

³¹ NAUK AIR 20/11423. Copy of ‘The Island Strategy’, critical note by the Admiralty, January 1963.

As for the ‘military practicability’ of relying on a concept of land-based air power, the Admiralty started out with the statement: ‘The concept of going into battle by air at ranges up to 1000 miles is untried’. That was a reasonable and justified criticism. Air power theorists from the early days (and up to the present) have repeatedly presented visions for ‘independent air power’ – which have proved impractical. It was, and still is, difficult to argue against this sound scepticism.

First regarding force projection: As argued by the Admiralty, the most critical phase of an intervention plan was the approach and touch-down at the point of entry, because of the light armour and arms any air-inserted spearhead troops would have in hand. In the early phase they would sit helplessly, even before the most modest opposition. The Admiralty stressed that in this phase: ‘...undisputed command of the air is essential, yet it can not be secured unless the transport force is protected by fighters and ground attack aircraft.’³² Even if a long range interdiction plan was conducted to take out any enemy forces prior to a landing, this would probably not be successful according to the Admiralty. This last argument would prove to be important. Firstly, attacking a nation before a conflict broke out was politically controversial. This argument was also raised within the Chief Scientific Advisor’s study-group, and especially stressed by Bondi.³³ He was quite clear in his speech that the ‘political dangers’ of the concept ‘effectively ruled it out’. As for the military practicability of pre-war interdict operations, the criticism was less justified. Such interdictions for taking out aircraft, commando posts, and early warning systems have become ‘normal operations’ in the conflicts of the past 20 years.

The greatest criticism from the Admiralty was to be directed towards the combat radius of the air forces. They stressed the 1000 miles argument. As the Admiralty stated: ‘...fighters and ground attack aircraft could not be flown to the battle zone in a state of combat readiness – nor could the radar environment be established’. Both the Kuwait and Aden operations gave recent examples of the practical difficulty of establishing such facilities. These criticisms were justified, even though the prospects of new and much greater capabilities of air-air refuelling by older, converted, V-bomber aircraft were promising. As a comment upon the critique of the Admiralty, far from all of the conflict areas would be 1000 NM away from the mounting bases – this was the maximum described by the Air Ministry. In most cases, the distance would be far less. This counter-argument by the Air Ministry was justified.

Other, lesser criticisms from the Admiralty included: The questions of logistics, the vulnerability of island bases in case of nuclear war, reaction speed, protection of shipping and acclimatisation.

³² Ibid.

³³ NAUK AIR 8/2354. Note by Bondi, 22 January 1963.

All these criticisms were raised more as loose arguments without much discussion, and consequently had less substance. A final criticism, which seems justified, was the Island Strategy concept's lack of military presence.³⁴ Military presence as a means of diplomacy has been and always will be important.

Many of the arguments of the Air Ministry's solution could have better been made from the Admiralty if it had been seen in the context of real experiences such as the Kuwaiti Crisis of 1961. The practicality of relying on land-based air power had been put to the test, but proved much more difficult than argued in the Island Strategy concept. But then again, one must remember that the argued Island Strategy concept was not in place. The crisis may still be used to exemplify many of the challenges that would meet such a land-based air power concept, even though it would be better prepared in the future.

Since the Iraqi Revolution in 1958, Great Britain's oil-interests in Kuwait were at stake.³⁵ An Iraqi attempt to seize control over Kuwait was expected, and the British constructed the 'Operation Vantage' plan for reinforcement of Kuwait.³⁶ Immediately after Kuwait was given full sovereignty on 19 June 1961, the Iraqi ruler looked to Kuwait. The British forces in the region were put on alert, awaiting any requests of assistance from the Sheikh of Kuwait. The invitation came, and the intervention was ordered by 30 June. According to the 'Operation Vantage' plan, Transport Command was to fly in great numbers of Army troops by strategic and tactical airlifts. However, the Army troops planned to be flown in from the UK, Africa and Cyprus were stopped by the 'Arab Air Barrier', as Turkey and Sudan denied over-flight rights to the British for the initial part of the crisis. They later relaxed the restrictions.³⁷ Still, even if the transport system for reinforcements was not as effective as hoped, several thousand troops were flown in within a week. RAF fighters in the region were to provide supporting air cover and air strikes. As the crisis started, the RAF had two Hunter squadrons in Bahrain. These provided limited air cover over Kuwait. As for the planned early warning and control radar and communication systems of the RAF, these did not become operational until more than two weeks after the crisis started. It was in fact the carrier HMS BULWARK with its air radar, the 42 Commandos, and the 848 helicopter squadron which became the saviour of the initial phase of the operation. The ship was luckily in the area for hot-water trials at the time. There were also several support ships close by. Soon HMS VICTORIOUS, with its new and much improved air

³⁴ NAUK AIR 20/11423. Copy of 'The Island Strategy', critical note by the Admiralty, January 1963.

³⁵ 50 per cent of the Kuwaiti Oil Company was owned by British Petrol (BP). About 50 per cent of the entire oil consumption in Britain came from Kuwait. See E.Grove, *Vanguard to Trident*, pp.246-249.

³⁶ NAUK AIR 38/399. 'Operation VANTAGE: plan for intervention in Kuwait', 1962.

early warning radar, came into the area.³⁸ The politically successful British intervention in Kuwait in 1961 was thus not without problems. First of all, the logistical system was initially so dislocated that it would have made a quick intervention impossible by RAF forces alone. The fortunate close position of naval forces, even strengthened by a planned handover of ships at station which made the force stronger than normal – made much of the contribution.³⁹ This operation demonstrated the importance and potential of naval forces. These experiences were used to some extent by the Admiralty in the debates that followed, regarding the need for carriers, but it would most certainly have helped their case if they had used them more in their studies and arguments.

Chapter 2-D: The debate following the 1962-63 Chief Scientific Advisor's Enquiry

The first complete preliminary report of the Chief Scientific Advisor Study-Group on the 'Enquiry into Carrier Task Forces' of 7 February 1963 was circulated to all involved institutions and actors. The final report was delivered 22 April 1963. In the final report, the study-group still found it difficult to give any concrete recommendations, as the technical and military tactical questions and the comparison of the two concepts were so thoroughly inter-connected with political and financial questions. For instance, if the politicians assessed that the probability of military intervention in the 1970s was low; they could well opt for the cheaper strategy. Since the choice between the alternatives would have far reaching consequences beyond those of a military tactical sort, they had to involve political judgement. Even though no clear cut recommendation was presented, the panel's discussion of pro and cons largely supported the naval concept.

The enquiry first discussed the most likely cases of intervention the British could face in the 1970s. The most likely case of intervention would come after an invitation by a regime threatened by a neighbouring country or facing internal security problems. In such a case, either carriers or the full network of island bases would be necessary. The enquiry concluded that such interventions would 'require the maintenance of the present planned Air Force strength of

³⁷ For a thorough documentation, see Alani, *Operation Vantage. British Military Intervention in Kuwait 1961*.

³⁸ Grove, *Vanguard to Trident*, p.246.

³⁹ NAUK AIR 38/399. Report after the operation, December 1962.

transport and fighter/ground attack aircraft.’⁴⁰ As the degree of opposition rose, the enquiry argued that the RAF would find it difficult to establish the airheads. In that case, the carrier option would most likely be the more effective and enduring. Despite this far less likely case, the study-group argued that the Government should be prepared to carry out such an operation.

As for the military technical and tactical evaluations, the study-group concluded that the advantages of the Admiralty’s solution had better prospects for effective air cover, a quicker landing of tanks (smaller ones however than the Army required) and heavy equipment in conflicts of ‘moderate opposition’. In addition, naval presence as a means of military diplomacy, geographical flexibility, and the ability to put an operation into reverse were assessed important. The study-group argued that ‘naval diplomacy’, operations such as sailing off the coast of a conflict area or while a political climate was about to ‘hot up’, might well prevent hostilities from breaking out. This argument was generally accepted, and was not much debated. It was the statement and conclusion regarding ‘air cover’ which most provoked the Air Ministry. The Chief Scientific Advisory Study-Group argued that the immediate provision of air cover, including adequate radar cover, was of paramount importance in the case of an opposed assault. None of the services disagreed over the importance of ‘air cover’, but the study-group’s acceptance of the naval case for carrier task forces for provision of more effective air cover, despite the shortcomings of carrier aviation, was fallacious according to the Air Ministry.⁴¹ Still, the enquiry supported the naval case:

Whatever can in theory be achieved by an air striking force operating at long range, we think there is no question but that a carrier-borne force, albeit a smaller one, at 100-200 miles range will be more effective in the opening stages of an assault landing.⁴²

This question, despite the enquiry’s conclusion, led to several rounds of discussion over the next few years.

As for the greater system of ‘mobility’ for the British Army, the Chief Scientific Advisory panel, the Admiralty, and the Air Ministry all agreed upon the necessity of transporting the bulk of the Army troops by air, but that the heavy equipment had to go by sea. Thus, both concepts were dependant on a ‘sea-tail’ for the main force and heavy supplies. But the consequence of this was

⁴⁰ NAUK AIR 20/11424. Copy of Chief Scientific Advisor’s final ‘Report of Enquiry into Carrier Task Forces’, 22 April 1963.

⁴¹ NAUK AIR 20/11424. See several internal notes and letter from both services in this file.

⁴² NAUK AIR 20/11423. Interim report of Chief Scientific Advisor’s enquiry into Naval Task Forces, 7th February, 1963.

more controversial and complicated: Zuckerman actually supported both concepts by concluding of this 'sea-tail': '...be it noted by ships other than carriers'.⁴³ Zuckerman argued that not even the projected carriers were large enough to carry all Army equipment, tanks especially.

Regarding the Island Strategy, he also noted positively that in any case the islands would be needed as staging points for all services, if not as mounting bases for offensive air operations.

But there were pitfalls and disadvantages in the Admiralty's solution which were also noted by the Chief Scientific Advisor's study-group. The study-group argued that a carrier force had to be of four ships – as a minimum. One may think that this support from the Chief Scientific Advisor would strengthen the Admiralty's case, but this argument of four – or none, did not suit the later discussion of a 'double' or 'single stance strategy', nor the cancellation that later came about. In addition, the Chief Scientific Advisor's report read:

Carriers are not required for operations in which U.K. forces intervene by invitation; nor is it likely that carrier task forces would be used against heavy opposition in view of the risks which the whole operations would run.⁴⁴

The preliminary report supported the carrier concept only if there would be a minimum of four carriers, and found that they were the 'right solution' only when used against enemies of moderate opposition. They would later change these arguments. The greatest criticism of the carrier option by the Chief Scientific Advisor's study-group was the vulnerability of a carrier force and its cost. A determined force of submarines or aircraft, or an opponent using mines, would pose a great threat to a carrier force. Much of its own force would be needed just for self-protection.

The Chief Scientific Advisor and his group were generally sceptical of the Island Strategy concept, which was dependent on four bases in the Indian Ocean; Aldabra, Masirah, Gan and Cocos.⁴⁵ The issue of bases in the East of Suez region was very much the background of the entire re-structuring of British forces in the region. Building up – and running new bases were thus controversial in themselves. Of the bases envisaged; Aldabra did not have any facilities, and the others had only limited air facilities. Consequently, the Air Ministry solution would also require heavy investments and some running-costs. The study-group was also sceptical of the Air

⁴³ NAUK AIR 20/11423. Letter by Solly Zuckerman, 27 February, 1963.

⁴⁴ NAUK AIR 20/11423. Interim report of Chief Scientific Advisor's enquiry into Naval Task Forces, 7 February, 1963.

⁴⁵ In some instances, a full list of six mounting bases, Aldabra, Masirah, Cocos, Butterworth, Manila and Darwin, as well as staging posts at Ascension and Gan were mentioned by the Air Ministry.

Ministry concept's ability to exercise close control of fighters and close air support aircraft in the initial hours of an assault. This could not be done effectively until the mobile ground radar systems were brought in. Even as the prospective P.1154s were to have air intercept (AI) radars, the enquiry report concluded that the 'effectiveness of standing fighter patrol without direction and control would be less than that of a patrol of equivalent strength operating under radar control as envisaged in the Naval Solution...'.⁴⁶ All the same pitfalls of the air control capabilities of the Island Strategy, with air power applied from 1000 NM away, would also be the case for tactical air strike operations.⁴⁷ And of course, the study-group also questioned the political (and military) feasibility of relying on destruction of the enemy on the ground before the operations.

The War Office sat on the fence during most of the inter-service debate. They were included in the mobile concepts of both the Air Ministry and Admiralty. The War Office was mainly taken into the debate for discussion regarding the logistical capacities required, especially concerning tanks. The Army argued that tanks were essential elements if the British were to advance against opposition, and the question of minimum weight was studied. The Army concluded that tanks weighing less than 35 tons were not acceptable. This not only challenged the Air Ministry, but the Admiralty as well. No aircraft available or planned for the RAF would be able to support this, but neither could the prospective carriers. The Chief Scientific Advisor's study-group concluded that sooner or later sea-borne supplies, beyond what the carriers could bring, had to be brought in.⁴⁸ They also found that a point of entry far from the coast was out of the question. The Air Ministry solution would always require a 'sea tail', which of course had to be protected by escorting forces. But then again, the Chief Scientific Advisor followed this up by stating that such an escorting force would not necessarily need carriers: Land-based air power and naval surface forces could fill these requirements. Even though the Chief Scientific Advisor's study-group was sceptical of the Island Strategy concept, they still argued for the fact that bases and staging posts were required in any case. The bases currently available should therefore be retained as long as possible.

⁴⁶ NAUK AIR 20/11424. Copy of Chief Scientific Advisor's final 'Report of Enquiry into Carrier Task Forces', 22 April 1963.

⁴⁷ Ibid.

⁴⁸ NAUK AIR 20/11423. Interim report of Chief Scientific Advisor's enquiry into Naval Task Forces, 7 February, 1963.

Throughout the studies and debate, Zuckerman's study-group did not support any compromise solution. It had to be one thing or the other. The interim report concluded that the Government had two choices:⁴⁹

- To use the forces and bases which they currently had, together with existing equipment, and to use them for as long as they could, cutting the political commitments accordingly and recognising that in the future the loss of bases would limit more and more the political interventions they could make.
- Or build and man, at admittedly a very high cost, an effective carrier task force so as to retain political and military flexibility.

As an interesting last note on the report, though unimportant at the time: The most visionary conclusion of the study-group argued that the Government, for financial reasons, would possibly decide against maintaining an intervention capability in the 1970s. A solution was simply to opt to continue the policy East of Suez for as long as possible using the carriers and bases in service – and progressively cut the political commitments accordingly. With these concluding remarks from the study-group one may foresee the end of the story...

Alternatives to the classical carrier

As we have seen, the Minister of Defence commissioned several studies to examine the case for new carriers, the costs involved, and the military strategy options during 1963. Many questions were raised, many of which were quite radical. From the beginning, the Navy also had to look into possible ways of protecting ships at sea and of supporting assault operations by other means than traditional (large) carriers. The first study was to examine the question 'The Navy without Aircraft Carriers'.⁵⁰ A central question was whether and how the Navy could fulfil their world-wide roles without the traditional carriers. Attached to this study was the shorter study of an 'All-Missile Navy'. Next, the Admiralty had to study the concept of 'Off-shore support ships'.⁵¹ This latter study was to examine the possibility of operating normally land-based aircraft from 'floating airfields'. These ships could either be converted from ordinary large merchant ships or purpose built. This was a study ordered by the Chiefs of Staff, and it was intended to involve all three services.

⁴⁹ Ibid.

⁵⁰ Copies within: NAUK ADM 205/201, The Navy without carriers: final draft, 1963: NAUK DEFE 7/1804, Carrier replacement program, 1962-1963: NAUK ADM 205/194, Replacement aircraft carriers, 1963.

⁵¹ Ibid.

The Navy without Aircraft Carriers

As for the main and first study, 'The Navy without Aircraft Carriers', this was fully undertaken by the Admiralty, with several drafts going out to the Air Ministry and Minister of Defence offices. The aim of the study was to examine the measures necessary to make the Navy viable and able to perform its world-wide role without 'carriers as we know them'. Commando carriers, as well as the proposed 'off-shore support ships', were planned. The first part of the study dealt with the necessity of fixed-wing aircraft for the maritime roles. The second part focused on the issue of whether land-based aircraft could take on all these maritime roles. In case the research found that some aircraft had still to be sea-based; could these aircraft be operated from vessels other than 'carriers as we know them'?

The arguments may be summarised thus; the Navy stated that 'these far-reaching' assumptions which formed the foundation for the studies in the first place were fallacious. The Admiralty stated that it was beyond doubt that 'seaborne fixed-wing remain indispensable for reconnaissance and surveillance, "probing" air and surface contacts, and the destruction of shadowers and jammers'.⁵² The reality of the potential of any British surface-to-surface missile systems was clear.⁵³

Neither can the Navy's requirements for fighter aircraft be reduced, nor for surface strike against ships eliminated, because we do not have the capability of developing shipborne long range S.A.G.W and S.S.G.W which could compete with the Russian L.R.G.W capability, present and future.

If one went forward with this alternative, it would require increased helicopter capacity for other parts of the Navy, fully capable command and control facilities built in other ships, as well as other means of carrying troops. In addition, it would require a great number of new weapon programmes to make the Navy into a still powerful force. And even so, one would lose the ability to influence events on land with such a naval force. Still further, it would require a much greater air force, to substitute for carriers.

In its recommendations, the Navy did not leave the alternatives much up to chance, and made no attempt at hiding their political position. 'It is concluded that for the operation of seaborne fixed-

⁵² NAUK AIR 20/11424. Including copy of the Annex B of the Admiralty report. See also NAUK ADM 1/29108, Discussion, decision on timing, size, costs etc of proposed new Aircraft Carrier, 1963-66. 'The Navy Without Aircraft Carriers', Enclosure 1 to First Sea Lords letter No.133/63 of 22/8/63.

⁵³ NAUK ADM 205/201. 'The Navy without carriers: final draft', 1963. Note from the Controller of the Navy to the First Sea Lord, 10 April 1963.

wing aircraft even in the indispensable minimum of roles, aircraft carriers as we know them are essential',⁵⁴

Off-shore support ships

The second study, which was to examine the controversial question of 'Off-shore support ships', was ordered in February 1963. The Chiefs of Staff had asked for an evaluation of ships other than classical carriers, which could still operate 'normally land-based aircraft' and provide air support for Army intervention.⁵⁵ This request and the document that followed should be understood in conjunction with the on-going discussion of new carriers versus the Island Strategy. The 'Off-shore support ships' report was delivered by 9 May 1963.⁵⁶ The first official record discussing the issue was a meeting between the Minister of Defence and the Chiefs of Staff held on 6 February 1963. The broad requirements were put forward by the Chiefs of Staff to the Admiralty study by 26 February. The general feeling of the Minister was that the long standing requirement of independently being able to put ashore a Brigade group plus a Parachute Battalion, as means of incursion and deterrence, had to be abandoned. If the UK were to uphold this capacity, it would probably require some cheaper solutions. The Minister 'was therefore seeking a way in which it could be carried out at less cost and with less vulnerability than in the aircraft carrier strategy but with more flexibility than in the Island Strategy'.⁵⁷ He asked for a study of a concept where the RN and RAF supported the Army from 'floating bases' of cheap converted merchant ships, or if necessary new support ships after merchant building standards. This would possibly give the capacity to support amphibious operations and other helicopter operations at far less cost than the naval carrier standards.

Even during the initial meeting, the First Sea Lord replied that such a ship would have a very restricted role compared to that of a fleet carrier. Escort groups and guided missile ships, including a programme of new surface-surface missiles would also still be required.⁵⁸ This was a view supported by the Minister. He still saw the need to examine cheaper solutions, and the concept had to be studied. In addition to the 'floating bases', they also briefly discussed what would be the smallest possible carrier that could operate the projected P.1154 aircraft. The Navy found that a ship for this purpose could be as small as 15,000 tons. The concept was abandoned

⁵⁴ NAUK AIR 20/11424. Including copy of the Annex B of the Admiralty report.

⁵⁵ NAUK AIR 20/11423. Report by the Joint Planning Staff, 21 February 1963.

⁵⁶ NAUK ADM 205/196, 'Replacement aircraft carriers: alternative solutions', 1963: Copy of the final Admiralty report and Air Ministry reactions are to found in e.g. NAUK AIR 8/2354, 'Island Strategy and the carrier force', 1962-1963.

⁵⁷ NAUK AIR 20/11423. Record of meeting MM(63)4 between the Minister of Defence and the Chiefs of Staff, 6 February, 1963.

shortly afterwards, as ‘such a ship showed that it could not be efficiently or even safely operated...’.⁵⁹ (An interesting conclusion, in the light of the coming 16,000 ton INVINCIBLE-class, in service just a decade later).

The ‘floating bases’ concept asked for by the Minister was later refined in a broad requirement put forward by the Joint Planning Staff. Such a ship was required to support:⁶⁰

- The landing of one parachute battalion group or Royal Marine commando group or both to seize an airfield and cover such engineering tasks as are required to rehabilitate or improve it.
- The arrival; sea-lifted battalion group by battalion group, or of an air transport infantry brigade group including some part of the non-organic units.
- The completion of the build-up of the forces and of non-organic units.
- Offensive and defensive actions on land would take place throughout the period of build-up which might last up to ten days.
- The development of further operations.

The naval study-group concluded in the end that this was an undesirable concept. And if it had been advisable, such ships had to be newly constructed ships of about 20,000 to 22,000 tons, with a minimum of landing and take-off facilities. The cost would be about £20 Million per ship, and three ships would be needed if it were to make some contribution.⁶¹ The Admiralty was greatly concerned with this concept, as the ships would be extremely vulnerable. In addition, they argued that operating and maintaining aircraft from ships was a very complex duty – which in reality required all the facilities present in complete carriers.

All the studies were delivered from the Admiralty to the Minister of Defence by May 1963. The Minister stated that he and his staff would reflect upon them, and convey the views and scepticism of the Admiralty to the Prime Minister. It never came to any realisation of such ships, or the ‘Afloat/Ashore concept’ which followed. Naval scepticism is very pictorial, with nicknames used in their in-house studies and correspondence about the concept-ships; the ‘Pike ships’, the ‘Thorneycrafts’, or simply the ‘Garages’. The Chief Scientific Advisor was also reluctant from the start. As he wrote in February 1963; ‘We have also briefly considered the

⁵⁸ Ibid.

⁵⁹ NAUK DEFE 7/2354. Note from Carrington to Minister of Defence, 9 May 1963. See also NAUK ADM 1/29108.

⁶⁰ NAUK AIR 20/11423. Report by the Joint Planning Staff, 21 February 1963.

⁶¹ NAUK DEFE 7/2354. ‘Off-shore support ships’ study report, summer 1963. For chronology and details on the debate and design of the ships; see the NAUK AIR 20/11423, NAUK AIR 20/11424, and NAUK AIR 20/11425, Future aircraft carriers and the island strategy: Admiralty/Air Ministry studies.

possibility of simplified carriers acting simply as floating airstrips, but have concluded that they would not meet the operational requirements'.⁶² The attitude of the Admiralty did not change.

A Navy without carriers; an 'All-Missile Navy'

When the Admiralty delivered the final reports of the studies to the Minister by May 1963, they also enclosed a new and general overarching paper named 'Aircraft Carrier Replacement'.⁶³ In this new paper, they attempted to sum up the greater issue of carrier replacement.

We approached the two studies which you commissioned with completely open minds and I think we have done them very thoroughly. We were fully prepared to make proposals for refashioning the Navy very radically, for example by going over to an "all-missile" force without carriers as we know them had this seemed the right course. But as you will see, our conclusion was that – even leaving aside any question of costs – it would not be possible to have a next-generation Navy capable of fulfilling the roles postulated for it.⁶⁴

In any case, an all-missile navy could not be built until the late 1970s, as the challenges of making such weapon systems were great. In addition, the Admiralty argued that the cost of building up such a navy would be just as expensive as building and running the currently planned structure.⁶⁵ However, later estimates showed that it would be about half the cost of a carrier programme, about £600 million for a 'All-Missile Navy' compared to roughly £ 1,300 million for a carrier navy.⁶⁶

As a final comment from the Admiralty, First Lord Carrington made a straightforward conclusion in a personal letter to the Minister of Defence after the final reports had been circulated:

I may summarise... Even if an "all-missile Navy" were a feasible aim in the time scale under consideration, which it is not, seaborne fixed-wing aircraft would remain indispensable for tactical reconnaissance, surveillance, "probing" air and surface contacts, and the destruction of shadowers and stand-off jammer aircraft. The seaborne aircraft must be operated, maintained, rearmed and refuelled in ships. For this is in fact no practical alternative to a parent ship with a flat top, a catapult, deck of certain strength,

⁶² NAUK AIR 20/11423. Interim report of Chief Scientific Advisor's enquiry into Naval Task Forces, 7 February, 1963.

⁶³ NAUK DEFE 7/1804, 'Carrier replacement program', 1962-1963.

⁶⁴ NAUK DEFE 7/2354. First Lord Carrington to the Minister of Defence, 21 May 1963. See also NAUK ADM 1/29108.

⁶⁵ NAUK ADM 205/200, 'Aircraft carriers: cost effectiveness study', 1963. C(63)133, Annex A.

⁶⁶ NAUK AIR 20/11977, 'Carrier study working papers', 1965. Copy of 'The Navy Without Carriers', Appendix to Annex E.

and minimum radar facilities. And whatever new name might be found, this would be an aircraft carrier.⁶⁷

Even though the Admiralty studies clearly tried to push off the alternative ideas proposed, the Chiefs of Staff found that the case for dual-purpose commando ships was poorly covered. The Admiralty never gave the alternatives a chance and their arguments were poorly founded. Thus, the concepts would not be disregarded for the future – and the issue of smaller and combined role ships for launching aircraft would emerge again.

Chapter 2-E: Approval of the Carrier

The debate summarised

The debate of 1963 thoroughly examined the pros and cons both of carrier aviation and land-based air power. All the arguments about maritime air power were brought to the table. This was an inter-service rivalry where the Air Ministry tried to torpedo the Admiralty's carrier replacement programme. It was clear that the building of new fleet carriers would have grave implications for the economy of the other two services. The two strategies proposed were both intended as solutions to the UK's demand for continued military presence and influence East of Suez in and after the 1970s. The case for carriers was generally supported by Mountbatten and Zuckerman throughout this period. As for the Ministers of Defence, Watkinson had been supportive, but Thorneycroft, who took office in July 1962, was initially greatly concerned over the costs involved. However, after a year in office, he had become a supporter in the Admiralty's fight for the carrier.

The Admiralty promoted carriers for both transport of troops and reinforcements, as well as air strikes and air cover. As they saw it, the RAF should play a supporting role to the Royal Navy by ensuring a modest transport of troops and equipment from the British Isles. The Air Ministry first came up with the Island Strategy for politically safe transport-routes, as a response to the 'Arab Air Barrier'. Later, by the autumn of 1962, the wider Island Strategy concept became a complete, but far cheaper, alternative to carrier forces. A multitude of missions from strikes, and air control, to the insertion of troops, was to be done via 'staging' and 'mounting bases', as well as airheads close to the conflict areas. This was deemed possible due to air-to-air refuelling and V/STOL fighter/strike and medium transport aircraft.

⁶⁷ NAUK DEFE 7/2354. Carrington to Minister of Defence, 21 May 1963. See also NAUK ADM 1/29108.

Even though the Island Strategy concept was not initially intended as an alternative to carriers, it became so by 1962. The economic situation was clear to anybody – if new carriers were to be acquired, other forces had to take enormous cuts. The Air Ministry clearly felt that they had taken their share of cancelled programmes over the last 3-4 years following the Sandys Defence Review in 1957. During Thorneycroft's first months in office, he was generally supportive of the economically more feasible 'Island strategy'; however, by the winter of 1963 he became less so. When the question of the financial cost of the Island Strategy came up for debate in March 1963, Thorneycroft declined to spend time on it. He had lost faith in the Air Ministry's alternative.

Finally a decision

The views of the Minister of Defence and the Chancellor of the Exchequer were to be presented to the Defence Committee in late July 1963. The CVA-01⁶⁸ project and the general need for an aircraft carrier fleet for the 1970s was by then fully supported by the Ministry of Defence:

It was, however, a necessary decision if the navy was to be able to deal with other countries (for example Indonesia) whose ships might be armed with surface-to-surface missiles. The decision had been taken in the past that the navy should not be so armed but rely on fixed-wing aircraft to deal with such opposition, and for this purpose carriers were necessary. There was no means of avoiding a decision on carriers unless the Government was to change its policy and abandon its east of Suez role, and Defence Committee had already decided that no such change should be made.⁶⁹

During July 1963, all the institutions and actors tried to lobby their case. There was much correspondence, not least directly to and from the Prime Minister.

The Air Ministry and the Treasury were particularly concerned over the fact that the expensive carrier programme had never truly been put under any cost-effective study.⁷⁰ The Treasury was sceptical because of the great burden it would put on the defence budget, as well as on public expenditure in general:

I do not consider that the case has yet been established for embarking on the construction of new aircraft carriers with its major long term implications for defence expenditure and public expenditure in general, and I invite the Cabinet to agree.⁷¹

⁶⁸ Carrier designation CVA: Aircraft Carrier, Attack

⁶⁹ NAUK DEFE 7/2354. Meeting of the Chancellor of the Exchequer and Minister of Defence on Aircraft Carriers and Defence Policy, 24 July 1963.

⁷⁰ NAUK T 225/2158, 'Admiralty: replacement and modernisation of the present generation of aircraft carriers: review', 1963. Note by Peck, 23 July 1963.

⁷¹ NAUK T 225/2157. Draft Memorandum by the Chancellor of the Exchequer, before the final meeting on the decision of 30 July 1963.

This statement was part of a draft presentation the Chancellor prepared for the final meeting. After a meeting with the Prime Minister, Macmillan, the Chancellor was told not to present it to the Cabinet.⁷² The Prime Minister himself put the Treasury off, as he did not want any political disturbance from this issue in what was generally a troublesome time for the party. The controversial issue of carriers was for political reasons pushed forward.

The Ministry of Defence and the Admiralty had argued convincingly that new carriers were needed. Modernisation and a refit programme for the old carriers were also discarded, as this would be enormously expensive and probably keep each carrier in dock for up to two years. A modernisation option would in any case only give an older carrier a few extra years. In July 1963, Peter Thorneycroft, then Minister of Defence, spoke to the House and confirmed that new carriers would be built. He also stated that three carriers should make up the future carrier force for the Royal Navy:

The Government have had the question of aircraft carriers under consideration with a view to determining the requirement for the 1970's. After full consideration it has been decided that the carrier force likely to be required during that period is three carriers.⁷³

It was hard to judge the defence challenges of the future (1970-80). However, a minimum of three carriers was deemed necessary if Britain and the Royal Navy were to keep any global role. With less than three carriers, the Navy would be reduced to an anti-submarine navy. With a global role in mind; two carriers were intended for deployments East of Suez, while one would be in home waters for maintenance and training.⁷⁴

The Cabinet supported the stand of the Minister of Defence, and the first new carrier was agreed upon by 30 July 1963.⁷⁵ The question of a second new carrier was planned to be discussed in about two years' time. Having scaled down their ambitions, from four to three fleet carriers and by spacing out the replacement programme, the Admiralty had won support for their arguments. The Chief of the Air Staff would still not support the political decision of building three new fleet carriers for the future challenges of the 1980s. The developments of shore-based aircraft were just too promising. The general financial problems were not solved. Both the carrier, the TSR.2 and the Army's Chieftain tanks were approved. It was quite clear that the economy would

⁷² NAUK T 225/2158. Letter from Caulcott, 15 July 1963.

⁷³ NAUK DEFE 7/2354. Thorneycroft, Hansard Official Report No.158 of 30th July 1963.

⁷⁴ NAUK DEFE 7/2354. Note from meeting of the Chancellor of the Exchequer and the Minister of Defence on Aircraft Carriers and Defence Policy, 24 July 1963: The RN also tried to uphold a two-carrier task force East of Suez after the decision to plan for a total carrier force of three ships were decided. See for instance: NAUK ADM 1/29108.

⁷⁵ NAUK ADM 1/28639, 'Aircraft Carrier Programme: date for placing order for replacement for HMS ARK ROYAL', 1963.

still be pressed in the future. This fact had been made clear by the Treasury. If the decision on the building of the carriers would stand – it was obviously clear that the numbers of aircraft and tanks would suffer. It was impossible to cut an expensive carrier in two...⁷⁶

Chapter conclusion

Due to the differences of opinion over the military strategic alternatives from the Royal Navy and the Royal Air Force, which had evolved into an extreme inter-service rivalry, Chief Scientific Advisor Zuckerman's neutral study achieved great political influence. From the beginning of the debate, Zuckerman had proved to be a strong believer in carrier aviation. This, added to the well known fact that he was closely related to the Chief of the Defence Staff Lord Mountbatten, largely ruined the Royal Air Force's trust in the 'neutral study'.

This chapter has reviewed and discussed the criticism to the study that was raised from the services, and the continuing inter-service rivalry. However, these two alternatives, proposed to fill the needs of the British as they withdrew from their former colonies and important garrisons, hardly reached the political decision makers. The top leadership did not want a great public debate in a generally troublesome period for the Conservative Party, and as the time for concrete investments lay far ahead the easiest solution was to stay with the proven policy and forces. The story of 1960-63 is important for the conceptual debate on land-based air power versus carrier aviation, but this chapter has shown that the inter-service rivalry, as well as Air Ministry and Admiralty strategic thinking and policy, had little bearing on the political decision that came in July 1963 in favour of the carrier option.

The way ahead

New carriers had been agreed upon by the Cabinet, but challenges for the Royal Navy would not ease for long. The greatest political issue at stake – the continuation of Britain's global role, which had also become essential in the carrier debate, became more and more important. The Admiralty soon came to conflict – again – with the Treasury over the need for new aircraft carriers. The disagreement surfaced after the Treasury halted the funding for the time-pressing research and development phase. This was what the naval MoD officers and servants feared to be an indirect move away from a 'new design carrier', to once again take the discussion on a refit carrier.⁷⁷ Several issues contributed to the halt of the new carrier; the question of cancellation of the surface-to-surface nuclear Blue Water missile, the question of deferring a decision on

⁷⁶ NAUK ADM 205/199, 'Aircraft carriers and defence policy', 1963. Note for the Record of one of the last MoD meetings on the issue before the decision on the carrier, 23 July 1963.

⁷⁷ NAUK DEFE 7/2354. Note from K.Nash to F.Armstrong 14 August 1963.

OR.351 VTOL transport aircraft, the discussions on finance of the nuclear programme, and not least the new policy review of 'strategy in the long term'. Clearly, the whole burden of the world-wide role was immense, and had to be reviewed.⁷⁸ The Treasury in particular pressed for a greater review in this period.⁷⁹ Despite the Cabinet decision of 30 July on the carriers, no agreement on funding had come by late summer. The fight kept on. In an internal MoD note from September 1963, the Treasury – Admiralty conflict was discussed:

It is clear that this can now be settled only at Ministerial level, and I understand that since Mr. Armstrong wrote his minute of 27th September the First Sea Lord has had a talk with the Minister. The Minister has made up his mind to appeal to the Prime Minister on the ground that what the Admiralty proposes is clearly in accordance with the conclusions of the Cabinet, and that what the Treasury are trying to do is equally inconsistent with those conclusions.⁸⁰

Thorneycroft now partly took the Treasury's side in the debate. He admitted that a late refit of HMS EAGLE and HMS HERMES would make them last until 1980. Consequently, only one new carrier was needed and consequently the CVA-02 was put aside. The CVA-01 was then designed to be about 50,000 tons, costing around £60 million.⁸¹ According to Thorneycroft, the aircraft intended for the carriers of the 1970s would be a joint RAF and RN multi-role aircraft based on the Hawker P.1154. This vision of a British joint aircraft was even supported by the opposition parties.⁸² The link between the carrier issue and agreement for a joint aircraft for the RAF and RN was important at this critical stage in late 1963.⁸³ In this sense; the RAF helped the Navy's case for carriers with this aircraft, which was chiefly designed for and proposed by the RAF.

⁷⁸ NAUK ADM 205/199. Concerns raised by the Chancellor at one of the last meetings on 'Aircraft Carriers and Defence Policy' before the 30 July decision on the carriers, 24 July 1963.

⁷⁹ See for instance: NAUK ADM 1/28639.

⁸⁰ NAUK DEFE 7/2354. Note by I.Montgomery, 30 September 1963.

⁸¹ Hansard Official Report No.158 of 30 July 1963. Thorneycroft statement. £60 Million from 1966 would be worth: £2,046,702,538 in 2006, using the share of GDP.

⁸² Hansard Official Report No.158 of 30 July 1963. Thorneycroft and Healey discussion.

⁸³ NAUK DEFE 7/2354. Meeting with Chancellor of the Exchequer and Minister of Defence on Aircraft Carriers and Defence Policy, 24 July 1963.



Figure 5: CVA-01⁸⁴

⁸⁴ NAUK DEFE 69/434.

Chapter 3: A new framework – a new debate on maritime air power

May I say, first, how glad we are on this side of the House that the Government have accepted the arguments which we have so often put forward against building an aircraft carrier of the size of the 'FORRESTAL' class.¹

Denis Healey, 1963

After the decision to opt for carrier task forces in the summer of 1963, the debate and rivalry calmed down for a while. Even though there were some disagreements between the Admiralty, supported by the MoD, and the Treasury over funding for the design and research work. This chapter first briefly discusses the shift of government in October 1964, after which the Ministries needed to be settled. Thereafter, examines the greater strategic developments; the Soviet Navy was rising and the challenges in the East of Suez region did not diminish. Simultaneously as the strategic framework was becoming more complicated – the debate on land-based air power and carrier aviation, now focusing on the CVA-01 programme, re-emerged. This happened within the framework of the new defence review under Denis Healey started by early 1965.

Chapter 3-A: From Conservatives to Labour, October 1964

The Conservative Party was the dominating political party in the 20th century. They had the leadership for most of the century, as well as a majority in the Commons and House of Lords.

For the first period of my research, the Conservatives held power under Prime Ministers Macmillan (1957-1963), and Douglas-Home (1963-64). Traditional Conservative politics has had a cautious attitude towards change, a distrust of 'big governments' and emphasis upon law and order, patriotism, and preference for freedom and private enterprise. In the late 1950s, the Conservatives had come to accept the 'welfare state' and a need for more governmental intervention and direction.² However, in early 1960s the Conservatives had problems in meeting

¹ Hansard Official Report No.158 of 30 July 1963. Healey's answer to Thorneycroft, the then Minister of Defence. The FORRESTAL class carriers of about 80,000 tons were the first 'supercarriers' produced by the USN in the mid-1950s. They were also soon followed by the first nuclear powered USS Enterprise in 1960.

² Duncan Watts, *British Government and Politics* (Edinburgh: Edinburgh University Press, 2006), pp.236-241. For further comparison of the Conservative and Labour governments of the 1960s, I have compared: Pearce and Steward, *British Political History 1867-2001*, John Ramsden, *The Oxford companion to twentieth century British Politics* (Oxford: Oxford university Press, 2005), David Butler and Gareth Butler, *Twentieth-Century British Political Facts* (Hampshire, UK: Palgrave Macmillan, 2000), Marsh, ed., *Postwar British Politics in Perspective*,

the steadily increasing demands from the public for an increased standard of living. As the economy performed less satisfactorily, at least compared to other nations the British identified themselves with, the support for this increased welfare state proved difficult.³ The international trend of nationalism and the establishment of the European Economic Community market (EEC), or Common market as it often was called, challenged Conservative foreign policy. The Conservative Party led the country during and after the Suez Crisis of 1956, and initiated the decolonisation era. Under the Conservative Party, the British applied for EEC membership in 1963. The British also applied in 1967 under Wilson. Both these were vetoed by the French General and President De Gaulle. In this period, Conservative politics was challenged and the party became divided over the developments. In several fields, the Conservatives had closed the gap on traditional Labour policies.

The new Labour Government under Prime Minister Harold Wilson, which came to power in October 1964, had the aim of modernising the economy. The concern for the overall economic position of Britain with other nations stayed central in politics. The Labour Government of 1964 aimed at a 4 per cent annual growth, increased focus on social reforms, and increased spending on public services.⁴ This classic socialistic policy had implications for the 'competing' demands of the defence sector for funding. The question relating to defence and foreign policy had always internally torn the Labour Party, and when Harold Wilson got to power in 1964 he had to bridge the differences within his party.

The Labour Party's ethos was one of social reform, economic redistribution, and support of the trade unions. Until the First World War, the party had not been interested in the questions of defence and foreign security policy. Following the war, the party became committed to disarmament and strongly supported the building of League of Nations. The party was not pacifist per se, but there were elements of this in the 1920-30s. However, this changed with the Spanish Civil War. The pacifist elements of the party then re-considered, and most of the party found that war could be justified. The same attitude prevailed after the Second World War. The party stayed focused on international institutions, the United Nations, and a commitment to international law. The party has also traditionally been sceptical of power politics, secret

David Childs, *Britain since 1945. A political history* (London: Routledge, 2001), Robert Leach, Bill Coxall and Lynton Robins, *British Politics* (Hampshire, UK: Palgrave Macmillan, 2006), Watts, *British Government and Politics* and Hennessy, *The Prime Minister. The office and its holders since 1945*.

³ Percentage GDP growth 1960-73: UK 3.2/USA 4.3/Japan 9.4/Canada 5.4/France 5.4/ Germany 4.4/Italy 5.3. Childs, *Britain since 1945. A political history*, p.353.

⁴ Leach, Coxall and Robins, *British Politics*, p.24.

diplomacy, and had a tradition of anti-colonialism. Finally, the party has strongly argued for diplomacy over military force.⁵

Despite these general lines of Labour policy thinking regarding defence and foreign policy, the Wilson Government did not initially propose great changes to the policy of the previous government. The new Secretary of State for Defence, Denis Healey, was largely a right-wing labour politician. He had great influence within the party, and had been one of the leading experts within the party in this field from the mid-1950s.

The late 1950s until early 1970s was a period of broad agreement between the parties. There were of course, in time, differences between parties, as well as within parties.⁶ However, by and large, the period has by most been described as an 'era of consensus politics'. Population and politicians focused on peace, prosperity, and welfare.⁷ Public expenditure had especially, but gradually, taken a greater portion of the GDP, and that fact resulted in increasingly hard-pressed defence budgets.

Chapter 3-B: NATO strategy

The road towards 'flexible response' in NATO strategy

From the start in 1949, NATO was founded on a strategic concept based on the maintenance of large conventional forces easily available along its central borders. In order to achieve this, NATO agreed in Lisbon in 1952 to build up almost 100 divisions to confront the stronger Soviet conventional position at the Central Front. It soon became clear that the European countries neither had the political will or the economic strength to achieve this goal. During the initial years of NATO, great advances were achieved regarding nuclear weapons. The US had used theirs first in Japan, while Soviets detonated their first atomic bomb, RDS-1, on 29 August 1949.⁸ The Soviet Union did not have their first mass-produced bomb delivered to the Long Range Aviation until 1953. Development of this immense technology was rapid. By 1954 the Soviets had used the technology to develop the first tactical nuclear bombs; soon thereafter the same warheads were used in long-range missiles, and by 1955 the first nuclear warhead was

⁵ This short review of Labour's view on war, peace and defence policy has been based upon Mark Phythian, *The Labour Party, War and International Relations, 1945-2006* (London: Routledge, 2007), pp.1-37.

⁶ For a debate on the degree of 'consensus', see several good articles in Marsh, ed., *Postwar British Politics in Perspective*.

⁷ Watts, *British Government and Politics*, pp.230-232.

⁸ P.Podvig, ed., *Russian Strategic Nuclear Forces* (Cambridge: MIT Press, 2004). p.72.

successfully tested with the T-5 torpedo for the Navy.⁹ For their Air Force, even air defence systems became available with tactical nuclear warheads.

The US detonated their first hydrogen bomb or thermonuclear bomb in 1952 – followed by the first Soviet thermonuclear test in 1953. The Soviet Union had their first mass produced thermonuclear bomb operational from 1955, and a full variety of bombs was available by the late 1950s. In late 1953 the US unilaterally began to deploy nuclear weapons on the European continent, which gave the US a first strike capability over the Soviet Union until the late 1950s. The Soviet long-range aviation of the time was not capable of large attacks against the US – but the launch of Sputnik on 4 October 1957 changed the balance.

As a consequence of these important developments, the US officially stated a new strategic posture based on ‘Massive Retaliation’ in 1954. The concept of Massive Retaliation implied that the conventional forces were used in a ‘trip-wire’ role, where the smallest aggression by Soviet military forces would open an Armageddon on Soviet territories. The Soviet Union, and later the Warsaw Pact¹⁰, had to mobilise fully to defeat the conventional forces. This would give the US, or NATO, the opportunity to attack strategically with nuclear weapons. NATO immediately started considering the new strategy. It was very tempting, primarily because the immensely high level of conventional forces the previous NATO strategy required had been both economically and politically unfeasible. NATO officially adopted its strategy of Massive Retaliation by the end of 1956 with MC 14/2. The main reason for the US taking the lead towards a new strategy for the use of nuclear weapons was that the credibility of the strategy was challenged. Soviet developments in rocket and nuclear technology were rapid, and the first strategic nuclear SS-3/R-5M missile was fully and successfully tested on 21 June 1956.¹¹ By modern definitions, the missile would be considered ‘intermediate-range’ with its 1200km range. Then all Soviet resources were put into making an intercontinental ballistic missile (ICBM) capable of hitting the US. The newly established Strategic Rocket Forces (RVSN) accepted the first ICBM, the R-7 (SS-6) missile, on 17 December 1959.¹² New and improved missiles, as well as silos were developed during the first half of the 1960s.

The consequence of these developments for the maritime theatre and especially for the Soviet Northern Fleet was immense. It made the large fleet of long-range and high performance

⁹ The test of the T-5 on 10 October 1955 included a 10-kiloton nuclear explosion at a depth of 35 meters, only 10 km from the submarine! Podvig, *Russian Strategic Nuclear Forces*, p.73.

¹⁰ The Warsaw Security Pact, May 14, 1955. Soviet-led Eastern European defence organisation established in Warsaw, Poland, to countered the U.S.-led NATO.

¹¹ Podvig, *Russian Strategic Nuclear Forces*, pp.120-121.

strategic bombers superfluous in its original role. This in turn had a great impact when large numbers of these aircraft were transferred to the Soviet naval air arm for strike purposes against NATO naval forces and naval infrastructure in and around the Norwegian Sea.

As for British strategic thinking, most strategic thinkers of the 1950s and early 1960s; e.g. Chief Scientific Advisor Zuckerman, Chief of the Defence Staff Mountbatten as well as the main part of the RAF, expressed clear belief in strategic nuclear forces. Zuckerman and Mountbatten, who would be central in the carrier and maritime strategy discussions from the late 1950s until the mid-1960s, also strongly believed in the 'mutual destruction' strategy.¹³ There was no need for maritime forces in such a reality, and from this, maritime forces were to find their rationale East of Suez.

US pressure for a more flexible strategy

The new US strategic posture was very controversial, and provoked a debate on nuclear policy. The early critics of the strategy of Massive Retaliation soon gained support because of the Soviet developments in nuclear and rocket technology. In the US, the critics of the Eisenhower administration introduced the term 'Missile gap'. It was claimed that the US had fallen behind the Soviet Union in the production of nuclear missiles, especially in case of ICBMs. Regarding both the USA and the Soviet Union, few questioned the assumption that a future war between the superpowers would quickly escalate into a nuclear war. Sokolovskiy, Marshal of the Rocket Forces and one of the most prominent and well known Soviet military thinkers of the early 1960s, stated; 'If nuclear weapons are not destroyed and if the aggressors unleash a world war, there is no doubt that both sides will use these weapons'.¹⁴ Further, Sokolovskiy said that nuclear weapons could be used in a modern war to solve strategic, operational, and tactical tasks from a military point of view. The Soviet missile threat was clear; however, it was greatly exaggerated in this early period. The period around 1960 saw many verbal confrontations between the Soviets and the West. The official speeches and articles of the Soviet leadership, together with the semi-official writings of authors such as Sokolovskiy, prove this. The Soviets tended especially to underline their success in missile technology, probably as a means of fighting Washington's overall lead in technology.¹⁵

¹² Ibid., p.121.

¹³ SZ/Chief Scientific Advisor/10, Nuclear Warfare 1961-1962. Stated that the strategic idea of 'mutual destruction' worked.

¹⁴ V.Sokolovskiy, *Soviet Military Strategy, third edition* (New York: Crane, Russak & Company, 1968), p.193.

¹⁵ Jennifer Mathers, 'A Fly in Outer Space; Soviet Ballistic Missile Defence during the Khrushchev Period' in *The Journal of Strategic Studies* (Vol.21, nr.2, June 1998), p.54.

The earlier nuclear weapons strategy had become dangerous and was now viewed as an 'inflexible tripwire'. For military development the Massive Retaliation era was an important period of growth for dealing with the menace of new technologies, but it was now time for new forward and flexible strategies. The discussions started in the early 1960s in the US as earlier feelings of invulnerability were effectively broken down by the leap forward of Soviet rocket technology. In addition, the Berlin Crisis of late 1960 to early 1961 led Kennedy and his new administration to start focusing on limited war and accidental nuclear exchanges.¹⁶ The result of this was an important secret policy directive known as National Security Action Memorandum (NSAM) 40, which focused on contingencies 'short of nuclear or massive non-nuclear attack' and laid out US policy towards NATO.¹⁷

A grand strategy of 'flexible response' had become US policy under Kennedy from the early 1960s, but NATO would not officially adopt the new strategy until as late as 1967 with MC 14/3. Still, the basic principles of a flexible response posture within NATO came gradually during the 1960s. The discussion was raised at a NATO Ministers meeting in Oslo in May 1961.¹⁸ The request of a new direction for NATO defence policy was raised more explicitly by the US Government in a speech to the NATO Council by the US Secretary of Defence McNamara in December 1961.¹⁹

In the 1962-63 timeframe, US officials worked intensively for NATO to implement this new forward and flexible strategic posture. At the NATO Council meeting of Ministers in May 1962, chaired by Secretary General Stikker; Dean Rusk, the US Secretary of State, and McNamara took the lead in this discussion. Dean Rusk raised two fundamental questions:²⁰ First, how should the Alliance's role in nuclear deterrent be increased? Second, what should be the balance of nuclear and non-nuclear forces in NATO's deterrent system? The American wish to build a multilateral MRBM force was a strong and integrated part of this proposal. This agenda was obvious at the time, and in response Dean Rusk underlined at the meeting; '...in order to avoid giving any impression that the United States was imposing a plan on its allies, he urged all members to co-operate fully as colleagues in the discussion'.²¹

¹⁶ Denis Healey supported this trend of nuclear strategy in 1961, then a M.P. He was referring back to Kennedy's speech in NATO on the issue in 1961. Healey, Denis, 'A Conventional Alternative to nuclear retaliation: Turning Point for NATO' in *New Republic* (Vol.144, Issue 17, 1961).

¹⁷ G.Pedlow, 'The Evolution of NATO Strategy 1949-1969' in *NATO strategy Documents 1949-1969*, p.XXI. (Accessed from: www.nato.int/docu/stratdoc/eng/, 01 March 2006).

¹⁸ Pedlow, *NATO strategy Documents 1949-1969*, p.XXI.

¹⁹ NATO C-M(62)55, *Statement by US Secretary McNamara on 'Defence Policy'* (5 May 1962), p.1.

²⁰ NATO C-R (62)25, *Summary Record* (21 May 1962).p.5.

²¹ *Ibid.*, p.6.

McNamara explained the background for the US shift in defence policy. It was based on studies of future nuclear exchange scenarios which showed the enormous losses which clearly would fall on both sides. In light of these findings, the US developed their plans in order to permit a variety of strategic choices and instituted programmes which would 'enable the Alliance to engage in a controlled and flexible nuclear response in the event that deterrent should fail'.²²

The British response to the American proposal of a more flexible strategy was divided. Harold Watkinson, the UK Minister of Defence, stated during the same NATO meeting that in general his government supported the views the Americans proposed on nuclear strategy, especially in case of the second-strike capability of the Polaris system. At the same time, Watkinson pointed out that over-reliance on conventional weapons might be interpreted by the Soviet Union as a sign of unwillingness on the part of the West to use nuclear weapons. Nevertheless he agreed that the balance between conventional and nuclear weapons as proposed by Rusk and McNamara was substantially correct.²³

Watkinson and the British Government, on balance, supported the plan for conventional forces. This was based on the fact that British forces:

...faced the Russians not only on the European central front, but also around the perimeter of the Communist world. Britain accepted its responsibilities in the Middle and Far East as well as in Europe where it would try to play its full part.²⁴

Again, the British found arguments which would justify their prioritisation of conventional forces for the East of Suez challenges.

As for the US led NATO project of a MRBM force, the British were generally reluctant. Mountbatten stated during an informal session of the NATO Military Committee of Chiefs of Staff on 11 Dec 1962: 'The British have never contested that there is an obvious and military case for modernising some of the present delivery systems, but we have always had some reservations about embarking on a MRBM programme on the scale now proposed'.²⁵ Later, according to Mountbatten, British military budgets in Europe were already fully committed in keeping the existing forces adequately equipped. According to General Maxwell Taylor, the

²² NATO C-M (62)55, pp.2-3.

²³ NATO C-R (62)25, pp.7-8.

²⁴ Ibid., p.7.

²⁵ NATO 334/MC/300.6 (29th Session): Verbatim incl. in Record MC/CS 29, '*General Taylor's comments on MRBMs for NATO*' (Informal Session MC/CS, 11 Dec 1962)).

MRBM programme would amount to one or two billions of dollars.²⁶ A couple of years later, as the question of multilateral forces was about to be abandoned, Mountbatten wrote to General Sir Michael West with the British Defence Staff in Washington: 'I am personally convinced that the multi-lateral force is the greatest piece of military nonsense I have come across'. He continued: 'I remain the implacable opponent to this and am glad to know that if Mr. Wilson does win the Election he has pledged himself to get us out of this nonsense'.²⁷ Also, Zuckerman had had the same views and worked against this maritime 'multilateral force'. In the words of Zuckerman this was a seaborne force which could simply not operate as an effective tactical force, as it had; '...target acquisition inadequate; rate of response too slow; inaccurate delivery; vast "overhitting" – Polaris missiles are pretargetal weapons'.²⁸ Such forces could only be useful as strategic weapon systems. The sole reason for such a multilateral force was to satisfy German nuclear aspirations, to which the British again were opposed.

The desire to create a credible non-nuclear option and strategy to reduce the reliance on an immediate resort to nuclear war, when faced with a Communist use of limited force, was strong. However, as the Americans took the lead for changing the overall strategic concept of NATO, some nations had grave concerns of their true agenda and the possible consequences.

The first concern which occupied many of the European continental nations was whether the overall deterrent would thus be improved? The next concern was whether such a strategy would make Europe the nuclear battlefield, or on the other hand; would the US really be willing to use nuclear weapons to defend Europe – as this in turn would lead to a Soviet nuclear attack on the American continent. On these questions, the French Government stood up as the greatest opponent to the American's new proposals for a strategical shift for NATO by 1962-63.

The American lead for a flexible strategy was captured in two controversial NATO Military Committee documents: The MC 100 was approved by early 1963.²⁹ It led to the controversial MC 100/1 'Appreciation of military situation as it affects NATO up to 1970'. The MC 100/1 proposals for a shift in strategy were based on three particular concerns:³⁰ First, 'the growth of an increasingly invulnerable Soviet nuclear capability'. Second, 'the certainty of enormous devastation in case of all-out nuclear exchange'. As a consequence of the two first, the third

²⁶ NATO 334/MC/300.6.

²⁷ MB1/J38, Mountbatten to General Sir Michael West, Washington, British Embassy, 20 February 1964.

²⁸ SZ/Chief Scientific Advisor/70, Multi-lateral Force 1962-1964, 'The Multilateral Force', SZ/CSA/70/4.

²⁹ NATO MC 100: MC 100 (Mil Dec, incl. complete MC 100), *The long term threat assessment* (24 Jan 1963), and MC 100 (Final), *The long term threat assessment* (07 Mar 1963).

³⁰ NATO MC 100/1 (Draft), *Appreciation of the Military Situation as it affects NATO up to 1970* (11 Sept 1963), p.4.

concern raised was; ‘the lesser credibility, under certain circumstances, of deterrence based on the threat of all-out nuclear war’. The MC 100/1 followed up this threat evaluation by calling for a three stage principle defence. First, ‘NATO’s manifest determination to defend its purposes against all forms of aggression’. Second, ‘the recognisable capability of the Alliance to respond effectively with the appropriate degree of force, regardless of the level of aggression’. Third, ‘a flexibility which will prevent the potential aggressor from predicting with confidence NATO’s specific response to aggression, and which will lead him to conclude that the maximum degree of risk would be involved’. What was additionally new was the focus on ‘circumstances less than large scale strategic nuclear attack’. In such circumstances, the MC 100/1 argued for a response with ‘appropriate conventional land, sea and air operations, augmented as necessary with tactical nuclear weapons’.³¹ The use of conventional forces, including tactical nuclear weapons, had two objectives: Either to halt the aggression and restore the integrity of NATO, and to clarify whether the aggression was major or limited.

The British viewed the MC 100/1 document as ‘...an able and skilfully-worded paper, which reaches a compromise between conflicting national views...’.³² The document met the European pressure for an early resort to strategic nuclear strikes in the event of major aggression, and at the same time met the US wish for a possibility of an appropriate strategic nuclear response. It also rejected the ‘trip-wire’ concept. The British evaluation of MC-100/1 was in total positive; ‘...one of the most important documents that has come before the Military Committee for a very long time’.³³ The document, with minor adjustments, reflected the UK’s national views according to Mountbatten:³⁴

- In its appraisal of the requirements of a strategy founded on deterrence to war in all its forms.
- In the emphasis placed on the growing Soviet threat to NATO maritime strategy.
- On the principles of maritime strategy.
- In its treatment of the NATO response to limited aggression.

In his presentation during the 30th Session of the Military Committee in Chiefs of Staff Session, Mountbatten was very clear on the use of tactical weapons and his emphasis on this first point: ‘I

³¹ Ibid., p.15.

³² NATO SGM-517-63. *Memorandum for the Standing Group Representative* (27 Nov 1963).

³³ NATO Record MC/CS 30, *Summary Record* (2 Jul 1963). Mountbatten to the Military Committee in Chiefs of Staff session, June 1963.

³⁴ NATO SGM-517-63.

believe we need such weapons to permit us merely to initiate but not to prolong a tactical nuclear response...’ He then concluded on the issue of NATO’s greater strategy: ‘We should therefore give priority to the things we require to deter war rather than those required to carry out prolonged and sustained operations if we cannot all afford both’.³⁵ This was a clear statement by Mountbatten, and indicative of his perceptions of strategy throughout the 1960s. Mountbatten simply found little reason for conventional forces for the security of the British Isles and home-waters. He, like most of the top military British establishment, focused on the deterrence role for the home region. Parts of the Royal Navy were, on the contrary, far more sceptical about the concept of Massive Retaliation, as well as the sole focus on nuclear deterrence. There were in fact great disagreements about strategy within the Royal Navy. The most known and persistent critic was Rear Admiral Buzzard, the Director of Naval Intelligence. He argued for a prime role for the Royal Navy prior to, and not after, a nuclear exchange (which was the main and official focus by the early 1960s).³⁶

The MC 100/1 document with its new strategic posture only came to a ‘final draft’ on 11 September 1963 – and was never accepted. With this, the discussion on NATO strategy was more or less put aside for a couple of years.

British home-waters and NATO’s northern flank

As for the military strategic importance of the northern flank of NATO entering the 1960s, the Atlantic Policy Advisory Group³⁷ argued there were three main rationales describing the strategic purpose of Scandinavia:³⁸

- The barrier which it presented to Soviet access to temperate waters;
- The bases which it afforded for counter-offensive (including anti-submarine) operations;
- Its favourable location for the detection and warning of impending attack.

The maritime strategic goals were set, but the NATO Annual Reviews (the Triennial Review after 1960) which examined how NATO countries fulfilled their obligations of force

³⁵ NATO Record-MC/CS 30.

³⁶ See for instance: MB1/J123, ‘Unity in Defence and disarmament’, paper by Rear Adm. Buzzard, March 1959. Also discussed in Geoffrey Till, ‘Holding the Bridge in Troubled Times: The Cold War and the Navies of Europe’ in *The Journal of Strategic Studies* (Vol.28, Nr.2, April 2005), p.322.

³⁷ Advisory body to the North Atlantic Council, charged with examining relevant security policy projections in the longer term. *NATO Handbook*, 2001.

³⁸ NATO C-M(62)79, *Note by Chairman of the Atlantic Policy Advisory Group Hooper ‘Basic assumptions for an assessment of the long term threat to NATO’* (11 July 1962). p.7.

commitments towards the NATO military authorities' final proposed programmes were not promising to read. For instance; the Military Decision on MC 39/14, an analysis of the military implications of the 1962 Triennial Review, showed that 'the military posture of the Alliance in general will remain inadequate to ensure fulfilment of the major NATO Commanders' missions'.³⁹ The evaluation made by Allied Command Atlantic underlined that the shortfalls of aircraft carriers, maritime patrol aircraft, and escorts for ASW seriously limited SACLANT's capability of carrying out his missions.⁴⁰

During the 30th Session of the Military Committee in Chiefs of Staff session, SACLANT⁴¹ Admiral Smith underlined the challenges the increased Soviet maritime focus represented. 'Their fishing fleets, their merchant fleets, and their offensive fleets, particularly the submarines, have enormously increased. They now constitute a very serious threat and challenge to our control of the seas, the control of this maritime alliance at sea. And we disregard this threat at our peril'.⁴² SACLANT said he understood the land and air focus of NATO following the Second World War, but now was the time to focus on the naval forces. CINCHAN⁴³, Admiral Woods, supported entirely what was stated by SACLANT. But in the end, despite SACLANT's and CINCHAN's pressure, the maritime threat evaluations and suggestions for getting NATO maritime capabilities on the agenda with the central leadership of NATO did not lead to any action taken. The discussion of the revised strategic concept of a more 'flexible nature' was still viewed mainly through the perspective of a tactical combat doctrine for land battles. As stated in a memorandum for the Secretary General in October 1963: 'The NATO Military Authorities consider that existing publications and procedures concerning maritime tactical doctrine are adequate for the development and evolution of [NATO Basic Military Requirements] NBMRs.'⁴⁴

NATO strategy in limbo, and the British still occupied 'East of Suez'

The American led attempt to change NATO strategy during the 1962-63, which has been previously discussed, did not materialise. The MC 100/1 document only came to a draft issue on

³⁹ NATO MC 39/14 (Mil Dec), 'An analysis of the military implications of the 1962 Triennial Review' (29 November 1962), pp.2-4.

⁴⁰ NATO MC 39/14 (final), 'An analysis of the military implications of the 1962 Triennial Review' (25 January 1963), p.17.

⁴¹ SACLANT: Supreme Allied Commander, Atlantic. The post has always been held by a US Navy Admiral (except USMC General Sheehan from 1994-97) nominated by the President of the United States and approved by the North Atlantic Council.

⁴² NATO Record MC/CS 30, p.44.

⁴³ CINCHAN: Allied Commander in Chief, Channel. Held by British officers, including both naval and maritime air.

⁴⁴ NATO SGM-487-63, *Memorandum for the Secretary General, NATO* (28 Oct 1963).

11 September 1963. French led European scepticism grew out of a fear that the Americans would never sacrifice American cities for European cities. The assassination of Kennedy was an additional factor ending American pressure for a more flexible strategy in 1963. He had been a driving force behind the new proposed position. The next government of Lyndon B. Johnson and his administration soon became preoccupied in South-east Asia.⁴⁵

An additional important concern for NATO in the maritime theatre was the withdrawal of French forces from SACLANT by June 1963. The decision can not directly be explained by the general conflict over NATO's 1962-63 debate on deterrence and conventional strategy – but was probably influenced by it. The French maritime position was in fact more 'independent' in its focus from the late 1950s. The French Navy grew from a coastal defence navy to become a modern navy of ocean-going cruisers, carriers (CLEMENCEAU and FOCH), and submarines. The aim of independence also made rationale for a nuclear deterrence fleet. The first out of six French SSBN were operational by 1971.⁴⁶ In parallel to this French naval build-up, De Gaulle started to withdraw French participation in NATO naval commands as early as 1959.⁴⁷

From late 1963 to 1966 very little was done to alter NATO strategy. Especially for 1964, hardly any interesting documents are to be found on this issue in the NATO archives. The focus following the crash of the 1962-63 attempts to change the strategic posture was of a more practical nature discussing force goals, for old and currently approved strategic guidance, for the major NATO Commanders. The reason was diplomatically stated in a progress report of the Defence Planning Committee of November 1964 stating: 'Owing to difficulties encountered in the Military Committee in agreeing on the outlines of a new strategic appraisal ...'.⁴⁸ In the following year, 1965, the same debate went on; it centred upon the forces required to cover the various contingencies which might arise within NATO.⁴⁹ Some aspects of strategy were developed, for instance, the creation of the Allied Mobile Force (AMF). Within this frame, two closely related issues were discussed; the economically driven tactical-technological idea of 'dual-purpose forces' and one main strategic level discussion about how to deter local and limited attack. It is important to notice the general perspective on the East-West relationship by 1964-65; that 'the present situation in Europe was a stable one, even though the chief problems of post-war Europe remained unsolved, and therefore no new measures should be adopted which

⁴⁵ Pedlow, *NATO Strategy documents, 1949-1969*, p.XXIV.

⁴⁶ Till, 'Holding the Bridge in Troubled Times: The Cold War and the Navies of Europe', p.323.

⁴⁷ J.Sokolsky, *Seapower in the Nuclear Age* (Annapolis, Naval Institute Press, 1991), pp.50-53.

⁴⁸ NATO C-M(64)120, *Progress report on 'NATO Force Planning'* (27 November 1964).

⁴⁹ NATO C-R(65)27, *Summary Record* (25 June 1965).

might be interpreted as stemming either from weakness or from a provocative policy'.⁵⁰ NATO was trying to keep ambitions 'realistic and feasible'. It was underlined in NATO meetings that force goals which plainly could not be met – should not be approved.⁵¹

Even though, at the top political level, NATO stood still in 1964-65, recovering from the crash of 1962-63, and generally holding a view of a 'stable Europe' – SACLANT became increasingly aware of the Soviet naval build-up. The issue had been raised several times from the early 1960s – but SACLANT's attempt to get the maritime issue more into focus at NATO top level did not materialise.

In 1965 SACLANT produced two important studies dealing with the growing Soviet naval threat, particularly the Soviet Northern Fleet. The two documents were the 'Contingency Study for Northern Norway' and 'Study on NATO Maritime Strategy of 1965'.⁵² These studies on maritime strategy and threat evaluation from 1965 did not have any immediate effect, but were followed up and continued to be referred to during the 1967 discussions of a new and more flexible NATO maritime strategy based on two concepts; namely standing naval forces and maritime contingency forces.⁵³ However, these SACLANT studies did not have any immediate effect in 1965-66, during which time the carrier programme reached its peak in British politics.

It is also important to notice that the general opinion in Europe and Britain was that 'Europe was a stable area'. Concerning strategic thinking, it was very much 'status quo', with discussions on force goals and national contributions as of the old strategic posture. NATO was in limbo, and the British were fully focused on their 'East of Suez' challenges and shrinking defence budgets.

Secretary of State for Defence, Denis Healey, asked for several studies during the autumn of 1965, as part of the last phase of the Defence Review to be presented in January/February 1966. As for British strategic interests, they too were solely focused on the 'East of Suez' challenges. The nuclear deterrent force had great support across the military services as well as among the politicians. The debate which found place within NATO, and predominately within SACLANT, had surprisingly little input from and to the British defence debate.

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² The documents per se were from SHAPE and SACLANT's organisation, and are thus still not declassified, but the main content is known from various NATO HQ documents.

⁵³ NATO IMSM-64-67, *Status Report on 'NATO Strategy and Defence Planning'* (24 April 1967), and Record MC 252, *Summary Record* (15 Feb 1967).

The study 'Defence Review – Possible Contingencies East of Suez in the 1970s' discussed the challenges of both independent operations and operations in co-operation with allies.⁵⁴

As for the Arabian Peninsula, the British would not be able, or willing, to intervene in any conflict, unless a United Nations operation came into effect. In the case of the Persian Gulf, it was the same. The British would generally only participate in United Nations operations, with the exception of unilateral support to some Gulf states, Bahrain included. In the case of China; the country was assessed to be unwilling to either get into a conflict with the West (especially the USA) or commence any aggression in the Australasia area.

The most likely trouble spots in which the British could be involved included East Africa, Malaysia, and Australasia. In the case of East Africa, the region was especially susceptible to communist penetration. If a conflict occurred, the British would probably be involved in the evacuation of British nationals. The British also accepted their 'moral obligation' of support to any Commonwealth countries. Malaysia was also still under pressure, and could face a new conflict with Indonesia. In this case the British were prepared to support Malaysia, hopefully in conjunction with Australia, New Zealand, and possibly the USA. Indonesia could also threaten parts of the Australian mainland and New Guinea, in which case the British would probably also intervene.

Chapter 3-C: A Carrier programme without a foothold

The building of the first carrier had been decided upon by the Cabinet in July 1963. However, the Treasury kept fighting the decision during the autumn of 1963. This was still an issue between the Admiralty and Treasury, mainly concerning the payment of design, research, and development costs.⁵⁵ The problems between the Treasury and the Admiralty, which was fully backed by the Minister of Defence, Thorneycroft, reached the Prime Minister.⁵⁶ As a consequence, the Admiralty and Treasury were forced, by the Prime Minister personally, to

⁵⁴ NAUK AIR 8/2447, 'Aircraft carriers and intervention and threat to shipping studies', 1965. Contains copy of 'Possible Contingencies East of Suez in the 1970s', DIS(65). Report by the Defence Intelligence Staff. This sub-chapter is based on the abstract of the study which was presented to Chief of the Air Staff, 28 October 1965.

⁵⁵ See numerous correspondence on the issue in NAUK ADM 1/29108.

⁵⁶ NAUK T 225/2159, 'Admiralty: replacement and modernisation of the present generation of aircraft carriers; review', 1963-64. Thorneycroft to Prime Minister, 1 January 1964.

reach an agreement.⁵⁷ Within a week, the Treasury agreed to pay gradually some £ 600,000 over the next year for the contracts needed by the Royal Navy.⁵⁸

However, much had changed in the British political landscape by 1964-65, as had the external factors influencing defence policy – therefore a thorough re-evaluation of both the procurement programmes as well as the greater thoughts of foreign and defence policy emerged again. As for internal factors, the new powerful joint Ministry of Defence of 1 April 1964, laid the foundation for a more direct control of the military by the politicians. The post also changed its official name, from Minister of Defence to gain status as Secretary of State for Defence. Denis Healey, who came to the post in the autumn of 1964, after the change of government, took a firm grip on all defence policy matters. He had long expressed his scepticism over large fleet carriers. E.g. in 1963, Healey expressed this concern about the building of unsuitably large carriers:

May I say, first, how glad we are on this side of the House that the Government have accepted the arguments which we have so often put forward against building an aircraft carrier of the size of the 'FORRESTAL' class.⁵⁹

As for external factors, the expansion of the Soviet naval and merchant fleet greatly influenced the strategies of the other maritime nations and NATO at all levels. SACLANT was gravely concerned over Soviet maritime expansions. The British were not a driving force in this case, but they generally supported SACLANT. However, the consequences of the shift in NATO strategies, the gradual rise of a 'flexible response', and the focus on the flanks would greatly influence the British by the late 1960s.

During the new Labour Government under Harold Wilson, with Denis Healey as Secretary of State for Defence, and James Callaghan as the Chancellor of the Exchequer, defence policy began to stabilise. The case for carriers, with the great costs involved, became the centre of attention again. Even though the first carrier had been approved by the Cabinet in July 1963,

⁵⁷ NAUK ADM 1/29108. Alec Douglas-Home to Minister of Defence (with copies to the others involved), 3 January 1964.

⁵⁸ NAUK T 225/2788. Draft note for the record by Dodd, 8 January 1964. Agreed by Nairne, 13 January 1964. See also the Admiralty treatment of the same case in: NAUK ADM 1/29108. Carpenter to Prime Minister, 7 January 1964; and NAUK ADM 205/195, 'Replacement aircraft carriers', 1963.

⁵⁹ Hansard Official Report No.158 of 30 July 1963. Healey's answer to Thorneycroft, the then Minister of Defence.

there was still time to look at alternatives. The Treasury in particular kept up their objections throughout 1963 and 1964, often directly to the Prime Minister.⁶⁰

Carriers, and the value for money

The period between late 1963 and late 1964 had been remarkably quiet with regard to the out-spoken rivalry between the services. There had been less pressure from the political level, as the new leaders had to find their place and make their political strategies. However, the cost-effectiveness of carriers and a question of ‘rationalisation of air power’ resurfaced again.

In early January 1965, the Ministry of Defence announced a study which was to examine ‘the most efficient and economical organisation for the control and employment of air power in support of national defence policy’.⁶¹

The committee consisted of Field Marshal Sir Gerald Templer, Admiral of the Fleet Sir Caspar John, and Air Chief Marshal Sir Denis Barnett. Field Marshal Templer, who retired as Chief of the Imperial General Staff in 1958 was viewed as a neutral leader, and therefore chosen to lead the committee. The study became known as the ‘Templer Study’, but its official name was ‘The Rationalisation of Air Power’. The Air Ministry considered the study very important.⁶² However, its conclusions did not propose many changes to existing structures. The boundaries of responsibility for air power, which had evolved over the years, were assessed to be functional for the services at present and in the foreseeable future. The study concluded that there should be no change in the basic responsibilities of the services, except that they were advised to further examine potential common training and logistical support to improve interoperability.⁶³

However, due to few new arguments or little influence, ‘The Rationalisation of Air Power’ study and the debate that had been led by General Templer, started a new round of inter-service rivalry that lasted from January 1965 to February 1966. The background was a deep and sincere difference of professional opinion between the Admiralty and the carrier supporters on the one side, and the Air Ministry and the anti-carrier supporters, especially from the Treasury, on the other. The prime question at stake throughout 1965 was whether strike carriers gave value for money as a military strategic option to the British challenges at present, and particularly for the

⁶⁰ See for instance various high-level correspondence from January 1964 in NAUK Prime Minister Office (PREM) 11/5104, ‘Ministerial discussions on naval building programme: replacement aircraft carriers: Polaris submarine’, 1960-1964; and NAUK Cabinet (CAB) 21/5902, ‘Study of future policy: strategy east of Suez’, 1963-1964.

⁶¹ NAUK DEFE 13/590, ‘Defence review: aircraft carrier plan’, 1965-1968. Announcement by the MoD, 8 January 1965.

⁶² Interview with Sir Michael Quinlan, 5 October 2006. Sir Michael’s underlined the importance of this study.

coming 1970s. This was the underlying issue of all the concrete studies produced in 1965, and was one of the most central issues of the Defence Review which ended in early 1966. The Treasury was sceptical to whether this immensely expensive programme (£1300m. plus over the next ten years) could be affordably fitted within any defence budgets.⁶⁴ During 1965, Healey continued asking for several studies to examine the many questions raised.

The Navy fighting back; the arguments for carriers

From all the studies I have seen it seems clear to me that in relation to the tasks likely to face us in the 1970s the greatest usefulness of the carrier force lies not in the traditional strike role but more in what might be called the support role – headquarter and control facilities – defence of shipping – close Army support in the more limited type of operations.⁶⁵

Richard Amyatt Hull, October 1965.

Late in December 1964, the Royal Navy presented a thorough document about the need for carriers. The background for the document was a questionnaire put forward by the Paymaster-General, Mr. George Wigg, to the Secretary of State for Defence. The document contained three sections; discussing the roles and operations of aircraft carriers, experience in the use of carriers, and a discussion on the costs of carrier forces.⁶⁶

The document started out with the ‘East of Suez’ argument: As long as the Government’s grand strategy required the deployment of military forces overseas, it was crucially important to exercise maritime control – whenever and wherever needed. To be able to do this, the carrier was a central resource. The carrier was argued to be important for three reasons: To control the military situation at sea, to provide the air support required for intervention operations, and to deter limited aggression.

The first requirement of being able to ‘control the military situation at sea’, this included strikes, air defence, surveillance and anti-submarine warfare. The strike capacity included both the capacity to strike enemy navies and shipping, as well as (together with the RAF) to strike towards land objectives. The air defence capacity included both air surveillance, with the organic AEW aircraft, as well as air defence fighter aircraft. A naval task force, or maritime shipping

⁶³ PP, *Statement on the Defence Estimates 1966, Part II: The Defence Estimates 1966-67*, HMSO 1966 (2902); For a broader discussion on the ‘Templer Committee’, see the draft ‘Defence Estimates 1966-67’ in NAUK CAB 148/26, ‘Defence and Oversea Policy Committee Papers 1-14’, 1966.

⁶⁴ NAUK T 225/2788. Bell to Isaac, 18 December 1964.

⁶⁵ NAUK AIR 8/2425, ‘Aircraft carriers and intervention and threat to shipping studies’, 1965. Amyatt Hull, October 1965.

⁶⁶ NAUK T 225/2788. Copy of text for the presentation of 21 December 1964, signed by John Peters, P.S./Minister (Navy).

convoy, was crucially dependent upon easily available air defence forces for self protection and for intercepting shadowing air forces. A carrier air defence force would give local air superiority of about a 250NM radius. As for surveillance, the organic AEW aircraft was crucially important. The Royal Navy argued that without such a capacity, the 'Fleet could not operate'. Also for anti-submarine warfare, the carrier was deemed necessary for the protection of a maritime force. The British carriers could carry up to 8 Wessex ASW helicopters with dipper sonars; a force that the Royal Navy argued had proved itself to be one of the most effective ASW of the time.

To provide the air support required for intervention operations. This strategic aim included military action to support British treaty obligations, or to ensure the continued internal and external security of those countries which relied upon the British, or to answer a call from a nation in distress. However, the intervention capacity of the Royal Navy did not envisage a large scale operation such as the Second World War. Such a demanding task would have to be done in conjunction with allies. The scope of their capacity had been demonstrated during the Kuwaiti intervention two years previously. The Royal Navy was also working out contingency plans for the support of an intervention in Zanzibar. As the Royal Navy argued, the capacity had been required in Indonesia, Korea, Kuwait, Cuba, and Borneo. For the near future of the 1970s, new places that could well require support from carrier forces would include; the new African states, Mauritius, Fiji, British Guinea, British Honduras, or the Falkland Islands. According to the Royal Navy, intervention operations there would be outside the range of shore-based fighters and ground attack aircraft, or readily available bases would not be available for the outset of a conflict. Local air superiority and air-land support of the forces on the ground have to be available locally – and in many instances the carrier task force was the only option. Additionally, a carrier might be the only available asset to provide a local command post, as it had for instance in January 1964 when Tanganyika appealed for support.

To deter limited aggression. The document started out with the classic naval argument that carriers, the Royal Navy in this case, could serve as a deterrent against attempts to interfere with British interests overseas. The mobility of the carrier with a striking power would enable the British to exert influence without a provocative presence.

The experience from carrier operations after the end of the Second World War was extensive, and made a formidable basis for discussing the need for carrier task forces. There had been many minor operations supported by naval carrier forces; e.g. naval aircraft had taken part in operations in Brunei and Malaya, as well as Tanganyika. As for major operations, British carriers had taken part in Korea, Suez, Jordan/Lebanon, and Kuwait.

In the Korean War, HMS TRIUMPH took part in the first naval air strikes of the war on 3 July 1950. At least one British carrier was constantly on station for the next two and a half years off the Korean coast. They conducted offensive interdict operations. (The American and Russian aircraft were far superior in air-air combat). During the Suez conflict in the autumn of 1956, British carrier forces participated with HMS EAGLE, HMS BULWARK, and HMS ALBION. The three carriers were important during the first five days for offensive strikes against airfields and aircraft, as well as against the Egyptian Navy. Organic fighter aircraft also gave air cover for the parachute forces. In addition, the helicopter and amphibious forces experienced a renaissance during this short conflict. The next example of British carriers at war was the Jordan/Lebanon conflict of 1958. HMS EAGLE was important for providing air cover for the entire air-lift route from Cyprus to Jordan. The organic fighter aircraft were also important for providing security for British Army troops in Jordan, should the Jordanian armoured forces turn against them. The last example of important carrier operations (prior to the debates of 1964-66) was the Kuwaiti intervention of 1961. HMS BULWARK, carrying the 42 Royal Marine Commando troops and the only available asset for command role of the forces, was the back-bone of the British forces during the initial phase of the intervention. Later, surprisingly late, both RAF aircraft and support forces were flown in and the fleet carrier HMS VICTORIOUS took the lead role. However, the Kuwaiti conflict clearly showed the usefulness of carriers, as this was an anticipated conflict that was supposed to be primarily undertaken by the RAF with Operation Vantage.

The Aircraft Carrier presentation of 21 December 1964 and the document that followed, are hard to assess. There are no clear traces of it being discussed or absorbed into any official documents during this turbulent period. 1965 saw numerous studies being prepared; many of these followed the line of thought and many of the same arguments and calculations as those presented by December 1964. The document probably did not have any great influence, but it shows the Navy's understanding of the need for carriers.

Alternatives to the CVA-01

During 1965, numerous studies were ordered, or conducted independently, arguing the case of one force, against that of the other service.

For instance, a Joint Service Group, under chairmanship of Deputy Chief of the Naval Staff Vice Admiral Sir Frank Hopkins, was established to try to bridge the differences and reach an agreed recommendation during the winter months of 1965. Air Vice Marshal P.C. Fletcher represented the Air Ministry; Sir William Cook represented the Scientific Advisor. In addition, a broad ranging group of experts participated. However, it became clear that such 'joint' study-groups

had limited effect. The study-group had to deliver a report on ‘deployment of fixed-wing aircraft for purely maritime tasks’. The group found it impossible to deliver a report giving a complete picture, as it had to be seen in conjunction with the broader question of ‘seaborne and land-based air power’ for the next twenty years. The question of the shape and size of the RAF as well as the shape and size of the ‘Navy without carriers’ also had to be further studied and resolved. The group still managed to come out with the broad conclusion that fixed-wing carriers would not be indispensable for purely maritime tasks, with the assumption that:⁶⁷

- The whole concept of future land-based air operations was valid (but there were a number of uncertainties which still needed to be evaluated more fully).
- The British could rely on sufficient airfields and reinforcement routes in those areas of the world where the future defence interests were.
- The aircraft of the type, and in the numbers planned for, did in fact come into service.

However, the compromises of this joint study so limited the written reports that most arguments both for and against carriers, or land-based air power, proved to find other channels of communication. By mid 1965, there developed a habit of writing service studies, where both services got to present their arguments and counter-arguments. Still, this study had some influence, as it pointed the way for many of the studies conducted later in 1965.

During the winter months of 1965, the work on a report on ‘Alternative Carrier Fleets for the 1970s’ was undertaken by the Admiralty under lead of Vice Chief of the Naval Staff John Bush. He presented this paper by 17 May 1965. In essence this was a report studying two proposals: The first being for a carrier fleet consisting of HMS EAGLE, HMS ARK ROYAL, HMS VICTORIOUS, and the new CVA-01. This first alternative was without HMS HERMES (which had less capacity to operate strike aircraft than the others). The second, optimistic alternative, proposed a five-carrier fleet using HMS HERMES to back up the striking capabilities of the other carriers.⁶⁸ None of these optimistic studies were carried on.

CVA-01 in the Commando Ship Role

Another alternative examined whether the CVA-01 could fill the role of a commando ship, in addition to being a fleet carrier. This was primarily a Material Division study, regarding whether

⁶⁷ NAUK ADM 205/219, Aircraft carriers: use of land-based aircraft in support of maritime operations: the Navy without carriers, 1965. Report by Deputy Chief of the Naval Staff to Chief of the Naval Staff, 8 April 1965.

⁶⁸ NAUK AIR 20/11425. Copy of ‘Alternative Carrier Fleets for the 1970s’, Admiralty study dated 17 May 1965.

it was possible to accommodate the Commando Forces.⁶⁹ The conclusion of this case-study was positive, the accommodation was fully possible from a technical point of view. The sacrifice of fixed-wing aircraft would also be limited to 4 aircraft, to give place to the much needed helicopters. However, from an operational perspective, it was only possible for limited incursions and not for full scale assault operations. In such cases, the CVA-01 was needed in its original primary role as a fleet carrier for strikes and defence of its own forces. A limited force of up to 950 Commandos could use the CVA-01 for a limited period (up to 14 days).⁷⁰ The capacity to carry a limited number of Commando forces and helicopters, for a limited period, was accepted and implemented in the design details of the CVA-01 from 1965 onward.

Refit of the existing carriers

The HMS ARK ROYAL was in poor shape by 1963, and some modernisation was urgently needed. One or two new carriers were to be ordered, but some of the old carriers had to be kept operational into the 1970s. As for HMS ARK ROYAL, it was discussed whether the planned 1966/67 refit should be a full overhaul or whether only the most pressing needs should be tended to; in the end, only essential maintenance and small defects were fixed. The whole refit came only to £ 4 million.⁷¹ By 1965 it became clear that a major refit was needed in any case. HMS ARK ROYAL was needed to operate the most modern aircraft of the Royal Navy, (except the Phantoms) to improve the ship's radar to modern standards, and a refit would improve the general living conditions for the crew.

The offer of US carriers

As an alternative, Denis Healey asked the Americans for the transfer of some of their carriers, as they were known still to be in good condition and about to be replaced. This was a consequence of an informal suggestion by Mr. McNaughton of the US Defence Department directly to Healey in July 1965.⁷²

Mr. McNamara, the Secretary of Defence in the US, replied to Healey by mid August 1965 with a positive answer. The case had been discussed within the US Department of Defence, and they were willing to consider the transfer of one or more ESSEX class carriers. It was not subject to

⁶⁹ NAUK DEFE 69/324, 'Commando ship role for CVA01 aircraft carrier', 1965 Jan 01 – 1965 Dec 31.

⁷⁰ Ibid.

⁷¹ NAUK T 225/2962, 'Design, construction and modernisation of the aircraft carrier "ARK ROYAL"', 1964-67. See note Mat.5123/64, 18 March 1964, and letter from Truman to Bennett, 13 May 1965.

⁷² NAUK DEFE 23/95, 'Shipping: aircraft carriers', 1965-1970. Contains several correspondences from July to September on the US Carrier issue.

Congressional approval. However, it was clear that these carriers would require modification.⁷³ The British soon sent a delegation, led by the Deputy Chief of the Naval Staff Vice Admiral Sir Frank Hopkins, to the US for detailed talks on the subject. Already by late August, less than a week after the Americans' reply, a more specific proposition was on the table. Together, the Americans and the British delegation had agreed that a HANCOCK class, a long-hulled ESSEX class carrier, was the best offer for British needs. The first carrier was intended as a replacement for HMS HERMES, and the second as a replacement for HMS VICTORIOUS or HMS ARK ROYAL.⁷⁴ The costs were estimated to be about \$50 million, including a total overhaul to modern and British standards. \$30 million of this could be spent in UK dockyards. A second Hancock class could be delivered by the early 1970s.⁷⁵ The total cost was estimated to come to \$150 million.⁷⁶

Transferring USN carriers to the Royal Navy would be a swift affair. But for the British, this was just one option on the table. Denis Healey put the Americans on hold until the greater Defence Review was conducted. As he wrote to the Deputy Secretary of Defence in the US: 'This matter of course impinges on several other major defence problems which we have got under consideration at present. It will, therefore, be a little while before we can reach a firm conclusion'.⁷⁷

After more considerations within both the Naval Staff and the MoD, the option proved both practical and financially challenging.⁷⁸ Even though the carriers could be handed over at 'knock-out' prices, the refit needed would make this option about half the price of brand new carriers. Still, it was kept open as an option.⁷⁹ By January 1966, the Secretary of State had explained the probable outcome, and by February a definite answer was given to the Americans; there would be no requirement for the proposed ESSEX carrier.⁸⁰

Despite the final answer in January, by March 1966, after the Defence Review of February 1966, the American diplomat, Mr. Goldberg, came to see the Prime Minister in the House of

⁷³ NAUK DEFE 13/589, 'Defence review: aircraft carrier plan', 1965-1966. Letter from The Secretary of Defence (US) to Denis Healey, 24 August 1965.

⁷⁴ NAUK DEFE 24/92, 'USN carriers: possible transfer to Royal Navy', 1965. Note by DN Plans, DNWTP and DS4, 22 September, 1965.

⁷⁵ NAUK DEFE 13/589. Letter from the Deputy Secretary of Defence (US) to Healey, 8 September 1965.

⁷⁶ NAUK DEFE 24/92. Note by DN Plans, DNWTP and DS4, 22 September, 1965).

⁷⁷ NAUK DEFE 13/589. Letter from Denis Healey to Mr Cyrus Vance, Deputy Secretary of State (US), 17 September 1965.

⁷⁸ See detailed studies in: NAUK DEFE 69/344, 'Proposed Royal Navy purchase of US aircraft carrier SHANGRI-LA', 1965 Jan 01 – 1965 Dec 31.

⁷⁹ NAUK DEFE 69/344. Letter by Chief of the Naval Staff, 28 October 1965; NAUK DEFE 13/589. Healey to Chief of the Naval Staff, 1 November 1965

⁸⁰ NAUK DEFE 13/590. Healey to McNamara, 14 February 1966.

Commons. He presented a ‘unofficial offer’ for the British to consider: The Americans were ‘...prepared to give the Royal Navy two aircraft carriers, completely refitted, free of charge, simply in order to have the White Ensign flying alongside the United States navy.’⁸¹ The British did not take the Americans up on this unofficial proposal. They would not now go back on the conclusions of the resent and controversial Defence Review.

Chapter 3-D: Land based air power; economically and strategically feasible

I have for some time been concerned about what seems to me to be the unavoidable need to look closely at the question of land-based and sea-borne air power in the context of the Defence Review. It will be essential to ensure that we are getting the best answer in terms of cost-effectiveness...⁸²

Denis Healey, 5 March 1965

The basic ideas of the Island Strategy remain current

In the summer of 1965, Secretary of State for Defence Denis Healey asked for a re-examination of the feasibility of the use of land-based aircraft instead of carrier-based aircraft in maritime roles.⁸³

One issue that had changed by this time, was the cancellation of the TSR.2 project, and the decision to go for the American F.111 strike aircraft. Originally, the plan was that the F.111 would be the Canberra replacement. By April 1965, it was envisaged to buy 10 Mark.1 F.111's, followed by a larger buy of 70-100 Mark.2 F.111's. This plan was soon abandoned. By December 1965, it was decided to become one single order of 50 modern F.111's, equipped with the Martel anti-radiation missile (AJ 168) and prepared as bombers (B.111 weapons computer and strengthened undercarriage). These F.111 was to undertake the following roles:⁸⁴

- To obtain reconnaissance information for all tactical purposes, including target mapping at low altitude, under all-weather conditions by day and by night using radar and/or photographic methods.

⁸¹ NAUK PREM 13/2937, ‘Aircraft carrier programme for Fleet Air Arm: future of HMS ARK ROYAL’, 1966 Jan 14 – 1969 Jun 13. Note for the Record, ‘U.S. Aircraft Carriers’, March 4 1966.

⁸² NAUK AIR 20/11561. Denis Healey to the Chief of the Naval Staff, 5 March 1965.

⁸³ NAUK DEFE 13/589.

⁸⁴ NAUK DEFE 68/75, ‘Fighter reconnaissance strike aircraft: RAF F-111’, October 1965 – May 1966. The F.111 as a Canberra replacement, 17 December 1965. The file also contains ‘Air Staff Requirement No. 343, Tactical Strike/Reconnaissance aircraft’.

- To deliver effectively a wide range of non-nuclear weapons from low altitudes at the maximum ranges obtainable and with minimum considerations for the prevailing weather conditions, by day and by night.
- To deliver effectively tactical nuclear weapons as an alternative to non-nuclear weapons.

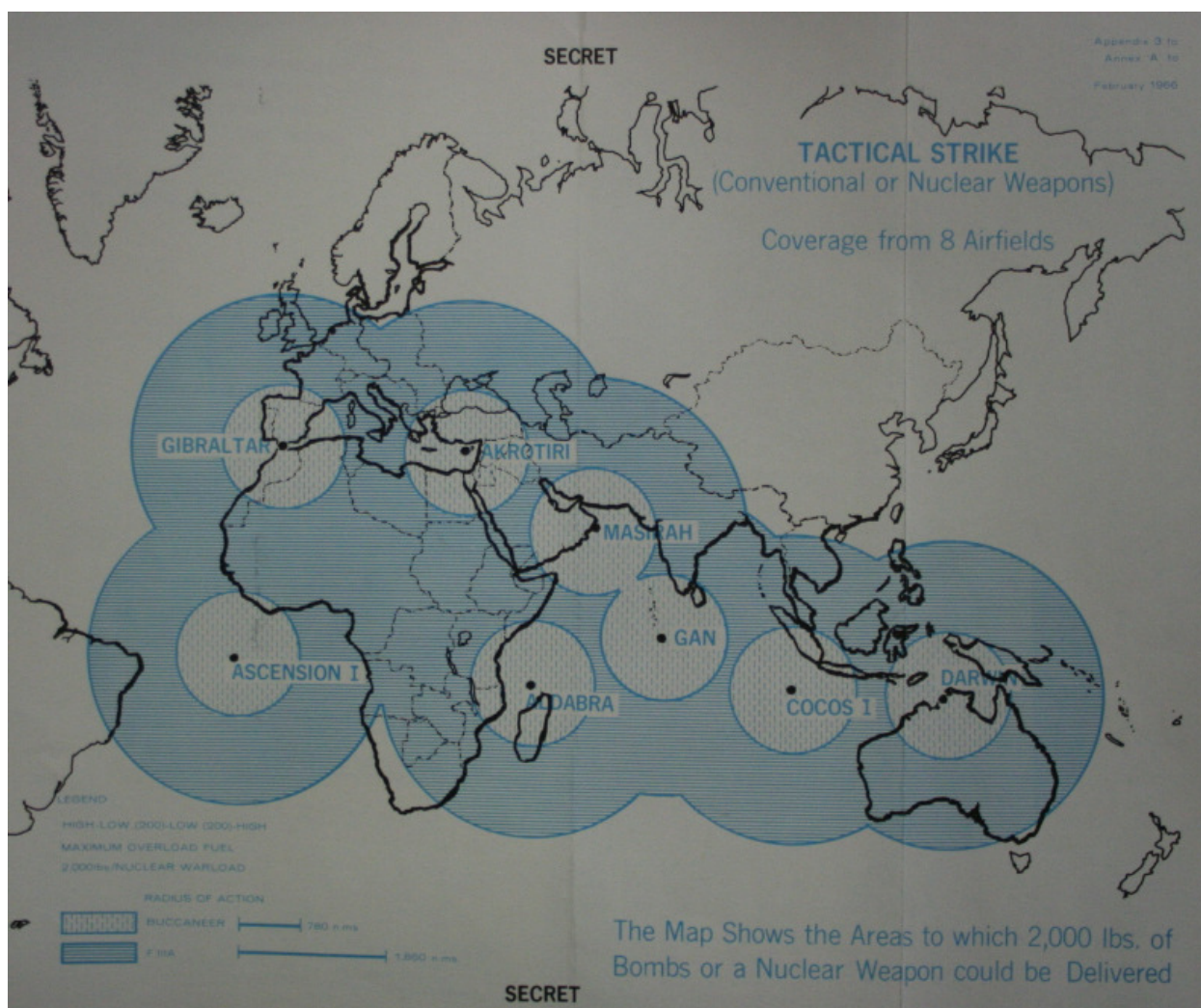


Figure 6: F.111: Strike range and bases.⁸⁵

⁸⁵ NAUK CAB 148/27.



Figure 7: F.111: Reconnaissance coverage.⁸⁶

The Air Ministry was among others ordered to deliver two comprehensive reports under the 'Program Working Group'; studying the alternative RAF consolutions of the aircraft programmes which could also possibly take on the maritime tasks of the carriers. The Air Ministry delivered the initial Stage I and Stage II reports to the Secretary of State for Defence by 21 October 1965. These studies discussed 'broad possible combinations' of forces, and suggested many 'alternative mixes' of RAF aircraft requirements for the future.⁸⁷ As the studies discussed only broad alternatives, and were not conclusive, they did not have much immediate effect. Still, they were comprehensive, almost to the extent that they were hardly possible to grasp and thus continued to hold the land-based air power option as a feasible political alternative to carriers. It was hard for politicians to argue against such comprehensive and technically detailed studies presented by the 'air experts'.

⁸⁶ NAUK CAB 148/27.

⁸⁷ NAUK AIR 20/12130, 'Global strategy: carriers and RAF bases', 1965. Copies of both studies are included.

Healey found the reports very promising, but too extensive. He therefore ordered a continuation of the studies, limiting the alternatives to the following guidelines:⁸⁸

- Strike/reconnaissance aircraft: The Canberra aircraft should only be retained until the F.111A came into service. There should be alternatives of 36 or 53 F.111A's, both with the assumption that one would co-operate with the Australians, which also bought F.111's. The V-bombers should only be retained until the Variable Geometry wing aircraft became available in 1975.
- Fighter/Ground attack aircraft: Alternatives should be examined both with and without the P.1127 VTOL aircraft, the Jaguar or the ADO12. Healey did not really have a total number of Phantom aircraft in mind, but ordered the Air Staff to use the number 68 suggested earlier by the Deputy Chief Scientific Advisor. The existing numbers of Buccaneer II and Sea Vixen were envisaged.

Healey ordered these studies to examine the consequences of a possible decision to dispense with fleet carriers. The problems of the British economy had not diminished, but rather increased, and thus all possible solutions which would make the case for cancellation had to be examined.

There were of course great disagreements between the Air Ministry and Admiralty in preparing their expert advice. Still, they did have some common ground:⁸⁹

- It was vital for the Navy to be able to rely on land-based aircraft for maritime operations in any operation.
- The provision of land-based support for the Navy would entail an addition to the RAF front line.
- Specialist Long-Range Maritime Reconnaissance (LRMR) aircraft under special command and control arrangements would be required.
- The Naval interests had to be properly represented when decisions were to be taken on issues like; numbers, characteristics, and deployment of land-based aircraft to be used for maritime tasks.

The specific Air Staff recommendation, if the decision was made to dispense with the carriers and to rely on land-based air power for all maritime roles, argued that the roles of air defence, and air strikes, as well supporting tankers and transports, could be covered by the overall

⁸⁸ NAUK AIR 20/12130. Healey to Chief of the Air Staff, 27 October 1965.

⁸⁹ NAUK DEFE 13/589. Vice-Chief of the Air Staff and Vice-Chief of the Naval Staff joint paper, unknown date of late summer 1965.

resources of the RAF.⁹⁰ With this recommendation, instead of asking for ever more resources to take on additional tasks, the Air Staff presented a very tempting offer for politicians concerned with an already over-stretched defence expenditure. The Air Staff agreed that joint training had to increase, both for the sake of the RAF pilots as well as for the Navy's confidence in the effectiveness of the maritime support provided for them.

As for the Naval Staff's view, this was even more detailed than the joint document. This was perhaps not unexpected, as such a decision would have grave implications for the Navy. First of all, the Navy described the entire idea of 'flexible multi-purpose air reserves for maritime tasks' stationed in the UK, to be used when needed, as 'fundamentally unsound'. One case was the LRMR, which could be used in such a way, and had the respect of the Navy – a totally different case from the forces needed for air defence and air strikes. The Naval Staff argued that these tasks were 'absolutely vital' for the naval forces, and had to be kept on hand at all times. Such operations were complex, needing close and complete integration with other aspects of naval operations.⁹¹ Another issue was training. The Naval Staff was very critical of the RAF's position that 'the techniques of strike and air defence are fundamentally the same, whether over land or over sea'. As the Navy normally had to deal with the problem of training its pilots and crews for both naval strikes and Army support – they were greatly aware of the demands that this put on training. It would put a far greater burden on the RAF than they were prepared for.

The content of this joint RAF and RN study was important for the greater Defence Review under Healey. However, by August 1965 Healey agreed that there were such basic differences of professional opinion on these subjects, that he found it impractical to continue this as a joint study. He therefore asked for the questions to be considered, but that studies and reports should be produced separately by the services, rather than attempting to reconcile the two in a compromise which clearly would not reflect the views of either service.⁹²

In September, Chief Scientific Advisor Zuckerman wrote an independent note to Denis Healey discussing the studies of land-based air power in support of maritime operations.⁹³ The letter was also widely circulated, and created a new round of debate. In essence, Zuckerman pulled out the same arguments and scepticism he had had over the Island Strategy concept two years previously

⁹⁰ NAUK DEFE 13/589. Air Staff recommendation from the Vice-Chief of the Air Staff and Vice-Chief of the Naval Staff joint paper, unknown date of late summer 1965.

⁹¹ NAUK DEFE 13/589. Naval Staff view presented in the Vice-Chief of the Air Staff and Vice-Chief of the Naval Staff joint paper, unknown date of late summer 1965.

⁹² NAUK DEFE 13/589. Secretary of State to the Chief of the Naval Staff and Chief of the Air Staff, 17 August 1965.

(discussed extensively in chapter three). The two main questions he asked were whether land-based air power could protect the fleet and merchant vessels as effectively as a carrier task force, and whether land-based air power proved as effective as carrier-borne aircraft in 'intervention operations'. Firstly, Zuckerman stressed the case that, up to a point of distance – land-based air power would prove both more effective and economical. However, it was also obvious that at a given range, the carrier concept would be the more effective. As for the Island Strategy, a maximum distance of 1000 NM had been proposed by the Air Staff; while now the Air Staff had come down to a useful range of 700 NM. The Admiralty on the other hand argued that the great difference would come at about 300 NM. Again, a great discrepancy between the military experts was labelled 'black-and-white answers' by Zuckerman. Therefore, an independent working-group had to look into this, as well as other questions related to these '...two major but totally different operational systems...'.⁹⁴ Zuckerman argued for the advantages of the carrier task force concept with its interdependence and mobility. However, he also saw that the carrier option was so expensive that the British would most likely not be able to exploit all its military advantages, despite increased technical capabilities. Concerning the land-based air power option; the complexity of operating an air force; reconnaissance and AEW aircraft, interceptors and strike aircraft, air defence aircraft on Combat Air Patrol (CAP), as well as ASW aircraft out to several hundred miles (700 NM. argued in the 1965 discussions) – it was very difficult to judge its realistic potential. At least the carrier concept was a proven one.

Land-based aircraft in support of maritime operations

As both the Admiralty and the Chief Scientific Advisor were still arguing against the land-based option, Healey had to rethink the arguments. For all practical purposes, he had used the arguments presented by the Air Ministry and was warned about and therefore knew he would be challenged on this ground when meeting Ministerial colleagues.⁹⁵

A Working Party under the chairmanship of the Deputy Chief Scientific Advisor was put together in October 1965 to examine the challenges related to land-based aircraft taking over the maritime roles of the Navy 'without carriers' in 1970 and 1975.⁹⁶ This was a continuation of the previous joint study; 'The allocation and control of shore-based aircraft in support of maritime

⁹³ NAUK DEFE 69/481, 'Defence Review: "The Navy without Carriers" and related studies', 1965 Jan 01 – 1966 Dec 31. Note from Solly Zuckerman to the Secretary of State for Defence, 22 September 1965.

⁹⁴ Ibid.

⁹⁵ NAUK AIR 8/2445, 'Aircraft carriers and intervention and threat to shipping studies', 1965. PUS to Secretary of State for Defence, 01 October 1965.

forces'. The working-group was further asked to determine the practical ranges (including air-air refuelling capability), duration and intensity possible, as well as the necessary numbers of aircraft needed for strike and air defence operations in support of the Navy. Also questions requiring command and control were to be examined. Relevant scenarios for war-gaming were to be found. The working-group discussed a range of scenarios for the East of Suez and the eastern Mediterranean areas. The report was finished by 22 October 1965.⁹⁷ In addition to delivering the report, Chief Scientific Advisor Zuckerman also wrote a letter to Healey to note his scepticism regarding the pace of the studies. Only 2-3 weeks had been permitted for such an important question. There was some risk that the studies would not be the scientific and objective studies which were needed. However, his voice did not seem to be heard by Healey. The pace and speed of the studies continued.

Land-based air forces would be required to support the maritime forces with air defence. The most critical factors for success would be the ability to refuel aircraft in-flight and the time that the aircraft could be kept airborne – and still be effective. The working-group found the land-based air power alternative viable, due to the new in-flight refuelling capabilities. Therefore, the limiting factor of a land-based air defence capability rested with the question of crew fatigue. As for crew performance, operations of 5-7 hours on a regular basis, with a peak of 8-10 hours in limited periods, were viable. The working-group used 7 hours as the average for crew-endurance. Such extensive operations would require a rest of 16-20 hours between the flights for the crew to be effective over time. The aim was to cover the maritime forces with a CAP of 6 aircraft at any time.

The second role involved probing shipping and enemy contacts for identification regarding their own maritime forces. The RAF strongly argued that the new Comet (Nimrod) maritime long range aircraft would effectively be able to fill this role, and even take on more duties. However, the working-group found that the Nimrod should be kept to a reconnaissance role, while other dedicated probing aircraft would be more effective in identifying the surface contracts detected.

The third role to be filled by land-based air power was the provision of airborne early warning (AEW) for the maritime forces. As the fleet carriers were taken out of service, the organic AEW aircraft would disappear. Airborne early warning and air defence was crucial for all naval forces. The working-group argued that new land-based aircraft would be required to solve this demand,

⁹⁶ For the broad aim and limitations of the study, see copy of letter from Richard Hull, acting Chief of the Defence Staff, 12 October 1965 in NAUK AIR 8/2446, 'Aircraft carriers and intervention and threat to shipping studies', 1965: For a copy of the actual study report, see NAUK DEFE 69/481.

⁹⁷ NAUK AIR 8/2447. Contains copy the report, 'Use of land-based aircraft in support of maritime operations'.

but they had no concrete proposals on hand. (Later, some Shackleton aircraft were developed into AEW aircraft, in wait for the British Nimrod AEW (which never became a reality)).

The fourth role performed by land-based air power was a strike role against enemy shipping and naval forces. The working-group used F-111 and the Buccaneer II aircraft in their calculations.

In the conclusion, the working-group used two island bases; Gan and Cocos, as well as one airfield belonging to a host nation. As for the forces required for the support of maritime operations, the numbers needed for the Far East scenario against Indonesia were the most extensive.⁹⁸ The British forces directly required for maritime tasks included:⁹⁹

(a) AEW and Air Defence:

- 6 Comet type AEW or 12 NAST 6166 (the proposed new organic AEW for CVA-01).
- 53-56 Phantom aircraft
- 12 Victor tanker aircraft

(b) Maritime Reconnaissance (excluding A/S tasks¹⁰⁰):

- 9 Comet aircraft for reconnaissance

(c) Tactical Recce and Strike:

- 17 F.111A or 24 Buccaneer II+
- 6 Victor tanker aircraft

(d) ANDAMAN Patrol¹⁰¹:

- 4 Comet type AEW or 11 NAST 6166
- 12 Phantom aircraft
- 3 Victor tanker aircraft

There were no great disagreements between the Air Force and Navy concerning tactical control and communication between land-based aircraft, ships, and shore-facilities.¹⁰² However, as for

⁹⁸ Indonesia was assessed to have by 1970: 1 SVERDLOV, 3 Skory, 4 Kotlin, 8 Riga, 6 Kronstadt, 8 SC-1, 12 Komar with STYX missiles, 8 Osa with STYX missiles and 12 P-6 naval combatants. Further: 65 fighter/ground attack aircraft of the Fresco, Fishbed and Fitter type, 20 light bomber aircraft of the Beagle and Brewer type, as well as 20 medium bomber aircraft of the Badger type, of which 10 was assessed to carry the modern Kennel missile. (NAUK DEFE 69/481).

⁹⁹ NAUK DEFE 69/481. Report of the Chief Scientific Advisor's Working Party on 'Use of land-based aircraft in support of maritime operations', 22 October, 1965. In addition to these maritime tasks, a force of one TPS 34 and UPS 1 radar system, 12 air defence fighters and one flight of Bloodhound and one flight of ET 316 SAM system would be required to protect the islands used as mounting bases. (Just in line with the earlier discussed 'Island Strategy' concept.

¹⁰⁰ An additional 17 Comets were needed to cover the entire region in A/S operations. However, this force was also needed with the alternative with carriers, and thus excluded from the calculation of forces required.

¹⁰¹ Referring to the Andaman Islands, and a possible Malayan – Indonesian conflict.

the extent and practicality of air defence cover for maritime forces, the services did not come to any agreement. As for the threats posed to friendly shipping, they assessed these to be largely confined to the Red Sea and the north-east Indian Ocean. The working-group concluded that despite obvious challenges, the land-based option was viable.

Strategic and tactical transport aircraft

The air mobility forces were increasing in this period. The V/STOL medium transport aircraft had been dropped, but other new procurements would ensure a solid strategic and tactical transport capacity to support forces of all the three services on the global scene. This included a solid tanker (AAR) fleet. A large part of the transport aircraft fleet was intended to mount contingency and emergency operations within 72 hours, while a percentage of the fleet was held at a higher degree of readiness.¹⁰³

In 1966, the strategic transport capacity consisted of Britannia, Comet Mk.2 (soon to be withdrawn), and Comet Mk.4 aircraft. The Belfast aircraft was entering service, and the VC 10 aircraft was soon to be introduced. The tactical (medium range) transport aircraft included the Hastings, Beverly and Argosy aircraft, as well as 48 American C-130 Hercules aircraft which had just been ordered to replace the existing Hastings and Beverly aircraft.

It was clear from discussions within the Defence and Overseas Policy (Official) Committee that the transport forces would see no reduction in capacity whether the carriers were to be phased out or not. Maximum reliance was to be placed on the principle of reinforcements by the strategic reserves by air in either case.¹⁰⁴

Strike and air defence aircraft for maritime operations

The TSR-2 had been the golden child of the Air Ministry and British aircraft industry. However, due to spiralling development costs and the advent of the cheaper, but still technically impressive American F-111 aircraft, the TSR-2 was cancelled by April 1965. In addition to the F-111 as an alternative aircraft, the Royal Navy argued a modernised and upgraded Buccaneer aircraft for the role. However, by January 1966 the case for F-111 as the preferred tactical strike aircraft had been firmly set.¹⁰⁵ The proposed F-111 showed a cost-effectiveness ratio of 2:1, compared with the updated Buccaneer. As for the need for new aircraft, the ageing Canberras (which are still with us today...) clearly required replacing for both the tactical strike and reconnaissance roles.

¹⁰² NAUK AIR 20/11978, 'Carrier study working papers', 1965. See various notes on the issue.

¹⁰³ PP, *Statement on the Defence Estimates 1966, Part II* (2902).

¹⁰⁴ NAUK CAB 148/26. Note by the Secretaries, Defence and Overseas Policy Committee, 14 January 1966.

¹⁰⁵ NAUK PREM 13/2937. Burke Trend to the Prime Minister, 'Defence Review', 18 January 1966.

A limited number of F-111s would be supplemented by the retention of some of the V-bombers (which lost their strategic strike role to the Navy's Polaris submarines) for the tactical strike roles. The V-bomber fleet of 1965 consisted of 96 aircraft and their 150 operational Canberra aircraft.¹⁰⁶ This was a substantial force of which many could be converted for tactical strike and reconnaissance purposes. However, they also had limitations for modern air warfare. Therefore, the purchase of F-111 strike aircraft was the preferred option.¹⁰⁷

The British, especially the Treasury, also hoped that a purchase of a limited number of F-111 would prompt an American purchase of British military equipment. This force would eventually be replaced by the Anglo-French Variable-Geometry wing aircraft by the mid-1970s.

Despite the many studies that had been undertaken, Denis Healey remained reluctant regarding big carriers and the cost they demanded. The 'value for money' issue discussed in this chapter made a strong case for 'alternative solutions', be it American carriers, refitting the old or a shift to rely on land-based air power for maritime strikes or protection of shipping. Neither the Deputy Chief Scientific Advisor's working-group or Zuckerman himself, had any influence on Healey. As a consequence, Zuckerman wrote a personal letter to the Prime Minister, with a copy to Cabinet Secretary Sir Burke Trend, by 14 October 1965 explaining his scepticism and his perspectives. Zuckerman started out discussing his views on strategy; arguing for nuclear deterrence forces in Europe and the mobile maritime forces East of Suez. This again led into his arguments for 'highly mobile amphibious task forces', supported by one strike carrier, and for the general concept of carrier task forces for the protection of shipping. The main concern for Zuckerman was that it would be impossible to precisely evaluate this strategic option in 'cost-effective financial terms'.¹⁰⁸

Healey was clearly aware of the difficulties involved in relying solely on land-based air power for support of naval forces and for the protection of merchant shipping. However, in response to the Deputy Chief Scientific Advisor's report on the issue, where the study-group was sceptical of its practical feasibility, Healey counter-argued that one could feel certain that such extensive operations (a long war game) would be necessary in the future. It would be just as uncertain whether a small carrier force could fill the same requirements.¹⁰⁹

¹⁰⁶ NAUK CAB 148/26. Memorandum by the Secretary of State for defence for the Cabinet (DOPC), 14 January 1966.

¹⁰⁷ Ibid.

¹⁰⁸ SZ/Chief Scientific Advisor/52, 'Aircraft-carriers 1963-1990', Personal letter to Prime Minister, SZ/Chief Scientific Advisor/52/6

¹⁰⁹ NAUK AIR 20/12130. Healey to Chief Scientific Advisor, 1 November 1965.

At the end of the day, Denis Healey played a political game, needing to find a cost-effective solution to the challenges East of Suez and the economic stress on the Government.

Chapter conclusion

The 1960-63 debate on land-based air power versus carrier aviation was great from a conceptual debate perspective. The 'final' discussion of July 1963 was still more of a political decision, with few references back to the inter-service rivalry over the two military strategic options.

The debate that developed a few months after Labour came to power, and Secretary of Defence Healey took the lead, became different. During the 1965-66 period, the Royal Navy did not manage to push many new arguments forward. Neither did they manage to make use of all the good arguments of the 1960-63 debates. Simply put, the Royal Navy argued that as long as the Government's grand strategy required the deployment of military forces overseas, it needed carriers to exercise maritime control. The carriers were by 1965 argued to be important for three main reasons: First; to control the military situation at sea (including strike, air defence, surveillance, and anti-submarine warfare). Secondly, to provide the air support required for intervention operations (treaty obligations, continued internal and external security of those countries which relied upon the British and as answers to calls from nations in distress). Thirdly, to deter limited aggression against British interests overseas. The mobility of the carrier with striking power would enable the British to exert influence without a provocative presence.

As we see, the arguments were not really different than previously. However, the Royal Navy never managed to get them well communicated to the public, the politicians, nor within the Ministry of Defence.

Both the Treasury and the Air Ministry had effectively re-entered the stage in late 1964, after the new Labour Government had been established. Several studies emerged, and by the summer of 1965 Healey asked for a concrete re-examination of the feasibility of using land-based aircraft instead of carrier-based aircraft in maritime roles. Land-based air power, no longer under the name the 'Island strategy', but with still very much the same arguments, had gradually re-emerged as a viable military strategic alternative.

The 'Island Strategy' term did not appear often in this period. The Air Ministry now argued the case for land-based air power as a general alternative. This was probably a good strategic choice. The argument was now less concrete, but still comprehensive. At the same time, it was much harder to counter-argue the land-based air power option as a feasible political alternative to

carriers. It was hard for both military experts and politicians to argue against such comprehensive and technically detailed studies as presented by the 'air power experts'. The Air Staff argued that land-based air power could effectively and cheaply fill all maritime roles; including air defence, air strikes, as well supporting tankers and transports on the seaways. With this political approach of stating what they could do with existing aircraft, instead of asking for ever more resources to take on additional tasks, the Air Staff presented a very tempting offer for politicians concerned with already over-stretched defence expenditure.

As Air Chief Marshal Sir Charles Elworthy wrote in a 'personal and secret note' to Lord Shackleton in the MoD in November 1965:

I know that in a ideal logical world commitments should determine forces, not the other way about; but I think that in the awkward and imperfect real world we live in this simply does not work – and indeed the course of studies during these last several months illustrates the fact. The political departments want us quite simply to support as many commitments as we possibly can support; and it is for us therefore to tell them what we possibly can support within the means available to us.¹¹⁰

Charles Elworthy, 1 November 1965

In the period after the Labour Government came to power and up to the decision on CVA-01 in 1966, the inter-service rivalry continued. As for the conceptual debate on land-based air power and carrier aviation, two issues were different from the previous debate of 1960-63: Firstly, the Royal Navy did not manage to communicate the purpose and reason for costly carrier task forces. They were largely reduced to focus on technical issues regarding the CVA-01 programme. The Royal Air Force on the contrary were very aggressive, and communicated the concept of land-based air power successfully. The Royal Air Force clearly managed to link their concept better to British foreign and defence policy – and not least successfully linking with the Treasury and arguing the better cost-effectiveness of land-based air power.

¹¹⁰ NAUK AIR 20/12130. Elworthy to Shackleton, 1 November 1965.

Chapter 4: The fate of the CVA-01, 1965-66

If the Government's defence review can be said to revolve around any single concept it is the aircraft carrier. Is it the supreme fighting ship which provides a flexible inexpensive answer to Britain's commitments along the shores of the Indian Ocean, or a vulnerable white elephant that should be replaced by long-range land-based aircraft? ¹

David Fairhall, in the Guardian, 2 October 1965

Gradually during 1965, it became clearer that the CVA-01 project was possibly heading for the unlikely conclusion, a cancellation. The first part of this chapter discusses how land-based air power gradually became the preferred option because of its economic feasibility. The first part also discusses the Defence Review, which was the framework for the debate and the many studies that were conducted in the autumn of 1965.

The second part of the chapter deals with the cancellation that followed the Defence Review in February 1966. The final part of the chapter discusses the planned run-down of the carrier forces. Not only the CVA-01 was cancelled, but the whole British carrier force was to be phased out by the mid-1970s – and relieved by land-based air power.

Chapter 4-A: Heading for cancellation

Already from early 1965, several alternatives for the carrier programme were discussed. First of all, the alternative carrier solutions (CVA-01, modernisation, etc) had to be re-examined. All the carrier alternatives could yet prove too far-stretched because of the economical constraints put upon the defence sector. If so, two other solutions had to be evaluated. The first alternative; the military strategy question of land-based air power versus carriers. Second; the political question of whether Britain wished to retain the power to mount an intervention operation independently. Throughout 1965, but especially from August 1965 onward, the carrier option had to be evaluated against both these other issues.

By November 1965, the Defence and Overseas Policy (Official) Committee had limited the options to two concrete alternatives to be examined in the ongoing Defence Review.²

¹ NAUK T 225/2962. Press cut out.

² NAUK CAB 148/26. Note by the Secretaries, Defence and Overseas Policy Committee, 14 January 1966.

Alternative A: No carriers:

- (a) The RAF to provide an extra 36 UK Phantom aircraft for maritime tasks.
- (b) The escort cruiser to be provided.
- (c) No changes in SSN programmes
- (d) The short-range anti-ship missile to be provided

Alternative B: With carriers:

A revised and simplified carrier plan, without US carriers, Buccaneer II aircraft and CVA-02.

The final document put forward for the Government's decision in January 1966, the 'Defence Review: Memorandum on Carrier Programme', was guided by Healey personally. A draft was given to him by 7 January, and he commented upon it as follows: The introduction to the document, which argued the case for abandoning the carriers, was according to Healey much too thin. Therefore he wrote his own introduction laying out the arguments his staff should focus on:³ The first part of the Memorandum should emphasise the financial background. The second part, which should be very short, just 'a paragraph or two', should briefly mention the effectiveness of carriers. The third part should go into the issue of 'future tasks of carrier forces'. This should start with the question of whether carriers could be argued to be cost-effective – with the above mentioned limitations. Then a statement should be inserted and make the case that in the land-strike role, carriers were two-to-three times more expensive than the land-based air power alternative. Further, the Minister already had accepted that the UK would no longer undertake any greater operations requiring carrier forces, without allies. UK forces would operate in co-operation with US and/or the Commonwealth partners in the future. Finally, the uncertainty regarding the cost-effectiveness of carriers should be attacked.

On the request of the Defence and Overseas Policy (Official) Committee, the Ministry of Defence proposed two alternatives by November 1965. Common to both were the procurement of F-111, for the P.1127 aircraft, as well as plans for the Type 82 destroyer projects to continue and the Lance weapons system to be provided for British Army of the Rhine (BAOR)⁴ and the keeping of a limited ground force in Hong Kong. These were also presented to the Prime

³ NAUK DEFE 13/589. Note from Healey directing the 'Case for abandoning carriers', 11 January 1966.

⁴ British Army of the Rhine (BAOR): British forces stationed in Germany after both the First and Second World Wars to control occupied Germany. During the Cold War it evolved to be responsible together with the Germans and other NATO forces for the security against the Warsaw Pact forces.

Minister by Burke Trend in early January.⁵ However, in addition, Healey argued for a ‘compromise solution’, Plan C, for the Committee and the Ministers to decide upon.⁶

- Continue the existing carrier-plan and build the CVA-01.
- Phase out the carrier fleet over the next five years.
- The ‘compromise’: cancel the CVA-01 and give the existing carrier fleet a refit, enabling them to last until the mid-1970s.

The last ‘compromise’ was the option preferred by Healey, as this would make a radical decision less immediate and therefore could be accepted more easily. In addition, the extension of the existing carriers would be useful until the retreat from East of Suez was finished. However, the Admiralty and the Navy Minister, Christopher Mayhew⁷, did not favour this ‘compromise’ alternative.⁸ The Admiralty was in fact quite optimistic, as long as there were only two alternatives. However, once Plan C emerged as Healey’s ‘Compromise Solution’, the Admiralty itself tried to get a revised carrier plan to the scene in January. In a last attempt to stay on the scene, they were opting for a modernisation of the existing carriers.⁹ They did not believe that the politicians would fully abandon the carrier forces – they could not. The Admiralty Board was clear that such a new strategy of land-based air power and a ‘new’ Navy, could not possibly be ready for the 1970s.

It is clear that Denis Healey was not in favour of large fleet aircraft carriers. He was against them, as he had been since the late 1950s in political opposition. As he delivered the official study of the 3 alternatives to the Defence and Overseas Policy (Official) Committee 14 January 1966, he wrote an additional Memorandum stating: ‘The purpose of this separate memorandum is to focus attention on one of the central features of my plan, which is the cancellation of CVA 01, and with it, the phasing out of the carrier force by about the middle-1970s’.¹⁰ In addition, Healey also wrote a ‘Personal Note’ to the Cabinet (DOPC) discussing further arguments for

⁵ NAUK PREM 13/2937. Letter from Burke Trend to Prime Minister, ‘Defence Review’, 18 January 1966.

⁶ NAUK DEFE 69/481. Internal MoD note ‘Future Carrier Programme’, 7 January 1966.

⁷ Christopher Paget Mayhew, Baron Mayhew (1915-1997). Labour politician from the Second World War till the 1970s. Served as Shadow War Secretary 1960-61, Opposition Foreign Affairs Spokesman 1961-64, and became Minister for the Navy when Labour took power in 1964. He resigned together with the First Sea Lord (Luce) after the decision to abandon the carriers in February 1966.

⁸ NAUK DEFE 69/481. Navy Minister to secretary of State for Defence, 7 January 1966: See also the private office note of a meeting of the Admiralty Board Members, 20 December 1965, in the same file.

⁹ NAUK AIR 8/2426, ‘Aircraft carriers and intervention and threat to shipping studies’, 1965-1966. ‘Carrier Forces’, note by Directors of Defence Plans, 12 February 1966.

¹⁰ NAUK CAB 148/26. Memorandum by the Secretary of State for defence for the Cabinet (DOPC), ‘The Future of the Carrier Force’, 14 January 1966.

cancelling the CVA-01, as well as the P.1127 V/STOL aircraft.¹¹ However, Healey's ambition to cancel the P.1127 was not fulfilled. Healey was also surprisingly frank with the Royal Navy, and presented his views on the carrier issue for the Navy Board on 7 February. He explained that cost was central to the case, but also that carrier forces had been useful for the operations over the last ten years, yet they had not been essential.¹²

What arguments were made by those in favour of carriers, and particular of CVA-01? In fact, the arguments for carriers which won acceptance in the 1960-63 debates were largely ignored in the debate of 1965. The archival research clearly shows that the Royal Navy now was far less politically involved. Military strategic issues, at least from the Admiralty, were lacking in the debate. The Air Ministry had been slightly more active than the Admiralty in the 1960-63 debates, but in the 1965 debates the Admiralty lost the political battle to the land-based air power advocates of the RAF and the Treasury. The Admiralty became fully occupied with the more technical studies of CVA-01 and was kept on the defensive, responding to the many alternative carrier studies they had to examine. This fact, which in any case was a politically strategic choice, was sole leadership responsibility that lay solely with the First Sea Lord and his immediate staff. Admiral David Luce was much criticised for this after the cancellation, a critique that was justified.

From the early 1960s until the cancellation of 1966, the main rationale for carriers largely rested with the East of Suez missions, chiefly in the Indian Ocean. In the early 1960s, the roles included power projection as well as maritime protection of shipping. However, by 1966, the primary role for the carriers became more limited; now mainly to be argued against the role of maritime protection of shipping and surface naval forces. For this role, the carrier option was still assessed as superior to the land-based air power option by e.g. the scientific advisors and the Royal Navy. However, the RAF would also be able to fill this role satisfactorily. As a perception grew that the British were not able to conduct larger operations independently, the four-power defence arrangements with Australia, New Zealand, and the United States came into focus. The question of carriers became directly linked to the role of the British in the Indian Ocean, and here too they saw the possibility of establishing closer interdependence with the United States.

¹¹ NAUK CAB 148/26. 'Personal Note' by the Secretary of State for defence for the Cabinet (DOPC), 'Defence Review', 14 January 1966.

¹² J.D. Brown, *The Carrier Controversy – British Aircraft Carrier Policy, Discussion and Decision, 1945-1966* (UK: Naval Historical Branch Study 62/1, January 1997), p.19.

Opting for land-based air power

I have become doubtful about the value of return we can expect from our 10-year programme for aircraft carriers and fixed-wing naval aircraft. I understand the need for some effective long-range strike aircraft; but I also have doubts about the planned size and 'mix' of the RAF programme, and about one or two of its current projects.¹³

Denis Healey, 3 August 1965

The discussion concerning land-based air power versus carriers was largely about cost. It was impossible to judge which would be more militarily effective. Both the Air Ministry and the Admiralty argued that they would fill the operational requirements. The inter-service rivalry and self-esteem is well captured in the minute:

Briefly the Air Force believe that in most likely circumstances land-based air power could be relied upon to do the job and that the Navy are unduly optimistic in their claims that aircraft carriers would be made available at the right time in the right place. The Navy, on the other hand, believe that, especially in the early phase of an intervention, the use of sea-borne air power would in many circumstances be essential to secure the success of the operation and that the Air Force, in their turn made some optimistic assumptions.¹⁴

The elimination of the carrier fleet was discussed seriously in the early autumn of 1965. It was still a very secret option, not involving the departments and staff normally occupied with these questions. It now seemed more and more likely that the carrier force could be eliminated, because the concept of land-based air power from island bases was clearly less expensive, but at the same time a realistic alternative. What was proposed by the land-based air power advocates was in reality the same content that made up the 'Island Strategy' concept proposed in 1962-63. The land-based air power option argued in 1965-66 lacked the detailed and concrete 'staging-' and 'mounting bases' previously argued, but the repeated argumentation had gradually been broadly accepted. As the detailed suggestions by the Air Ministry were now lacking, it also made it harder for the Admiralty to counter-argue the somewhat more loose and general arguments. However, there was still concern about the political stability of the islands involved. Because of this uncertainty, it was clear that reservations had to be applied to the military capabilities in the 1970s. The capability for air defence was particularly unsatisfactory with the 'Island Strategy' concept. An acceptable solution to the air defence of maritime operations had to be found.

¹³ NAUK AIR 20/11776, 'Defence review: carrier studies', 1965-1966. Letter 'Defence Review' from Healey to Chief of the Defence Staff, Chief of the Naval Staff and Chief of the Air Staff, 3 August 1965.

If the carriers, and thus the Fleet Air Arm were eliminated, it was crucial to re-shape the entire naval programme in a way that it would ‘present – and be seen to present – the Royal Navy with a challenging and effective long-term role’. It was also clear that the run-down of the carrier programme had to be handled in such a way that it would sustain, as far as possible, the morale of the Fleet Air Arm.

However important and much debated the carrier issue was, the greater Defence Review was concerned with all aspects of the ‘military capabilities in the 1970s’: By September 1965, all the programmes of the F.111A, the updated Buccaneer, the P.1127 Harrier, and the Belfast transport aircraft, as well as the entire naval programme within the ‘strategic framework surrounding any decision to abandon carriers’ had to be reviewed. A firm basis for the cost of the reduced defence programme as a whole was needed. As for the F.111A, Healey asked the Air Staff for updated reports with regards to numbers required etc. – in light of the ‘hypothetical assumption that we may decide to dispense with carrier-borne fixed-wing aircraft’. The Buccaneer update programme (II and II+) had also to be re-examined for the same reason; the assumption that there would be no carriers beyond 1970.¹⁵

The land-based air power option was possible within the £ 2,000 million limit the politicians had agreed upon as an absolute limit to the defence sector during the future budget meetings of the Government in November 1965.¹⁶ This same cash limit also haunted the MoD, as demonstrated in the last bullet in an internal MoD paper titled the ‘Broad Conditions for Elimination of Carrier Force’:

We must be sure that the consequent re-shaping of the naval program and the unavoidable increases in the R.A.F program will not lead to higher expenditure than the cheapest acceptable carrier plan; and that the elimination of carriers enables us (or very near so) to achieve the £2000m. Target in 1969/70.¹⁷

By early January 1966, it was becoming ever clearer that the fate of the carriers would be sealed by the Defence White Paper. It was equally clear that the land-based air power option would be the politicians’ way out of the dilemma. The politicians could now, with reference to the argued

¹⁴ NAUK AIR 20/11425. Draft minute on ‘Aircraft Carriers’ from the Secretary of State for Defence, February 1965.

¹⁵ NAUK DEFE 13/589. Note from Healey to COS, Chief Scientific Advisor, Chief of the Air Staff, Chief of the Naval Staff, PUS, 24 September 1963.

¹⁶ NAUK CAB 148/26. Note by the Secretaries, Defence and Overseas Policy Committee, 14 January 1966. The defence budget had been £2.400M prior to this.

¹⁷ NAUK DEFE 13/589. Internal MoD paper, unknown author and date (appx September 1965).

capabilities of the land-based air power option, argue for a cancellation of the costly carriers – but at the same time politically argue for the home-audience as well as the Commonwealth countries, and still adhere to their international commitments. In early January 1966, the Naval Staff prepared a paper ‘The Future of the Carrier Force’¹⁸, which started out by discussing the land-based air power versus carrier debate. The Chief of the Naval Staff said he understood that the Chief of the Air Staff would argue that the RAF would be able to support the Navy, as well as the Army, with air power as envisaged in the ‘Island Strategy’ from 1962-63. Still, he had to agree with the Chief Scientific Advisor when he stressed that relying on the untried ‘Island Strategy’ concept for such complex tasks was dangerous – and could well prove ‘unworkable’. The Admiralty and the Chief Scientific Advisor were one side, against the Air Ministry and the Secretary of State for Defence on the other side of the argument. The relationship between Healey, Mountbatten and Zuckerman had been quite good just after Healey’s entry into office. However, this relatively good relationship came to an end sometime during 1965. Thereafter, Zuckerman had little influence on Healey, and also tended to go directly to the Prime Minister with his concerns. This upset Healey and after one such incident, he wrote to Zuckerman: ‘I am surprised that you felt able to send a copy to the Prime Minister without consulting me first’.¹⁹ Just a couple of months later, Zuckerman left his post as Chief Scientific Advisor to the Ministry of Defence, for a new Scientific Advisor’s position with the Cabinet Office, responsible for co-ordinating work across the Departments.²⁰ Alan Cottrell came on as the new Chief Scientific Advisor. However, the scientific advisors got less influence under Healey, and appear seldom in the archival files on the carrier versus land-based debate after 1965.

The final comments of the Chief of the Naval Staff, David Luce, before the cancellation show his despair and doubts for the future:

...if we cancel CVA 01 now, we will be irrevocably committed to this concept. It seems to me that in common prudence we ought not to stake the whole of our overseas policy in the 1970s on this gamble; but that we should leave ourselves another option. If we do not, it is my professional opinion that we would place in grave jeopardy our ability to meet our revised commitments in the Indo-Pacific area – or indeed to exercise any influence outside Europe where this requires the use of maritime power.²¹

¹⁸ Copy of paper within NAUK DEFE 13/589.

¹⁹ SZ/Chief Scientific Advisor/106. Healey to Zuckerman, 14 January 1966, SZ/Chief Scientific Advisor/106/4/9.

²⁰ SZ/Chief Scientific Advisor/116. SZ/Chief Scientific Advisor/116/5/17.

²¹ NAUK DEFE 13/589. Paper ‘The Future of the Carrier Force’, 7 January 1966.

Healey's Defence Review of 1966

The re-examination of the defence requirements announced with the new government in October 1964 ended up as a continuous review ranging from early 1965 till 1968. The financial target of £ 2,000 million²² which the Government had set in November 1965 for the defence sector was also important. However, that did not mean the outcomes were decided. The first major conclusions were presented as a two-part Defence White Paper in February 1966. Again, British economics had a central position, as defence expenditure was assessed to be still too high. They had managed to get it down from more than 10 per cent of the Gross National Product in the 1950s to about 7 per cent by 1966; the aim was to lower it to a stable level of 6 per cent.²³ However, to be able to reach this goal, some of the major procurement-programmes had to be cut. At the same time, the Prime Minister had made it clear to the House of Commons in January 1966 that the East of Suez presence would be maintained. This was a message Healey continued to preach, even in the Defence Review.

Healey's Defence Review of February 1966 consisted of two parts: The second part was called the 'Defence Estimates 1966-67'. Healey concentrated on making this as non-controversial as possible, and focused solely on current activities. He wanted the annual administrative details endorsed quickly.²⁴ The first part of the Defence White Paper, which was called 'The Defence Review', was on the other hand quite radical – and was expected to make quite a stir in both media and politics.

Chapter 4-B: The Defence White Paper of 1966

The Government, not the MoD, would decide the carriers' fate. The first step of the official process was a Memorandum from the MoD, strategically worded and presented for the politicians to choose the 'compromise solution', cancelling the CVA-01, but keeping some of the carriers until well into the 1970s. The Memorandum was then approved by the Defence and Overseas Policy (Official) Committee, and presented to Ministers for consideration. The Ministers in full Cabinet made the final decision on 14 and 15 February. The process was very much driven by Healey, as he had a strong position externally as a politician and internally as a Secretary of State.

²² £2000 Million (1966), would in 2006 prices (share of GDP) equal £68,223,417,937.

²³ PP, *Statement on the Defence Estimates 1966, Part I* (2901).

²⁴ NAUK CAB 148/26, Defence and Overseas Policy Committee Papers 1-14, 1966. Healey to the Defence and Overseas Policy Committee, 13 January 1966.

The famous Defence White Paper of 1966, presented on 22 February 1966, is known chiefly for its cancellation of the CVA-01. A controversial decision, where the prospects of land-based air power were in fact the official rationale used:

... the tasks, for which carrier-borne aircraft might be required in the later 1970s, can be more cheaply performed in other ways. Our plan is that, in the future, aircraft operating from land bases should take over the strike-reconnaissance and air-defence functions of the carrier...²⁵

The defence paper argued the future of the carrier force in some detail, but the core argument was that a carrier of this magnitude would occupy far too much of the resources. The first supporting argument of this decision was ‘...only one type of operation exists for which carriers and carrier-borne aircraft would be indispensable: that is for landing, or withdrawal, of troops against sophisticated opposition outside the range of land-based cover’. The second argument was that the future strike aircraft, the updated Buccaneer or more likely the American FB-111A, would take on the capabilities of the expensive carriers and that future operations would be in conjunction with other allied forces. In fact, the Defence Review argued it had already placed an order of ten F-111 aircraft, with an option of 40 more to be ordered soon. Future land-based aircraft would also take on all the strike-reconnaissance and air defence functions of the carrier aircraft. Only ten years earlier the Sandys Defence Review had proposed that the overseas garrisons could be replaced to an extent by aircraft carriers.

Another argument included against the carriers was that in the land-strike role, carriers were two-to-three times more expensive than the land-based air power alternative. This proportional number had just previously been counter-argued by Zuckerman as the Chief Scientific Advisor, who pointed out that that clearly would be different in different scenarios – depending on the location of the target area in relation to the land bases and the carriers.²⁶ However, Zuckerman had far less influence under Healey than under earlier Ministers. He was at logger heads with Healey by the end of the Defence Review. Further it was argued that the UK would not undertake any greater operations requiring carrier forces, without allies. This statement was also challenged by Zuckerman (and in fact many others), who was deeply sceptical of the political consequences of being dependent upon US local support.²⁷ However, Zuckerman had in the end very little influence on Healey, and his arguments were seldom taken in.

²⁵ PP, *Statement on the Defence Estimates 1966, Part I* (2901).

²⁶ NAUK DEFE 13/589. Zuckerman to Healey, 11 January 1966.

²⁷ Ibid.

The decision to cancel the carrier project was not just about the CVA-01. As Healey explained; ‘it was whether to build a new series of carriers, so that we could run on for another twenty years at least...’. This was in contradiction of the views of the Admiralty who in fact had argued in the end for an option of keeping the old ones, but it was Healey who decided the wording of the Defence Review.²⁸ A few carriers were not cost-effective. The MoD argued that probably six, or at the minimum four, carriers were needed to give any value for money. The cost of running six, four or even three carriers could only be achieved by a serious reduction in all other areas of the Navy’s capabilities. Still, even with four or three carriers, only one could be kept East of Suez permanently. Healey put forward a devastating argument; ‘Now East of Suez is the only area where we regard carriers as necessary’.²⁹ The view that carriers were irrelevant to the European theatre, and of only marginal relevance to the Middle East region, became widespread in political circles by late 1965.³⁰ This perception of naval and maritime strategy, which had evolved from the days of Mountbatten as the First Sea Lord until Healey’s Defence Review, is central for understanding the elimination of the British carrier fleet. The rationale for fleet carriers was fully linked to the East of Suez missions, and it was now ‘proved’ that this role could be filled by land-based air power – at a lower price.

Denis Healey stated that the carrier issue was by far the most complicated and difficult decision made in the course of the Defence Review. Some fifty high level meetings directly related to the decision were held during 1965, all of which had some twenty meetings of staff as preparation. The case fully occupied the Naval Staff, the Air Staff, as well as Healey’s personal staff.³¹

The issue of land-based versus carrier-borne air power

Britain’s poor economic state in the 1960s has been used extensively to explain the radical changes that hit the foreign and defence sectors. However, the controversy of land-based air power versus carrier task forces was also at the centre of the decision to abolish carriers in the 1966 Defence Review. This story, which I have outlined in the previous chapters, should be given its rightful attention. The decision to abolish the carriers came from a combination of these two explanatory reasons. The economic question was important, as this led the military strategic debate into a track of examining ‘cost-effectiveness’. In the pursuit of cost-effective forces and

²⁸ NAUK DEFE 13/589. Chief of the Naval Staff to Healey, 04 February 1966.

²⁹ NAUK DEFE 13/590. Script on ‘Policy on Aircraft Carriers’ by Healey, 14 July 1966.

³⁰ The wording was used in numerous documents, see e.g. NAUK CAB 148/26. Note by the Secretaries, Defence and Oversea Policy Committee, 14 January 1966.

³¹ NAUK DEFE 13/590. Script of talk by Healey, 14 July 1966.

solutions, the land-based air power option emerged as the political winner with both the Treasury in general, as well as with the Secretary of State for Defence, Denis Healey.

During his visit to Australia in February 1966, Healey discussed British policy and future presence in the East of Suez region with the Australian Government. Healey made sure that as the 'confrontation' in Borneo ended, British influence could remain, even though the current strength would be cut by half and the British carriers would be phased out. Healey stated to the National Press Club in Canberra:

We intend to remain, and shall remain, fully capable of carrying out all the commitments we have at the present time, including those in the Far East, the Middle East, and in Africa and other parts of the world. We do intend to remain in the military sense a world power.³²

Regarding military forces, Healey brought forward the concept argued by the RAF for the last decade. Healey, in best Air Ministry language, explained that in spite of the phasing out of the carrier force, land-based air power would be able to keep a presence from its 'island staging posts'.³³

The ideas and principles of the 'Island Strategy', even if not genuinely supported to the extent of fulfilment, became the practical political argument and explanation for Healey and the Government. The land-based air power option had been accepted, but Healey was still fully aware that it would not be as efficient as fleet carriers. As he stated: '... even though we might not be able to do the job as well with RAF aircraft and new types of naval weapons, it was not worth paying the extra money to do it as well as it's done by the carriers today...'.³⁴

By 1966, carriers were perceived to be important for East of Suez roles. All the rationale for carriers had been found there. As for all the other areas of British interest, be it the Middle East and the Mediterranean or the North Atlantic – the widely held perception was that this could be done more efficiently and cheaply by other means.³⁴ A carrier fleet of only three carriers would cost about £200 million a year. That was roughly ten per cent of the entire Defence Budget, and about 30 per cent of the Navy's budget. What type of Navy would this produce?

The cancellation of CVA-01 was in the end based on these arguments: First of all the question of cost-effectiveness. The land-based air power alternative was argued as much cheaper. Secondly,

³² Healey, *The time of my life*, p.292.

³³ Michael Carver, , *Tightrope Walking, British Defence Policy since 1945* (London: Hutchinson, 1992), pp.78-79.

³⁴ NAUK PREM 13/2937. Burke Trend to the Prime Minister, 'Defence Review', 18 January 1966.

it was not just about the CVA-01, but whether the British should and could retain an effective carrier fleet. Thirdly, all the arguments for carriers were linked directly, and exclusively, to the East of Suez roles – and fell with this. This direct link may be traced back to Mountbatten's strong focus on the Far East in his time as First Sea Lord in 1956, and to the Royal Navy's intensive search for a new strong argument for the position of naval forces in the era of total nuclear war. In conclusion, the promise of a land-based air power option as a much cheaper, but still strategically feasible alternative, won the political battle in 1966.

I decided on balance that the right thing to do was not to go ahead with a new generation of carriers, and therefore to plan to phase out the existing carrier force at the end of its natural life.³⁵

Denis Healey, 14 July 1966

Chapter 4-C: The planned run-down of the carriers

The forces intended to take on the roles of the carriers

The decision, of February 1966, not to build the CVA-01 and to end the carrier history of the Royal Navy rested upon the view that Britain's presence East of Suez would be reduced. Some level of presence would still be required, including one carrier deployed to the Far East in the 1970s. Britain still had interests in the region.³⁶ However, full-scale independent operations could not be expected, and the allies had to take a greater share. The earlier roles of the carriers would be filled by other forces:³⁷ Three 'Tiger' class cruisers, eventually succeeded by a new class of cruisers, the introduction of new powerful surface-surface weapons³⁸ for the frigates and cruisers, the maintenance of HMS HERMES as a ASW carrier, and not least a strengthening of the RAF by 36 (ex RN) Buccaneers and 24 additional Phantoms for maritime strike, 12 AEW aircraft and 12 tanker aircraft. The 1966 Defence White Paper concluded:

...only one type of operations exists for which carriers and carrier-borne aircraft would be indispensable: that is the landing, or withdrawal, of troops against sophisticated opposition outside the range of land-based air cover.

³⁵ NAUK DEFE 13/590.

³⁶ PP, *Statement on the Defence Estimates 1966, Part I* (2901).

³⁷ NAUK PREM 13/2937. Burke Trend to the Prime Minister, 'Defence Review', 18 January 1966.

³⁸ Little came of this, compared to for instance the Soviet Navy. The British bought the Exocet medium range (appx 70km) missile for the role by the late 1970s.

The cheaper solutions of and arguments for an ‘alternative navy’ and land-based air power had won the political battle. Healey compared the abolition of the carrier fleet with those days when the Navy moved from sail to steam, from coal to oil, and when the carrier replaced the battleship. The abolition of carriers was no different; like all other systems it was likely to have its day. The argument had been whether this should happen now, gradually over the next decade, or only when carriers truly were obsolete.

However, the MoD, via the naval ‘Future Fleet Working Party’, was already in 1966 carefully looking at the possibility of using V/STOL aircraft to give the fleet some independent striking capability. Both large helicopter-ships and the possibility of V/STOL aircraft for the Navy would soon become a reality with the arrival of ‘through-deck cruisers’.

The transfer of duties from the FAA to the RAF

The transfer of duties from the FAA to the RAF for operating the aircraft in the phase-out period was not problem free. The Minister (RAF) wrote a personal, secret letter to Healey in March 1966, explaining ‘all the disagreements’ which did not come to light in the official note by the Chief of the Naval Staff and Chief of the Air Staff.³⁹

A particular concern was the amount of work needed to define the relationship between the FAA and RAF. The Navy would not agree to a plan for RAF aircrew to rotate, taking one-two tours on carriers, and then returning to land stations. The Navy felt this would lead to a total takeover of the aviation service by RAF standards. Another issue was the basic criticism that air force pilots simply do not understand naval warfare and ways of operations. This would require that aircrews were much more permanently attached to naval wings. The next challenge, of which the Chief of the Air Staff and Chief of the Naval Staff came to no agreement, was the possibility of FAA personnel who, at some point, would prefer a transfer to the RAF.

According to the Minister (RAF), a more thorough study should be conducted to examine the economics of the collaboration of the services during the carriers’ phase-out period. The issue included the questions of manning and the use of training facilities, deployments and the running of the squadrons. And finally, the closure of many facilities would most likely lead to considerable economies for ‘the sake of the Defence Budget as a whole’. He was playing the right ‘economic’ argument to Healy.

³⁹ NAUK DEFE 13/590. Letter from Minister (RAF) to Healey, 11 march 1966.

The 1967 Defence White Paper, and British defence policy heading for change

The Labour Government's aim for a positive rate of economic growth did not materialise. On the other hand, the demands from the public sector did not stop. Public spending kept rising, largely because of the escalating cost of the welfare state. The Government, despite great dedication and determination, did not manage to make much impact on the long-standing economic problems of the nation.⁴⁰ The pressure on the pound sterling resulted in a controversial devaluation in 1967. What was different to the other north-western European nations which had adopted similar economic philosophies was the power of the trade unions and industrial relations. With continuous pressure from the increasing demands from welfare state growth and the many strikes, defence would naturally suffer as there was apparently no great external threat towards the British Isles. Even though people lived under a constant threat of nuclear war, and many were against nuclear weapons, most people tended to disengage and not relate this to greater defence spending.

The plan for phasing out the old, 1966-68

As discussed in the Defence Review of 1966, which cancelled the CVA-01, Britain hoped to meet future maritime challenges with a Navy with greater reliance on missile systems. It was also clear that there would be an increased focus on organic helicopter forces. This was in line with the international trend of building ASW ships carrying great numbers of helicopters. However, the greatest share of the previous carrier-tasks (i.e. strike, reconnaissance and air defence) would be taken on by land-based aircraft, albeit on a reduced scale. However, it was clear that it would take some time to reshape the Navy and get the Air Force settled into its maritime roles. Therefore, the Defence Review of 1966 considered it important to continue parts of the carrier fleet for as long as possible. The existing force was soon to be reduced to three carriers (which also would have been the case had the CVA-01 been built) in a few years time. The purchase of the Phantom for the old carriers would proceed, as would the *Buccaneer II*. In addition, HMS *ARK ROYAL* would be given a major refit.⁴¹ Relationships with contractors and industry, and also with the Labour organisations were eased after the cancellation, as new prospects for extensive refit programmes would keep them busy.⁴² HMS *ARK ROYAL*, which had been laid down during the Second World War and was largely outdated by 1965, was to be fully modernised. The ship was to get a 'three-year special refit', and a progress and finance

⁴⁰ Leach, Coxall and Robins, *British Politics*, p.24.

⁴¹ PP, *Statement on the Defence Estimates 1966, Part I* (2901).

⁴² For studies of the defence-industry relationship, see for instance: NAUK DEFE 69/311, 'CVA01 (new aircraft carrier): financial position after cancellation', 1964 Jan 01 – 1966 Dec 31.

watch committee was established to discuss and follow the progress of the full modernisation of HMS ARK ROYAL. The ship was also now intended to operate the planned Phantoms.⁴³

The three (-four) carriers kept in service in 1966-67 included: HMS EAGLE, HMS HERMES and HMS VICTORIOUS, while HMS ARK ROYAL underwent a three-year refit. HMS VICTORIOUS would to be retired as HMS ARK ROYAL was completed. In addition, the amphibious forces had the small commando carriers HMS ALBION and HMS BULWARK in service⁴⁴, as well as the new assault ships HMS FEARLESS and HMS INTREPID, carrying helicopters and Royal Marines Commandos.⁴⁵ However, the Treasury kept up the fight against the modernisation programmes. As they argued in late 1966, the budget ceiling for the defence sector was yet far from being resolved.⁴⁶

In 1967, the Royal Navy kept up a solid detachment East of Suez: one carrier, one commando ship, and one assault ship operated between the Middle East and the Far East theatres. However, the Supplementary Defence White Paper of July 1967 decided that the carrier fleet must be further reduced, earlier than planned.⁴⁷ HMS VICTORIOUS would be scrapped by 1969, followed by HMS HERMES in 1971. However, while HMS VICTORIOUS was in for an overhaul in the autumn of 1967, it was suddenly decided to scrap her even before she became operational.⁴⁸ The 1967 Supplementary Defence White Paper further decided that the two last carriers, HMS ARK ROYAL and HMS EAGLE would be phased out by the mid-1970s. Following the decision to stay with two carriers, the Royal Navy saw problems in keeping the carrier presence East of Suez, and many raised their concerns. From their perspective, it was unrealistic to keep a permanent presence after mid-1968.⁴⁹ The realistic aim presented by the Navy involved a 4 month deployment, East of Suez, per year, up to the full retirement of the carrier fleet in 1975-76.⁵⁰

⁴³ NAUK T 225/2962. MoD Office Memorandum (Navy Department), 21 June 1965.

⁴⁴ About the conversion to Commando Carriers, see for instance: NAUK T 225/983, 'Admiralty: modernisation and construction of Aircraft Carriers', 1959-60.

⁴⁵ PP, *Statement on the Defence Estimates 1967*, HMSO 1967 (3203).

⁴⁶ NAUK T 225/2962. Nicholls to Bancroft, 18 October 1966.

⁴⁷ PP, *Supplementary Statement on Defence Policy*, HMSO 1967 (3357).

⁴⁸ NAUK T 225/3735, 'Ministry of Defence Navy Department: phasing out of the Royal Naval aircraft carrier force, HMS ARK ROYAL, HMS EAGLE, HMS HERMES', 1967-70. Copy of several Hansard Extracts November 1967 – January 1968.

⁴⁹ See for instance: NAUK DEFE 69/445, 'Employment of carriers and Commando ships east of Suez', 1965 Jan 01 – 1970 Dec 31. Letter from Williams, Director of Naval Plans to the Vice-Chief of the Naval Staff, 23 November 1967.

⁵⁰ NAUK DEFE 69/445. DN Plans 122/1/1 (unknown date, Autumn of 1967)

The 1968 debate on the future of HMS ARK ROYAL

The greatest controversy during the phase-out period was the question of whether HMS ARK ROYAL should or should not complete its refit. The question became an issue in October 1966.⁵¹ The Treasury wanted to cancel the refit.⁵² This debate was however quickly ended, as Healey had explained his political tactics to Chancellor Callaghan. Healey wanted to avoid further reference to the future shape of the Navy. The outcome of a decision to cancel the promised refit could well be grounds for a new discussion of the future of the other carriers. However, most importantly, Healey made it clear to Callaghan, as well as to the Cabinet (DOPC) and the Prime Minister, that he wanted to use the controversial question of ‘the future of NATO’ due to the French retreat from the leadership of the organisation, the emerging détente, and the new Flexible Response doctrinal developments – to make the case for the cuts argued in the 1968 Defence White Paper.⁵³ On this basis, as these cuts of commitments would mean great savings in time, it was well supported by the Treasury, and Chancellor Callaghan decided to leave the matter of the cancellation of HMS ARK ROYAL’s refit in January 1967.

Following this letter from Healey, Callaghan concluded by 20 January that:

I have naturally reviewed this decision in the light of the current defence studies and have carefully considered its financial and other implications. As a result I am in no doubt that the right thing and indeed the only course at this stage is to go ahead.⁵⁴

It was unofficially accepted that the debate between the Treasury and the MoD would be held off until 1968.

The next round of debate occurred during the winter months of 1968. The strain on the British economy was immense in 1967, with poor prospects for 1968. Prime Minister Wilson announced in the House of Commons in January 1968 that a new direction in defence policy was urgently needed.⁵⁵ This announcement led to hasty work on the Defence White Paper. The existing carriers could be taken out of service when the withdrawal from the East of Suez region, which

⁵¹ NAUK T 225/2962. Various correspondence. See also NAUK T 225/3322, ‘Refit of the ARK ROYAL aircraft carrier’, 1967-70. Note by Patterson, 4 January 1967.

⁵² Ibid. Various correspondence and documents from January 1967.

⁵³ NAUK T 225/3322. Treasury note for the record, after a Callaghan – Healey meeting, signed by Lavelle, 18 January 1967.

⁵⁴ NAUK T 225/3322.

⁵⁵ PP, *Statement on the Defence Estimates 1968*, HMSO 1968 (3540). See also comments to this in: NAUK T 225/3735. Internal Treasury note by Patterson, 27 February, 1968.

was planned for late 1971, was complete.⁵⁶ This controversial decision was heavily debated in January and February, all the way up to the printing of the White Paper in February 1968. There was a long discussion between the MoD and the Treasury on this issue. Chancellor James Callaghan and Roy Jenkins of the Treasury were especially active, arguing for taking HMS ARK ROYAL out of service before it was finished. They debated this vigorously with Healey.⁵⁷ After the 1967 Supplementary Defence White Paper, it had been decided that the Treasury and MoD should reach an agreement on the issue of the refit. However, they did not manage to agree. The Treasury wanted to cancel the HMS ARK ROYAL refit and extend the life of HMS HERMES. As they argued; it was ridiculous to complete a refit for the carrier that would operate for only two years. It did not give conviction to the Prime Minister's announcement of a changing defence policy, and it would be tempting in the future to argue for a continued worldwide role in the 1970s.⁵⁸ Healey on the contrary saw the refit of the large HMS ARK ROYAL as absolutely necessary for a safe and orderly withdrawal. In the end, the Prime Minister became involved. He ordered the issue be raised with the Cabinet (DOPC).⁵⁹ Healey argued that capable carriers, able to carry modern aircraft, were needed for the critical withdrawals of 1971. HMS HERMES, which could only carry seven strike aircraft, was a poor alternative.⁶⁰ HMS ARK ROYAL would, after her 'Phantom refit', be the main protector for the withdrawal. In addition, one more ship was needed to carry the Navy's carrier-operation competence while HMS ARK ROYAL was in refit, and a second carrier was needed as back-up.⁶¹ The Cabinet (DOPC) supported Healey's arguments, and also took note of the Treasury's fear of a new debate on the fate of the carriers after the coming election in 1970. However, the Cabinet saw this as a sensible option. In fact, they had become seriously concerned at the rise of the Soviet Navy and its increased operations in the Indian Ocean and the Mediterranean.⁶² In the end, Healey's position won support, and the Defence and Oversea Policy Committee decided by 28 February, just in time for

⁵⁶ PP, *Statement on the Defence Estimates 1968* (3540).

⁵⁷ NAUK PREM 13/2937. Various correspondence between the Callaghan, Jenkins and Healey of February 1968; NAUK DEFE 23/95. Various correspondence, e.g. Healey to Chancellor of the Exchequer, 13 and 23 February 1968.

⁵⁸ NAUK T 225/3735. Internal Treasury note by Patterson, 27 February, 1968.

⁵⁹ NAUK T 225/3735. Official letter from Downing Street Whitehall (unk. writer) to Treasury, 23 February 1968: For the debates of the Cabinet, see for instance: NAUK CAB 148/35, 'Defence and Oversea Policy Committee Meetings 1-24', 1968. Minutes of 28 February 1968.

⁶⁰ The discussion continued also after the White Paper decision to abandon her. However, the RN was sceptical to her performance: Operating HMS HERMES would have several disadvantages; first of all she was far less capable. She also demanded greater maintenance, and had in addition to rely on the Singapore dockyard for service. She also had a greater probability of aircraft accident rates. (NAUK DEFE 69/445. Letter from Commander Far East Fleet, O'Brien, to Vice-Chief of the Naval Staff, Hill-Norton, 13 May 1968.).

⁶¹ NAUK T 225/3735. Healey to the Chancellor, 13 February, 1968.

⁶² NAUK T 225/3735. See copies of Press cut-out from the summer of 1968.

the hasty Defence White Paper, to go ahead with the refit of HMS ARK ROYAL.⁶³ HMS ARK ROYAL was agreed upon as the main ship for the Navy, with HMS EAGLE as back-up.

The infrastructure of the Royal Navy was also to undergo great changes. About half the naval air stations were expected to be handed off as the planned fixed-wing air operations ended within the Navy. The fixed-wing aircraft support facilities were soon scaled down, creating more problems for the Royal Navy carrier operations East of Suez. It therefore proved challenging to keep up the permanent stationing of even one fleet carrier in the eastern areas.

However, as the end of the carrier history of the Royal Navy drew nearer; it was not to take place in silence. The Press re-opened the case for keeping the carriers on several occasions. HMS ARK ROYAL and HMS EAGLE, as well as the planned retired HMS HERMES, were all discussed as potential commando carriers in the 1970s.⁶⁴ Although both the two large carriers were assessed to be too demanding of manpower and resources to be cost-effective as commando carriers, HMS HERMES was assessed as a good option for conversion.⁶⁵ HMS HERMES was kept in service as a fleet carrier, mainly for ASW as decided in the 1967 Defence White Paper, until July 1970. She was then converted into a commando carrier.⁶⁶

The two last fleet carriers planned in British service, HMS ARK ROYAL and HMS EAGLE, were projected to be scrapped by the end of 1971. However, by 1969 it had become clear that the withdrawal would not be finished until the first half of 1972. Inevitably, carriers would also be needed until that time.

Another aspect which (could have) helped the case for the carriers, was NATO and SACLANT's growing concern over the rising Soviet Navy.

Chapter conclusion

With the Defence White Paper of 22 February 1966, the CVA-01 was cancelled. Also the existing carriers would be phased out by the mid-1970s. The defence paper stated that:

...only one type of operation exists for which carriers and carrier-borne aircraft would be indispensable: that is for landing, or withdrawal, of troops against sophisticated opposition outside the range of land-based cover.⁶⁷

⁶³ NAUK DEFE 24/501, 'Revised Aircraft Carrier Programme: refit of HMS ARK ROYAL', 1968-1969. See several documents from January to March 1968.

⁶⁴ NAUK T 225/3735. See Treasury note for the record, signed by Patterson, 16 April 1969, as well as copies of Press cut-out of 1968.

⁶⁵ NAUK T 225/3735. Treasury note for the record, signed by Patterson, 16 April 1969.

⁶⁶ NAUK T 225/3735. Treasury note for the record, 6 August 1970. .

⁶⁷ PP, *Statement on the Defence Estimates 1966, Part I: The Defence Review* (2901).

Healey's Defence Review that presented this decision consisted of two parts: The first part argued that the British would balance the Armed Forces within the decided £2,000 Million budget. This was a high benchmark set by the Government in November 1965. It had been made clear by Prime Minister Wilson that the British would still be present East of Suez. However, it was obvious that some limitations to previous capacity had to be made. It came to a general statement explaining that independent operations against another nation were no longer possible. It would be done in co-operation with allies. The second part was mainly a row of arguments about how and to what extent land-based air power could replace carrier-based aircraft. The Royal Air Force had won the second round of the inter-service battle.

The Defence Review had found that the future strike aircraft; the updated Buccaneer and the American FB-111A, would take on the capabilities of the expensive carriers. Land-based aircraft would take on all the strike-reconnaissance and air defence functions of the carrier aircraft. Another argument against the carriers concluded that in the land-strike role, carriers were two-to-three times more expensive than the land-based air power alternative. Healey put forward a devastating argument: 'Now East of Suez is the only area where we regard carriers as necessary'.⁶⁸ The view that carriers were irrelevant to the European theatre, and of only marginal relevance to the Middle East region, had become widespread in political circles by late 1965.

The rationale for fleet carriers had become fully linked to the East of Suez missions. Arguably, this was the worst political strategic mistake made by the Royal Navy in this period of inter-service rivalry. Additionally, the Royal Navy stayed focused on technical aspects throughout the 1965-66 debate, and did little to involve them in the greater political discussion regarding policy. By this they were constantly kept on the defensive. Towards the end of 1965, they did try to downscale the technical requirements to save money. However, they did not manage to get expenditure down to a manageable level acceptable to the Government.

Even though the carriers were to be abandoned, the Government was far from ready to leave the East of Suez region yet. Healey tried to convince the Commonwealth countries that in spite of the phasing-out of the carrier force; land-based air power would still allow the British the ability to maintain a presence from its 'island staging posts'.⁶⁹ Therefore, the cancellation of CVA-01 may not be directly explained by the 'retreat from empire'. This has previously been a misunderstood perception in British naval history. In the end, the Air Ministry's arguments on

⁶⁸ NAUK DEFE 13/590. Script on 'Policy on Aircraft Carriers' by Healey, 14 July 1966.

⁶⁹ Carver, *Tightrope Walking, British Defence Policy since 1945*, pp.78-79.

the 'Island Strategy' (1960-63) and land-based air power in general (1965-66), became the politicians' practical way out of the costly carrier programme for Healey and the Government. Throughout the 1960s, the Air Ministry was clearly on the offensive regarding the 'inter-service rivalry'. During the 1965 debates, Chief of the Air Staff Elworthy made it clear to his staff that they should be frank and outspoken in all 'joint' settings, e.g. study committees. There was no reason for joint groups if one was reserved.⁷⁰ From an extensive review of the archives, it is clear that the Air Ministry had the most aggressive attitude, including a greater pace of studies and correspondence. The Admiralty produced fewer studies, centred mainly on technical issues of the prospective carriers and not so much on strategy. This fact was also stressed during the interviews made with Air Ministry and Admiralty representatives of the period.⁷¹ Especially during the last period before the cancellation of the CVA-01; Sir Michael Quinlan noted that the Air Force clearly had the 'most able' Chief of Staff (CAS Elworthy against CNS David Luce), as well as better senior civil servants. The Vice Chief of the Naval Staff was on the contrary regarded very able and 'had to be avoided'. Accordingly, the Air Ministry civil servants and staff officers preferred to keep the debates at either higher or lower levels.⁷² Admiral Sir David Luce for instance, who was known as a pleasant and easy going officer, was clearly not the political bulldog needed for this period. His own description of the 1963 battle gives us a good picture of his lack of aggressiveness, determination and political skill:

We have not been able, until now, to let anyone outside Whitehall into our detailed thinking of the carrier replacement programme. This has been simply because the pace has been so hot, with the direction and ground of attack shifting so radically and so frequent, that any papers we might have sent out were apt to have been overtaken by events, almost before we got them.⁷³

In defence of the Admiralty, the Air Ministry was also known to have a far greater part of its staff involved in these issues. According to Sir Henry Leach: 'They put more resources into the staff functions for this critical period. Where the Navy were out-witted, the Air Force were better and had better staff officers – and more of them'. Sir Henry described further the Admiralty as 'arrogant' and too self-centred and naïve. His conclusion was that 'the Air Force had strong leaders and their arguments won – it is as simple as that'.⁷⁴

⁷⁰ NAUK AIR 8/2355. Elworthy to Minister (RAF), 3 March 1965, as well as other internal notes of the same period.

⁷¹ Interviews with: Michael Quinlan, Peter Hudson and Henry Leach.

⁷² Sir Michael Quinlan, interview 5 October 2006.

⁷³ NAUK ADM 1/29108. Letter No.133/63 by David Luce, 22 August 1963.

⁷⁴ Sir Henry Leach, interview 24 January 2007

Chapter 5: The Soviet naval build-up, in the shadow of Britain's 'East of Suez' pre-occupation

Although the move from East of Suez had primarily economical motives, the improvements in Soviet naval capability ... made a move westwards well advised. There was thus a strategic as well as a financial imperative for Britain to withdraw her fleet from colonial and post-colonial policing around the world.¹

Eric Grove

As previously argued, the British were preoccupied with their own economic problems, the challenges East of Suez, and thereby the radical defence reviews. They were surprisingly little involved in NATO's changing strategic thinking and curiously unconcerned by the gradual Soviet build-up in the northern Atlantic. However, this reality hit the British at the end of the 1960s. This chapter focuses entirely on this strategic framework created by the Soviet developments. As the topic of the chapter is far too large for any limited single study, I will necessarily rely on secondary sources of primary research on the Soviet Navy during the Cold War.² The next chapter in turn reviews British and NATO primary archival sources in order to analyse the response to the increasing challenge posed by the Soviet forces in the northern Atlantic.

Chapter 5-A: The Soviet Navy

The heritage

Stalin had visions of an ocean going navy from his early days in power until his death. Due to the costs however, its building was repeatedly postponed. Following the Second World War, Stalin's envisaged 'ocean-going fleet' plan of the second half of the 1930s was again on the agenda. The Commander-in-Chief of the Navy, Admiral Kuznetsov, made a ten-year naval plan for 9 battleships, 12 heavy and 60 light cruisers, a large number of destroyers, and submarines.

¹ Grove, *Vanguard to Trident*, p.305.

² About the Soviet forces and doctrines, Gorshkov's *The sea power of the State* and Sokolovskiy's *Soviet Military Strategy* were important at the time. Further Herrick's *Soviet Naval Doctrine and Policy*, Mitchell's *A History of Russian and Soviet Sea Power* and Podvigs edited book on the *Russian Strategic Nuclear Forces*. Of the most recent contributions, the April 2005 edition of *The Journal of Strategic Studies* contains many good articles. Still, compared to the influence of the Cold War, relatively little has yet been researched from the late release of archival sources.

He also argued for carriers and landing ships. However, due to the post-war economy and the focus on merchant ship building these plans did not materialise.³ Despite his visions, Stalin's 'ocean-going fleet' never came about. Most of the project that started after the Second World War was cancelled by mid-1950s. Production was then halted on the three in-line STALINGRAD class heavy cruisers and seven SVERDLOV class light cruisers. In addition, three new cruisers which had become operational were dismantled.⁴ No carriers were constructed.

The lack of air-cover from carriers and surface fleets, comprising mainly old design ships, confined the Navy of the 1950s to operations within the reach of its own supporting air power. The British Naval War Manual of 1957/61 stated that the Soviet surface forces did not constitute a decisive threat to British and NATO forces.⁵

The death of Stalin; and Khrushchev changing the maritime strategy

The death of Stalin in March 1953 threw the Soviet political and military leadership into a troublesome period. Khrushchev became first secretary of the Central Committee in 1953, and gained more influence from 1954. He had a temporary setback following Polish defiance of the USSR in 1956 and during the Hungarian revolution of the same year.⁶

Khrushchev replaced Bulganin as Prime Minister in March 1958, becoming the undisputed leader of both the State and the Party. The role and position of Khrushchev as leader has been heavily debated. As Mawdsley and White point out, the period of the late 1950s and early 1960s has been and still is somewhat confusing for historians. At the time, Khrushchev was seen by the West as a 'transitional leader' and 'supreme leader' from 1957-1964. A more contemporary perspective is that Khrushchev was an 'original leader', who truly tried to modernise the system. His ideas have been viewed as the origin of the Perestroika of the 1980s. Another contemporary perspective on the leadership-struggle of this era, argued by Mawdsley and White, is that it was greatly influenced by the development of an powerful ruling elite.⁷ The elite in Soviet politics were clearly strongest during this Khrushchev-period.

³ See for instance: Natalia Yegorova, 'Stalin's Conception of maritime Power: Revelations from the Russian Archives' in *The Journal of Strategic Studies* (Vol.28, April 2005), pp.157-186; Jurgen Rohwer and Michael S Monakov, *Stalin's Ocean-Going Fleet* (London: Frank Cass Publishers, 2001).

⁴ Sergei Chernyavskii, 'The Era of Gorshkov: Triumph and Contradictions' in *The Journal of Strategic Studies* (Vol.28, April 2005), p.290.

⁵ Naval War Manual (1957/1961), p.87.

⁶ http://www.questia.com/library/encyclopedia/khrushchev_nikita_sergeyevich.jsp (Accessed 7 March 2007).

⁷ Evan Mawdsley and Stephen White, *The Soviet Elite from Lenin to Gorbachev* (Oxford: Oxford university Press, 2000), pp.136-137.

Regarding defence policy, military strategy, and technology, Khrushchev pressed for a greater concentration on nuclear forces at the expense of conventional forces.⁸ This was motivated both by his personal strategic perspective, with focus on deterrence, as well as the aim of cutting costs and manpower. His ideas were not unique, as this belief in missiles and cutting conventional forces came exactly at the time of the same debate in western countries (e.g. Britain). Such a strong belief in strategic missiles, ICBMs especially in Khrushchev's case, would still prove 'over-optimistic'. The best example of the latter is the Cuba crisis. As for his aim of great reductions in the conventional Army, this also proved too dramatic. Following the first Berlin crisis, a compromise was reached in 1961 which recognised the importance of all traditional conventional forces.⁹ Very similar lessons were learned in the West.

The late 1950s were the gloomy years of missile technology throughout the world. Khrushchev criticised Stalin's ambitious naval planning from the mid-1950s onward, especially his fascination with large ships. The philosophical perspective on naval strategy changed dramatically, as the effects of nuclear weapons and missiles influenced the debate. The central party policy was clearly in favour of an increased focus on the new technology, and less on traditional naval forces.¹⁰ This was especially viable from 1957, beginning with the removal of Marshal Zhukov and the increasing influence of Khrushchev. According to Khrushchev, carriers and submarines were the systems which had proved themselves during the Second World War. Carriers had become less important due their vulnerability to the (nuclear armed) long range missile systems – but the submarines' potential was still indisputable. He therefore concluded: 'We must concentrate on developing our defensive weapons, our means of sinking enemy ships, rather than on building up an offensive surface fleet of our own...'¹¹

Khrushchev opting for submarines

Admiral Kuznetsov, an outspoken and firm supporter of Stalin's fleet-plans, had to give way to a new Commander-in-Chief of the Navy who would be able to work with the new leadership. The new leader, Admiral Gorshkov¹², followed the official course set by Khrushchev and criticised Stalin's naval position, but was at the same time a true believer in the fundamental ideas of a balanced ocean-going Soviet fleet. From the late 1950s, Admiral Gorshkov acquired more influence over maritime strategy, and with that he initiated surface ship programmes. Gorshkov's

⁸ Norman Friedman, *The US Maritime Strategy* (London: Jane's Publishing, 1988), p.152.

⁹ Ola Tunander, *Cold War Politics* (Oslo, PRIO, 1989), p.26.

¹⁰ George Hudson, 'Soviet Naval Doctrine, 1953-72' in Michael McGwire ed., *Soviet Naval Developments* (New York, Praeger Publishers, 1973), pp.278-279.

¹¹ Ronald Kurth, 'Gorshkov's Gambit', in *The Journal of Strategic Studies* (Vol.28, Nr.2, April 2005), p.266.

fascination with large surface combatants was apparent. It was also part of his personal history as commander of such fleets. In his memoirs from 1996 he makes this very clear:

Large ships – battleships and cruisers – always appeared as the standard for fleet smartness, having a reputation for tight discipline (and) model organisation. To serve on them was not easy, but young commanders knew that, after such schooling, they were guaranteed success on any ship.¹³

Still, the Soviet maritime position under Khrushchev would clearly focus on the potential of the submarine – and a massive building programme was started. In September 1955 the Soviet Navy launched their first nuclear-capable missile at sea from the conventional Zulu-class submarine, an event that set a new revolutionary standard in naval warfare.¹⁴ The Soviet Navy built a powerful and feared navy based on a large submarine fleet. It may be characterised as both asymmetric and alternative – but it was entirely suited to its tasks.

Consequently the first and main threat posed by Soviet naval forces of the late 1950s and early 1960s came from the Soviet submarine build-up. A fleet of attack submarines aimed to dispute the Sea Command of the NATO navies. The submarine build-up can be identified by some important steps in technological evolution.

The submarine developments

The Whiskey-class diesel-electric submarines were classical medium-range patrol and torpedo-attack submarines (SS). They were produced in large numbers, and the class was operational from 1950 till the 1980s. Whiskeys I-V were produced. The Zulu-class diesel-electric patrol and attack submarines were in service by 1952, and in addition a Quebec Class diesel-electric was developed for coastal patrol, and was in service by 1954. The great changes came with the revolutionary Zulu IV ½¹⁵ and the following five Zulu V class boats were converted from earlier Zulus in the late 1950s. From the second boat onwards, they were armed with two SS-N-4 SLBM¹⁶ missiles in addition to torpedo tubes.¹⁷ In addition, two new versions of the Whiskey-

¹² Admiral Sergei Gorshkov (1910-1988), Commander-in-Chief of the Soviet Navy from 1956 to 1985.

¹³ Translated by and quoted in: Kurth, 'Gorshkov's Gambit', p.267.

¹⁴ E.Grove and G.Till in J.Hattendorf and R.Jordan ed., *Maritime Strategy and Balance of Power*, p.293.

¹⁵ E.Miasnikov in P.Podvig ed., *Russian Strategic Nuclear Forces*, p.x of tables and p.283.

This Zulu IV ½ fired the first nuclear missile from the White Sea to a test range on the Kola Peninsula on the 16 September 1955 (E.Miasnikov in P.Podvig ed., *Russian Strategic Nuclear Forces*, p.237).

¹⁶ SLBM: Submarine launched ballistic missile.

¹⁷ The SS-N-4 had initially a range of 250 km, and 150 km when carrying a nuclear warhead.

<http://www.fas.org/nuke/guide/russia/slbm/611AB.htm> , April 2004.

class called the Long Bin and the Twin Cylinder came by 1959-60, armed with the first submarine cruise missile, the P-5 (SS-N-3 Shaddock).

In Britain, these Zulu- and Whiskey-class submarines were assessed as far more capable than the British conventional hunter submarines.¹⁸ About the same time, the Golf-class¹⁹ diesel-electric appeared. From 1958 to 1962, 23 missile submarines of this class were built, and they were fitted with the SS-N-4 from the beginning.²⁰

Two other classes of conventional patrol and attack submarines (not equipped with missiles) were also built in the following few years. The Foxtrot-class came in service from 1958, and consisted of 62 boats for Soviet use. They were initially designed for anti-surface and anti-submarine warfare operations in northern latitudes.²¹ The Romeo-class came in service the same year, but only 20 were built. In 1962 a new and more specialised diesel-electric submarine came into service, the Juliet-class. It was to carry the Soviet Union's first cruise missile, the new P-5, and an increased torpedo load.

Still, the drawbacks of conventional submarines were clear. On patrol out in open waters they were very vulnerable to ASW aircraft while charging their batteries. Nuclear propulsion was being explored, and the November-class²² became the first Soviet nuclear-powered submarine. It was in service by April 1958, and 14 submarines were soon built. The November-class only carried torpedoes, but as the first Soviet nuclear submarine, it was significant.²³

During the second half of the 1960s, new powerful classes of nuclear submarines became operational. The Charlie-class cruise missile submarines, of which twelve Charlie I submarines were built from 1968, were equipped with the short-range anti-ship SS-N-7 Starbright and 6 torpedo/launch tubes for the missile-torpedo SS-N-15 Starfish or Type 53 torpedoes. The Charlies were not too successful, as their lack of speed made them ineffective as hunters.²⁴ The Victor-class attack submarine came along in 1967, of which 16 Victor I were built and equipped

¹⁸ They were assessed to have a submerged capability of 90hrs at 4kts and 25hrs at 6kts.

¹⁹ It was a Golf I that was lost in 1968 off Hawaii, and later partially salvaged by the USN/CIA in 1975. This was a spectacular story known as "Project Jennifer".

²⁰ The latest versions of the Golf class had up to 540-600 km range for the improved SS-N-4 missiles.

²¹ Ryurik Ketov, 'The Cuban missile Crisis as Seen Through a Periscope' in *Journal of Strategic Studies* (Vol.28, April 2005), p.218.

²² It was named Leninskiy Komsomol, and was launched on 09 August 1957. The boat's nuclear reactors started for the first time on 04 July 1958, and on 17 July 1962, K-3 was the first Soviet submarine to reach the North Pole. Several units of this class suffered reactor accidents.

²³ In 1968, a Soviet November class nuclear submarine surprised the US Navy by keeping pace with a high-speed (31-knot) task force led by the nuclear-powered aircraft carrier Enterprise. The next year, responding to the 'November surprise', the US Navy initiated development of the new 'Los Angeles' class of fast attack boats (<http://www.globalsecurity.org/military/world/russia/627.htm>), April 2004.

²⁴ Friedman, *The US Maritime Strategy*, p.170.

with 6 torpedo/launch tubes for SS-N-15 or Type 53 torpedoes. This class had better performance than the rest of the fleet, and is still operational with the Victor III batch in the Russian Northern Fleet. These two submarine classes; the Charlie and Victor, as well as the first SSBN Yankee-class, marked the change to a 'modern submarine fleet'.

The submarine threat was clearly the threat that received the most attention, and rightly so, during the early 1960s. However, the Soviet focus on long-range bombers with missiles had to be taken seriously.

The Soviet controversy of large surface ships

From the early 1960s the Soviet surface fleet saw a gradual build-up. Carrier aviation has had a troubled position in Soviet naval thinking. The naval leadership has generally argued the need for carriers, especially as a means of giving air cover to surface forces at sea. Kuznetsov was the foremost advocate of carrier aviation; he considered air cover for ships at sea to be essential. Stalin was clearly in favour of large ships, but in the case of carriers he was reluctant. Stalin did not support them being included in the construction programmes of the 1940-50s. The bureaucratic infighting and misperceptions of cost and practicality did not help their advocates.²⁵ By 1954, Kuznetsov finally did manage to get an ASW carrier approved. In the period 1956-57, doctrines and reports, research, and even land-based training tests all reflected the naval leadership's desire for carriers. This was a source of irritation for Khrushchev.²⁶ During Gorshkov's first years of office, he also spoke in favour of the carriers and large ships (as earlier mentioned), but by 1960 he had adjusted his perception in line with the 'official view'. Gorshkov echoed the ideas of Khrushchev and Sokolovskiys in his statement of 1960: 'Large ships, like cruisers or aircraft carriers, have on the whole become outdated as a means for conducting war at sea and are merely a good target for modern missiles'.²⁷

British intelligence also had no thoughts of the Russians planning for carriers, either for the purpose of limited war or a total war. If so, they would most likely be intended for making extended cover-range for the naval surface strike-forces. The British had made note of the official Russian literature arguing the vulnerability of carriers in modern war.²⁸

²⁵ Vadim Kolnogorov, 'To Be or Not To Be: The Development of Soviet Deck Aviation', in *The Journal of Strategic Studies* (Vol.28, Nr.2, April 2005), pp.339-342.

²⁶ Kolnogorov, 'To Be or Not To Be: The Development of Soviet Deck Aviation', p.344.

²⁷ Quoted in: Kolnogorov, 'To Be or Not To Be: The Development of Soviet Deck Aviation', p.345.

²⁸ NAUK AIR 8/2355. 'The Russians and Carriers', note by Cooper, 19 July 1963.

The carriers never came about, and compared to the USN's 23 attack and anti-submarine carriers by the late 1960s²⁹, we are clearly discussing a very different navy. As discussed later in this dissertation, the Soviet Navy grew dramatically and became a powerful force at sea – but it was balanced in its own way. Even so, this crucial lack of air cover for the protection of surface forces, outside the reach of land-based fighter aircraft, limited their goal of a global navy, at least as greater task forces. The Soviet Navy has tried to cover this flaw since the 1960s, as most Soviet naval surface ships have since been equipped with extremely long range and effective surface-to-air missiles systems for air denial purposes. This started with the SVERDLOV-class, and has continued all the way up to the contemporary KIROV-class. For fighting the NATO anti-surface warfare aircraft, the SVERDLOV had the Big-Net radar of some 120 NM range on medium bombers. This radar was first seen on a SVERDLOV in 1957.³⁰ The SVERDLOV-class were the main ships used for the air defence role. The rest of the major warships mainly used the Knife-Rest radar of some 90-110 NM. ranges on bombers. The SVERDLOV-class attracted great attention among the NATO maritime nations. NATO, Britain included, made aircraft and tactics directly to counter this. For instance, the Buccaneer project in its early phase was popularly labelled a 'SVERDLOV-killer'.

Ocean-going Soviet naval operations were sporadic up to the mid-1960s. The first large task force to operate outside its own waters after the Second World War came in 1954, when Vice-Admiral Gorshkov took a cruiser and two destroyers on a visit to Albania.³¹ The following years saw some visits to Egypt and Syria by Soviet naval forces, and the first greater exercise in the Mediterranean came in 1960. The next great ocean deployment was the infamous Cuban deployment of merchant vessels and submarines.

Soviet ASW forces, as a response to the American Polaris system

The American George Washington class Polaris submarine became operational by 1960, and immediately influenced NATO and Soviet strategies and tactics, as well as the development of new technological responses. For instance, the 1963 American public announcement that a Polaris submarine was on patrol in the eastern Mediterranean provoked both a verbal and practical response by the Soviets. The Soviets argued that the Mediterranean should be a nuclear free zone. Stalin's ocean-going vessels and submarines had been on visits and operations in the Mediterranean from 1953 onward and Soviet naval activity clearly increased from 1964 onward.

²⁹ Paul Ignatius, 'The Soviet Navy' from *Vital Speeches of the Day* (Vol.34, Issue 16, 01 June 1968).

³⁰ NAUK ADM 239/546, 'Soviet aerals of naval interest'.

³¹ David F. Winkler, *Cold War at Sea* (Annapolis, Naval Institute Press, 2000), p.47.

This was a means of military diplomacy – as well as a response to the Polaris threat in that region.

Kuznetsov had always been a firm advocate of carriers. Gorshkov had a more pragmatic perspective. During his first years in office he spoke in favour of carriers, thereby avoiding conflict with those supporting his predecessor, Kuznetsov. From the late 1960s onward he focused on the place of carriers for ASW and air cover for his surface forces. It was a different rationale than the offensive USN use of carriers.

The building of Soviet carriers seemed imminent in 1952-53, but did not materialise then. The first carriers became the two MOSCOW-class ASW carriers.³² Built in 1967-69, they were a response to the threat posed by the Polaris system. In addition, ASW carriers were needed for protection of the surface ships which began to operate for the purpose of diplomacy in the mid-1960s. As the strategic submarine missiles got greater ranges (Polaris A-II, A-III, and in time Poseidon), the Soviet Navy could no longer effectively hunt down the strategic submarines. The Soviet submarines soon followed this missile evolution, and with this the Soviet ASW forces shifted from an offensive to a defensive role; the protection of the ‘Bastions’ of the 1970s. The Soviet Navy maintained this defensive ASW posture for the protection of its own forces, and did not build up an offensive ASW capacity parallel to the NATO and USN triad-concept of world-wide SOSUS, ASW aircraft, and hunter submarines.

The Cuban Crisis

Experience gained during the Cuban Crisis is often cited as rationale for the Soviet Navy build-up. However, this is a over-simplification of the story. The Cuban, or Caribbean Crisis, did not create a change in NATO or US maritime strategy. The conflict was short, and successful from a western point of view. For the Soviets, the operation would have a greater impact. The Cuban crisis had some clear lessons for the Soviet Navy. At the tactical level the Soviet Navy learned that:³³

- All submarines detected were surfacing for snorkelling or communication needs
- All submarine detections were during daylight hours
- The submarines were detected visually by aircraft or surface ships
- The Soviet submarines managed to evade after completion of snorkelling

³² The MOSCOW-class ASW carriers, as well as the KIEV-class small traditional carriers were officially labelled ‘cruisers’, or ‘through-deck cruisers’ in the British case in this era).

³³ Ketov, ‘The Cuban missile Crisis as Seen Through a Periscope’, p.231.

At a grand strategic level, it was evident that submarines were not the best tool for projecting influence by diplomacy over other nations or for limited wars or conflict.

The Cuban Crisis has been seen as the rationale behind the new and more offensive Soviet naval strategy that evolved during the late 1960s and early 1970s. This explanation may be partially right, but must not be overstated. The explanation is more complicated. Gorshkov's writing has been accepted as his true belief regarding naval strategy, and his quest for a balanced ocean-going fleet was evident. This was a common perspective within the naval Admiralty that had been fostered in the 'old school' tradition since the mid-1930s. Before the Cuba crisis in 1962, the original plan was to send the Baltic Fleet on a mission of diplomacy.³⁴ This never came about, probably because the status of the surface fleet was too limited after Khrushchev's shift away from the original ocean-fleet plans in the mid-1950s.

Gorshkov's real views were unacceptable in 1956 when he entered office as the leader of the Navy.³⁵ The Cuban Crisis should be viewed as an operation which confirmed these beliefs. The Cuban Crisis might be viewed as a turning-point for Khrushchev rather than for the naval establishment. The surface fleet build-up had started by 1961. As the Cuban Crisis unfolded, for instance, four KYNDA-class cruisers were under construction in Soviet shipyards. After Khrushchev's humiliating defeat in the Caribbean, he told his naval chief that neither he, nor his successors should ever again experience this.³⁶ Gorshkov could promise this, as the naval build-up was already underway. However, emphasis on a balanced fleet for diplomacy did not materialise until after Brezhnev came to power in 1964.

In fact, the Cuba Crisis rather normalised the views on sea power which had prevailed from the mid-1930s until Khrushchev came to power. Still, it is clear that the Cuban Crisis inflicted on Khrushchev's fate as leader, and that the naval posture of the leadership changed with Brezhnev coming to power. Under Brezhnev, the services gained more independence for planning and manning, and conventional forces got increased attention.³⁷ From 1964, the Soviet Navy also gained a more prominent place in the Soviet military. Sergei Chernyavskii describes the leader as central to this:

³⁴ Svetlana Savranskaya, 'New Sources on the Role of Soviet Submarines in the Cuban Missile Crisis', in *The Journal of Strategic Studies* (Vol.28, April 2005), pp.235-237.

³⁵ Kurth, 'Gorshkov's Gambit', pp.266-267.

³⁶ Winkler, *Cold War at Sea*, p.50.

³⁷ Friedman, *The US Maritime Strategy*, p.152.

Gorshkov was not only a gifted strategist, but also excelled at bureaucratic politics, and proved remarkably successful in convincing the Soviet leadership of the imperative of developing an ocean-going fleet.³⁸

To conclude, the Soviet surface fleet expanded from 1961 and gradually increased its activity by the mid-1960s. Two main explanations may be found; an extension of Soviet defence zones and a traditional ocean-going fleet:

- A direct response to the Polaris threat. The Soviets needed to extend their defence zones, and against the threat of the US submarines in the Eastern Mediterranean, Norwegian Sea, Japanese Sea' and Indian Ocean³⁹ – this could only be done by a more effective surface fleet.
- It is important to note that the balanced ocean-going fleet had been the main idea from 1936 until the mid-1950s. From 1961 onward, a balanced ocean-going fleet was again a reality. The experiences of the Cuban Crisis probably accelerated and underlined the wish for a surface fleet for the purpose of military diplomacy, thus an important, but not the only explanation.

Chapter 5-B: Soviet fighting for the Norwegian Sea

The definition of unified 'theatres of military action', TVDs ('teatr voennekh deistvii'), were central in Soviet strategic planning and organisation. Within these theatres, there were unified concepts and perceptions about the character of war, defined by the characters of each of the TVDs. There were also clear perceptions that a war might well be limited to one or more of the TVDs. From the Soviet position, the Scandinavian Peninsula and the Norwegian Sea made up an independent theatre up to the mid-1980s and was regarded as an important battle-theatre, and not viewed as a flank. The entire north-western TVD was expected to 'constitute an active military battlefield' from the very outset of a war.⁴⁰ This 'area of military action' was central for three main reasons: First for defensive purposes for stopping the offensive NATO forces, carriers at first, and later also the Polaris submarines; secondly for offensive purposes for securing access to the northern Atlantic; and thirdly for conducting their own offensive operations towards the European continent and the British Isles.

³⁸ Chernyavskii, 'The Era of Gorshkov: Triumph and Contradictions', p.281.

³⁹ The increase in Soviet operations in the Mediterranean (from about 1964) and in the Indian Ocean (from about 1968) also stemmed from a strategy of projecting influence. (See various articles in MccGwire, *Soviet Naval Developments*.)

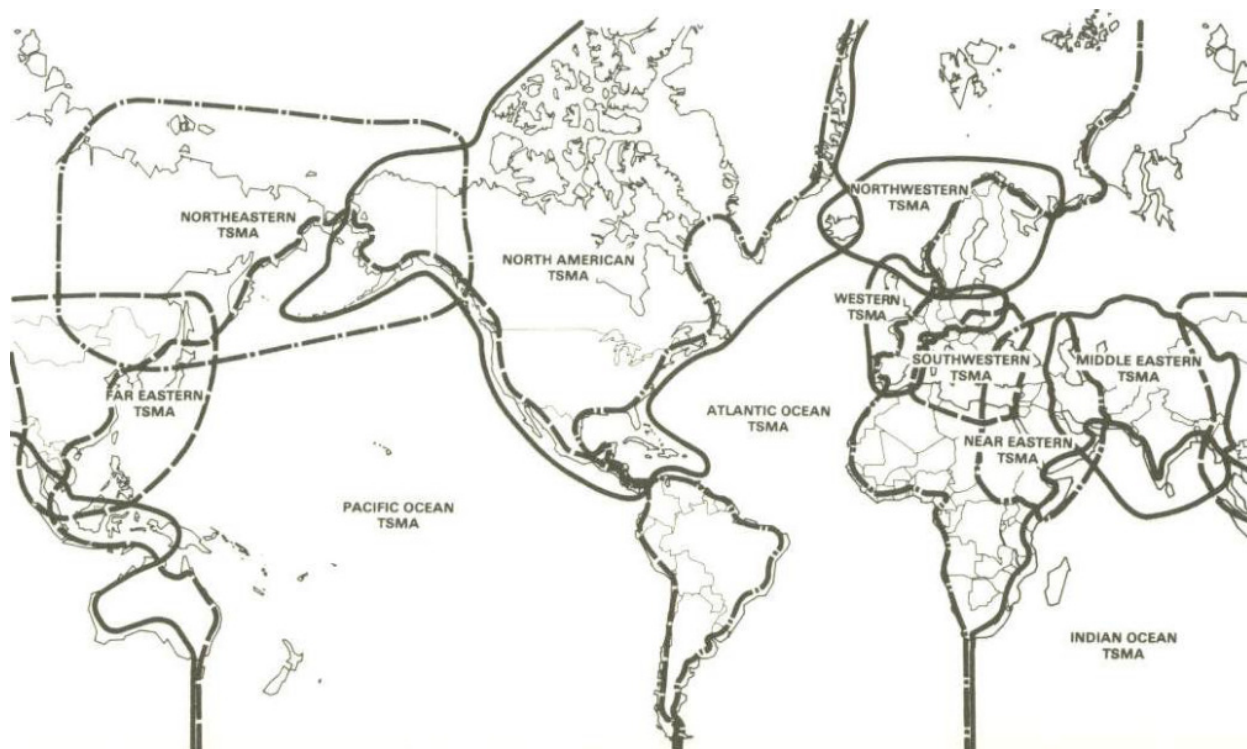


Figure 8: Soviet TVDs.⁴¹

By the composition of the Soviet naval and air forces of the 1960s, there were mainly two dominant scenarios for the fight for control of the Norwegian Sea; namely who would have air superiority in the area – the Soviet Union or NATO? Control of the Norwegian Sea was dependent on who would be able to seize control of the airfields of northern Norway. The following general strategic perceptions were widespread in Western thinking. It remained much the same from the late 1960s until the end of the Cold War:

If the Soviets were able to capture northern Norway with its airfields, this would pose a multi-threat to NATO. With forwarded land-based air defences and combat aircraft, the Soviets would have air superiority – which in turn would enable their naval surface forces to move south-west. In the case of Soviet land-based strike air power, it would pose an immense offensive threat to northern continental Europe and Britain. Until the late 1960s, the submarine fleet was dependent

⁴⁰ Ghulam Wardak and Graham Turbiville, *The Voroshilov Lectures*, Vol.1 (Washington, National Defence University Press, 1989), p.116.

⁴¹ Wardak and Turbiville, *The Voroshilov Lectures*, Vol.1, p.92. The edited series uses the term TSMA (Theatres of (Strategic) Military Action) in stead of the Russian TVD (teatr voennekh deistvii). I stay with TVD, as this Russian abbreviation is most used also in western literature. The TVD structure changed to four principle TVDs by the later years of the Cold War; the Far East TVD (1978), the Western TVD and South-Western TVD in Europe (1984), and the Southern TVD (1984). Wardak and Turbiville, *The Voroshilov Lectures*, Vol.1, p.18.

on breaking out of the Barents and closing the naval forces and shorelines to use its limited range missiles.⁴²

If NATO could keep control of northern Norway, they could effectively close off all Soviet naval surface forces, intercept the strike aircraft, and be able to put great ASW forces into the hunt for the Soviet submarines that were designed to dispute NATO's control of the Norwegian Sea and attack Europe and Britain with missiles.

As for combat between military forces, tactical nuclear weapons were expected to be used against groupings of enemy forces and the destruction of rocket sites. This single conviction at the military strategic level of decision-makers in the Soviet Union had a crucial impact on the conduct of maritime warfare and its technical development. Sokolovskiy stated about nuclear weapons '...profound changes will take place in the methods of carrying out military operations in naval theatre'.⁴³ Further he specified:

In a future war the tasks of destroying shore targets, of defeating grouping of the naval forces of an aggressor, his assault carrier formations and rocket-carrying submarines at bases and on the high seas, disruption of sea and ocean communication, will be accomplished by strikes of rocket troops and mobile operations of rocket-carrying submarines co-operating with rocket-carrying aircraft.

Even Khrushchev argued that large surface ships, e.g. carriers, were 'large sitting ducks' for surface missiles.⁴⁴ Later in his writing Sokolovskiy stressed that bombers and fighters were more successful at destroying moving targets than the rocket troops with their ballistic missiles.⁴⁵ Here we see some of the background for the Soviet Navy's heavy focus on aircraft in the anti-surface role of missions. This was supported by Khrushchev, who favoured 'modest surface ships with anti-ship missiles and long range naval aviation'.⁴⁶

The British perspective is well described in the Naval War Manual of 1957. The threat of nuclear bombardment would be greatest to those forces in harbour. At sea, the threat would constitute submarines, operating independently but also in co-operation with long-range scouting aircraft. In addition to the submarine, the long-range bomber or strike aircraft armed with long-range missiles would be a great threat. Regarding the Soviet surface forces: 'Surface raiders are not

⁴² From late 1960s, the Soviet was able to change the tactics and hold the ballistic missile submarines in safe heavens. The 'Bastion' concept.

⁴³ Sokolovskiy *Soviet Military Strategy*, p.203.

⁴⁴ Kurth, 'Gorshkov's Gambit', p.266.

⁴⁵ Sokolovskiy *Soviet Military Strategy*, p.253.

⁴⁶ Kurth, 'Gorshkov's Gambit', pp.266-267.

likely to be used on any scale, but may possibly be deployed in more remote areas to attack independent shipping and to extend the protection of forces'.⁴⁷ The Soviet vision and the threat posed to western forces is perhaps best summarised in the thought-provoking words of Sokolovskiy of the High Command of the Soviet forces: 'Long-range bomber craft, armed with long-range missiles, retain the capacity of delivering independent blows to enemy targets, especially at sea and in the ocean, but also on the coast and in the deep areas of the enemy territory'.⁴⁸ Further he stated about the balance of the surface, submarine, and air platforms:

...the Navy will keep such important tasks as combating the enemy's naval forces on the sea and at the bases and also disrupting his ocean and sea transport. These problems can be solved most effectively by submarines and planes armed with nuclear rocket weapons and torpedoes. A certain number of surface ships are also necessary to safeguard the activities of submarines and to perform secondary missions such as protection of naval communication lanes and co-ordination with Ground Troops in operations carried out in coastal regions.

Continuing about naval aviation: 'Naval aviation must be able to attack warships at sea at distances at which they will not be able to use their aircraft carrier forces and missiles for attacking targets in the socialist countries', and '... naval aviation will be called upon to destroy enemy transport at sea and at their bases.'

In conclusion, it is clear that fighting the Soviet submarines and the long-range bombers and missile carrying strike aircraft primarily, and secondary the Soviet surface navy, were the main threats to western conventional forces. Consequently, the British and NATO forces of northern Europe had to be planned and structured for establishing control of northern Norway and the Norwegian Sea. (To what degree they managed to meet this challenge will be discussed in the end of the next chapter). However, by early 1960 the importance of conventional military forces for the home region had only a subordinate position in British policy. The region off Britain's north-eastern shores and the Soviet Northern Fleet was predominantly an American concern. The High North had been in focus because of the strategic bomber fleets and their 'forward strategy' in the 1950s, both for offensive operations with carrier forces and using Norwegian airfields. The Norwegians were in addition greatly concerned with a potential 'limited incursion into northern Norway'. This was the reason for a Norwegian invitation to British officials to visit Oslo in

⁴⁷ Naval War Manual (1957/1961), p.87.

⁴⁸ Sokolovskiy, *Soviet Military Strategy*, p. 254.

1960.⁴⁹ The British had been part of NATO's Striking Fleet in the Norwegian Sea and North Sea prior to this, but as the East of Suez challenges gradually got more attention, the 1960s saw far less participation by British forces in the northern region. Indeed the Norwegian concern about limited incursions towards northern Norway did not gain influence either with the British or Americans until the late 1960s.

Land based aircraft fighting the naval ships

The Soviet submarine build-up has traditionally received the greatest attention, but another important development was the threat posed by an extraordinary land-based maritime naval air force (Aviatsiya Voenno-Morskogo Flota, meaning 'aviation of the military sea fleet').

This second threat from the Soviet military forces has been underestimated in military history literature. The capabilities and reach of Soviet maritime air power, both for strikes against maritime targets and land targets along the flanks of Europe, have not been given their rightful attention. The well-balanced and capable land-based air power of the Soviet Union would have seriously displaced the power balance of Britain and northern Europe operating from the Norwegian coastline. Jonathan Alford, former Director of the International Institute for Strategic Studies, and a great debater on strategic issues in the 1980s, summed up the joint nature of maritime operations, and specifically the northern flank issue:

In part this is about the Soviet interdiction of the trans-Atlantic routes; in part this is about the Soviet need to keep NATO naval forces well away from important Soviet assets; and in part it is about the reinforcement by the sea of the NATO north – and all are interconnected...

I will assert that it is the Norwegian airfields which are – or ought to be – of greatest concern. I suggest the following syllogism: who controls the Norwegian Sea depends on who controls the North Norwegian airfields: who controls those airfields depends on who gets there first: and who gets there first depends on who controls the Norwegian Sea.⁵⁰

For the Soviet Union to be able to control the Norwegian Sea, or at least deny it to NATO forces, the two most important tasks of the Soviet Fleet and aircraft from the very outset of a war would be to destroy carrier based enemy striking units and to get hold of the airfields of northern Norway. The absence of carrier-borne aviation in the Soviet Navy – and their need for forward bases, brought northern Norway into military strategies. The bases in northern Norway became a

⁴⁹ Berdal, Mats, *Forging a maritime alliance. Norway and the evolution of American Maritime Strategy 1945-1960* (Oslo, Norway: Institutt for forsvarsstudier (IFS)/Norwegian Institute for Defence Studies, Vol.4, 1993), pp.111-112.

⁵⁰ Jonathan Alford in G.Till, ed., *Britain and NATO's Northern Flank* (New York: ST.Martins Press, 1988), p.77.

prerequisite for defensive operations to fight enemy carriers and for air cover of their own naval forces, as well as for offensive strike operations against Europe, the British Isles, and the northern Atlantic. The Soviets expected that NATO ASW ships, as well as ASW and air defence aircraft would protect the attack carriers. Still, they were strong in their belief that those forces and weapons could not effectively defend the vulnerable carriers from the Soviet submarines and aircraft armed with long-range missiles.

As Sokolovskiy stated: ‘... our fleet of missile-carrying submarines and aircraft permit approaching the aircraft carrier to the distance of missile launch without entering the zone of antisubmarine and air defence of the attack carrier force’.⁵¹ To be able to do this, the geo-strategic importance of northern Norway in this game was quite clear.

Aircraft developments

The Cold War Soviet medium- and long-range bomber and strike aircraft era started with the development of the Tupolev Tu-4 Bull in 1947. They were followed in the 1950s by the Myasischev M-4 Bison, the Tupolev Tu-16 Badger and the TU-95 Bear.

The M-4 Bison has been somewhat overlooked, chiefly because of its failed performance in its original role as a long-range strategic bomber. The early Bison A aircraft from the early 1950s simply did not possess the range capabilities needed for those missions. The Bison B and the specialised Bison C with their large search radar for maritime reconnaissance and Electronic Intelligence (ELINT) operations became important for naval operations.⁵² But, the fact that the aircraft design was not suited for carrying large missiles still made this an expensive aircraft to maintain only for reconnaissance and tanker roles.

The Tu-16 Badger was first flown in 1952, and entered service with the strategic aviation forces by 1955.⁵³ Within a few years most of the aircraft were fitted with flight-refuelling equipment. In the 1960s, after the rocket troops took on the strategic strike role, the aircraft were steadily transferred to the expanding Navy.⁵⁴ The Badgers became the first missile carrying aircraft for the Navy. The first missile variant, the Badger B, was initially equipped with the 80km range AS-1 Kennel⁵⁵ anti-ship missile and later with the more advanced anti-ship and land-attack missile AS-5 Kelt⁵⁶. The Badger C production line came at about the same time – and with the

⁵¹ Sokolovskiy, *Soviet Military Strategy*, p.300.

⁵² B.Sweetman, *Soviet Military Aircraft* (California: Presidio Press, 1981), p.140-141.

⁵³ Dalnaya Aviatzia (DA), *Soviet Strategic Aviation*.

⁵⁴ Aviatsiya Voenno-Morskovo Flota (AVMF), *Soviet Naval Aviation*.

⁵⁵ KS-1 missile-NATO designation: AS-1 Kennel.

⁵⁶ KSR-2 missile-NATO designation: AS-5(A) Kelt. The AS-5 had a range of 230km, and was operational by 1961.

AS-2 Kipper⁵⁷ missile for anti-ship and land-attack and its large radar installation, it became a feared strike-aircraft. The development of these first cruise missiles had begun in the early 1950s, and they were from the start intended chiefly as radar-guided anti-ship missiles.⁵⁸ The Badger D aircraft was equipped with the same radar and electronic surveillance capabilities as the previous aircraft of the series, but were more specialised for maritime reconnaissance. The Badgers E through L aircraft designations pointed to various roles; including reconnaissance, intelligence, and jamming. Some Badger (Tu-16Z) aircraft were also fitted for air-air refuelling, to keep up with the later Tu-22s with refuelling capability.

Due to the development of the Badgers, SACLANT became greatly concerned at the growing threat from the expanding Soviet naval strike aircraft fleet. The air threat had now 'considerably increased' according to SACLANT's 1958 Emergency Defence Plan. As a consequence, the NATO Strike Fleet made special air defence arrangements with Norway to upgrade and link early warning information from shore-based systems to SACLANTs naval forces in 1958.⁵⁹

The reach of Soviet air power in maritime operations and along the flanks became an even greater threat with the introduction of the magnificent Tu-95 Bear aircraft. As Sweetman wrote, thirty years after its development: 'unquestionably the most spectacular of contemporary warplanes'.⁶⁰ Prototypes flew in the early 1950s, and by 1956 the aircraft was operational. For the next 10 years 49 Bear A were produced for the traditional bomber role and were soon reconfigured to carry nuclear bombs, and further 71 missile carrying Bear B and 23 Bear C for strike purposes were produced and operational by 1959.⁶¹ The Bear D, operational by 1964-66, had a long-range maritime reconnaissance and targeting role and mid-course guidance for the long-range surface-to-surface as well as air-to-surface missile systems.⁶² The Bear D was equipped with the powerful Big Bulge radar and a secure communication link. The Bear D was renamed Tu-142 during the 1960s, indicating that it was a genuine maritime aircraft.

The Tu-22 series, where the initial production line aircraft were named Blinders, was projected in the mid 1950s. It would give a supersonic penetration capability to the existing concept of the Tu-16 Badger. The effectiveness of western air defences with high altitude SAMs and radar controlled supersonic interceptors required the greater performance of the strategic bombers.

⁵⁷ K-10S missile-NATO designation: AS-2 Kipper. The missile had appx 250km range.

⁵⁸ T.Kadyshev in Podvig ed., *Russian Strategic Nuclear Forces*, p.344.

⁵⁹ Berdal, *Forging a maritime alliance. Norway and the evolution of American Maritime Strategy 1945-1960*, pp.106-107.

⁶⁰ Sweetman, *Soviet Military Aircraft*, p.182.

⁶¹ P.Butowski, *Combat Aircraft*, European Ed, Vol.4, No6 (UK: AIRtime Publishing Inc, May 2003), p.548.

⁶² Gething, *Sky Guardians, British Air Defences 1918-1993*, p.120-121.

But, by the time the aircraft was fully operational, Soviet strategies had shifted to rely on strategic missile systems rather than aircraft. The radical doctrinal change of the Soviet Union⁶³ in the early 1960s assigned the land-based strategic ballistic missiles to the principal role of strategic strike and deterrence. Many of the first Tu-22s (as well as other types) were consequently transferred from the strategic aviation forces to naval aviation for precision maritime strikes and for strikes in the European regions along the flanks. These Tu-22s were named Blinder B.⁶⁴ The Blinder C became an important ELINT aircraft for maritime reconnaissance. These latter B and C batches were accepted as fully operational by the late 1960s.

Another interesting aspect of the Soviet long-range reach air power was the development of the long-range and long-endurance fighter Yak-25P of 1953, later replaced by Yak-28Ps in 1960. In addition to the Tu-126 Moss AEW and the Tu-128 interceptors, this gave the Soviet Union a considerable reach in the northern areas. These were designed as interceptors and to deny the airspace to Western aircraft to far greater distances than normally capable of land-based fighter aircraft.⁶⁵ Soviet long-range air power strike capabilities were immense, and clearly posed a great threat to British and NATO maritime forces and communication. They must not be overlooked.

Chapter 5-C: Soviet SSBN's and an established ocean-going fleet

Soviet quest for a ocean-going fleet materialised

As argued previously, Gorshkov was a genuine believer in the Soviet need for an ocean-going fleet and large ships. His statements from the late 1950s and up to 1960-61 still favoured the 'official views'. This period saw considerable doctrinal discussion in Soviet politics, but the influence of the Army and strategic-missile advocates⁶⁶, including Khrushchev, was significant. By the early 1960s Gorshkov argued more for large ships. David Winkler argues that Gorshkovs'

⁶³ After the "secret speech" of Khrushchev in 1956, in which he denounced the cult of personality – is viewed as a turning point in Soviet military thought. In the period 1958-60 the theorists of the High Command agreed that the military doctrine needed revision. At the IV session of the Supreme Soviet of the USSR on 14 January 1960 – Khrushchev outlined a new Soviet military doctrine. (Harriet Scott's editors' introduction of Sokolovskiys *Military Strategy*).

⁶⁴ The Blinder B's were armed with the AS-4 Kitchen missile, where the naval strike version were capable of a 320km air-to-surface range. (Sweetman, *Soviet Military Aircraft*, p.169.) It is reported to have a range exceeding 700km in other sources.

⁶⁵ Note: Soviet fighter aircraft were not equipped with in-flight refuelling systems until 1979 with the Mig-31. (Sutyagin in Podvig, *Russian Strategic Nuclear Forces*, p.410.)

⁶⁶ E.g. Sokolovskiy, Zhukov, Frunze

‘deliberate campaign to urge Nikita Khrushchev to reverse his naval outlook’ came from the threat posed by the first Polaris system of 1960.⁶⁷

Some scholars, e.g. MccGwire⁶⁸, noted this change at the time, prior to the Cuban Crisis. The planned scrapping of Stalins SVERDLOV-class was prevented, and the KYNDA-class missile-cruiser was commissioned by 1962. The construction of various large ships came about in the early 1960s. As argued earlier; the turning away from the sole submarine fleet focus, and a quest for larger ships, clearly started to materialise before the Cuban Crisis. But although building started early in the 1960s, the Soviet Navy’s presence on the oceans did not materialise until the mid-1960s, with a rapid increase in activity on a global scale by the late 1960s.

The first major operations by Soviet naval forces in the Mediterranean were in 1964, and increased from the mid-1960s. The Caribbean was also visited regularly. The Indian Ocean was first visited by hydrographic survey ships in 1967, with the first naval task force spending four months showing the flag during the following year.⁶⁹ The rationale for operations in this area was the Polaris deployment and reach from the northern Indian Ocean, together with naval diplomacy and in support of space operations. The first Soviet deployments were most evident with the Black Sea and Pacific Fleets. Another aspect, or fear, of Soviet expansion on the oceans, especially across the Indian Ocean, Middle East and Africa, was argued regarding the British withdrawal of its military presence in the region.⁷⁰ There was a vacuum to be filled, and the Soviet Navy might fill this gap. It turned out that the Soviet Union gained less footing than expected in these regions, as the countries kept their newly gained independence, and the US increased its influence.

⁶⁷ Winkler, *Cold War at Sea*, p.27.

⁶⁸ MccGwire, ‘Current Soviet Warship Construction’ in MccGwire ed., *Soviet Naval Developments*, p.136.

⁶⁹ David Fairhall, *Russia looks to the Sea* (London: The Trinity Press, 1971), p.232.

⁷⁰ Fairhall, *Russia looks to the Sea*, pp.233-235; Mitchell, *A History of Russian and Soviet Sea Power*, pp.577-581.

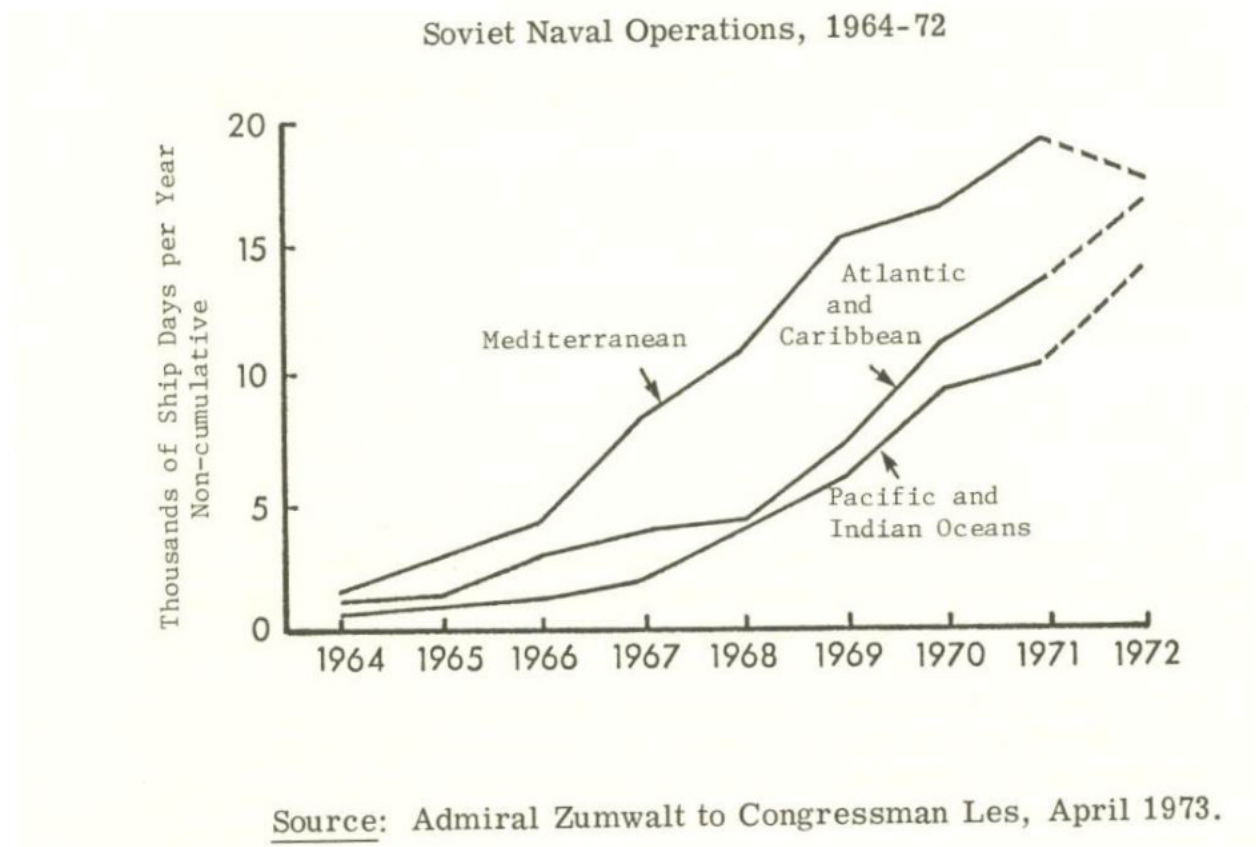


Figure 9: Soviet Naval Strength and Deployment.⁷¹

The MOSCOW-class ASW carriers, MOSCOW and LENINGRAD of 25000 tons, were laid down in 1967-69. They were from the beginning assigned to the Black Sea Fleet and operated in the Mediterranean. By 1970, the MOSCOW-class was also followed by a small conventional carrier, the KIEV-class. The four ships of this class were built to operate vertical take-off and landing (VTOL) fighter aircraft. Their rationale may be explained by several parallel needs. By the late 1960s, the fight for the Norwegian Sea was intensified. The Soviet nuclear powered and armed strategic submarines (SSBN) had to pass through this area to get within striking distance. The Polaris system often operated in this area. The SSBNs, on both sides, did not have truly inter-continental ranges yet.

By the late 1960s, when Soviet confidence had grown, they began to design nuclear powered cruisers. This was a natural development, in light of Gorshkovs fascination with large surface combatants. The result, the KIROV-class of four cruisers, did not become operational until 1980. This class remains today the ultimate surface combat ship.

⁷¹ Zumwalt quoted in Berman, Robert, 'Soviet Naval Strength and Deployment' in McGwire, Michael ed., *Soviet Naval Developments* (New York: Praeger Publishers, 1973).

A new central element; the Soviet SSBN

By 1967, NATO woke up to a new great threat; the SSBN. It had gone through some evolutionary steps – but from the late 1960s it considerably influenced maritime strategy as well as the greater nuclear strategies and the balance between the superpowers, because of its second strike capacity.

The basic design of the first nuclear powered submarine, the November-class attack submarine, was used to create the first nuclear powered strategic submarine, the Hotel-class. The first of this class, the famous K-19, was commissioned at the end of 1960.⁷² The Echo-class cruise missile tactical submarine soon joined the ballistic missile Hotel-class. The first Echo I was in service by 1960, and was armed with the P-5 cruise missile and had 6 torpedo tubes for Type 53 torpedoes, as well as 4 torpedo tubes for Type 40 torpedoes. The Echo II entered service in 1962, armed with the P-6⁷³ anti-ship and coastal-strike cruise missile (The P-6 was given the same name as the P-5 – the SS-N-3 Shaddock by NATO) and the same torpedo configuration. The submarines carrying these first generation missiles, with their relatively short range and requirement of a surface launch, made the submarines very vulnerable to air ASW forces. Projects to create missiles with underwater launch capability resulted in the SS-N-5 Sark SLBM missile. It had a far greater range⁷⁴ and was able to launch from depths of 40-60 meters.⁷⁵ Many of the earlier submarines were, from 1963 to 1967, refitted with the D-4 system to launch these missiles..

Submarines were now nuclear powered, as well as able to launch long-range missiles whilst submerged. This was another significant development for maritime warfare.

In the case of the ballistic-missile submarines, the US had a great lead with their George Washington-class Polaris submarine of 1960. These second-generation missiles ensured a true second-strike capability.⁷⁶ The Soviet answer to this weapon system was the Yankee-class ballistic missiles submarines (SSBN). 34 Yankee I were built between 1967 and 1974.⁷⁷ This first true Soviet strategic submarine was armed with 16 SS-N-6 Serb SLBM with a range of 2400 km.⁷⁸ – but even with this range, the strategic submarines had to move out of the Barents Sea to their combat patrol areas and strike position. The first generation strategic submarines had to move out through the GIUK Gap, and this fact, in addition to a steady decline in NATO

⁷² It was political prestige that pushed the early deployment of K-19, which nearly ended in a nuclear melt down of the Norwegian coast after a collision with the US *Gato* submarine.

⁷³ Miasnikov in Podvig ed., *Russian Strategic Nuclear Forces*, p.238-239.

⁷⁴ Ranges of about 1400km.

⁷⁵ Miasnikov in Podvig ed., *Russian Strategic Nuclear Forces*, p.237-238.

⁷⁶ The system had initially ranges of about 2200 km.

⁷⁷ http://en.wikipedia.org/wiki/Yankee_class_submarine , March 2004.

maritime capabilities in the late 1960s and early 1970s, was the basis of the rationale behind the focus on the GIUK Gap in NATO, US, and UK maritime thinking in the 1970s.

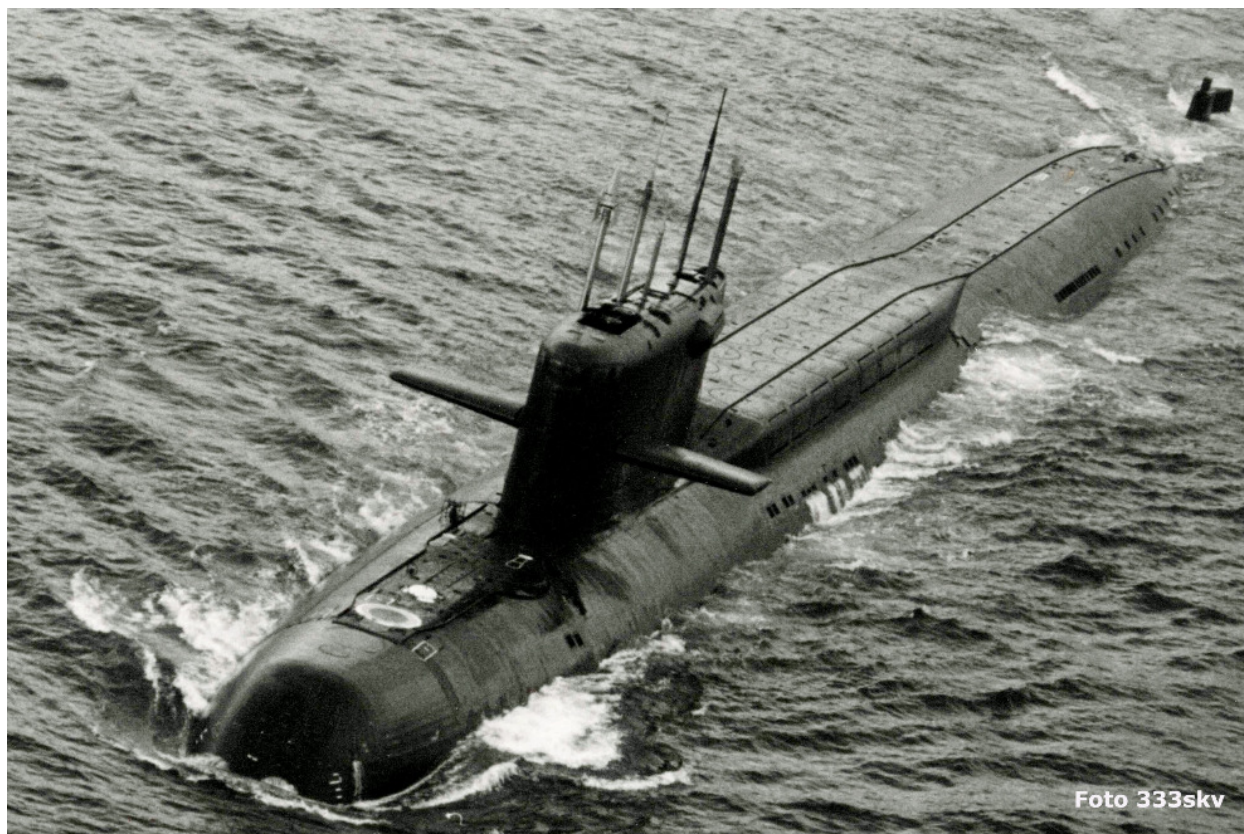


Figure 10: SSBN YANKEE I.⁷⁹

The well known ‘Bastions’ of the Barents and the Arctic did not become a reality until after the SS-N-8 Sawfly⁸⁰ SLBM entered service with the Delta-class in the early 1970s. The SSBN have since become the main focus and the greatest concern of the North Atlantic. As Bertram and Holst state in their introduction to their book ‘New Strategic Factors in the North Atlantic’ from 1977: ‘For the Soviet Union and the United States, as well as for France and Britain, the North Atlantic will, for some time to come, remain an area which lends itself for the deployment of strategic nuclear forces’.⁸¹

⁷⁸ Miasnikov in Podvig ed., *Russian Strategic Nuclear Forces*, p.240.

⁷⁹ Provided by 333 Squadron RnoAF, Norwegian Armed Forces.

⁸⁰ The SS-N-8 had a range of 7800 km, and the Bastion strategy soon became a reality. By 1975 the missile had even been tested launched from the piers.

⁸¹ Christoph Bertram and Johan Holst eds., *New Strategic Factors in the North Atlantic* (Oslo, Norway: Universitetsforlaget, 1977), p.5.

Chapter 5-D: Gorshkov's rising navy of the 1960s

After the dynamic 1960s, the 1970s were a period of more stable challenges for NATO on the northern front. The Soviet naval position became more defined. By the 1970s and 1980s, a great debate focused on its true purpose; perceptions in the west ranged from the utterly traditional perspective of the Soviet naval posture as truly defensive and subordinate to the Army, to those who argued that the Soviet Navy was aiming at a superpower's navy to challenge the United States in a true Mahanian style. Neither can be entirely true when looking at its balance and history.

Admiral Gorshkov was in charge of the Soviet Navy for three decades, and as this period saw such great changes in terms of technological evolution and a fluctuating Cold War, it is difficult to make a simple description of its naval posture. Stalin had a clear vision of an ocean-going fleet, but did not truly accomplish it. The late 1950s were exceptional, as Khrushchev tried to cut conventional forces, and direct the Navy's focus towards submarine warfare. The cost of building an ocean-going fleet was great. Nevertheless, Brezhnev still supported this investment. He also gave the services more freedom to develop strategic thinking and balance its forces. Naval spending was questioned more during Andropov's short time in power, when reports of halting the Soviet naval programmes surfaced. Chernenko was more in line with Brezhnev, and thus saved the naval programmes of the mid-1980s.⁸² From 1985 until the end of the Cold war, the Soviet Navy's activities were greatly reduced.⁸³

In total, the history of the red Soviet Navy shows a remarkably firm understanding of sea power. The navy we saw, what we may call 'Gorshkov's Navy', may be characterised as both asymmetric and alternative. But it was beautifully balanced for its tasks.

In the words of Gorshkov:

In the search for the lines of development of our fleet we started not by simply copying the fleet of the most powerful maritime power of the world. The composition of the fleet, its weapons, ship design and the organisation of its forces were primarily determined by the tasks which are set before the armed forces and hence before the fleet by the political leadership of the country, its economic potential and the conditions in which the fleet will have to solve these tasks.⁸⁴

⁸² Friedman, *The US Maritime Strategy*, p.156.

⁸³ Grove, Eric ed., *NATO's Defence of the North* (London, Brassey's, 1989), p.3.

⁸⁴ Gorshkov, *The sea power of the State*, p.281.

It was clearly not ‘Mahanian’, and it was clearly not simply defensive. To the extent that we may compare it with other navies, the best parallels are to be found within German naval thinking of the late nineteenth and early twentieth centuries⁸⁵, and in the theoretical works of the French Admiral, Raoul Castex⁸⁶ in the 1930s. Donald Mitchell perfectly summed up the Soviet naval developments from the Second World War until the 1970s: ‘Between 1945 and 1962 the Soviets attempted to achieve seapower. From 1962 to 1972 they attained it’.⁸⁷ This was clearly a steady evolution towards a strong and balanced naval and merchant fleet, only broken by Khrushchev’s ideas of an alternative submarine focused fleet from 1957/58-1961/64.

The navy Gorshkov created rested on four main military capabilities: strategic deterrence submarines; balanced sea denial and regional sea control forces and regional force projection forces for fighting a maritime war with NATO; and global naval diplomacy forces for times of peace and crisis.

Concluding the Soviet naval build-up

With the George Washington-class of Polaris submarines, the US had a definitive lead in naval strategic forces in the 1960s. This lead lasted up to the mid-1970s. The Soviet Navy’s modern SSBN fleet first saw light in 1967 with the Yankee-class. The year was an important milestone which was correctly noted by NATO intelligence. The Soviet SSBNs increased gradually from 2 SSBNs in 1967, to 20 SSBNs in 1970, and then passed the 40 US SSBNs with 55 Soviet SSBNs by 1975.⁸⁸ The Northern Fleet became the dominant home base and operating area for the SSBNs. The Soviet naval concept of ‘Bastions’ of SSBNs was well protected by land-based air power and a regional focused naval surface fleet. This was a successful concept, and therefore encapsulated by the 1970s. It ensured a true second strike capacity, and at the same time did not require an expensive build-up of ocean-going surface fleets. The latter issue, which had traditionally been an internal Soviet controversy, was thus solved.

The SSBNs became important for the greater Cold War play, however, it was Soviet sea denial forces of attack submarines and strike aircraft there made up the most interesting and prominent part of Gorshkov’s war-fighting navy. As he so clearly stated: ‘Today submarines and naval

⁸⁵ Recommended reading: Rolf Hobson, *Imperialism at Sea: Naval Strategic Thought, the Ideology of Sea Power and the Tirpitz Plan, 1875–1914* (Boston: Brill, 2002).

⁸⁶ Recommended reading: Raoul Castex, *Strategic Theories* (Annapolis: Naval Institute Press, 1994).

⁸⁷ Donald Mitchell, ‘Traditional Russian Maritime Strategy’ in McGwire ed., *Soviet Naval Developments*, p.243.

⁸⁸ Chernyavskii, ‘The Era of Gorshkov: Triumph and Contradictions’, p.294.

aviation, equipped with the most up-to-date weaponry, in which missiles play a major part, constitute the main type of forces of our fleet'.⁸⁹

The priority given to the development of the submarine forces made it possible in a very short time to increase sharply the strike possibilities of our fleet, to form a considerable counter-balance to the main force of the fleet of the enemy in the oceanic theatres, and, at the cost of fewer resources and less time, to multiply the growth of sea power of our country, thereby depriving an enemy of the advantages which could accrue to him in the event of war against the Soviet Union....⁹⁰

This sea denial force was both defensively and offensively oriented. Defensive in the sense that it would protect the Soviet coastlines as well as halt American and NATO offensive forces (carriers and Polaris submarines) operating in e.g. the Norwegian Sea. Offensive in the sense that it would attack and deny NATO the crucial sea lines of communication between North America and Europe. NATO was critically dependant on this communication link, and that was obvious to both sides. But as so clearly expressed in Gorshkov's writing, he was occupied with the greater position of trade and commerce on the world's oceans. Oceanic sea power was an indispensable tool for all superpowers.

In addition to the strategic forces and the sea-denial forces, Admiral Gorshkov created a balanced regional sea control force of surface ship, submarines, and aircraft. He realised that '...the imperialist states possess advantageous positions in the World Ocean'.⁹¹ The role of surface ships in Gorshkov's mind was still not 'Mahanian'. For fighting an enemy navy, submarines and aircraft were the tools of the Soviet Navy. The roles of surface ships were still important. First of all, for diplomacy in peacetime and force projection in wartime: 'Surface ships form the basis of the land disembarking aids and forces of support for landing'. As for regional conflicts, the surface ships were important for protecting their own and engaging enemy communication lines, as well as for mine-warfare tasks. The final task and that which constituted the greatest numbers of warships was that of ASW; for the coastal areas with smaller ships, and in the oceanic theatres with the larger warships with independent long-range surface-to-air capabilities.⁹² The Soviet strategic position regarding both air and naval forces, was inclined in wartime to protect its close regions, and to protect its SSBNs and deny US and NATO forces offensive naval operations. As Eric Grove noted about the surface fleet of the northern waters

⁸⁹ Ibid., p.189.

⁹⁰ Gorshkov, *The sea power of the State*, p.190.

⁹¹ Ibid., p.183.

towards the end of the Cold War; 'Most intelligence analysts seem to agree that the main role of the rest of the Northern Fleet in war is the defence of the Barents and arctic Bastions using submarines, aircraft and surface ships'.⁹³

The Soviet naval forces became more focused on amphibious operations by the mid-1960s, requiring regional sea control forces. The Soviet Naval Infantry was re-activated as a force, with unusual official publicity, by 1964. Still, this was a limited force compared with the capabilities of the US Marines. The Soviet amphibious vessels were great in numbers, but many of these forces consisted of short range coastal vessels. Many air-cushion landing vessels were built. The larger Alligator-class landing ships started becoming operational by the mid-1960s, and gave a greater range than the smaller vessels. Yet, the capacity and numbers were limited and the logistical support insufficient for greater operations over any distance. In any case, the Soviet Navy never attained an organic air cover capacity to mount greater operations. The MOSCOW-class ASW ships had good capacity for carrying helicopters, but these could only support limited force projection operations. The Soviet naval forces' capacities to mount larger operations over greater distances were clearly limited, even though they had a large number of vessels designed for amphibious warfare. Thus, the Soviet naval capacity for force projection must be viewed as one of a 'regional' reach and purpose only. For instance, the Baltic Sea and its approaches to the west were from a Soviet perspective related directly to the northern part of the Central Front. This included Denmark and the southern part of the Baltic Sea, the northern part of the Irish Sea, the English Channel and the Straits of Kattegat and Skagerrak.⁹⁴

⁹² Ibid., p.197.

⁹³ Grove, *NATO's Defence of the North*, p.2.

⁹⁴ Wardak and Turbiville, *The Voroshilov Lectures*, Vol.1, p.105-106.

EUROPEAN THEATERS OF STRATEGIC MILITARY ACTION



Figure 11: European TVDs in Soviet strategy, 1970.⁹⁵

In the 1950s and early 1960s, the Soviet Baltic Fleet was defensively oriented, and concentrated its operations on the eastern parts of the Baltic. By the late 1960s, a more self-conscious Soviet Union began to operate in the western parts as well.⁹⁶ As the main larger surface vessels were transferred to the Northern Fleet by the mid-1960s, the amphibious forces were retained. The Soviet Baltic Fleet effectively became a close-sea navy. Soviet regional sea control forces were designed to control their own shorelines, giving cover for force projection forces supporting the Army in land war, and for protecting the evolving bastions of the 1970s.

The final element of the Soviet was the naval diplomacy surface forces. For Gorshkov military forces was all about strategic influence, and strategic reach by naval forces around the globe was crucial for the growth of the State.

⁹⁵ Wardak and Turbiville, *The Voroshilov Lectures*, Vol.1, p.232.

⁹⁶ Rolf Hallerbach, 'Baltic Strategy Past and Present' in Grove ed., *NATO's Defence of the North*, p.77.

Demonstrative actions by the fleet in many cases have made it possible to achieve political ends without resorting to armed struggle, merely by putting on pressure with one's own potential and threatening to start military operations. Thus, the fleet has always been an instrument of the policy of states, an important aid to diplomacy in peacetime.⁹⁷

Before and during the Arab-Israeli War, from June 1967, Soviet naval forces greatly increased their presence in the region. The Sixth Fleet was continuously shadowed by intelligence and naval ships, and the ports of Egypt and Algeria were frequently visited. The Soviet naval force consisted of 31 surface ships and 13 submarines during the most intense periods.⁹⁸ The Soviet naval forces were able to show force to promote their interests, in this case, in support of the Arabs. To what extent naval diplomacy bore fruits is hard to judge. However, as Bertram noted in a discussion on naval diplomacy in 1977, related to the discussion on the Soviet Navy:

We all know that the silhouettes of warship over the horizon have some kind of effect on the coastal observer; but given the complexity of human reactions, and of the reactions of human society, it is very difficult to say in advance what exactly the effect will be: resigned acceptance, indifference or heightened opposition.⁹⁹

As a means of diplomacy, the Soviet Union also engaged in building up a merchant fleet. This made possible the goal of developing trading partners and supporting friendly governments on a global scale. From the early 1950s to the late 1960s; the Soviet merchant navy grew from some 500 ships to more than 1400 ships and by the late 1960s continuously visited ports around the world. This was a modern fleet, and it matched the numbers of the US merchant fleet. Sea power for diplomacy, a necessity for any global power, had a prominent position in Admiral Gorshkov's thinking. As noted by Admiral Moorer, US Chief of Naval Operations in 1969:

Sea power, inescapably, derives from the quality and quantity of a nation's merchant marine, shipyards, fishing fleet, and oceanographic enterprise – as well as its combatant forces, i.e., the sum of its maritime potential. If we can be said to have demonstrated a lack of appreciation for this definition, the Kremlin, on the other hand, seems not only to fully appreciate it, but is actively applying it.¹⁰⁰

⁹⁷ Gorshkov, *The sea power of the State*, pp.247-248.

⁹⁸ Ignatius, 'The Soviet Navy' from *Vital Speeches of the Day*.

⁹⁹ Bertram and Holst eds., *New Strategic Factors in the North Atlantic*, p.11.

¹⁰⁰ T.H., Moorer, 'The Soviet Navy: Our ability to meet the challenge' from *Vital Speeches of the Day* (Vol.24, Issue 24, 01 October 1969).

Admiral Gorshkov stressed the importance of the fleet as an instrument of the policy of the state; it was simply the most important aid to diplomacy in peacetime.

Both military and political studies of Soviet strategy in this period have focused on whether the Soviet naval forces were defensive and protective – or offensively oriented. Was the main objective of the naval forces to add a layer to the traditional Russian protection of the homeland and, later, to their submarine bastions? Or did the Soviets have aspirations to a greater blue-ocean navy, capable of projecting influence around the world and perhaps finally challenging the command of the United States on the world ocean? It is important to notice these two points of view regarding the Soviet naval build up.

The Soviet Navy clearly became an important force at sea by the 1960s, and demonstrated a considerable global reach during the 1970s. The rationale behind this expansion has been a never-ending question in western debate. Many scholars have stressed the Soviet need for access to the high seas. This seems to be a miscalculation, if one thinks of it in terms of challenging the US Navy in classic battles. Gorshkov's navy was focused on an ocean-going fleet. The Soviet surface fleet was great, but still definitely inferior to the American and NATO naval forces, so that it could not fight a war out at sea in a Mahanian traditional sense. The lack of organic air power supports this argument. Its purpose may be said to be dual; that of sea denial and sea control operations in defined regions for war-fighting – and for naval diplomacy with its ocean-going fleet, in times of peace and crisis.

The aspirations of the Soviet Navy were high by the end of the 1970s. It would be strange if political and military leaders, as well as writers and strategists, did not explore this possibility. However, the navy has classically had a subordinate position to the army in Soviet and Russian thinking, and if you go to sources other than those of naval experts – the homeland, army, and the strategic rocket troops do have a more prominent position.

Chapter 5-E: British perception of this rising Soviet naval challenge

In British politics, the Joint Intelligence Committee (often just referred to as the 'JIC') has had a central position in evaluating threats. The JIC was charged with giving direction to, as well as keeping under review, the organisation and working of intelligence as a whole at home and overseas. They set priorities and requirements. A review of the JIC archival files thus gives an impression of the intelligence and strategic focus areas for the British political-military decision makers of the period.

Already from the late 1950s, Sir Norman Brook and Sir Patrick Dean's studies were closely linked to the JIC studies in the same period, often setting the scene by asking for evaluations. In the early 1960s, the areas of focus were largely on: the outlook on the Horn of Africa, the threat to Jordan during 1960, the outlook on Yemen, petroleum exploration in North Africa, Soviet strategic air plan in the early stages of global war, and indicators of Sino-Soviet Bloc preparations for early war. Some other works-at-hand included the communist threat in Malaysia and related ANZAM studies, Berlin in Europe and several issues in the Middle East and Africa.¹⁰¹ Clearly, the focus was on the global role. As for the home-region, the fear of a sudden, devastating and all-out war set the framework. For the first half of the 1960s, there was little concern about maritime threats and national home-defence strategy.

By 1964, a Joint Intelligence Committee 'Soviet Bloc Study-Group' was established.¹⁰² The group was chaired by various representatives of the Foreign Office, and the members of the group were experts from the Foreign Office, the three military services (the War Office, the Admiralty (initially Mr. A.N. Shores) and the Air Ministry (initially Wing Commander J.D. Wilson)), as well as the Security Service and the Joint Intelligence Bureau. The members of the group were intended to act as individual experts rather than representatives for their respective departments.

During 1964, two questions were central to this Soviet study-group: the power structures within the Soviet Union and the Soviet forces confronting NATO Europe.¹⁰³ As to the threat to NATO, several questions were raised: did recent Soviet military writings (e.g. the Sokolovsky's book on Military Strategy) indicate any significant change in Soviet doctrine? And further about these writings, how representative were the writers, and were there any indications of changing views? Were there any indications of significant differences of view between the military and civilian leaders? And finally, the classic Cold War question; were the Soviet theatre forces in Europe basically offensive or defensive?

On the topic of the Sokolovskiy book, the study-group argued that it represented an attempt to synthesise the views that had emerged in the military debate in the late 1950s and early 1960s. It was assessed to be intended for middle and junior rank officers. This judgement has recently been supported by Ghulam Wardak in 'The Voroshilov Lectures', where he states that Sokolovskiy's book was important reading literature at the Soviet Staff College during his time of study. The book was not an official document, and there were internal contradictions within

¹⁰¹ NAUK CAB 21/4739, 'Joint Intelligence Committee (JIC)', 1957-61.

¹⁰² NAUK CAB 182/50, 'Joint Intelligence Committee, Soviet Bloc Study Group: meetings and Secretaries Minutes', January 1964 – June 1965.

the Armed Forces. However, Sokolovskiy had a prominent position and was representative of the prevailing thoughts of the time. The most interesting fact is perhaps that the many doctrinal writings of the early 1960s clearly showed that questions of military thought were very much on the agenda in the Soviet Union. However, as for content, the writings did not show any change of thought regarding the prospect of limited wars. A war would still mean a full scale war. The study-group's conclusion was that the main role of the Soviet forces was that of deterrence, but that the armed forces had to be prepared for war should deterrence fail. Thus, a defensive grand strategy arose, but with offensive operations of war. The Soviet civil leadership retained the main responsibility for the deterrence strategy; while the military was mainly occupied with the war-fighting should deterrence fail. This largely showed the division and responsibility of the two groups.¹⁰⁴

As for the Joint Intelligence Committee working parties on the questions of implications of the policy decisions of 1966-68, and the immediate years after, most are still withheld from public disclosure. As only limited parts of the reports are available, it is hardly possible to make any conclusion about the analysis made. Still, many of the content lists are available, showing what reports and studies were conducted and thus giving a broad picture of which focus was present. From these content lists of documents, it is possible to say that the Joint Intelligence Committee working-group was still preoccupied with the implications of leaving the East of Suez region. The commitments to CENTO and SEATO would be upheld, but without any force declarations. There are no references to the Soviet Naval build-up or changes in NATO strategy.¹⁰⁵

Later, by 1969, the intelligence focus had shifted to a broader view on the world than they had for the last decade.¹⁰⁶ Northern Ireland had become a great concern and NATO threats were more discussed. This included a renewed focus on Soviet developments, as well as the Mediterranean region. However, the East of Suez region still figured high. As for intelligence on the Soviet forces, Soviet strategic air and rocket forces remained the focus of attention. Additionally, the new Soviet satellite reconnaissance capabilities that had been built up in the late 1960s were under discussion.

In 1968, new sub-committees of the Joint Intelligence Committee were created: the JIC (A) was to be concerned with external affairs and defence and the JIC (B) became responsible for

¹⁰³ NAUK CAB 182/50.

¹⁰⁴ NAUK CAB 182/50. Note: Soviet and Satellite theatre forces confronting NATO Europe, 17 April 1964.

¹⁰⁵ NAUK CAB 182/72, 'Joint Intelligence Committee, Working Party on Intelligence Implications of Recently Announced Policy Decisions: meetings and memoranda', January – May 1968.

¹⁰⁶ See NAUK CAB 185/9, 'Joint Intelligence Committee (A) (JIC(A)) meetings. Part 3, August – December 1968: NAUK CAB 185/1, 'Joint Intelligence Committee (A) (JIC(A)) meetings 2 Parts', January – August 1969.

interdepartmental assessments of overseas economic matters.¹⁰⁷ There were also some other sub-committees. The Committees worked closely, and reported mainly to the Secretary of the Cabinet. Questions of a predominant military nature however, were to be reported to the Chiefs of Staff first.

For the period of the 1970s, mainly economic intelligence (JIC (B)) files have been released. What may be concluded from these files is that the British kept mainly concerned with the traditional trading party countries of their former empire.¹⁰⁸ Surprisingly little intelligence work on the Soviet Union was conducted. The British were however concerned over Soviet aims to threaten Western oil interests in the Middle East. Western Europe was dependant on Middle East oil (including Africa) for 82 percent of its supplies. The JIC (B) assessed that the Soviets would increase their import of oil from the Middle East.

Many JIC (A) files are still withheld. The content lists are complete and available, but most individual chapters are withheld. What may be extracted from the 1969-1970 indexes is that the British were concerned with traditional global issues; i.e. East of Suez, Cyprus, Gibraltar, as well as some few military assessment studies on increased Soviet activity in the Indian Ocean and on Soviet interests in Africa. None (at least available) related to Soviet naval developments and activity in home-regions.¹⁰⁹

By 1971, the first greater studies on Soviet maritime strategy and threats towards the British Isles may be found in the JIC (A) series.¹¹⁰ The study 'Soviet Maritime Strategy' and 'Uses of Soviet Military Forces Overseas' were produced in July 1971, while the study 'Likely scale, nature and methods of Soviet attacks on the United Kingdom' was produced in August. However, it must be noted that these were still just a few of many studies. The focus was still of a global scale, predominantly against traditional empire countries and regions.

Again, the full studies remain withheld. However, from the description of the 'Maritime Strategy' study, including the short abstract 'main point made in the discussion', we may detect no great concern. There were, for instance, proposed no further studies, but that '...the paper should be reviewed on a regular basis to take account of changing circumstances'. As for the 'threats against the United Kingdom' study, there was a specific reference to the air- and ballistic missile threats.

¹⁰⁷ NAUK CAB 163/212, 'Joint Intelligence Committee (B): terms of reference and composition', January 1970 – November 1974.

¹⁰⁸ See NAUK CAB 188/15, 'Joint Intelligence Committee (B) (JIC(B)): current intelligence notes', January – May 1971: NAUK CAB 188/16, March – July 1973: NAUK CAB 188/17, July – November 1971: NAUK CAB 188/23, April – November 1972: NAUK CAB 188/28, January – December 1973.

¹⁰⁹ NAUK CAB 185/3, 'Joint Intelligence Committee (A) (JIC(A)) meetings', January – June 1970.

From 1971, we may see a concrete example of the differing view between the American (who were more concerned with the Soviet naval build-up) and the British threat evaluations: The US forces in Europe had in July 1971 given credence to a threat to the United Kingdom from attack by Soviet conventional bombing. These assessments by the Americans were however at variance with the British assessment. The issue was decided to be studied in February 1971 by the JIC.¹¹¹ However, the British found only after a short review of the case that ‘there was no such eminent threat’.¹¹²

Chapter conclusion

The Soviet naval build-up in the 1960s was great. The capabilities and the balance of the Soviet Navy and its long-range air force for influence in the Norwegian Sea, and for possible strikes on NATO’s Northern Flank, were also undisputed. Still, in the overall picture, these developments achieved surprisingly little influence on British foreign and defence policy in the early- and mid-1960s. As discussed in the next two chapters, the British were fully occupied with traditional global interests, mainly with the former imperial countries throughout the 1960s. There was some increase in focus on the Soviet forces in home-waters by 1969-1971, however, this was far less the case than expected, given the Soviet naval build-up and heightening of activity. Neither the Royal Air Force nor the Royal Navy focused much on the new challenges. Thus, the Soviet naval build-up did not influence the inter-service rivalry or the policy discussions of the mid-1960s. However, the Soviet developments proved to have great influence on NATO maritime strategy from around 1967, which soon proved to have great influence on Britain’s renewed interest in home-waters and Europe, and not least the development of the Royal Navy, and the carrier question of the late 1960s and early 1970s. The Royal Navy then saw a role to fill, and again conventional forces would prove to be necessary. It was time for a shift away from the maritime roles defined by Lord Mountbatten and the Admiralty in the 1950s. In due course, via NATO policy and strategic thinking, the Soviet naval build-up also influenced British policy.

¹¹⁰ See NAUK CAB 185/4, July – December 1970: NAUK CAB 185/6, January – June 1971: NAUK CAB 185/7, July – December 1971.

¹¹¹ NAUK CAB 185/6.

¹¹² NAUK CAB 185/7.

Chapter 6: NATO strategy changing, and the demand for a new maritime posture

Numbers of M.P. [maritime patrol] aircraft are being withdrawn. CVS numbers are reduced as are other surface forces. SACLANT faces a gradual erosion both in surveillance and in anti-submarine capability and I would note the clear implication arising from the Czech crisis that this erosion should be arrested.¹

SACLANT Holmes, 1968

The former chapter explained and discussed the Soviet naval build-up. This chapter focuses on the response from NATO and Britain to these challenges. The first part of the chapter reviews and discusses the development of the Flexible Response strategy of 1967, NATO's awakening to the first true Soviet SSBN threat, and the establishment of NATO's maritime STANAVFORLANT force. The second part of the chapter discusses how the flanks became central in this new strategic thinking and the first steps NATO made to alter its maritime strategy. The final part of this chapter discusses British maritime surveillance and ASW capabilities. These roles were assessed by NATO and SACLANT to be the greatest challenges in the new strategic reality.

Chapter 6-A: NATO's 'Flexible Response' strategy of 1967

In 1966, 7 March, President de Gaulle wrote to President Johnson stating the French intention to cease participation in NATO integrated military commands. Three days later an Aide Memoire went out to the other NATO countries proposing to end the assignment of French forces, and the removal of the headquarters from French territory.² The new headquarters in Belgium opened in October 1967. This French decision is an important turning point in NATO history, as it is for this research on maritime strategy. The year after the French decision of 1966 proved very productive for NATO in the areas of strategic debate and change. The concept of a flexible strategy, which the Americans had earlier taken in their national policy and which they promoted heavily in NATO in 1962-63, was now easily accepted. The work started in 1966, but direct guidance was given to the NATO Military Authorities from the Ministers early in 1967. The

¹ NATO Record MC/CS 42, *Summary Record* (20 December 1968).

² NATO IMSWM-64-68, Memorandum on 'Revision of "Facts about NATO"' (5 Mar 1968).

grand strategy of MC 14/3 'Flexible Response' was prepared during 1967, and Ministers adopted the revised strategic concept at their December 1967 meeting – the first major update since 1956/57.

Three levels of 'Flexible Response' were described: 'Direct defence' was about seeking out the enemy to defeat him at a conventional level. If the conventional direct defence should fail, the plans were to go to the next level of 'deliberate escalation'. At this level tactical nuclear weapons were intended to be used so that the attacker would cease his hostilities and withdraw from NATO territory. Should this fail, the last resort was to go to a 'general nuclear response'.

For this to be credible, the capabilities NATO required were based on three pillars: First of all the assured second-strike retaliatory nuclear capability based on a triad of land, sub-surface, and air-launched nuclear weapons. In addition, an acceptance of close control of tactical nuclear weapons was needed. The last capability, which also would have great importance regarding the High North, noted greatly increased and more mobile conventional forces. The strategy implied that NATO needed to prepare for limited incursions.

The command relationships

The command relationships concerning the northern flank of NATO are complicated. Several actors are involved; SACEUR³ (especially with the Commander-in-Chief Allied Force Northern Europe, in Oslo) and SACLANT (Norfolk, US), as well as CINCHAN (Northwood, UK). SACEURs Commander in-Chief Allied Force Northern Norway was primarily concerned with the Scandinavian approaches during the 1960s. The same goes for CINCHAN, and British strategic focus in home waters until the late 1960s. They were mainly focused on the Baltic approaches, the southern North Sea and the Channel. During 1966, CINCHAN and the Channel Committee lost operational status, and this was transferred to SACLANT's Commander-in-Chief, Eastern Atlantic Area⁴. The Commander-in-Chief, Eastern Atlantic Area was moved to Northwood, and has since been led by a British Commander.⁵ SACLANT was clearly the actor who prioritised and worked for the flank to become a central part of NATO's strategic thinking in the mid-1960s.

³ SACEUR: The Supreme Allied Commander, Europe. Prior to 2000, the post was always held by a US Army General, except Lauris Norstad from the US Air Force from 1956-1963. The post has always been held by the US.

⁴ Admiral Sir Varyl Begg (UK) was Allied Commander-in-Chief Channel till 21 January 1966, by when Admiral Sir John Frewen (UK), Commander-in-chief, Eastern Atlantic Area assumed Adm. Begg's responsibilities. Admiral Sir John Bush (UK) relieved Admiral Frewen as Allied Commander-in-Chief channel and Commander-in-Chief, Eastern Atlantic Area on 6 October 1967. IMSWM-64-68.

⁵ NATO IMSWM-64-68.

During the 252nd meeting of the Military Committee at the Pentagon in 1967, the Deputy Chief of Staff at SACLANT, British Admiral Colbert, argued for the new concepts. The highlights of his speech came from a joint SACLANT and CINCHAN paper entitled the 'Maritime Aspect of NATO Strategy'. In his briefing, Admiral Colbert stated: 'We are hopeful, if not plain optimistic, that they will see the virtues of our recommendations for the creation of these two maritime forces from over-all NATO perspective. We believe that these forces could play an important role in connection with the support of SACEUR in defence of the northern flank as well as elsewhere'.⁶ SACLANT's threat perspective on Soviet maritime strategy was the driving rationale; namely a clear perspective on a Soviet strategic shift 'towards the use of open seas to gain their goal of communist world domination'.⁷ This included the great build-up of merchant and fishing fleets, as well as naval forces. The study was very much based on the growing 'strength and capabilities', and not as much as previously, on the 'unpredictable variations of Soviet intentions'.

NATO awakening to the SSBN threat

An additional and very significant development of NATO strategy was an awakening to the evolving threat of SSBNs. Submarines with missiles had existed for several years, but the threat was, by 1967, for the first time focused in the annual studies of 'The Soviet Bloc Strength and Capabilities'.⁸ The existing SSBNs were assessed to operate within two or three days steaming of launch areas off the United States. Many of these submarines were also capable of firing their missiles submerged. In addition to the submarines already operational, a new and very capable SSBN class was expected to come into service by 1968. This correlated to the Yankee-class, which were reported by Soviet sources to be operational by 1967. The SSBNs were concentrated with about 60 per cent of the ships to the Northern Fleet.⁹

This shift in perception, the SSBNs being finally truly capable of strategic strikes and reckoned by NATO as a very significant threat, must be reckoned as one of the main explanations why the Northern Flank, with the Soviet Northern Fleet, came to the centre of NATO strategy, and was no longer a subordinate theatre as the flank of the Central Front. The general naval and maritime Soviet build-up did not receive the same focus (outside SACLANT) within greater NATO circles, which focused on the Central Front and strategic deterrence until 1967, by which time the Soviet submarines had become an important strategic weapon. By 1968 the NATO Military

⁶ NATO Record MC 252.

⁷ Ibid.

⁸ NATO SG 161-67, The Soviet Bloc Strength and Capabilities (1967).

⁹ Robert Berman, 'Soviet Naval Strength and Deployment' in McGwire ed., *Soviet Naval Developments*, p.131.

Committee started to press for the flanks to be a priority. In response, SACLANT made a list of his planned priority of contingencies – and the top priority by 1968 was: ‘Support of AFNORTH in Northern Norway’.¹⁰

By 1968 the strategic roles of NATO naval forces were summed up in the MC 118 document ‘Roles and Tasks of Naval Forces and Their Relationship to Other NATO Forces’. The military committee report now stated that the overall strategy was derived from NATO’s ‘defensive strategy’ in conjunction with the new ‘strategic deployment of the Soviet maritime forces...’.¹¹ The roles of NATO’s naval forces were defined in the cases of peace, limited aggression, and major aggression.

The roles of NATO naval forces in case of peace, limited aggression and major aggression

Peacetime	Limited Aggression	Major Aggression
<p>To contribute to the overall deterrent capability of the Alliance by maintaining an overall readiness for conventional and nuclear war.</p> <p>To demonstrate the unity and capability of NATO in order to discourage or counter Soviet maritime activities aimed at gaining influence at the expense of NATO.</p> <p>To assist in providing intelligence necessary for an assessment of Soviet capabilities and intentions.</p> <p>To provide a NATO capability in periods of tension for quick naval reaction as a meaningful politico-military instrument.</p>	<p>To maintain the seaborne nuclear deterrent.</p> <p>To maintain control of the NATO sea areas.</p> <p>To support other NATO forces, as required.</p>	<p>To maintain supremacy in the NATO sea areas.</p> <p>To conduct operations in support of other NATO forces, as required.</p> <p>To conduct strategic nuclear strikes, as applicable.</p>

Figure 12: The roles of NATO naval forces.¹²

These roles described in MC 118 were the main focus of NATO naval forces at the end of the 1960s. The concepts of ‘External Reinforcements for the Flanks’ also became a central part of NATO strategy. The military measures became focused on permanent reinforcements by

¹⁰ NATO MCM-76-68, Memorandum on ‘Maritime Contingency Forces Atlantic’ (24 September 1968).

¹¹ NATO MC 118: MC 118 (Final), Final Decision on MC 118 ‘Roles and Tasks of Naval Forces and Their Relationship to Other NATO Forces’ (16 July 1969). MC 118 (Mil Dec, incl. full MC 118), ‘Roles and Tasks of Naval Forces and Their Relationship to Other NATO Forces’ (15 August 1968).

¹² MC/118.

redistribution of SACEUR forces, modernisation of the flank forces, and improvements of infrastructure.¹³

STANAVFORLANT

By the end of 1967, the ideas of a new maritime strategic posture had been approved.¹⁴ SACLANT's follow-up paper on the 'Concept of Activation and Operation of the Standing Naval Force Atlantic' (from this data known to all naval officers simply by its acronym; 'STANAVFORLANT') was approved with some amendments and sent forward to the Defence Planning Committee for final approval. The NATO Ministers met in mid December 1967 in Brussels, and approved the activation of STANAVFORLANT.¹⁵ The planned implementation date was set as 11 January 1968. The force was activated in Portland, England, on January 13 1968, with ships from the Netherlands, Norway, the UK, and the US. This quick activation date was possible, since they planned to use the staff and ships already operational and assigned to 'Matchmaker IV'.¹⁶ As General De Cumont, the Chairman of the Military Committee, stated: '...the Standing Naval Force is simply Matchmaker made permanent'.¹⁷

The force was planned to consist of 8 destroyer ships, possibly as few as 5-6. In addition, no nations were allowed to contribute more than 25% of the ships. This was to be a joint international standing force. By the first 6 months, seven nations had contributed; the Netherlands, Norway, the UK, and US as the initial four, soon followed by Canada, Germany, and Portugal.¹⁸

An additional and parallel study by SACLANT (Admiral Ephraim P. Holmes (US), SACLANT from June 1967) focused on 'NATO Surveillance Requirements'. The findings in this study of September 1968 were that NATO surveillance had to shift from national operations and this selective and obsolete intelligence data, to increase its focus on multinational measures and the dissemination of information from the nations to the major NATO commanders. The study

¹³ First lined out in NATO MC-73-66 and finally made into implementing plans with the main document; 'A concept for External Reinforcement of the Flanks', MCM-23-68, *Memorandum on 'A Concept for External Reinforcement of the Flanks'* (16 April 1968).

¹⁴ NATO MCM-45-67 (Rev), *Memorandum on 'Military Intelligence Appreciation (on Standing Naval Force Atlantic)'* (8 December 1967).

¹⁵ NATO MCM-76-69, *Memorandum for the Secretary General on 'The Standing Naval Force Atlantic'* (25 September 1969).

¹⁶ NATO MCM-45-67 (Rev). The 'Matchmaker' exercise series was the outcome of a 1964 British proposal for more and better multi-national naval co-operation. See also Till, 'Holding the Bridge in Troubled Times: The Cold War and the Navies of Europe', p.319.

¹⁷ NATO Record MC/CS 38, *Summary Record* (26 Jul 1967).

¹⁸ NATO IMSM-212-68, *Memorandum on "Maritime Contingency Concept"* (4 May 1968).

indicated ‘...a requirement for substantial improvements in the NATO Maritime Surveillance effort...’.¹⁹

Chapter 6-B: ‘External Reinforcements of the Flanks’

The SACLANT²⁰ staff and the Military Committee work on standing forces and contingency forces went on from 1967-69. In parallel, the Defence Planning Working Group (DPWG) worked on plans for ‘quick reaction forces’ and studies of ‘reinforcement of the flanks’. These concepts must be seen in conjunction with each other, even though there were great rivalries and criticism between the MC and DPWG in this period. As noted by SACLANT in the MC; ‘As you know, SACLANT strongly supported the Military Committee in the position that any study on this subject is rightfully the province of the military authorities and not the DPWG’.²¹ Still, the DPWG studies of reinforcement of the flanks came to the Military Committee’s table in due time. The name of the concept became ‘External Reinforcements of the Flanks’, and the Military Committee was supposed to complete the study and make recommendations to the DPC before this was forwarded to the Ministers.²² This was a complex study, dealing with everything from force requirements and composition, to issues of transportation, local infrastructure, logistical support, communication, and the principles of cost-sharing.²³ In addition, SACEUR and the flank nations agreed that the defensive problems of the Southern and Northern Flanks were so different, that they should no longer be referred to as ‘the flanks’ – but as the ‘Northern Flank’ and the ‘Southern Flank’.²⁴

The ‘External Reinforcements of the Flanks’ study contained four operational elements; the Allied Mobile Force (AMF), the Standing Naval Force, the Quick Reacting Mobile Force (QRMF) and the Maritime Contingency Force. These four elements were then divided into two sets of forces: the Immediate Reaction Force (the AMF and the Standing Naval force), and the Reinforcement Forces (the QRMF and the Maritime Contingency Force).

¹⁹ NATO IMSM-483-68 (Rev), *Memorandum on ‘Status Reports’* (12 November 1968), and IMSWM-362-68, *Memorandum on ‘Status Report’ for DPC in Ministerial Session* (23 Dec 1968).

²⁰ Admiral H.P. Smith (US), April 1963 – May 1965, Admiral Thomas H. Moorer (US), May 1965 – June 1967. Admiral Ephraim P. Holmes (US), June 1967 – September 1970.

²¹ NATO Record MC 252.

²² NATO Record MC/CS 38.

²³ NATO MCM-23-68 and IMSM-217-68, *Memorandum on “A Concept for External Reinforcement of the Flanks”* (14 May 1968).

²⁴ NATO IMSM-217-68.

The concept of Standing Naval Forces was a success, while the concept of Maritime Contingency Forces (known by the acronym 'MARCONFORLANT') met objections. The concept was '...in essence a planning concept for forces which would be called upon in periods of tension'.²⁵ The British national Chief of the Defence Staff, Sir Charles Elworthy supported the concept, but had some concerns and felt that the forces should be used for the NATO area only.²⁶ The concepts of Immediate Reaction Forces and Reinforcement Forces were successful, and the principles have continued up to the present day.

From the 'tactical northern flank' to the strategic 'Northern Flank'

When discussing the 'flanks', it is important to note the terminology. Within the studies on 'maritime strategy' of 1967 (starting with the 1965 SACLANT study on Maritime Strategy) and 'Reinforcement of the Flanks', the terminology 'Northern Flank' shifted geographically from the Baltic Sea and strait, to the High North. Prior to 1965 the Baltic Sea was clearly the more important of the two areas in northern Europe. But this was about to change.

The flanks were defined by the DPC of 14 July 1966 as:²⁷ The northern region, with the critical areas being Finnmark-Troms and the Baltic Straits. The south-eastern region, with critical areas being northern Greece, Turkish Thrace, the Straits and eastern Turkey. During a SACLANT presentation and following discussion on Maritime Strategy in 1967²⁸, it was stated, with regard to the Baltic Sea, that this now was 'very much a place where national forces [German and Danish] were located' and should operate. The term Northern Flank clearly changed its meaning between 1965 and 1967. Prior to this the north flank had been a 'tactical flank to the Central Front' – while by the mid-1960s and onwards – the Northern Flank became a new theatre in its own right. This was chiefly due to the awakening to the SSBNs build-up in the High North.

The 'Brosio Study'

SACLANT's work for a new maritime strategic posture and focus on the Soviet maritime build-up bore fruit. The Secretary General, Brosio, supported his views on the maritime threat and strategy and asked for a continuation of the SACLANT study on 'NATO and Soviet Bloc Maritime Capabilities and Strategies'. He also asked for two main questions to be answered; the

²⁵ NATO MCM-76-68.

²⁶ NATO Record MC/CS-40, *Summary Record* (20 June 1968).

²⁷ NATO MCM-73-66.

²⁸ NATO LOCOM 7775, *Presentation on 'Maritime Strategy'* (20 Feb 1967).

relative strength of NATO and Soviet maritime forces world-wide and the respective maritime strategic doctrines of NATO and the Soviet Union.²⁹

The study known as the 'Brosio Study' of 1969 was conducted entirely by SACLANT, but he named it after Brosio. As Admiral Holmes³⁰, who had taken over as SACLANT in 1967, introduced his statement on the study for the Military Committee in a Chiefs of Staff session, November 1968: '...in my Headquarters we refer to this study as the "Brosio Study" because the idea originally stimulated from the Secretary General'.³¹ The highlights of the 'NATO and Soviet Bloc Maritime Capabilities and Strategies' study were first briefed by SACLANT for the Military Committee in May 1968, also after recommendations by Brosio.³² The 'Brosio Study' was controversial at the time – and today we can see that the study was the final important turning point regarding NATO's maritime strategy and perspective of the high Northern Flank, a gradual evolution from SACLANT's study on 'Maritime Strategy' from 1965. Towards the end of the 'Brosio Study', the final three-volume document was forwarded to the Military Committee by March 1969, classified as Cosmic Top Secret - with a limited distribution.³³

The (interim) report on the study by May 1968 focused on two main issues: first, the relative strength of the maritime forces of the two sides, and second; an analysis of the maritime strategic doctrine of the Soviets and the NATO countries.³⁴ SACLANT was occupied with the increasingly global focus of the Soviet Navy, proved (according to SACLANT) by the steady increase in Soviet global maritime operations, from the Norwegian waters, the Mid-Atlantic, the Mediterranean, around Africa, and even in the eastern hemisphere. He also made references to the writings of Gorshkov.³⁵ The perception of a strong Soviet naval build-up grew so strong, that

²⁹ NATO PO/68/117, 13 Feb 68, referred to in MCM-103-69, Memorandum for the Secretary General on 'Relative Maritime Strategies and Capabilities of NATO and the Soviet Bloc' (21 November 1969).

³⁰ Ephraim Paul Holmes (1908-1997). USN Admiral who served as Commander-in-Chief of the US Atlantic Fleet and SACLANT from 17 June 1967 till 30 September 1970.

³¹ NATO Record MC/CS 42.

³² NATO IMSM-211-68, Memorandum on 'Status of the Studies of NATO/Soviet Bloc Maritime Capabilities' (4 May 1968).

³³ Understanding the BROSIO STUDY of 1969: Even today in 2007, this historically important document is classified as NATO Secret and withheld. I traced the document (SACLANT 3800/C-16, 18 March 1969 (Cosmic Top Secret, with strict limited circulation). There is from other de-classified and close related documents greatly possible to reconstruct the documents main focus and conclusions (mainly from NATO Hq documents; IMSM-211-68 of May 1968, Record MC 334 of September 1968, Record MC/CS 42 of December 1968, Record MC/CS 43, *Summary Record* of February 1969 (first complete draft of the Brosio Study) and Record MC/CS 44, *Summary Record* of June 1969.

³⁴ NATO IMSM-211-68.

³⁵ NATO IMSWM-277-68, Memorandum on 'Release of Unclassified briefings on the Soviet World Wide Maritime challenge' (4 October 1968).

by the autumn of 1968, SACLANT, as well as many other national representatives, wanted to 'bring this out to the public'.³⁶

There were two additional factors influencing NATO strategy and force planning by 1968; namely the implications of the Soviet invasion of Czechoslovakia and the general trend of détente and force build-down in central Europe. As for détente, the American December 1967 announcement, pulling back some 35,000 US soldiers and airmen, from April 1968, made a great stir in European debates on defence policy. The invasion of Czechoslovakia was the main issue during the November 1968 meeting of the Military Committee. During this meeting, Admiral Holmes highlighted the need to recognise a significant reduction in the warning time available to NATO naval forces as well as to land and air forces.³⁷ SACLANT saw this as a clear argument for his study regarding a radically increased maritime surveillance capability, as well as better co-ordination of surveillance within NATO. SACLANT was very clear about the critical status of NATO naval capabilities facing the Soviet naval build-up:

Numbers of M.P. aircraft are being withdrawn. CVS numbers are reduced as are other surface forces. SACLANT faces a gradual erosion both in surveillance and in anti-submarine capability and I would note the clear implication arising from the Czech crisis that this erosion should be arrested.³⁸

SACLANT followed up on the issue of anti-submarine decline; 'ASW forces are minimal, to say the least; and that further reduction can be viewed only with apprehension, since such reductions are occurring at a time when Soviet maritime forces are increasing'. Following these statements, he brought the focus onto his on-going radical comparative study of NATO and Warsaw Pact strategies and capabilities; 'NATO and Soviet Bloc Maritime Capabilities and Strategies'.

The first ideas of the 'Brosio Study' were presented to the Military Committee in May 1968. By late 1968 the study-group of American, Canadian, German, Italian, and British officers – as well as SACLANT's staff – had divided the study into four main parts.³⁹

- The first part dealt with the political and economic background of the maritime strategy of the two sides, including a comparison.
- The second part was the strategy paper from which the comparison of results was drawn.

³⁶ NATO IMSWM-277-68.

³⁷ NATO Record MC/CS 42.

³⁸ Ibid.

³⁹ Ibid.

- The third part discussed the maritime capabilities of both sides in a functional and geographical framework.
- The fourth and final part was a computerised operational analysis which attempted to assess some of the maritime interactions between NATO and Warsaw Pact capabilities that could be met in 1977. This analysis included carrier and anti-carrier operations, anti-submarine warfare barrier operations, protection and attrition of sea lines of communications, and afloat support.

A final draft of the study was ready shortly after this status report by SACLANT, though the content of the still classified original document is not expected to differ much. The final version of the 'Brosio Study' was forwarded by March 1969 to the Military Committee⁴⁰, and in due time the study was approved by the Ministers and the Secretary General. It was then issued in three volumes.

The Brosio Study volumes:⁴¹

- Volume I contained a summary of the report.
- Volume II provided a comparison of strategies and capabilities. This volume continued collected data on virtually every aspect of the maritime activities of NATO and the Warsaw Pact.
- Volume III was the operational analysis based on one main scenario for military comparison of the two sides; a maritime war against the Soviet Northern Fleet in and around the Norwegian Sea as support to the northern flank of NATO.⁴²

From a presentation on the study during the 44th meeting of the Military Committee in Chiefs of Staff session, 6 May 1969, some months after submission of the study, it is clear that the content did not change substantially. SACLANT commented:

In summary, SACLANT endorses this study to the Military Committee as a good first step. It states that there is little, if any, time left for NATO to improve its Maritime Forces, particularly in ASW, if NATO maritime freedom is to be maintained. To view this study in any other way would be to misread it completely.⁴³

⁴⁰ NATO SACLANT 3800/C-16, 18 March 1969 (Still classified Top Secret in 2007)

⁴¹ NATO IMSWM-196-69, Memorandum on "Relative Maritime Strategies and Capabilities of NATO and the Soviet Bloc" (7 August 1969). Record MC/CS 44, MCM-103-69, 'Relative Maritime Strategies and Capabilities of NATO and the Soviet Bloc', including attachment Ser 3800/C-16 and Ser 3800/C-8-69 Vol. 1-3 of 10 March 1969 (1969). This SACLANT document is what is popularly known as the 'Brosio Study'. The study is still classified (originally CTS, but downgraded to NATO Secret in 1977). Therefore; nothing is drawn directly from this document, but the reference may be useful for others as it becomes declassified in the future.

⁴² NATO Record MC/CS 43 and Record MC/CS 44.

⁴³ NATO Record MC/CS 44.

SACLANT underlined two main findings from the greater political-economic discussion:

The results of the political-economic section indicates that the Soviets are embarked on a global maritime strategy stemming, first, from a realisation that the Alliance has successfully contained the spread of communist influence in Europe, and hence, they are looking elsewhere and; Second, from their realisation from being thwarted in Cuba in 1962 that such ventures cannot succeed without adequate naval capability.⁴⁴

SACLANT made it clear after the study was submitted that Soviet maritime strategy was clearly global!⁴⁵ SACLANT concluded from this that NATO's maritime strategy should be broad, maintaining a continuing global knowledge of Soviet capabilities and patterns of operations.

The results of the analytic studies of maritime interaction tended to vary, but some findings were clear:⁴⁶

- NATO attack carriers had to operate together for maximum survivability.
- An air-to-surface missile attack was the greatest threat to naval survivability in the Norwegian Sea. (From this we see the origin of the strong focus on NATO interceptor aircraft operating from bases in northern Norway to stop the Soviet bomber aircraft from breaking out into the Norwegian Sea).
- NATO should concentrate on ASW barriers to contain Soviet submarine egress to the Atlantic. (Particularly in the decade ahead when Soviet submarine forces might consist of increasing numbers of nuclear submarines).
- There were significant deficiencies in NATO ASW forces which would become relatively greater if corrective action was not taken.

The 'Brosio Study' concluded that a four attack carrier (CVA) task force, operating in this high threat of Soviet aircraft with air-to-surface missiles, would be able to operate indefinitely and exact a heavy toll on the attackers. If the Soviet Navy brought submarines into the scenario in addition to the aircraft, the four CVA task force would be able to operate for up to 27 days with a survivability of more than 50%. It was judged impossible to operate with a single CVA force. This was regarded as a good survivability for carrier forces. The greatest problem was assessed to be the lack of NATO ASW forces and escorts. Up to 1500 merchant ships were, in 1977,

⁴⁴ NATO Record MC/CS 42. In addition; the Soviet 'global' strategy was also underlined in several other NATO documents of the late 1960s, e.g. MCM-39-67, *Memorandum on 'Force Proposals 1969-73'* (14 November 1967); MCM-44-67; MCM-017-68; IMSWM-196-69.

⁴⁵ NATO Record MC/CS 44.

⁴⁶ NATO Record MC/CS 42; Record MC/CS 43; Record MC/CS 44.

expected to be lost during the first year of a war.⁴⁷ For a few years during the late 1970s, both NATO and American perceptions of the balance of east versus west maritime forces in and around the Norwegian Sea led to less activity in the area. From about 1980 this escalated, and with the evolving US maritime strategy of Lehman and Reagan, American carriers were again seen off the Norwegian coast. This scenario of the ‘Norwegian Sea Battlefront’ following the ‘Brosio Study’ greatly coloured NATO’s perceptions of maritime threats during the early and mid-1970s; its context is remarkably similar to the famous US maritime strategy and NATO maritime and flank posture of the 1980s.

NATO maritime strategy changed during the period 1965-69. The 1965 study on maritime strategy by SACLANT was the first influential step. Although not initially recognised, this study was referred back to during the greater 1967 discussions of a new strategic posture. NATO, with the central leadership, did not awaken to the greatly increased Soviet naval threat until 1967. The final stage in this shift towards a more maritime focus in NATO strategy and a focus on the flanks became clear in the ‘Brosio Study’ of 1969. By the early 1970s, the changes materialised in new strategies and a new balance of forces.

Chapter 6-C: The British maritime surveillance and ASW forces

As we have seen, SACLANT had been greatly concerned over Soviet naval developments from the mid 1960s. From this general concern, NATO’s poor maritime surveillance and ASW capabilities were of most consequence. This last part of the chapter therefore discusses the status of British forces, and especially the contribution they had in relation to the Soviet naval threat.

Maritime Surveillance

Information collection by continuous surveillance and tactical reconnaissance, followed by effective management of the data, is essential for all military actions. Various British aircraft were used to collect information on potentially hostile forces operating below, at or above the ocean surface. Some aircraft, often fighter types, were focused on the tactical reconnaissance of enemy forces, some for long endurance general surveillance, while others were more specialised for the collection of enemy electronic, communication, and acoustic signatures.⁴⁸

⁴⁷ NATO Record MC/CS 44.

⁴⁸ These latter aircraft intelligence communities are normally very “closed” – and only open up on a need-to-know basis. This is a great concern for historians, where even the normal 30-year rule do not apply for releasing state and military information.

As for the role of continuous maritime surveillance, the long range and endurance aircraft were the main assets. By the late 1960s, NATO and SACLANC focused much on this and the British had to take their share of the surveillance of the Soviet naval forces that moved out of their home areas of the Barents Sea. The Shackleton aircraft, introduced in the early 1950s, was the principal patrol aircraft for surveillance and long-range reconnaissance. The Shackleton was the first aircraft built for this role and for Coastal Command. By a 1950s standard, the aircraft had a reasonably good surface search radar with all-around coverage introduced with the Mk.2, as well as ESM equipment and active and passive sonobuoy systems. However, the greatest attribute of the Shackleton was its range and endurance capabilities. On one occasion one of the aircraft reached a point 300 miles off New York to meet a cruiser carrying Sir Winston Churchill, before returning.⁴⁹ Still, by the 1960s the Shackleton was already obsolete in several aspects. For the role of surveillance and reconnaissance, its range and endurance was a great attribute, but as radar technology improved, it became clear that the AVS-21 radar system performed poorly. The ASV-21 radar had a detection range of about 40 NM on fishing trawlers and smaller naval vessels.⁵⁰ The Shackletons were the main asset for surface surveillance, but they often worked closely with other forces.

The V-force of Bomber Command is not often mentioned in cases of maritime warfare, but contributed to maritime surveillance and reconnaissance roles (as well as in the strike role). The Victor PR aircraft had a good surface radar system with ranges of 100 NM detection-range on naval ships. The speed and sensor attributes of the Victors, added to the speed and radar limitations of the Shackleton, was the rationale behind the Victor-Shackleton co-operation for surveillance and reconnaissance of the Norwegian Sea.⁵¹ Three Victors were to fly racetracks at optimum radar-coverage height and report the surface picture to the six Shackletons which would stay at low level and identify all the contacts reported. These were time-consuming operations. Up to 150 ships could be within a radius of only 30 NM in the Norwegian Sea, and all ships had to be positively identified. Reconnaissance of British waters and the Norwegian Sea was a priority for Coastal Command, especially for identifying the large numbers of Soviet intelligence ships. These could be small naval-like ships, but were often trawlers and merchant ships with intelligence equipment.⁵² In the first half of the 1960s there were increasing numbers

⁴⁹ <http://www.kinloss-raf.co.uk/shackleton.html> , Feb 2004.

⁵⁰ In a high-density (many vessels) area, the 36nm range-scale would be used. NAUK AIR 15/927, 'Optimum search tactics for the detection of ELINT (AGI) vessels within the fishing fleet'.

⁵¹ NAUK AIR 15/923, 'Evaluation of the Victor/Shackleton co-operation technique for surveillance of the Norwegian Sea'.

⁵² NAUK AIR 15/927.

of merchant, fishery, and research ships which offensively monitored British and NATO ports and naval operating areas.⁵³

Victor and Shackleton combined operations for maritime surveillance and reconnaissance

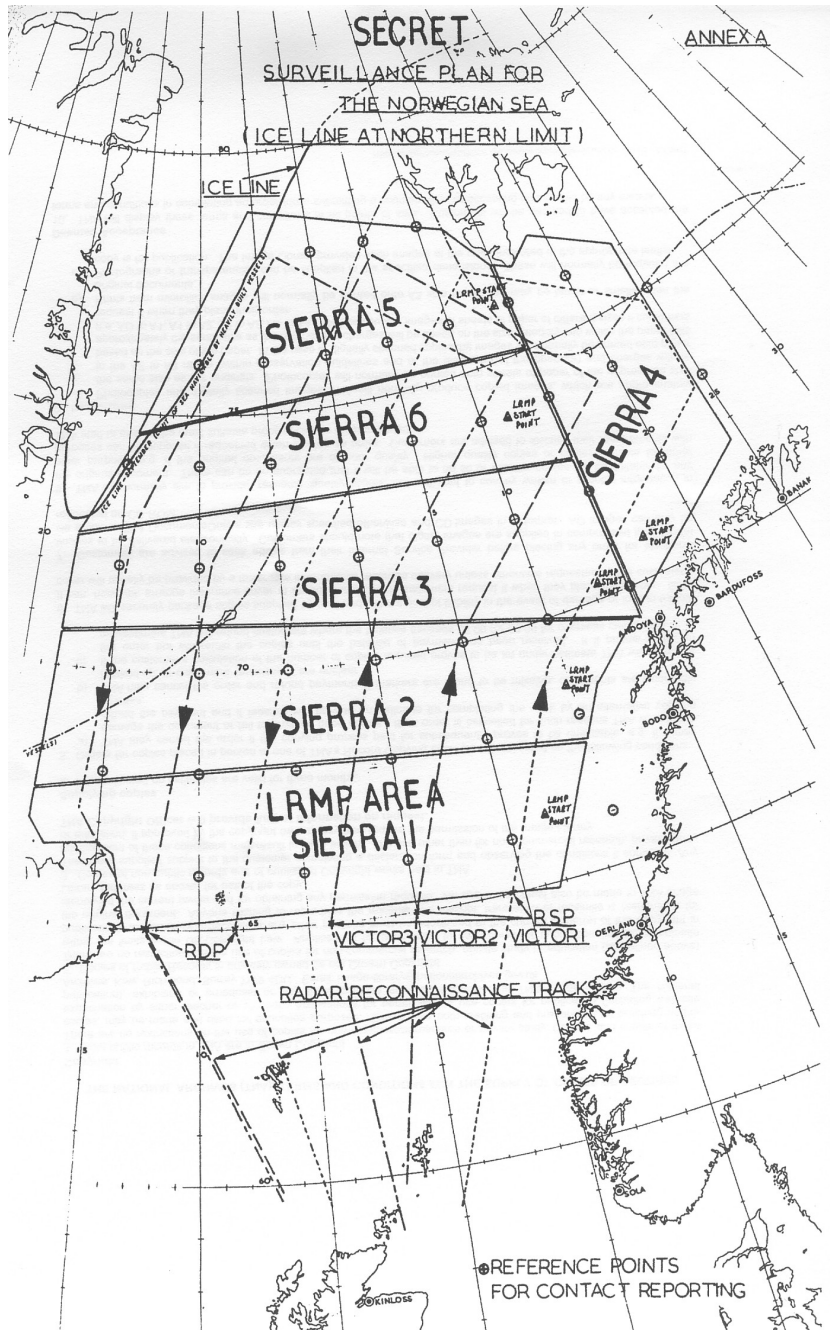


Figure 13: Victor and Shackleton combined operations.⁵⁴

⁵³ NAUK ADM 1/28642, 'Control of Soviet vessels in British territorial waters'.

The Shackletons were the backbone of Coastal Command's surveillance and long-range reconnaissance capability throughout the 1950s and 1960s. Still, by design it was an old aircraft. Technical problems haunted it - and by the early 1960s a modern replacement was needed. This must be seen in relation to the introduction of the P3 Orion during the late 1950s, which set new standards for long-range maritime patrol aircraft. Four aircraft were evaluated as the Shackleton's replacement: The modern P3 Orion and Dassault Atlantic, as well as two British designs based on commercial aircraft. There are some interesting notes from the project in NAUK DEFE 25/15.⁵⁵ A note stated about the Orion: '... cheapest, but politically impossible to buy American...', and regarding the Dassault Atlantic: '... Air Force Departments preference and cheapest after Orion, but politically difficult to buy French'. By 1965, Ministers agreed to go for a Comet variant.⁵⁶ The jet aircraft Nimrod, based on the Comet, finally relieved the Shackletons in the period 1969-71 for traditional maritime reconnaissance roles.

Maritime air forces for ASW

An important aspect of maritime surveillance and intelligence is the collection of acoustic information. This became very important from the 1950s onward, by which time the SOSUS systems had become operational. From the early 1960s, an ASW triad of maritime surveillance aircraft, hunter submarines, and underwater passive acoustic surveillance systems were developed. Such long-range surveillance systems, as the SOSUS, were crucially dependent on good recognition data, positively matched to the true source by e.g. friendly aircraft.

For the acoustic collection and intelligence, the British only had the Shackleton aircraft which had poor collection-capability on acoustics. The Shackletons were equipped with a 16 channel sonic system. The system could only display two sonobuoys, active or passive, at any one time. This was not a LOFAR⁵⁷ system, but a system that looked for cavitation noise of the propellers.⁵⁸

ASW was the core focus of much of the Cold War, both for organic aircraft of the FAA and the land-based long-range aircraft of RAF Coastal Command. From the early 1950s until the late 1970s, both submarines and ASW developed rapidly.

The Shackletons stayed the main ASW asset of Coastal Command throughout the 1950s and 1960s. To counter the Soviet submarine fleet build-up, especially the nuclear submarines, the

⁵⁴ NAUK AIR 15/923.

⁵⁵ NAUK DEFE 25/15, 'Shackleton replacement'.

⁵⁶ NAUK DEFE 25/15, note with Minute Ref. SZ/278/65.

⁵⁷ LOw Frequency Analysis and Recording. Operational by the late 1950s, but the British ASW forces did not have a LOFAR system before the introduction of the Nimrod in 1969.

⁵⁸ Air Publication 2552P vol.1, March 1963, 'Sonobuoy Transmitter Type T.7725'.

sonobuoy became the main sensor. The British had passive buoys, which searched for the propeller-noise of the Soviet submarines, as well as active buoys. In addition, the Shackleton used its ASV-21 search-radar and S- and X-band ECM equipment in ASW.⁵⁹ The Shackleton also had a diesel fume detection system called Utolycus, and an early magnetic system (MAD) to look for submarines. The ASV radar was not effective for detecting submarines operating at periscope depth. This was very rare.⁶⁰ The APS-20 radar of the Fairey Gannet was actually much more capable of detecting small targets, and could even detect a periscope on occasions. The limitation of the ASV radar is also demonstrated by the need to develop a smoke detector system for finding nearby submarines at periscope depth charging their batteries by operating diesel engines. The MAD system of the Shackletons never worked properly, and was abandoned by the late 1950s. The sonar system consisted of the T9003 directional passive sonobuoy and the T11514 directional active sonobuoy. The system was known as the Mk1c Sonar System. As for the capabilities of the system, it was assumed to have a passive detection range of about 1000 yards per knot of submarine speed above cavitation speed. For example: The Soviet Foxtrot-class could have a cavitation speed of 6 knots. If the Foxtrot were transiting at a speed of 11 knots, this would give a detection range of 5,000y per sonobuoy. For the active sonobuoys, they used 3 frequencies between 20.4 to 23.0khz, and had detection ranges of about 2-3000 yards.⁶¹ However, up to the late 1960s, the active buoy-indicating equipment could not display contacts beyond 2000 yards.⁶²

The buoys used by the British were large – 5 feet long and 9 inches in diameter, weighing about 80 lbs. They had to be carried in the aircraft's bomb bay, and consequently took up space intended for the torpedoes and depth charges. The Shackleton could not carry any large number of buoys. In any case, the operators could only display two buoys in the Mk1c system simultaneously. The Mk1c sonar system never gave the British ASW forces any capability to search larger areas.

A British analysis report of the Shackleton trials in the mid-1960s gave the acoustic system, its radar and navigational, and weapon system a poor appraisal.⁶³ Regarding the radar, submarine contacts could at best be detected at some 6-12 miles. These were the test ranges used. Even then, the navigational system was so poor that it normally had offsets of about 600-900 yards.

⁵⁹ Air Publication 4267E, April 1965 'Shackleton'.

⁶⁰ Not until the revolutionary Searchwater ASW radar came along in the early 1980s, were periscope detections so frequent that they put any significant pressure on and limitations to submarine operations.

⁶¹ Air Publication 116G-0201-1 (3rd ed.), October 1968, "Sonobuoys active Mk.1c system".

⁶² NAUK AIR 15/926, 'Tactical evaluation of the phase III Shackleton (ASW DU trial 427)'.

⁶³ NAUK AIR 15/926.

With the Mk30 passive homing torpedo, which had to be dropped within 900 yards of the target, and the Mk44 active homing torpedo that only had an acquisition range of about 400 yards – a disappearing radar contact (DRC) under attack was seldom killed. The crew had to drop buoys to relocate the submarine. Single buoys gave a poor detection percentage, so patterns of buoys had to be used. Tactical sonobuoy-patterns called P-A-P⁶⁴ and PA-PA⁶⁵ were used in the 1960s. The relatively poor kill rate by air, submarine, and surface forces in submarine hunts, as well as the acceptance that tactical nuclear weapons would be used – led the British forces to buy the AS-1200 nuclear depth bomb for the Shackletons by the late 1960s.⁶⁶

The British were years behind the developments of the US and Canadian ‘Julie’ and ‘Jezebel’ sonar systems. The Julie-system was an early multi-static system of explosive echo ranging (EER⁶⁷), and was designed to give long active sonar ranges in deep water. The passive Jezebel system comprised the CODAR (Correlated Detection And Ranging) and the LOFAR (Low Frequency Analysis and Recording) systems. The CODAR system was the pairing of information from two buoys, where the incoming signal was correlated to provide bearings to the sound-source. The LOFAR-system enabled the operators to analyse the acoustics in a wide frequency spectre for the recognition of submarines, even down to ‘fingerprints’ of single submarines. This became very important for the Cold War ASW game, especially when the nuclear submarines came into service. Tests in 1959 proved some 30 NM range for LOFAR, and 20 NM for CODAR against British and US submarines.⁶⁸ These capable systems first came to British forces with the Nimrod by the early 1970s.⁶⁹

The Shackleton had served well, but its flaws were too great, and the new standards set by the P3 Orion made its replacement inevitable. Even in 1960, just after re-modernisation, the Shackleton was assessed as inadequate.⁷⁰ By the mid 1960s, the Shackletons became haunted by fatigue problems, and aircraft had to be progressively withdrawn from squadrons to be reconditioned.⁷¹

⁶⁴ Passive-Active-Passive. Three buoys in the water with 2000 yards spacing.

⁶⁵ Two sets of Passive-Active buoys co-located, 1000 yards spacing on each side of the datum (datum: last known position).

⁶⁶ NAUK AIR 10/8643, ‘Medium capacity air-to-surface bomb: use in Shackleton MR Mk 2A and 3; amendments 1-16’.

⁶⁷ Contemporary understanding of the abbreviation is Extended Echo Ranging. (As it may used other transmitters than explosives).

⁶⁸ NAUK AIR 15/948, ‘Review of operational experience with sonobuoys and suggested future policy’.

⁶⁹ In 1968 the UK Ministry of Defence adopted the US and Canadian LOFAR technology to complement more basic British designs. British LOFAR solutions began to take shape in late 1969 with the production of SSQ-48 (T24501) Jezebel sonobuoys (http://www.ultra-ussg.com/coMaritime Patrol Aircraftny/sonobuoy_history.cfm , June 2004).

⁷⁰ NAUK AIR 41/86, ‘The RAF in Post War Years: Defence Policy and the RAF, 1956-1963’, p.173-174.

⁷¹ NAUK AIR 41/86, p.280.

The Nimrod replaced the Shackleton by 1969-70 as previously described. This gave British forces a great step forward – not at least for ASW.

As for organic ASW aircraft, the Royal Navy got its first operational aircraft capable of combining search and attack roles in one single aircraft in 1955 with the Fairey Gannet. The Fairey Gannet had one pilot, one tactical observer and one aircrew. The aircraft were capable of carrying two Mk30 passive homing torpedoes, as well as bombs, depth charges, and rockets. The ASW aircraft were retired in 1960, as the naval helicopters proved effective. The Whirlwind helicopters were operational by 1960, and soon followed by the Wessex in 1961. These first organic helicopters were used in a range of missions. The Whirlwind had in addition to the ASW role (search or attack), the capability of surface reconnaissance, commando assault, search and rescue, and logistic support. The Whirlwinds were delivered in two main configurations, the HAR⁷² and the HAS.⁷³ The HAS.7 being the main ASW helicopters, with a crew of three. The HAS.7 ASW helicopter had provision for only one MK30 passive homing torpedo. When carrying a torpedo it was not possible to operate the dipping sonar. This required the helicopters to operate in pairs for search and attack. The Whirlwind HAS.7s replaced the Gannet ASW aircraft from 1957 onward but suffered from technical problems. From the early 1960s it was already an obsolete helicopter design, soon replaced by the more modern Wessex, first the Westland Wessex HAS.1 utility batch, later followed by the more specialised, but somewhat unsuccessful HAS.3 ASW helicopter. The HAS.1 were equipped with the T.194 dipper sonar and carried the active Mk44, and, by the late 1960s, the more modern Mk46 torpedoes. It also carried Mk11 depth charges. The Wessex was the first British helicopter capable of night and all weather dipping operations – which were crucial necessities if the helicopters were to operate in the northern areas between Britain and the Soviet naval forces during winter-time. This was also a great step forward for all night-time and poor weather operations around the world. Due to the HAS.1's problems with endurance, it had to be used in either a search-role or an attack-role.⁷⁴ The T.194 sonar normally had a 3000-yard detection range,⁷⁵ and with no torpedoes loaded, the Wessex was able to cover up to 140sq.miles⁷⁶. The later HAS.3, operational by 1966, was unsuccessful due to technical problems, but the HAS.3 helicopter introduced a new era of capacities with the integrated search radar.

⁷² The HAR batch was assault aircraft.

⁷³ 120 HAS 7 ASW models were delivered to the RN. HAS 9 were SAR versions of converted 7's.

⁷⁴ NAUK ADM 219/453, 'Future A/S helicopters: improved Wessex'.

⁷⁵ Ibid.

⁷⁶ The T.195 sonar was tested on some Wessex aircraft, but did not really come into operational large scale service till 1969 with the Sea King. It had better range and thereby better coverage.

The light helicopter Westland Wasp also had an ASW role, for which it carried the passive Mk30 torpedo and later the active Mk44, as well as Mk11 depth charges. It did not have any search sensors, and was tactically operated as an attack unit, which delivered weapons on targeting directions from other units (another dipping helicopter or surface ship contacts). The arrival of the Wasp proved important, and since, light-medium helicopters have subsequently constituted an integrated part of all types of naval ships.

The introduction of the helicopter was an important event in modern naval history. Multi-role capabilities and particularly the ASW dipping sonar system proved so effective, that many nations started building a new class of ships – the helicopter ASW carriers.⁷⁷

The Shackleton's ASW capabilities were poor compared with American technology, as well as against the threat posed. However, the British were still capable of ASW due to a reasonably high number of aircraft. There were also operational and tactical concepts for air-sub co-operation procedures, but the slow production pace of British nuclear hunter-killer submarines made these forces incapable of matching the growing numbers of Soviet nuclear submarines. Conventional British submarines were not able to match them in terms of speed, range or underwater performance.⁷⁸

The one positive development was the introduction of the dipping sonar, which considerably improved the traditionally defensive convoying system. Helicopters must be reckoned as one of the great technological inventions of maritime air power in this era. It enhanced everything from short-range ASW to effective control of shipping in defined areas, with its reconnaissance capabilities. The helicopters were first employed on existing carriers, but soon became available to smaller surface ships. Still, the helicopter saw many challenges in these early years – so the effect of helicopter ASW is hard to evaluate for this period.

In the greater picture, the large numbers of Soviet submarines, nuclear powered and with missile capabilities, and the poor status of British ASW search and attack systems, made this a time of crisis for NATO and British ASW forces.

⁷⁷ The type was also often called "helicopter destroyers/cruisers", due to political reasons and international restraints on carrier forces.

⁷⁸ K. Young, 'The Royal Navy's Polaris Lobby, 1955-62' in *The Journal of Strategic Studies*, Vol25, nr.3, September 2002, p.59.

Chapter conclusion

Up to the decision of 1966 to abandon the carrier forces, the rationale for carriers had rested entirely with the limited war scenario and military diplomatic influence East of Suez. This was a heritage we may trace back to Lord Mountbatten's time as First Sea Lord in 1956, and his line of arguments in the military studies that made the foundation of the famous Sandys's Defence Review of 1957. The Royal Navy had problems shifting from this line of thought. Even though the 1968 Defence White Paper argued for the NATO missions and the threat posed by the Soviet Navy, the carrier advocates still did little to take up the former decision made for the phasing out of the carriers by 1972, this even as SACLANT in 1968-69 publicly argued that the Royal Navy needed to keep the carriers manned, and that even NATO should consider paying for the carriers. They were absolutely needed in the North Atlantic.⁷⁹ However, the Royal Navy did little to use this new NATO concern with the Soviet naval threat and focus on maritime strategy. Even the Treasury, as the department that argued for an abolishment of the carriers, expressed surprise over this.⁸⁰ In fact, the Royal Navy had been extraordinarily quiet regarding the entire carrier issue since the cancellation of CVA-01. Some of this may be explained by the fact that the top leadership, especially Chief of the Naval Staff Varyl Begg (1966-68) had never been a carrier advocate. During his time as Vice Chief of the Naval Staff in the early 1960s, he had de facto been one of the few who expressed doubts about the entire validity of the carrier task force concept.⁸¹

Since the land-based air power won the inter-service rivalry and political battle in 1966, the next couple of years were promising for the RAF. The development of the Harrier was well underway. The F.111 was ordered, and a number of the V-bombers were planned to serve as tactical strike aircraft. The Nimrod was soon to become operational. This successful story was the same for the transport fleet of aircraft. As the planned date for ending the carriers approached, the last existing naval Buccaneer and Phantom aircraft were also to be transferred to the RAF.

Even though the British had focused surprisingly little on the Soviet naval build-up in the politically critical and demanding mid-1960s, the Soviet Navy's developments happened, and clearly influenced NATO maritime strategy in the latter half of the 1960s. The Flexible Response strategy of 1967, NATO's awakening to the first true Soviet SSBN threat, and the establishment of NATO's maritime STANAVFORLANT force became important for British defence policy. It

⁷⁹ NAUK T 225/3735. Press cut-outs, 04 September 1968.

⁸⁰ NAUK T 225/3735. Treasury note for the record, signed by Patterson, 16 April 1969.

also greatly influenced the restructuring of the Royal Navy and the carrier issue as they entered the 1970s. The surprising finding is that the Royal Navy was not a prominent actor in this restructuring. Indirectly, and in time, it proved that this Soviet naval build-up discussed in the previous chapter and the consequential NATO developments discussed in this chapter had great bearing on the future of the Royal Navy. Aircraft carriers became important once again, and maritime surveillance and ASW became prioritised roles. All these three issues were much in focus by SACLANT, and admittedly, the British capabilities were in a poor state in the late 1960s.

⁸¹ Brown, *The Carrier Controversy – British Aircraft Carrier Policy, Discussion and Decision, 1945-1966*, p.5.

Chapter 7: The British heading home, 1968-72

Britain's basic security continues to depend on the strength of the North Atlantic Alliance and it is NATO that by far the greater part of Britain's military forces is committed. But the first of the Government's objectives recognises that British interests and responsibilities are not confined to the NATO area. Britain's political and trading interests are world-wide and they can flourish only in stable conditions.¹

Defence White Paper, 1971

The retreat from East of Suez came as a result of financial problems in Britain, but was also just in time for NATO's changing strategic thinking that resulted from the Soviet naval build-up. The Soviet naval build up had surprisingly little influence on the decision to cancel the CVA-01, and even for withdrawing from the East of Suez commitments. However, the Soviet naval build-up soon made the justification for the re-balancing of the maritime forces, including both the Royal Navy and the maritime elements of the RAF.

This final chapter of the dissertation reviews the British retreat and the consequences it had for maritime air forces, both carrier forces and land-based aircraft. The first part of the chapter starts out by discussing the 1968 Defence White Paper, which announced a more hasty retreat than previously planned. First the British withdrew to the Mediterranean to meet the many challenges in that region in the mid-and late 1960s. Thereafter there was focus on the High North, where the Soviet Northern Fleet had grown to become the greatest Soviet fleet. The second part of the chapter reviews the fate of the carriers in their new scenario, and briefly discusses the carrier fleet of the 1970s. The third part of the chapter reviews the fate of the land-based option that had been chosen. The two last parts of this final chapter discuss how British maritime strategy became balanced regarding both forces and rationale.

¹ PP, *Statement on Defence Estimates 1971*, HMSO 1971 (4592).

Chapter 7-A: A hasty retreat from East of Suez

The 1968 Defence White Paper

The ending of the 'Confrontation' in August 1966, after a signed agreement between Indonesia and Malaysia, further made the case for a British withdrawal from the region. However, as the 1967 Defence White Paper stated: 'It is too early to make firm assumptions about the political pattern of South East Asia...'.²

The Defence White Paper of 1967 did not in reality alter much of the planned structures and defence policy of the 1966 Defence Review. However, an adjustment came with the Supplementary Defence White Paper of July 1967. In particular, forces in the Far East were now to be greatly reduced.³ Several major developments of 1967 determined this change: the evolution of the Government's policy towards Europe, the changing NATO strategy, the Middle East Crisis and the ending of the 'Confrontation'. In addition, the strain on the British economy had even become more severe, and this also demanded an increased reduction of overseas expenditure.

According to Dockrill, the 1967 Supplementary Defence White Paper represented the Wilson Government's first real admission that financial and political realities '...had made the sacrifice of the major part of Britain's responsibilities East of Suez inevitable'.⁴

It was not only the overseas forces there were to be pulled back, one brigade of BAOR and one squadron of RAF Germany were also to be withdrawn. The argument was that an attack by the Soviet Union was unlikely and, if so, an ample warning would be given. However, it was a financially driven decision.

More drastic measures would soon follow. The Cabinet discussed the need for a hasty retreat from the East of Suez region throughout the winter-months of 1967-68. There was a broad consensus within the Defence and Overseas Policy Committee, including the Prime Minister.⁵ The Defence White Paper of February 1968 went much further than the 1966 Defence Review and the Defence White Papers of 1967 in its attempt to stay within a £ 2,000 million cash limit.⁶ By 1968, the Government had carried out a broad review of all aspects of government spending in its attempt to get this under control. Among many other posts, the defence budget was, as a

² PP, *Statement on the Defence Estimates 1967* (3203).

³ PP, *Supplementary Statement on Defence Policy* (3357).

⁴ M.Dockrill, *British Defence since 1945*, p.94-95.

⁵ NAUK CAB 148/35.

⁶ PP, *Statement on the Defence Estimates 1968* (3540).

direct result of the devaluation, further cut by some £210-260 million from the £2,000 million target for the 1970s.⁷ After the 1967 devaluation many more difficult decisions had to be made. The 1968 Defence Review now proposed a serious cut in tasks for the Armed Forces, and an accelerated withdrawal from Singapore and Malaysia as well as from the Persian Gulf. They were all to be completed by 1971. The East of Suez withdrawal, which had been a political issue since 1965, was now to become a reality, and earlier than previously expected. The focus for all British military forces would be Europe and the North Atlantic area.

With the release of the 1968 Defence White Paper, a hasty retreat had been announced. The wording used in the White Paper clearly bears witness to a nation in distress. The economic state of the country had come to such a poor state, that the politicians sought extreme measures. The White Paper succinctly stated:⁸ 'No special capability for use outside Europe will be maintained when our withdrawal from Singapore and Malaysia, and the Persian Gulf, is complete'. The White Paper further specified that the UK would keep some capability to deploy overseas, for use in operations in support of the United Nations. It was a policy of isolation and the consequences of such a radical strategic shift were not yet clear. A few months later, the Supplementary Statement followed up on this change in policy, and made it clear that the security of the country lay 'fundamentally in Europe' and had to 'be based on the North Atlantic Alliance'.⁹ Sokolsky has a very good summary of the British shift in strategic focus: 'The establishment of the NATO command structure and the development of seapower directed towards the defence of the north Atlantic region coincided with the retreat of British seapower from its global position'.¹⁰

It did coincide, but the gradual changing NATO strategies and the rise of the Soviet Navy in home-waters also had a gradual and indirect effect on British strategists and politicians, and thus made the economically motivated rationale seem reasonable.

The Royal Navy had to leave its global role and concentrate on its home-region. However, the memory of great times and a lingering desire to return as a major and global power still persisted. As Rear Admiral Lewin expressed it:

I hope that in the future the navy will have an opportunity to range the oceans and seas of the world... One of the most important parts which we have played in NATO is to

⁷ Correspondance with Peter Hudson, 2008.

⁸ Ibid.

⁹ PP, *Supplementary Statement on Defence Policy 1968*. HMSO 1968 (3701).

¹⁰ Sokolsky, *Sea Power in the Nuclear Age*, p.53.

persuade the Europeans that there are important countries and important things going on in the world outside Europe.¹¹

As Geoffrey Till noted, even though the East of Suez role had attracted the most focus during the 1960s, European security had still been the top priority even before the dramatic decision of 1968 to end Britain's permanent presence in its former empire.¹² This statement may easily be defended; of course home defence role had top priority. It is however striking that all the great procurement programmes during the 1960s rested their rationales mainly upon challenges and commitments East of Suez.

The new Government of 1970

The Conservative Party under leader Edward Heath won the next general election on 18 June 1970. This was for many a surprise victory. However, economic problems had dogged the Labour Government throughout their reign in the 1960s. The devaluation of sterling in 1967, rejected application for membership of the European Economic Community, poor industrial relations, the feeling that the Government had been backing the American war in Vietnam upset many. Edward Heath stated clearly that he wanted to address the problems of rising prices, high unemployment, and not least the increasing tax burden.

Once the new government had been established in 1970, the defence policy was altered. From September until the end of October 1970, the new government worked on a new short Defence White Paper outlining the new course.¹³ The first and most important objective was to: '...enable Britain to resume, within her resources, a proper share of responsibility for the preservation of peace and stability in the world'. The first two concrete strategic priorities centred on committing a 'military contribution to Five Power defence arrangements in South East Asia' and a re-examination of the carrier issue and the need for new anti-ship missiles for the Navy. Again, British forces should be a balanced one – first of all covering the needs of NATO and the home-waters, but also honouring obligations to protect territories overseas and to CENTO and SEATO, as well as contributing to peace and security in the Gulf, and giving solid support to United Nation operations.

¹¹ Rear Admiral Lewin quoted in Till, 'Holding the Bridge in Troubled Times: The Cold War and the Navies of Europe', pp.310-311.

¹² Ibid., p.310.

¹³ See for instance: NAUK CAB 148/102, 'Defence and Oversea Policy Committee Papers 19-50, 1970 Sept 15 – Dec 31'. Memorandum by the Secretary of the State for Defence to the Cabinet (DOPC), 'Presentation of Defence Policy', 14 October 1970.

However, as only one carrier would be available in the 1970s, new British efforts to become a world-Navy did not really involve more forces than those assigned by the former government.

The British presence on and around the Arabian Peninsula and the policies regarding the Gulf States were to end in late 1971. This was according to decisions made and the diplomatic work done by the former government in 1968. However, the new government argued for a revised policy. The Secretary of State for Foreign and Commonwealth Affairs, Sir Douglas-Home, presented a report made by Sir William Luce to the Cabinet (DOPC) in December 1970. This report outlined the new strategic aims for the Arabian region. The strategic objectives of the British were:¹⁴

- (a) to contribute by all possible means to the creation of conditions which would ensure peace and stability;
- (b) to preserve as much influence as possible with a view to maintaining that stability and to limit communist influence in the area to the greatest possible extent;
- (c) to maintain the uninterrupted flow of oil on reasonable terms;
- (d) to increase British exports to a rapidly growing market.

Therefore, the Foreign and Commonwealth Office recommended that the Cabinet should support a British attempt to make new agreements with some nations (especially Bahrain, Qatar and possibly the Union of Arab Emirates), or even a new union with these nations, as all the old agreements were about to end. However, the Secretary of State tried to limit any potential new obligation of forces for such a revitalisation of commitments East of Suez, as this would not be possible without vitiating the amphibious forces for flank enforcement and the Mediterranean forces dedicated to NATO operations.¹⁵ In the end, an interdepartmental study-group was ordered by the Prime Minister to examine the foreign policy and defence questions regarding the Persian Gulf. A preliminary report was presented in late December by the Secretary of the Cabinet, Sir Burke Trend.¹⁶ However, the group did not come to any significant conclusion, other than confirming that China, to a degree, but particularly the Soviet Union, had intensified their deployments in southern Asia and Africa after 1968.

¹⁴ NAUK CAB 148/102. See two Memorandums by the Secretary of State for Foreign and Commonwealth Affairs to the Cabinet (DOPC), dated 08 and 10 December, 1970.

¹⁵ NAUK CAB 148/102. Memorandum by the Secretary of the State for Defence to the Cabinet (DOPC), 'Policy in the Persian Gulf', 28 December 1970.

¹⁶ NAUK CAB 148/102. Note by the Secretary of the Cabinet, 30 December 1970.

Chapter 7-B: Britain, the Soviet Navy and NATO strategy

As for a study of British maritime strategy, the British were fully occupied with East of Suez tasks and rationales for new forces. As for the home-waters, little happened on a national basis. The British followed NATO developments from the late 1950s.¹⁷

However, this slowly began to change in the late 1960s. Still, NATO and USN were clearly leading the way. The 1968 Defence White Paper stated that: 'Britain's defence effort will in future be concentrated mainly in Europe and the North Atlantic area'.¹⁸ NATO strategy had, with the approval of MC 14/3, officially changed to a 'Flexible Strategy' in 1967, and the timing was perfect for the British to play a part in the next stage of drawing up military plans and deciding upon future force planning.

First home to the Mediterranean

The decision to retreat from a global role made large forces available for NATO. Both the challenge posed by the Soviet naval build-up and the emerging trend of détente came into focus. The 1968 Defence White Paper had pointed the way forward. However, as this clearly was a hasty decision, the details and consequences were not discussed. The Supplementary Defence White Paper of July 1968 followed up on this, and made clear Britain's new direction. A small naval force would be kept in the Mediterranean from 1968; a squadron of long-range maritime reconnaissance aircraft (first the Shackleton, later the Nimrod) from 1969, from 1970 a guided-missile destroyer would be added permanently, and a commando carrier for part of the year to the new maritime force stationed in the Mediterranean

Most of the other forces were arranged as mobile assets based in Britain. However, maritime exercises, patterns, and the new greater commitment to NATO were focused initially on the Mediterranean.

¹⁷ As for background literature on NATO's changing strategy thinking in the 1960s, I have had great use of Pedlow's 'The Evolution of NATO Strategy 1949-1969' in *NATO Strategy Documents 1949-1969*, and Hill-Norton's *No Soft Option. The Politico-Military Realities of NATO*. The maritime aspects of NATO's strategic thinking is well captured in Sokolsky's *Seapower in the Nuclear Age, The United States Navy and NATO 1949-80*, and Tamnes's *The United States and the Cold War in the High North*. However, there have been produced a great number of books on this issue. The classical studies of the Soviet Naval expansion includes: MccGwire's edited *Soviet Naval Developments* and Ranft and Till's *The Sea in Soviet Strategy*, as well as the somewhat less known *Russia looks to the Sea* by Fairhall. These were important works of the time for the wider Western perceptions of the Soviet naval developments, the Northern Fleet included.

¹⁸ PP, *Statement on the Defence Estimates 1968* (3540).

Readjusting, and looking to the North Atlantic and the High North

The British national debate was preoccupied with carriers and the East of Suez roles until 1968, when attention turned to the Mediterranean. As for NATO's strategy in 1967-69, maritime strategy was heavily debated in Brussels and within SACLANT. SACLANT's perspectives on maritime strategy clearly gained strong support within the central leadership of NATO. However, the British involvement in the debate was remarkably passive. Sometimes they supported SACLANT, often they were opposed to American proposals.¹⁹

However, despite Britain's lack of involvement in the early changes of NATO maritime strategy in the mid-1960s, it is very clear that the final 'Flexible Response' strategy of 1967 had a great effect on maritime strategy and the balancing of and requirement for new forces – the British included. Naval vessels, as well as organic and land-based air power, became important both for anti-invasion and sea control in support of the flank-nations.

NATO's concept-study; 'A Concept for External Reinforcement of the Flanks', constituted a great shift for NATO's navies.²⁰ SACEUR led the implementation of this concept, which started late in 1968. From the beginning he drew UK forces into the concept. By November 1968 SACEUR had made proposals to the UK, that with their newly declared amphibious forces and the Mobile 3rd Division they offered support in specific areas on both the Northern and Southern Flanks.²¹ The British supported SACEUR with a UK commando carrier in Exercise Sunshine Express the following year. In addition, in 1968 proposals were made by NATO to the UK for elements of 3rd Division to deploy to the Northern Flank for exercise purposes in 1969. This was now possible as the British were ending their world-wide military role. In fact, the British Defence and Overseas Policy Committee agreed that it was important to demonstrate the reality of their intention (made with the 1968 Defence White Paper) to contribute more to NATO challenges.²²

As for the maritime threats that had emerged in home waters, these consisted of Soviet long-range aircraft, surface ships, and submarines. In the mid-1960s the focus was on the eastern Mediterranean, while from the late 1960s, the focus turned to the High North. The first large Soviet naval exercises were conducted in north Norwegian waters from mid-1960s, but the great exercises in the late 1960s and early 1970s attracted broader attention. The Soviet forces

¹⁹ See for instance: NATO IMSWM-055-68, 'Memorandum dealing with "Maritime strategy"' (25 March 1968).

²⁰ NATO MCM 23-68.

²¹ NATO Record MC/CS 42.

²² NAUK CAB 148/35.

operated even as far as the GIUK and around the British Isles.²³ The great threat discussed was whether the Soviet forces could win the air and land war at this flank of the Norwegian coast. Further, the question remained whether or not they then would be able to move their forces forward with long-range air power and seriously threaten continental Europe and Britain, as well as covering large portions of the northern Atlantic. The Soviet forces would be able to secure their other maritime forces with air cover, as well as working offensively with their heavy armament of long-range air-to-surface missiles.

This describes the core difference that the new strategy of Flexible Response meant for maritime forces and maritime air power. The conventional struggle on land, both in central Europe as well as along the flanks, was at the centre of this strategy, and thereby the maritime tasks were to protect the flanks and protect the sea lines of communication in support of a land-war. The flanks further had a special focus, since they were viewed as the most likely areas of limited Soviet attacks because of the risk of nuclear escalation along the central front.²⁴

Regarding British security, and the British perspective on Norwegian waters and northern land-areas, Admiral Sir William Staveley, First Sea Lord (1985-89), explained:

Considering the situation if we were to relax our guard in this strategically important area, putting at risk the sparsely populated region of North Norway, then Iceland and the Faeroes and thus placing the North Sea and the United Kingdom so much closer to the front line of Soviet forces, needlessly exposing ourselves to a greater threat which would make warfighting a much more daunting prospect for NATO. Put another way, if we were to permit the Soviet Navy free reign north of the Greenland-Iceland-Norway Gap, their front line would be closer to this country than the inner German border: that is a prospect which I would not relish.²⁵

Staveley further stated: 'Recognizing the vital importance of the Northern Flank to the conduct of maritime operations in the Norwegian Sea and Atlantic as well to the defence of the United Kingdom itself, we commit substantial resources to the defence of the region'. Northern Norway and the Norwegian Sea were important during this era of powerful missile carrying nuclear submarines and missile armed long-range aviation.

To demonstrate this new focus, British maritime forces sent the commando carrier HMS BULWARK to northern Norway for the 1968 'Polar Express', the largest yet of the

²³ See for instance: S.Maloney, 'Fire Brigade or Tocsin? NATO's ACE Mobile Force, Flexible Response and Cold War' in *The Journal of Strategic Studies* (Vol.25, nr.4, December 2004), p.590-591 .

²⁴ J.Sokolsky in J.Hattendorf and R.Jordan ed., *Maritime Strategy and Balance of Power*, p.321.

²⁵ W.Staveley in G.Till, ed., *Britain and NATO's Northern Flank*, p 68.

reinforcement exercises at the Northern Flank.²⁶ With this, and the ‘Strong Express’ exercise of 1972, it was ‘crucial for the Royal Navy and Royal Marines to emphasise their role on NATO’s flanks after the withdrawal from East of Suez’.²⁷ This new search for rationale applied to both the Royal Navy carriers and amphibious forces. As Grove has put it; ‘Asserting a role in Norway was vital to provide a continued rationale for the two British assault ships (LPDs) completed just as Britain was abandoning the “East of Suez” role for which they were built’.²⁸

This was a delicate and difficult issue; what place did carriers and landing-ships have in the new strategic reality? Since 1956 their heritage, from Mountbatten’s time as First Sea Lord, was found in the East of Suez missions, and not in nuclear Cold War war scenarios.

Chapter 7-C: The fate of the carrier task force concept

The new government, and the question of keeping the old

The new Conservative Government under Edward Heath, which took power on 19 June 1970, brought change to the defence sector. The new Secretary of State for Defence, Lord Carrington, with his naval background as First Lord of the Admiralty (1959-1963) under Macmillan, introduced some important changes.²⁹ He considered it undesirable to reverse the policy of the previous administration of transferring the fixed-wing sea-borne aircraft from the Royal Navy to the RAF. However, he considered it urgent that the Royal Navy should get new weapon-systems and capabilities to make them less dependent on land-based air power. The first step was to negotiate with the French for a joint production of their Exocet surface-to-surface weapon. The Royal Navy needed this in order to have some effective capability against the rising Soviet Navy and their increasing numbers of missile armed surface combat ships.

Despite the focus on NATO, decided upon in 1968, the new government also found a reason for keeping a limited presence East of Suez. As carriers were not an option for the future, the British proposed, in 1970, to contribute a limited force of naval ships and some aircraft to future Commonwealth defence arrangements. The force-proposal included a naval force of five frigates/destroyers, including afloat support, one UK battalion with an air platoon, one artillery battery, one flight of six Whirlwind helicopters and up to four Nimrod aircraft. In addition, staff,

²⁶ Grove, Eric, with Thomson, Graham, *Battle for the Fiords* (Annapolis, Maryland: Naval Institute Press, 1991), p.14.

²⁷ Ibid., p.27.

²⁸ Ibid., p.28.

engineers, and logistical support were needed. After pressure from allies in the region, a limited air defence force was also proposed.³⁰

The greatest change introduced by Lord Carrington concerned the fate of carriers. As it would take time for the Royal Navy to rebuild an independent capability, it was crucially important that the phasing out of at least one of the remaining fleet carriers was halted. He argued they could well last out the 1970s. The decision of the previous government to phase out the two last carriers as the retreat from East of Suez was completed in late 1971-early 1972 was still standing. However, in terms of their hull life, both HMS ARK ROYAL and HMS EAGLE could last out the 1970s. HMS ARK ROYAL had recently had an extensive three-year refit, and operated the modern Phantom and Buccaneer aircraft. HMS EAGLE, on the contrary would require a refit just to keep her going past 1972, even with the older aircraft and then a further extensive refit to be able to operate the newer aircraft. On the other hand it was clear that a continued operation of both the carriers would cast a heavy manpower burden upon the Navy, and would probably have serious consequences for the rest of the Navy. Lord Carrington therefore recommended that only HMS ARK ROYAL would be kept in service until the late 1970s, by which time the new missile systems could be operational for the Navy. In addition, it would give the Navy time to examine whether it would be worth-while to provide the new cruisers with a V/STOL capacity.

Lord Carrington's proposal made sense, as the Navy would not waste the money just spent on the extensive refit. Keeping HMS ARK ROYAL would not require any additional capital resources, and thus involved only minimum financial cost and adjustment of the present plans decided by the previous government. Lord Carrington played his hand with political skill. He did not open a fight with the RAF, as he argued for the RAF to man the naval aircraft. He further asked for the continuation of HMS ARK ROYAL to fill the gap in capability, until new systems would take over late in the 1970s. Finally, he argued that this solution, which in fact involved only small costs, would '...be a valuable politico-military advantage in relation to NATO and also our Commonwealth Allies'.³¹

Once there emerged the possibility of extending the life of the existing carriers, the Treasury again became involved, as this would involve cost, manpower, aircraft and ships.³² The cost of

²⁹ NAUK CAB 148/102. Memorandum by the Secretary of State for Defence to the Cabinet (DOPC), 08 October 1970.

³⁰ Ibid.

³¹ Ibid.

³² NAUK T 225/3735. Treasury note for the record, 6 August, 1970. .

running the carriers in 1970 was about £13 million, and retaining the carriers longer would at least cost the same, probably more as refits and more maintenance would be needed. This cost-estimate did not include the 5,500 men required for the carriers, which would cast a great strain upon the Navy. Further, if the Navy was to retain their aircraft, the RAF would probably need some additional aircraft for their own tasks.

In the end, the HMS HERMES was converted into a commando carrier, becoming operational by 1973. Soon, she also began to operate the new Sea King ASW helicopters, as well as the Sea Harriers when they became operational in the mid-1970s. The veteran HMS HERMES thus became a small, but fully worthy aircraft carrier with a balanced airwing. The HMS EAGLE was to be scrapped as planned by 1972. HMS EAGLE left Singapore on 31 October 1971, for her last journey back home. This may be seen as the end of the Royal Navy's permanent presence East of Suez. HMS ARK ROYAL was retained until the late 1970s.³³ She lived off the spares of the retired HMS EAGLE and was the backbone of the Fleet until her retirement in 1978. With her retirement, the Fleet lost its AEW capability.

Not a new carrier – but a ‘through-deck cruiser’

By 1966, the MoD, with the naval ‘Future Fleet Working Party’, was carefully looking at the possibility of using V/STOL aircraft to give the fleet some independent striking capability. The prospect of operating the new RAF V/STOL aircraft, the Harrier,³⁴ was more specifically studied from 1968 onwards. And it was officially discussed in the House of Commons for the first time in February 1969. The Under-Secretary of State for Defence for the Royal Navy, David Owen, then confirmed that successful trials had been conducted with the RAF V/STOL aircraft from the existing carriers and commando ships, and that they could also be operated from the Tiger-class cruisers after a conversion had been done. He further stated that the design studies for the planned new surface ships would take into account this development.³⁵

The new government of October 1964 had cancelled the Royal Air Force P.1154a, and the objection to V/STOL aircraft continued. Denis Healey personally argued for a cancellation of the P.1127 throughout 1965 and up to the presentation of the Defence Review in February 1966, this mainly on the grounds that it was ‘not essential operationally’. His motivation was most likely a

³³ PP, *Supplementary Statement on Defence Policy 1970*, HMSO 1970 (4521).

³⁴ The joint project for the supersonic P.1154 V/STOL had been cancelled in 1964. The Navy had never wanted this RAF proposed aircraft, and then got to order their preferred Phantom aircraft. The first Phantoms were delivered in 1969. However, the RAF persisted and the V/STOL story continued, and would prove greatly important for the Navy in the late 1970s and for the Falklands War. The Harrier V/STOL for the 1970s originated from the Hawker P.1127, of which saw its design work in 1957. This evolved into the Kestrel evaluation aircraft which first flew in 1964. From this the RAF Harrier was developed and became operational from 1967.

wish to get the defence budget below the £2,000 million limit the Government had set in late 1965. The cost of the P.1127 was estimated at £60-65 million for the research and development, and a unit cost of £0.75 million.³⁶

However, the Cabinet could not go ahead with this recommendation, as the Prime Minister only a year previously had, during his announcement of the cancellation of the P.1154 aircraft, strongly stated that there was an 'urgent need' for an operational version of the P.1127 as the replacement. This became prestigious, not least because this was the first VTOL fighter aircraft for close support of land forces. It was also a clear promise to the defence industry.³⁷ In the end, the P.1127 could not be cancelled: 'For reasons of time-scale and cost, the deliberate decision was taken right at the start to go for the minimum operationally viable aircraft; to eschew all unnecessary elaboration of the requirement; to accept the consequent performance limitations; and to have the aircraft in service at the beginning of 1969.'³⁸

The evaluation of the P.1127 continued with the 9 P.1127 Kestrel aircraft evaluation from 1964, and as the P.1154 was cancelled a modified P.1127 Kestrel was ordered as the Harrier GR.1. The Royal Air Force argument that this would be a 'unique and flexible aircraft' had won acceptance. The Defence and Overseas Policy Committee (DOPC) authorised an initial order of 60 aircraft and an option for 40 more in March 1966.³⁹ A two-seater version was also decided upon (primarily) for training purposes. The Cabinet approved this order of 60 single-seat and 10 two-seat P.1127's, now called the Harrier aircraft in December 1966, after disagreement with Denis Healey. This order was expanded to 77 Harrier GR.1 single-seat and 13 Harrier T.2 two-seat aircraft in 1968, as a consequence of the cancellation of the planned F.111 purchase from the Americans in February that year.⁴⁰

Even though the Royal Navy had decided to go for the Phantom instead of a British design V/STOL early in the 1960s, the V/STOL aircraft continued to be tested from the carriers. However, this was not a process driven by the Royal Navy, but rather by the industry, the Ministry of Industry and the Treasury, for the potential of export. For instance, the P.1127 had demonstrated successfully various V/STOL operations from the HMS ARK ROYAL in 1963, and later the commando carriers.⁴¹ This proved successful, and the aircraft was subsequently

³⁵ Extract from Hansard, 19 February 1969, in NAUK T 225/3735.

³⁶ NAUK CAB 148/26.

³⁷ Ibid.

³⁸ NAUK CAB 148/26. 'P.1127', Memorandum of the Minister of Aviation.

³⁹ NAUK AVIA 65/1746. 'The Harrier Project: historical summary', 1965-71.

⁴⁰ Ibid.

⁴¹ NAUK T 225/3296. 'Research and development of a modified version of the P.1127 for the Royal Air Force Harrier Jump Jet', October 1967 – November 1968.

exported to the US Marine Corps and others, and brought into service with the Royal Navy in due time.⁴²

However, there was no intention to extend the life of either of the existing carriers for the sake of operating V/STOL aircraft. From a MoD perspective, it was also emphasised that if Harriers were deployed from ships after 1972, they would be operated by RAF aviators, as it clearly would be more cost-effective to keep all fixed-wing aviation within one service.

However promising the concept of V/STOL aircraft for use from naval ships, the general case was proceeding at a low pace, at least within the Royal Navy. There were some studies under way, but those focused primarily on a possible anti-surface ship strike role.⁴³

In the late 1960s, proposals for a conversion of HMS ARK ROYAL and HMS EAGLE into 'combined carriers' – operating both helicopters and commandos, as well as the new 'jump-jets' (what the Press often called the Harrier V/STOL aircraft), still kept appearing as an alternative in the Press.⁴⁴ Clearly the Navy was working to restore the future carrier capacity, but this had to proceed by unofficial channels. As Admiral Henry Leach stated in a recent interview, within the Navy caution was taken not to use the 'carrier' term in relation to the new ships. Officially they had to be called 'through-deck cruisers', even though they clearly could carry fixed-wing aircraft.

In 1969, Mountbatten reappeared on the public scene arguing for carriers.⁴⁵ He argued that they could well be operated beyond the present planned date of scrapping. He further argued for the new possibilities that had emerged; the prospect of operating the new V/STOL Harriers from far cheaper ships than had been the case in the past. The option of extending the life of the old fleet carriers, for filling the gap until the new 'through deck cruiser' would be operational, was now a reality.

The INVINCIBLE-class

Following the cancellation of the CVA-01 and the decision to go forward with a navy without carriers in 1966-67, and the tumult that followed, work started on the large ASW helicopter capable cruiser for the NATO EASTLANT area of operations. The design and political process went through several phases. Two designs competed; an ASW cruiser of 12,500 tons capable of

⁴² The first RAF Harrier squadron, the No. 1 Squadron RAF, was declared operational on 1 January 1970.

⁴³ NAUK T 225/3735. Treasury note for the record, signed by Patterson, 16 April 1969.

⁴⁴ NAUK T 225/3735. Several Press cut-outs from 1969.

⁴⁵ NAUK PREM 13/2935, 'Lord Mountbatten's critical remarks on phasing out of carriers: speech at Foyle's luncheon and letter to Prime Minister', 26-30 September 1969. Letter from Mountbatten to the Prime Minister, 26 September 1969.

carrying missiles and six helicopters, and a larger 17,500 tons ASW cruiser fully capable of filling the role as a command and control platform for naval forces. The project ended up with the ‘through-deck cruiser’ design of the INVINCIBLE class. It was then officially known as ‘Through-Deck Command Cruisers’ (TDCC). However, as part of the re-evaluation of defence policy, including the future of the structure of the Royal Navy under the new government, the ship was not ordered until 1973. The new ‘through-deck cruiser’ design had then evolved into a 19,000 tons ship, officially called a ‘helicopter carrying heavy cruiser, ‘CAH’. The first ship, HMS INVINCIBLE, was laid down by 1973, launched in 1977 and became fully operational by 1980 – just in time for the Falklands War. HMS ILLUSTRIOUS was laid down in 1976, launched in 1981 and became operational by 1982. The last ship, carrying the ARK ROYAL name after the last fleet carrier, was laid down in 1978, launched in 1981 and became operational by 1985.⁴⁶

The INVINCIBLE-class was originally intended as a pure ASW ship for the North Atlantic challenges posed by the Soviet naval build-up, but the ship saw many changes both in its design and intended roles. For example, the Russian concept of long range reconnaissance and strike aircraft, armed with long range missiles, led to the requirement of a self defence force for naval forces at sea. The RAF Harrier STOVL aircraft had matured, and suited the ship perfectly. By 1973 the air defence Harrier had been fully integrated into the Armed Forces. By 1976, the commando role was again included in the ships’ capacities. From the beginning of her operational duty – the HMS INVINCIBLE had evolved into a new, small multi-purpose carrier carrying ASW forces, Commando forces as well as a flight of Sea Harriers.

Chapter 7-D: The fate of the land-based air power option

The last garrisons and the islands

Several events marked the hasty retreat from British roles East of Suez. The retreat was not free of political criticism and debate, but the British broadly followed their plans. After the end of the confrontation between Malaysia and Indonesia in August 1966, 10,000 British servicemen were withdrawn from Borneo. There were considerable discussions and criticism of Britain’s role in the area after the crisis of Rhodesia (declaring independence in 1965) and Britain’s inability to persuade Israel to give up her conquests after the 1967 Arab-Israeli War. Finally, Britain did not

⁴⁶ The HMS HERMES and HMS INVINCIBLE made the backbone of the Fleet for the Falklands War. After the war, HMS BULWARK was disposed of and HMS HERMES was sold to the Indian Navy.

in the end, commit to defending South Arabia after her independence in 1968. By then the retreat was fully decided upon, and the decision was followed up by a withdrawal.

One may say that finally the national strategy was to adopt the realities of Britain's financial situation. From the late 1960s a new strategy emerged – based on more commitment to continental Europe and areas closer to the British Isles and on maritime nuclear deterrent, as well as balanced conventional forces. Britain only maintained a few of its garrisons around the world. It was no longer a global power, but a regional power.

The main part of British forces and infrastructure East of Suez were scaled back. Certain military obligations were still there and the services would have to be prepared to deploy limited forces. For this purpose, the British decided in 1968 to keep Gan and Masirah in order to keep route options open.⁴⁷ However, in the end, this never came to reality.

By 1971 all British resident forces in the East of Suez region had been withdrawn. The former treaties had been terminated, but new treaties of friendship had been signed with Bahrain, Qatar, and the United Arab Emirates. British naval and air forces would visit the area on a regular basis. A force of six ships was intended to be stationed more or less permanently as a contribution to the Five Power arrangements and the ANZUK Force. The Beira Patrol of the eastern African coast was also to be upheld, as well as a guard ship at Hong Kong.⁴⁸ The British still had interests in the region.

The land-based forces

Since land-based air power won the political battle in 1966, the 1966 and 1967 Defence White Papers were very promising for the RAF, even though the Supplementary Defence White Paper of July 1967 decided on some force reductions. The development of the P.1127, now officially known as the Harrier, was well underway and the first squadron was estimated to be operational by 1968-69. The F.111K, the British variant of the American aircraft, was proceeding, and a number of the V-bombers, which were losing their strategic role to the Polaris submarines, were planned to enter service as tactical strike aircraft. The world's first turbo-jet maritime reconnaissance aircraft, the HS 801 project (later named the Nimrod) was also proceeding. This successful story was the same for the transport fleet of aircraft.

⁴⁷ PP, *Supplementary Statement on Defence Policy 1968* (3701).

⁴⁸ PP, *Statement on Defence Estimates 1972*, HMSO 1972 (4891).

As the planned date for ending the carriers approached, the last existing naval Buccaneer and Phantom aircraft were to be transferred to the RAF.⁴⁹ The 68 naval Buccaneers would make up six squadrons. Three squadrons would keep a maritime strike role, and be assigned to NATO. Half of these aircraft, making up three squadrons, were to be modified to carry the Martel missile for Air Force duties. In case of the Phantoms, all the aircraft would be assigned to maritime defence roles.

However, the Royal Air Force would soon be hit by constant increasing strains on the defence budget. Also the planned F-111 buy from the Americans, as well as a large portion of the RAF Transport Command were cancelled with the 1968 Defence White Paper.⁵⁰ In addition to the downsizing of the forces, the Supplementary White paper of July 1968 went further in specifying the new role of the forces: The new prime role of Transport Command was to move the UK-based mobile force and reserves to Germany or to the flanks of NATO as emergencies were unfolding.⁵¹ In a short time, roles had changed from a global, mainly East of Suez focus, to a NATO focus.

In the end, the 'Island Strategy' and land-based air power concept had also lost. All British forces were to focus on primarily Europe and NATO, and as NATO's maritime strategy was drawn to the challenges posed by the Soviet naval build-up discussed in the former chapter – so too was British maritime strategy.

Chapter conclusion

The last part of the Healey defence reviews was not completed until the presentation of the 'Statement on the Defence Estimates, 1968'. The process had by then involved a thorough review of foreign commitments. Clearly, the decision to leave East of Suez and to make substantial savings by cancelling major equipment orders for the Royal Navy and the Royal Air Force, and reduction of Army strength, were interrelated.

Which one came first is almost impossible to distinguish. The Armed Forces were cut because their rationale was cut, and the decision to leave the East of Suez was made because the investments and the running-costs of the Armed Forces became unbearable. Economic problems had accumulated and a hasty retreat from former colonies and foreign bases thereby became a reality. Throughout the 1960s these issues of economy, the East of Suez and nuclear strategies

⁴⁹ NAUK T 225/3735. Wyatt to Wood, 01 July, 1970.

⁵⁰ PP, *Statement on the Defence Estimates 1968* (3540).

⁵¹ PP, *Supplementary Statement on Defence Policy 1968* (3701).

stayed central to discussions on British policy, and laid the foundation for inter-service rivalry. Both the Conservative and Labour Governments of the period thought that Britain had an important role to play for international peace and security in the Middle East and in the Far East. The politicians were crushed between the economic realities and pressure to keep up with traditional tasks and assignments. It has been well described by M. Dockrill:

... Harold Wilson's Labour government after 1964 attempted to hold down defence expenditure and at the same time cling on to Britain's role east of Suez. Wilson's effort to square the circle came to grief in 1967-8 when a succession of serious financial and economic crises forced the government to abandon its role east of Suez and concentrate its defence efforts on the West European theatre.⁵²

The Royal Air Force was happy in the 1966-68 period. They had 'won' the inter-service rivalry as the politicians had chosen the land-based air power option in order to maintain influence on a global scale. However, the good times soon turned. As the economic realities, or partially perceived difficulties, evolved to the extent of devaluation, the Royal Air Force were also about to lose most of the prospects promised. The planned F-111 purchase from the Americans, as well as a large portion of the RAF Transport Command, was cancelled with the 1968 Defence White Paper,⁵³ and the Supplementary White Paper went further in specifying the new role of the forces: Transport Command was to move the UK-based mobile force and reserves to Germany or to the flanks of NATO as emergencies unfolded.⁵⁴ By 1968, the new strategic challenges had indirectly influenced the British. British policy and the roles of the Armed Forces changed from a global to a NATO and home-water focus. In the end, the 'Island Strategy' and land-based air power concept, which had argued it could fulfil the global commitments, had also lost. The inter-service rivalry and political battle saw no winner. All British forces were to focus on Europe and NATO, and as NATO's maritime strategy was drawn to the challenges posed by the Soviet naval build-up, so too was British maritime strategy.

Within this altered framework, the new Secretary of State for Defence in 1970, Lord Carrington, with his naval background as First Lord of the Admiralty, altered the planned fate of the carriers. In his view, it would take more time for the Royal Navy to rebuild a missile-navy capable of operating without land-based air power. He won support for his argument that it was crucially important that the phasing out of at least one of the remaining fleet carriers was halted. The

⁵² M. Dockrill, *British Defence since 1945* (Oxford: Basil Blackwell, 1988), p.82.

⁵³ PP, *Statement on the Defence Estimates 1968* (3540).

⁵⁴ PP, *Supplementary Statement on Defence Policy 1968* (3701).

existing carriers could well last out the 1970s. However, Lord Carrington recommended that only HMS ARK ROYAL was kept in service until the late 1970s, by which time the new missile systems could be operational for the Royal Navy. This gave the Royal Navy time to examine whether it would be worthwhile providing the new 'through-deck cruisers' with the new V/STOL capable Harrier aircraft – now argued with reference to the home-water challenges.

Politically Lord Carrington played his hand with great skill. Most importantly, he did not initiate a new or continued inter-service rivalry, as he argued for the Royal Air Force to man the carrier-based aircraft. He further only asked for the continuation of HMS ARK ROYAL to fill the gap in capability, not least for NATO's demands, until new systems would take over late in the 1970s.

In the end, the HMS HERMES was converted into a commando carrier, becoming operational by 1973. HMS HERMES operated Sea King ASW helicopters, as well as the Sea Harriers when they became operational in the mid-1970s. The veteran HMS HERMES became a small but fully worthy aircraft carrier. The HMS EAGLE was scrapped in 1972 after her last deployment, an event that may be viewed as the end of the Royal Navy's permanent presence East of Suez. HMS ARK ROYAL lived off the salvage of the retired HMS EAGLE and made the backbone of the fleet until her retirement in 1978. Now a new era started with the INVINCIBLE class of 'through-deck cruiser', which was in reality a small carrier with a balanced complement of aircraft for air defence, strike and anti-submarine warfare in home-waters and on the global scene.

Chapter 8: Conclusion

The underlying aim of this PhD dissertation has been to bring forward one of the most controversial issues of maritime air power, the land-based air power versus carrier air power debate, a question which has been raised over and over again, both in Britain and among other larger navies since the earliest days of aviation. Arguably, the most thorough and deep ranging debate on this issue occurred in Britain in the 1960s, including the controversial cancellation of the projected fleet carrier CVA-01 and the build-up of an alternative carrier force of 'through-deck cruisers' with Harrier aircraft. The cancellation of CVA-01 in 1966 has attracted much attention by those involved at the time, as well as by later academics. The general perception has been that this cancellation came as a result of the poor economic status of Britain and the retreat from the former colonies. The dissertation set out to conduct a broad historical research of this fascinating British story, which so many have referred to, but at the same time few have conducted research into. It is clear from the arguments presented that the individual services, the Royal Navy and the Royal Air Force, with their differences in policy and opinions, and the inter-service rivalry over maritime strategy that followed, also influenced the outcome of the many air and naval procurement programmes of the 1960s and the subsequent restructuring of the military forces

Largely, probably due to the inherent naval interest in this explicit CVA-01 story, former research has overlooked the underlying conceptual debate on alternative military strategies. The hypothesis was that this conceptual debate; the sincere difference in professional opinion between the Royal Navy and the Royal Air Force as experts and advisors to the politicians, influenced the outcomes of the military procurement programmes and, to a degree, the changing foreign policy. A further important overarching result of this research is that the numerous studies on defence policy and military projects and suggestions, as well as the preliminary decisions and final decisions that were conducted throughout the 1960s have here been put in order and context. This will hopefully help other researchers when examining concrete issues of these turbulent years for the Royal Air Force and the Royal Navy.

The services' policy and opinion and the story of the 'inter-service rivalry'.

The British maritime air power debate of the 1960s was principally on the conceptual question about land-based air power versus carrier aviation, but it is also a fascinating story of deep-ranging inter-service rivalry and how the military services and the rivalry managed to influence British policy making. The dissertation has had no intentions of trying to explain the greater question of the British retreat from its former empire; however it is clear that the alternative military concepts of land-based air power and carrier task forces argued by the services were fully integrated with and influenced the debates on foreign and defence policy. It was a de facto line of arguments of the Royal Air Force that were echoed in Secretary of State Healy's famous White Paper of 1966, when cancelling the CVA-01 and the carrier fleet. By 1966, the British still wanted to keep political influence East of Suez as the former garrisons were built down, but now with the use of land-based air power instead of carrier task forces.

The British maritime air power debate of the 1960s is perhaps the most comprehensive and pictorial case-study for the greater question of land-based versus carrier air power. During this decade long narrative, most arguments for- and against land-based air power and carrier air power were brought to the table for debate. As the research has shown, it was not 'just the 1960' – but a story that evolved over the course of three distinct periods:

- The first period, 1960-63, started with the need for a carrier modernisation. This set the scene for a conceptual debate on 'Carrier Task Forces' and a concrete land-based air power alternative 'Island Strategy'.

The story originated in the late 1950s, when the Royal Navy wanted to modernise its carrier fleet. The existing carriers would last until the 1970s, but it was clear that new larger carriers were needed for operating new and larger jet aircraft. By 1960, this evolved into the concrete question of the building of new fleet carriers for the 1970s. This was initially generally accepted within political circles. However, as this clearly would involve great strains on an already pressed economic situation for the Royal Air Force, they soon confronted the Royal Navy in a vigorous inter-service battle. In addition to the economic reason for this political battle, the Royal Air Force was genuinely convinced that carrier aviation was not a cost-effective way of exercising air power. The Royal Air Force alternative became the 'Island Strategy'. This was originally conceived as a concept of staging islands for politically safe air-transport links to get around countries that denied the British overflight rights. However, it soon became a definite concept of providing distant air power for intervention operations and support of maritime

forces. The first records of the 'Island Strategy' becoming a direct alternative to the carrier task force concept date from January 1962. During the 1960-63 debates, the Treasury and Air Ministry criticised the carrier task force concept, while the Admiralty and the Chief Scientific Advisor, Zuckerman, criticised the 'Island Strategy'. Lord Mountbatten, as the Chief of the Defence Staff was clearly in support of the naval case. Lord Mountbatten and Zuckerman were friends and shared ideas, and proved to have great political influence. The political end of this debate, which was particularly intense in the winter and autumn of 1963, came with an approval for carriers by the Cabinet in July 1963. The period saw a constructive discussion, where both the Royal Navy and the Royal Air Force managed to argue well for their concepts of air power. The detailed narrative of and line of arguments in this discussion are most interesting, and should give valuable inputs to any future discussion on these topics. However, as for political influence, the Air Ministry and the inter-service rivalry of 1960-63 seem to have had less importance.

- The second phase of the debate came with the CVA-01 controversy in 1965-66, where the Royal Navy constantly had to fight for the continuation of the programme approved of in 1963.

In late 1964, the Royal Navy and the carrier programme again came under heavy political attacks. There had been a shift of government, and there had been attempts to alter NATO strategic thinking in Europe. The new Secretary of State for Defence, Denis Healey, soon focused on 'the rationalisation of air power' and future challenges. Initially, he ordered several joint service studies, however, later to focus more on independent studies by the services as the joint studies proved to be too much of a compromise. For the debate on land-based versus carrier-borne air power, the single service studies for arguing their case, as well as studies for criticising the others, were seen as effective. All the arguments for and against both these military strategic concepts were thus put forward. Healey played a great political game, constantly pitting the services against each other. For the debate on land-based air power and carrier-based air power, the decision to cancel the CVA-01 in February 1966 is not in and of itself particularly interesting. However, the way the Government and Healey argued that land-based air power would fill the previous roles of the carriers is important. The cancellation of CVA-01 was a great blow to the Royal Navy, and has therefore naturally been much debated by enthusiasts and historians. There are many reasons why the project was cancelled. The obvious one being economy, however, the explanation is more complicated. As often perceived, the cancelation of CVA-01 and the carrier fleet was not argued from a need or wish of changing policy. The politicians were not ready to abandon the responsibilities and possibilities East of

Suez by January 1966. Further, the costs of the CVA-01 programme were not far from being within the economic limits set by the politicians. Thus, it is hard to say whether the programme would have been cancelled if the Royal Navy had better argued their case, but we may conclude that the cancellation was not inevitable. This dissertation has shown how the Royal Air Force's constant repetition of the arguments for land-based air power as a viable alternative gradually won influence, and de facto was used as a rationale in the Defence White Paper of 1966. Former researchers have not given rightful attention to the land-based air power option constantly argued by the Air Ministry and the Treasury from 1960 until 1966. However, it is not possible to conclude that Healey was convinced of the land-based air power option, but at least it represented an alternative, and was clearly a way out of the costly carrier programme for the politicians. It is clear that the Air Ministry and the land-based air power arguments won political influence.

- The third and final part of the story concerns the planned gradual phasing out of the old carriers, a story that evolved from 1966 until 1972.

I began my research with a hypothesis that the Soviet naval build-up in the High North influenced the British retreat from its global role. However, the research proved that the British focused surprisingly little on this build-up. Thoughts on maritime strategy for the home-water region were simply put to NATO from the late 1950s until the early 1970s. Therefore, it may be concluded that the Soviet developments do not give justification for the decisions to cancel the CVA-01, nor for the hasty retreat from the global role that was decided in 1967-68. However, the Soviet naval build-up was important for NATO strategy in the last half of the 1960s. NATO maritime strategy changed with the Flexible Response strategy of 1967. NATO took a new and increased focus on the flanks and the threats posed by the Soviet Navy. These changes were first and foremost driven forth by SACLANT. The greatest flaws he saw regarding NATO capabilities were the maritime surveillance and anti-submarine warfare capabilities. This context greatly influenced British developments around 1970, both the balance of forces and shift in policy and strategic focus in the early 1970s, and not least the development of the new 'through-deck cruisers' and the use of the Royal Air Force VTOL aircraft in the maritime theatre. The land-based air power option and the rationale for carriers had, out of the East of Suez challenges throughout the 1960-68 period, been fully argued through. However, in the period 1969-1972 the course was adjusted to involve a broader argument, including more anti-submarine warfare and island defence. The fate of the carriers and the land-based air power option became something else than envisaged in 1966-68. The 'through-deck cruisers' became small carriers with a small,

but balanced, complement of aircraft and capabilities. The VTOL technology the Royal Air Force had used in their prospect of 'Island Strategy' made this possible.

The impact of the 'inter-service rivalry' and the influence of the leadership

It is clear that British economy and the fight for resources contributed to the rivalry between the services, and thereby both set the scene for and influenced the land-based air power versus carrier task force debate. The cancellation of CVA-01 came first and foremost as a result of the Wilson Government's reaction to financial distress. This is not a controversial, nor an original finding. However, the British were not yet ready to abandon the East of Suez involvement in 1965-66, therefore the CVA-01 programme was not deemed to be cancelled. As this research has shown, the line of arguments for the 'Island Strategy' of 1960-63 and the later arguments for the greater 'cost-effectiveness' of land-based air power in 1965-66, greatly influenced the politicians and the decision. In the end, the cheaper, but arguably viable and realistic land-based air power alternative became an attractive alternative.

It is not possible to say to what extent the politicians truly believed in the prospects of land-based air power argued by the Royal Air Force, but at least it became their 'scapegoat' for cancelling the CVA-01 and the carrier fleet. Land-based air power was far cheaper, and military (air) experts said it was a viable and realistic alternative. The politicians were thus able to use the expert advice of their choice. The Royal Air Force won great political influence by the power of ideas, constantly repeating the viability of the alternative to and the cost-effectiveness over carrier aviation during a period of 6 years.

This period of study saw two very different organisations of military leadership. For the first period, the Chief of the Defence Staff had great influence. Lord Mountbatten had a good relationship with the defence ministers Sandys, Watkinson and Thorneycroft. Still, Lord Mountbatten's influence was not complete as Chief of Staff. As the former First Sea Lord, clearly in favour of carriers, and eager for a greater political career as leader of a stronger and more centralised Ministry of Defence – he constantly had to show balanced co-operation and respect for both the Royal Navy and the Royal Air Force. Daily, he had to downplay his true support for the navy case, but on the unofficial scene he clearly remained a naval officer. As for the period from 1964 and onward, Secretary of State for Defence Healey was in a stronger position. Largely, under the leadership of Healey, Lord Mountbatten and Zuckerman who had been the leading figures in the early 1960s lost influence. The same happened to the Chief of the Defence Staff in general. With the great politician in power, the individual service chiefs gained more influence. This largely because Healey effectively played the services off each other, in

order to get all the raised arguments for and against the questions in discussion. As Sir Henry Leach described it: 'He [Healey] was very skilled, but used extensively a 'divide and conquer' tactic in politics'.¹ Generally, by such a strategy, politicians always find a military expert's advice to support either case they want. In addition to the comprehensive debate on maritime air power of land-based versus carrier alternatives, British military services should remember these organisational lessons of the past.

The prime rationale of this PhD research has been to examine the controversial debate on maritime air power between the Royal Air Force and the Royal Navy in the 1960s. The decisions made are evident from the unclassified and annual White Paper. However, this dissertation has researched and showed the underlying conceptual debate that occurred and casted additional light on the decisions that were made. This research set out to contribute to an important conceptual debate about land-based air power and carrier aviation. However, I have made no attempt to conclude this debate, as there are times for carrier aviation as well as times for the land-based option. There is no clear answer to this conceptual question, but the broad ranging debate that has been lined out in this dissertation may well be used as a starting point in any future discussions on the issue. Regarding the main lessons to be learned from the political process; this study shows that defence procurement programmes of great magnitudes must be constantly defended and rationalised. The Royal Navy successfully argued the case of carriers in the early 1960s, but failed to do so in the later half of the 1960s. Secondly, the services should have some common ground, thereby decreasing the opportunities for inter-service rivalry. This is better organised in contemporary Britain, where the Royal Air Force provides much of the aviation resources and aircrew. Thirdly, the service arguing for expensive procurement programmes should be strategically foresighted. This is of course difficult, but one should then at least avoid dependence on a narrow line of rationale and try to keep open a wide range of future defence policy challenges. It is questionable to what extent the Royal Navy is successfully managing this today. The rationales for the new planned HMS QUEEN ELIZABETH and HMS PRINCE OF WALES fleet carriers are much the same as in the mid-1960s...

The controversial debate on maritime air power and 'inter-service rivalry' of the 1960s was, and still is, an important part of Royal Air Force and Royal Navy history. Perhaps, the insights from this historical study, both the narratives of the historical study and the conclusions made, may help the services to avoid (or win) such battles in the future.

¹ Sir Henry Leach, interview 24 January 2007.

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Sir Michael Quinlan, 5 October 2006

Private Secretary to the Chief of the Air Staff from 1962-65. He has further been Private Secretary to the Parliamentary under-secretary of State for Air from 1956-58, and served in MoD and NATO positions up to 1992.

Admiral of the Fleet Sir Henry (Conyers) Leach, 24 January 2007

Director of Naval Plans 1968-70, Commanded Commando Ship Albion in 1970, Assistant Chief of Naval Staff (Policy) 1971-73, and First Sea Lord 1979-82.

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Abbreviations

AAR	Air-Air Refuelling
AD	Air Defence.
AEW	Airborne Early Warning.
AJP	(NATO) Allied Joint Publication.
ASuW	Anti-Surface Warfare.
ASV	Air-to-Surface-Vessel (radar).
ASW	Anti-Submarine Warfare.
AWACS	Airborne Warning and Control System.
BAOR	British Army of the Rhine.
CAP	Combat Air Patrol.
CAS	Chief of the Air Staff.
CINCHAN	Allied Commander in Chief, Channel.
CNS	Chief of the Naval Staff.
CODAR	Correlated Detection And Ranging.
CVA	Aircraft Carrier, Attack.
DCAS	Deputy Chief of the Air Staff.
DCNS	Deputy Chief of the Naval Staff.
DPC	Defence Policy Committee. (NATO)
DPWG	Defence Planning Working Group. (NATO)
DRPC	Defence Research Policy Committee. (UK MoD)
ECM	Electronic Counter Measures.
ELINT	Electronic Intelligence.
ESM	Electronic Support Measures.
FAA	Fleet Air Arm. (UK)
GIUK (gap)	Greenland Iceland United Kingdom (gap).
HAS	Helicopter Anti-Submarine.
HMS	Her Majesty Ship.
HU	Helicopter Utility.
ICBM	Inter-Continental Ballistic Missile.
ISR	Intelligence, Surveillance and Reconnaissance.
LOFAR	Low-frequency Analysis and Recording.

LRMR	Long Range Maritime Reconnaissance.
MAD	Magnetic Abnormality Detection.
MC	Military Committee. (NATO)
MCM	Mine Counter Measures.
MoD	Ministry of Defence.
MPA	Maritime Patrol Aircraft.
MW	Mine Warfare.
PS	Permanent Secretary.
RAF	(British) Royal Air Force.
RN	(British) Royal Navy.
SACEUR	Supreme Allied Commander, Europe.
SACLANT	Supreme Allied Commander, Atlantic.
SAM	Surface-to-Air Missile.
SLBM	Submarine Launched Ballistic Missile.
SLOC	Sea Lines of Communication.
SOSUS	Sound Surveillance System.
SSBN	Ballistic missile submarine, nuclear.
STANAVFORLANT	Standing Naval Force Atlantic.
STOL	Short Take Off and Landing.
TVD	Teatr Voennekh Deistvii.
UAV	Unmanned Aerial Vehicle.
VCAS	Vice Chief of the Air Staff.
VCNS	Vice Chief of the Naval Staff.
VTO	Vertical Take Off.
VTOL	Vertical Take Off and Landing.
AAP	Allied Administrative Publication. (NATO)
AAR	Airborne Air Refuelling.
AAW	Anti-Air Warfare.