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The navy as the ultimate guarantor of freedom in 1940?

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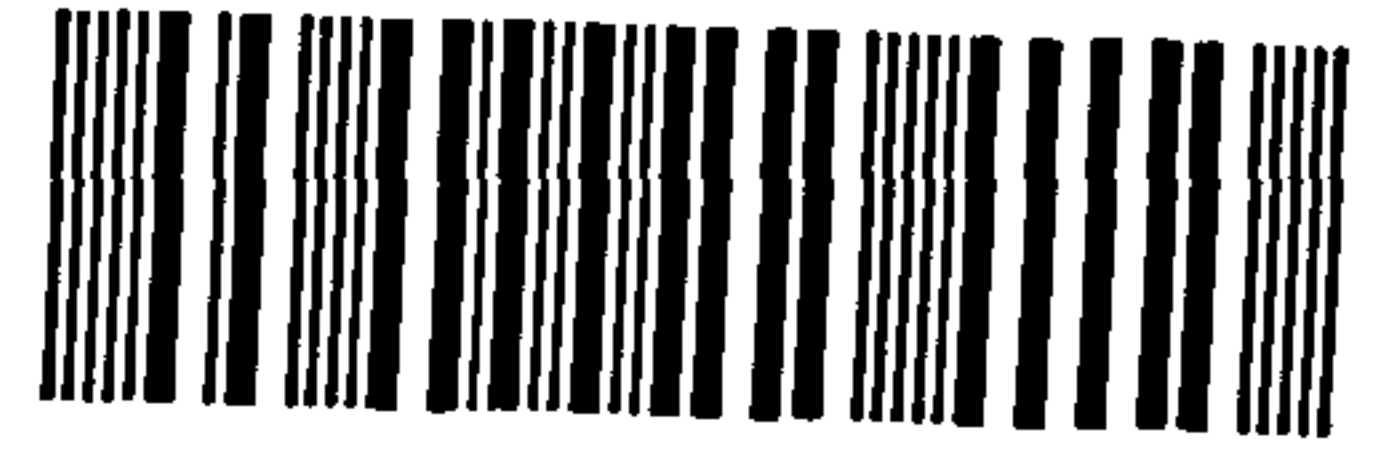
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**THE NAVY AS THE ULTIMATE GUARANTOR OF FREEDOM IN
1940?**

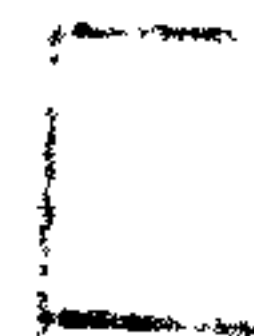
by

ANTHONY JOHN CUMMING

A thesis submitted to the University of Plymouth
in partial fulfilment for the degree of

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2006

Abstract

The Navy as the Ultimate Guarantor of Freedom in 1940?

by

Anthony John Cumming BA MA PGCE

The widely held public view that Britain was saved from invasion during 1940 because the RAF denied the *Luftwaffe* control of the air is challenged here. Although the heroism of 'the few' is not in question, the ability of Fighter Command to act as a serious physical barrier to German plans is refuted with the *Luftwaffe* holding the initiative between 24 August and 6 September and its ability to bomb Britain by night for months virtually unopposed. Archival and other evidence show that even without adequate fighter cover, the Royal Navy retained considerable potential to resist German air attacks on the Home Fleet and local flotillas. The traditional importance of 'seapower' is strongly reasserted with evidence from American newspapers and German admirals revealing preoccupations with the Royal Navy's control of the sea in the summer of 1940. Britain's negotiating position with Germany was therefore stronger than generally assumed. The relative position of Sir Hugh Dowding and Sir Charles Forbes in the British national pantheon is revised with the relatively unknown Admiral Forbes emerging as a forgotten hero. An undue focus on the air campaigns of 1940 only emerged as an Anglo-American media construct after American fears over Axis naval domination began to ease. As Churchill wished to fight-on, he glamorised the exploits of 'the few' and allowed the suffering of bombed civilians to be paraded in front of a cautious American public. Churchill's desperation ensured some British technological achievements overwhelmingly connected with the air campaigns were exaggerated in order to 'buy' sympathy and vital logistical support. This new narrative of victory distributes the credit more fairly among participants and calls for Battle of Britain monuments to recognise the sailors' contributions, especially those of the Merchant Navy whose human losses far exceeded those of 'the few' at this crucial period.

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on the school website. Thanks are also due to Julian-André Finke of the Militärgeschichtliches Forschungsamt, Potsdam for replying to my detailed written questions in English. I must also mention Sidney Tyas, former Gunnery Officer of *SS Southgate* who gave me the benefit of his wartime experiences. Grateful thanks must also go to Alf Regan of South Devon College of Further Education, Paignton. Since becoming my teaching mentor in 2003, Alf has given unfailing help and encouragement and I am particularly grateful to him for showing me a selection of current GCSE and A level textbooks dealing with World War II. Needless to say, I am extremely grateful for the kind and patient support of my Ph.D supervisors at the University of Plymouth, Dr G H Bennett and Professor K Jefferys who spent their valuable time, not just on the drafts of this thesis, but also encouraging my applications for the *Julian Corbett Prize for Research in Modern Naval History*. My thanks to them and also to my mother who also helped with the correction of the text. I am of course indebted to the University of Plymouth for the generous scholarship that covered my fees and stipend without which it is extremely unlikely this thesis would have been written. The Graduate School also kindly allowed the bulk of my expenses to attend a useful training course at the Institute of Historical Research during my first year of study. Special thanks go to my wife who has by now endured countless hours of World War II television documentaries but especially for rescuing me from the consequences of my computing blunders that have driven me to the brink of insanity on more than one occasion. Any mistakes that remain are entirely my own responsibility.

A J Cumming, 3 February 2006.

Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

This study was financed with the aid of a scholarship from the University of Plymouth who also paid the bulk of my expenses for a one-week training course at the Institute of Historical Research.

A programme of advanced study was undertaken, including the course on research methods at the Institute of Historical Research together with a number of short skills courses at the University of Plymouth Graduate School. Entries were made for the *Julian Corbett Prize for Research in Modern Naval History* in 2004 and 2005 and twenty-nine hours of undergraduate teaching was undertaken in 2004 in order to build confidence for making presentations. A public presentation entitled *Bombers Versus Battleships in the Battle of Britain* was made at the Devonport Lecture Theatre, Plymouth in May 2005. In November 2005, I attended a one-day event in London entitled *Careers in Academia* run by UKGRAD.

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Signed..........

Date.....14 February 2006.....

Abbreviations

ACNS	Assistant Chief of Naval Staff (Until 26.5.40)
ACNS (T)	Assistant Chief of Naval Staff (Trade)
ACNS (F)	Assistant Chief of Naval Staff (Foreign)
ACNS (H)	Assistant Chief of Naval Staff (Home)
ADC	Air Ministry Committee for the Scientific Survey of Air Defence (Tizard Committee)
ADGB	Air Defence of Great Britain
AI	Airborne Interception
AMSO	Air Member for Supply and Organisation, Air Council
AOC	Air Officer Commanding, RAF
AOC-in-C	Air Officer Commander-in-Chief, RAF
ACGS	Assistant Chief of General Staff
AVM	Air Vice Marshal
CAS	Chief of the Air Staff, Air Ministry
BIPO	British Institute of Public Opinion
CH	Chain Home
CHL	Chain Home Low
CID	Committee of Imperial Defence
CIGS	Chief of the Imperial General Staff, War Office
CMSR	Controller of Merchant Shipbuilding and Repairs
CNS	Chief of Naval Staff
CNP	Chief of Naval Personnel
CNAS	Chief of Naval Air Services
COS	Chief of Staff Sub-Committee of CID
DDP	Deputy Director of Plans, Air Ministry
DNI	Director of Naval Intelligence
DP (P)	Defence Plans (Policy) Committee of the Cabinet
DOD (H)	Director of Operations Division (Home), Royal Navy
DOR	Director of Operational Requirements, RAF
DPNS	Deputy Chief of Naval Staff (Until 21.4.40)
DPRC	Defence Policy and Requirements Sub-Committee of the Cabinet
DRC	Defence Requirements Sub-Committee of CID
DSIR	Director of Scientific and Industrial Research
DSR	Director of Scientific Research, Air Ministry
DTSD	Director of Trade & Staff Duties, Royal Navy
GC & CS	Government Code & Cypher School
HAC	High Angle Control, Anti Aircraft
IFF	Identification of Friend and Foe
JIC	Joint Intelligence Sub-Committee of COS Committee
JPC	Joint Planning Sub-Committee of COS Committee
LAC	Low Angle Control
MAP	Ministry of Aircraft Production
MoI	Ministry of Information
OIC	Operations Intelligence Centre, Admiralty
OKH	Oberkommando des Heeres Supreme Command of the Army
OKM	Oberkommando der Kriegsmarine Supreme Command of the Navy
OKW	Oberkommando der Wehrmacht Supreme Command of the Defence Forces
OTU	Operations Training Unit, RAF
OWI	Office of War Information
PID	Political Intelligence Department (of the Foreign Office)
PFS	Parliamentary & Financial Secretary
PPS	Parliamentary Private Secretary
PC	Panzerdurchschlags Cylindrisch – German armour piercing bomb
PS	Private Secretary
RDF	Radio Direction Finding (Radar)
ROC	Royal Observer Corps
SC	Sprengbombe Cylandrich – German general purpose bomb
SD	Sprengbombe Dickwandig – German semi-armour piercing bomb
SFTS	Service Flying Training School
VCNS	Vice Chief of Naval Staff

Preface

The summer of 1940 was a time when the British people braced themselves for invasion and occupation by a continental power that had achieved breathtaking, unprecedented and spectacular military success throughout northern Europe. To my mother, then a teenage girl in the vulnerable Sussex town of East Grinstead, less than fifty miles from the south coast and within easy striking distance of *Luftwaffe* bombers, it seemed only a matter of time before the invaders came. The growling defiance of Winston Churchill – or his radio impersonator - remains with her to this day. Like millions of ordinary people at times of national crisis, she looked for leadership, inspiration and reassurance to a higher authority and was told to expect ‘blood, toil, tears and sweat’. As Churchill warned the nation of imminent fighting in the ‘fields and in the streets’ and ‘in the hills’, she imagined her elder brothers risking their lives at the front and her father, already disabled from World War I, having to defend the High Street from Nazi paratroopers alongside elderly Home Guard comrades.

While she visualised this dreadful scenario, she cursed the stupidity of the pre-war appeaser politicians whom her parents, neighbours and friends were saying ‘had got us in this mess’. The Prime Minister’s stirring tribute to ‘the few’, in late Summer should have eased her fears of immediate invasion as it was explained by her elders that our small gallant band of Spitfire pilots had shot down so many enemy planes that ‘Hitler’s invasion armada’ could not now cross the sea. Unfortunately the constant nocturnal interruptions by enemy air fleets over East Grinstead en-route to London meant her worries continued unabated for some time to come.

To the present day, she firmly believes that Churchill saved Britain in 1940 as to her there was obviously no alternative to Nazi occupation but to fight on. After all, how

could a man like Hitler be trusted? She recalls a horrified British soldier telling a newsreel camera at Belsen in 1945, 'If you want to know what we've been fighting for, just look around'. Understandably, these poignant and macabre images haunt a generation who imagine what-might-have-been in Britain had we not 'stood alone' in 1940. Hero-worship, she acknowledges, was a major element in her History lessons while growing up in the 1930s and the war was essentially a fight between good and evil. 'Thank God for Churchill and the RAF – they saved us in 1940' expressed with strong feeling sums up the sentiment of the wartime generation.

Given the circumstances, the views of the wartime generation are understandable but the events of 1940 were so pivotal and far reaching that it has become essential for all involved to put the best possible light on their actions and sacrifices. If Churchill was wrong to persuade the Cabinet to refuse German peace-overtures in 1940 then subsequent British sacrifices including loss of life, wartime damage to property and loss of financial empire to the USA were surely made in vain. Furthermore, if Churchill was wrong about this, then it might also be said the British people were wrong to lend him their support. No doubt for Churchill, there was always a certain moral imperative that to his rivals seemed to transcend national self-interest and even common sense. Yet the shocking disclosures of 1945 revealing the moral bankruptcy of the Nazi state seemed to justify his actions for everyone. Academics sometimes debate these matters in detached ways that sometimes fail to capture the emotional intensity those who lived through these troubled times recall whenever these events are discussed.

Sadly, the fierce emotions that the Battle of Britain evokes amongst the wartime generation tend to rule out revisionism of any kind and reduce the impact of research. They faced many problems in the years following 1945 and their post-war world can hardly have seemed much safer than in 1939 with the powerfully armed communist dictatorships

menacing the democracies. The immediate euphoria of victory and delivery of the welfare state between 1945-50 may have deferred any open debate as to why the nation persevered with the war for such little tangible gain but the publication of Churchill's memoirs from 1948 effectively put the old warhorse's case before too much disillusionment could seep in. Wartime propaganda films had already conditioned my mother's generation to accept their heroic status in the eyes of the world, namely for 'standing alone' and preventing Adolf Hitler's quest for world domination by defeating the *Luftwaffe* in the Battle of Britain.

The single bloody-mindedness of 1940 lives on in newspaper headlines asking if 'our boys died in vain in 1940' whenever some 'threatening' amendment to the European Constitution comes under discussion. It is perhaps my own irrational irritation with the eternal emotional bombast obstructing rational debate on these matters that motivates me to challenge some of the most cherished assumptions of 1940 and to ask who saved Britain in her finest hour?

Chapter 1

Introduction

‘We shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender...’¹

(W S Churchill, Speech to Commons, 4 June 1940)

‘I find it difficult to believe that the South coast is in serious danger at the present time.’²

(W S Churchill to C-in-C Home Forces, 10 July 1940)

‘He himself [Churchill] had never believed that invasion was possible! To which I replied to the effect that he had camouflaged it very well. He then had a go at me ... However we made it up (he had perhaps had one over the odds)’.³

(Admiral Charles Forbes to Godfrey Style, 6 Feb. 1947)

These quotes from Winston Churchill were made only a few weeks apart in the crisis summer of 1940 while Admiral Forbes, C-in-C Home Fleet, wrote the third a few years later. The first was designed to raise the nation’s spirit of resistance against imminent German invasion and gain American support; the second downplaying the invasion threat in order to release military resources for a colonial war in the Middle East while the so-called Battle of Britain had barely begun. The third quotation came from a surprise meeting with Churchill at a post-war social function. It also marked the conclusion

¹ Winston S Churchill, Speech in House of Commons, 4 June 1940 as quoted by R Jenkins, *Churchill*, Pan Books, 2002 edn, p.611.

² TNA CAB 120/438, REF: 95419 Memo from Winston S Churchill to C-in-C Home Forces, 10 July 1940.

³ ROSK 4/49 Letter from Admiral Charles Forbes to Godfrey Style, 6 Feb. 1947. Forbes is relating a meeting with Churchill at a recent Navy Club dinner.

of a little publicised strategic dispute between the former Prime Minister and his most important naval commander stemming from Forbes's refusal of Churchill's 1940 request to bring his heavy ships south of The Wash should the enemy armada set sail. Most importantly, the second two quotations marked Churchill's admission that even before the German attempts to control British airspace, he had not seriously expected a German invasion in 1940. Together they suggest Churchill had practiced a subterfuge on his own people. Needless to say, it is only the first that echoes down the ages - a reminder of the nation's glorious past and a determination to resist tyranny whatever the consequences.

This thesis deals with a number of areas within the 'finest-hour' mythology, endeavouring to throw new light on the manipulation of events between May and October 1940. Such manipulation was made in order to convince the British public that the nation *must* continue the armed struggle against Germany and that the USA should continue its essential support. The study will help to explain why, after centuries of holding a special place in the affection of the British public, the Royal Navy lost out to the RAF as the main perceived bulwark against foreign domination. In the course of this it will be shown that the Royal Navy was actually no less effective an organisation than the RAF. In fact, criticisms are made that Fighter Command was over reliant on inadequately tested new technology and less effective than generally perceived. By looking at the state of morale in the Home Fleet and examining actions in which British warships were exposed to *Luftwaffe* attack it will be seen the Navy was far more robust in the face of air attack than usually assumed. The situation from 'the other side of the hill' with particular regard to the true significance of the Battle of Britain and the operational difficulties of mounting an invasion are also emphasised rather more than in traditional accounts. A consequence of scrutinising the careers of Admiral Sir Charles Forbes and Air Marshal Sir Hugh Dowding may be the revision of their relative positions in Britain's pantheon of national heroes. Along the way it will shown how the blanket of mythology Winston Churchill helped to

weave continues to obstruct rational discussion of our future as part of the European Union in ways he probably never intended. In this connection, the study is distinctive in its inclusion of evidence showing how ineffectually academic revisionists have influenced popular writing. While 1940s British and US newspapers have been used to illustrate aspects of wartime propaganda, emphasis has also been given to more recent tabloid articles showing how inaccuracies are furthering the cause of those who wish to use the legend for overt political purposes. A number of history textbooks aimed at schoolchildren and the more advanced student has also been examined to assess the guidance being given for malleable young minds.

In reviewing the enormous historiography covering the events of 1940, preference has been given to the revisionist histories largely written during the last two decades. Clive Ponting's, book *1940, Myth & Reality* is particularly useful for an understanding as to how Britain and the Empire were further endangered by Churchill's crusade to keep on fighting. The post-war disintegration of Empire and erosion of British influence relative to the USA and USSR may conceivably be rooted in the single 'bloody-mindedness' of 1940. For Ponting, the decision to fight-on with bankruptcy in sight and over-optimistic hopes for early decisive American intervention marked the end of Great Britain as an independent power. As John Charmley's *Churchill: The End of Glory*, points out, members of the War Cabinet wanted to explore peace options on the lines of the numerous seventeenth/eighteenth century conflicts with continental powers where peace was concluded with little more than the exchange of a few bases and peripheral colonies. Also useful for an understanding of these points is Angus Calder's *The Myth of the Blitz*. Calder is perhaps less of a revisionist than his reputation allows, even admitting to being more laid-back about the mythology than when he first started to write about it. Sadly, he is surely mistaken in his view that 'the negative effects of the myth on British societies have almost worked themselves out'. Of interest is a section on the American press and how

they worked with propagandists to develop an heroic image of the British acceptable to US opinion – a tale subsequently sold back to the British public and given the validation of an American narration. Also relevant is Phillip Knightley's, *The First Casualty is Truth: The War Correspondent as Hero and Myth Maker from the Crimea to Kosovo*. Knightley explained the official pressures upon journalists to toe the official line and the relationship between the Ministry of Information (MoI) and the foreign press during 1940. Similarly useful are M Balfours's *Propaganda in War* together with A Aldgate and J Richard's *Britain Can Take It*.

The myth-making of the finest hour, dealing with how the legend was constructed and why it took such a hold on the British imagination is dealt with at some length by Richard Weight's comparatively recent, *Patriots: National Identity in Britain 1940-2000*, a scholarly work based on his 1995 PhD submission. Weight claimed that by the 1930s, Britain had become so insular that British maritime spirit was less about the urge to conquer foreign territory and more about defending the frontier of the 'cosy' beach resort, hence the rapid colonisation of the seaside that occurred in the nineteenth century. In contrast to Nelson's era, the British were now rejoicing in their 'smallness', readily identifying with David in his fight with Goliath and it was this sentiment that Churchill was appealing to in 1940. Eagerly read accounts of 1914-18 fighter pilots written between the wars represented a yearning for a return to noble chivalric values and the exploits of 'the few' neatly fitted in with those derring-do heroes familiar to schoolboys of the period.

In a less polemical vein, an important round in the battle to control the Battle of Britain narrative took place in the late 1960s between former *Luftwaffe* personnel led by air ace Adolf Galland and the makers of Harry Saltzman's feature film, *Battle of Britain*. Leonard Mosley's book *Battle of Britain* revealed that Galland was deeply unhappy about aspects of this film including the 'incompetent clown' characterisation of Herman Goering.

Galland's role as official advisor was meant to give an aura of objectivity and it soon became clear that he and other *Luftwaffe* personnel possessed a deep desire for reconciliation not quite reciprocated by former RAF enemies. The film itself was undeniably more sympathetic to the German airman than anything previously produced, but if the *Luftwaffe* was allowed a human side, the film changed little of the traditional story.

To understand how the mythology has been used since 1940, it is necessary to understand the media's power but the question of the press existing as a shaper or reflector of public opinion seems irresolvable. B Pages's *The Murdoch Archipaleago* argued press influence on public opinion today is uninspiring quoting an un-referenced survey alleging approximately 14% of adults believes tabloids like the *Sun* 'are trustworthy'. Yet this does not mean the other 86% believe they are *untrustworthy*. New Labour politicians clearly believe the press is a shaper; but journalists who write about press power argue against this, stressing the commercial need to supply whatever the readership want to read.

This was not always the case. D Hobson's *The National Wealth*, observes that press baron Max Aitken (Lord Beaverbrook) of the Express Group, confidante of Churchill and Minister of Aircraft Production during the Battle of Britain openly admitted to the Press Commission in 1948 that his paper was run only for the purpose of propaganda. Hobson does make the valid point that thirty-five years ago most newspapers were in the hands of a few families - the Northcliffes, Beaverbrooks, Astors, Berrys, Pearsons and Carrs. Now they subordinate everything including 'proprietary ego' to the hunger for investor dividends. However, Beaverbrook's influence in 1940 both as a media figure and crony of Churchill's can hardly be denied and one of the biggest disappointments has been Chisholm and Davie's biography *Beaverbrook, A Life*, that has little to say about his propaganda activities in the USA during this time. As a potential architect of Battle of

Britain mythology, this is a glaring omission from what ought to be a key secondary source.

Biographies of Churchill abound including what is usually described as the ‘magisterial surveys’ of his official biographer, Martin Gilbert. Preference has been given to shorter works by authors such as the late Roy Jenkins. His book *Churchill*, is commendably readable and written by a man with a sound scholarly background combined with ‘insider’ experience of government. Jenkins gives a good general account but disappoints on the topics of his subject’s ability as a military leader or as a creator of myth. Two fairly recent concise and readable accounts of Churchill, both focusing on his involvement with the secret services, including intelligence, deception and his relationship with Roosevelt throw a newer perspective on neglected aspects of his career. These are David Stafford’s *Churchill & Secret Service* and *Churchill & Roosevelt: Men of Secrets*. John Charmley’s *Churchill: The End of Glory*, is equally readable and also represents a powerful attack on the 1940s mythology. For a more recent account of Churchill’s actions by a prominent academic, David Reynold’s *In Command of History*, describes the former Prime Minister’s battle to control the narrative of World War II through his multi volume *The Second World War*.

Geopolitical concepts outlined in naval historian Paul Kennedy’s classic *The Rise & Fall of British Naval Mastery* are picked up in an illuminating revisionist text dealing with Churchill’s influence on military strategy written by the Israeli historian, T Ben-Moshe, *Churchill, Strategy and History*. Ben-Moshe claimed that Churchill once subscribed to the prevalent ideas of ‘seapower’ from naval theorists Alfred T Mahan and Sir Julian Corbett. Read by influential politicians such as Kaiser Wilhelm and Presidents Theodore and Franklin Roosevelt, Mahan successfully promulgated the idea before 1914 that great power status was contingent on a powerful navy but this notion has been much

criticised since. However, maritime determinist theories underpinned the concept of the 'British way' of warfare, using British wealth to fund mercenaries and coalitions to fight enemies – invariably whoever was the strongest continental power – and use the Navy to protect both nation and Empire while imposing economic blockade upon the enemy. A powerful navy was also intrinsically linked with the prevailing nineteenth century notion of Liberal 'free-trade'. Churchill broke with this from 1911, almost certainly influenced by the geopolitician, Halford Mckinder, who argued in 1904, that the Columbian age of maritime-state supremacy was over. Churchill's inter-war research into his ancestor *Marlborough* seems to have confirmed this for him providing convenient parallels with his disastrous Gallipoli experience. Indeed, Marlborough's eighteenth-century concepts, a combination of land and seapower suited both Churchill's romantic temperament and the understandable need for justification of a disastrous campaign that was to haunt the rest of his career.

Henceforth Churchill was to argue for a strong British Expeditionary Force as the only way to help France militarily. The clashes between Churchill and the Chamberlainites in the 1930s were less over the 'criminal' lack of military preparation as argued by Cato, *Guilty Men* in 1940, but whether resources should go into a powerful navy to avoid the cost of a large land army. The Cato authorship of *Guilty Men* included well-known socialist journalist Michael Foot whose harsh criticism of Conservative politicians was undoubtedly fuelled by a natural antipathy. Ironically it was convenient for Churchill to adopt the arguments of *Guilty Men* when writing up his histories after the war.

Airpower complicated these arguments as the need for a powerful air force was integral both to acceptance and rejection of a continental commitment and Churchill was clearly annoyed that his arguments for RAF expansion were sometimes misunderstood as promoting a maritime strategy. Chamberlain was heavily influenced by Basil Liddell

Hart's advocacy of a maritime-based strategy, largely because of its inherent cost effectiveness. If 'the economy is the fourth arm of warfare' then Chamberlain's opinion that a bankrupt Britain was unlikely to deter the dictators was reasonable. Ironically, Ben-Moshe suggests it suited Chamberlain to have Churchill agitating outside government for accelerated rearmament, as it was proving difficult to persuade the public of its necessity. Even so, Churchill's frequent attacks on the government clearly irritated Chamberlain, making this assertion seem unlikely.

Even if viewing British history through a maritime determinist lens is nothing new, Peter Padfield has recently complained in *BBC History Magazine*, ('Missing at Sea?') that naval and maritime history has almost fallen into disrepute. Padfield argued eloquently for a greater recognition of the differences between a continental and maritime spirit manifesting itself in most areas of life. While Padfield's views are ammunition for anti-EU lobbyists, the country does seem to have lost touch with its maritime traditions despite resurgence of interest during the Trafalgar anniversary celebrations in 2005. It is hardly surprising the myth of the Battle of Britain and the blitz fails to give due recognition to the naval dimension of 1940. A more pluralistic approach seems to be required.

If Churchill proved less of a navalist than his Admiralty experience or self-styled 'former naval person' epithet might suggest, he used this to ingratiate himself with President Franklin D Roosevelt, a former US Naval Secretary and far more consistent naval enthusiast and disciple of Mahan than Churchill ever was. A useful guide to understanding Roosevelt through his relationship with the US Navy is contained within the contributions to *FDR and the US Navy*, edited by Edward J Marolda. This picture widens in J Leutze's, *Bargaining for Supremacy: Anglo-American Naval Collaboration, 1937-1941*. Leutze skated over incidents such as the *Havana Conference* of 1940 too quickly but

he understood the personalities and motives of Anglo-American soldiers and politicians during 1940.

Both publications show how the President became progressively concerned about the rise of Nazi Germany and the erosion of the traditional Royal Navy shield that for over a hundred years protected the US from foreign interference. It was through Anglo-American naval contacts that American resistance to German expansionism first manifested itself in a practical way. FDR's reaction to Churchill's later inept manipulation of US fears about the fate of the British fleet in the event of capitulation is well documented here.

For better or worse, a consequence of our decline in naval history is having our perceptions shaped by increasing numbers of writers who are American (or based in the USA) and influenced by American attitudes. Ronald Spector's, *At War at Sea: Sailors and Warfare in the Twentieth Century* is a comparatively recent publication embracing the 'new methodologies'. Spector deploys oral history to advantage in describing the experiences and stoicism of British sailors under fire from the *Luftwaffe* around Crete protected by an inadequate anti-aircraft defence – a situation with many parallels to that in UK waters during 1940.

One of the best American authors is Jon Tetsuro Sumida, outspoken exponent of new methodologies and master of technical and tactical detail on matters relating to the twentieth-century Royal Navy. Sumida's 1992 article, 'The Best Laid Plans: The Development of British Battle-Fleet Tactics, 1919-1942' in *The International History Review* contradicted earlier works including the radical Correlli Barnett's *Engage the Enemy More Closely: The Royal Navy in the Second World War* and E Ranson's, *British Defence Policy and Appeasement Between the Wars 1919-1939*. Sumida argued

powerfully that the Navy's leadership was not unduly influenced by its experience at the Battle of Jutland in 1916 supposedly leading to technical stagnation and slavish adherence to the line-of-battle concept. In fact technology and tactics were radically revised throughout the inter-war period. The primacy of the capital ship was a logical and justifiable response to the circumstances of the day bearing in mind the power balance with competing foreign navies and the difficulty of anticipating whether the gun or the airplane would dominate future wars. Sumida blamed the strong market demand for military history for a decline in writing standards that perpetuates the myth making inherent in much twentieth-century military publication.

An American newcomer has mounted a spirited defence of the leadership given to the Home Fleet by Admiral Sir Charles Morton Forbes. An article in the *Mariner's Mirror*, 'Lost Leader: Admiral of the Fleet Sir Charles Forbes and the Second World War' by James Levy shows that although Forbes was responsible for crippling the *Kriegsmarine's* surface fleet during the Norway campaign, his reputation has suffered unduly because of intelligence failures and operational interference both from Churchill and First Sea Lord, Dudley Pound. These were beyond Forbes's control and neither Churchill nor Pound were disposed to listen to his sound tactical advice on matters of ship dispositions during or after the Norwegian campaign. Had the invasion of Britain been launched, Forbes's skills as a commander might have proved crucial, yet he is relatively unknown outside naval circles. Unfortunately, bearing in mind Forbes held many key naval posts in the inter-war period; Levy's article has thrown little light on his precise contribution to the development of the wartime Royal Navy.

If Sumida is correct about the dilution of standards inherent in the sheer volume of writing on twentieth-century warfare, then nowhere is this more apparent than in the literature relating to the operational history of the Battle of Britain in the air. The official

story was first published during wartime in the HMSO pamphlet *The Battle of Britain* and was criticised by none other than Lord Dowding for its assertion that ‘the fighter squadrons of the Royal Air Force...were indeed stronger at the end of the battle than at the beginning’, remarking that ‘whatever the paper return showed, the situation towards the end was extremely critical and most squadrons were fit only for operations against unescorted bombers’.⁴ The most inspiring study remains in Wing Commander H R (Dizzy) Allen’s controversial *Who Won the Battle of Britain?* First published in 1974, Allen criticised the inter-war Air Staff decision-makers but was in turn savaged by Francis Mason in an influential defence journal. Nevertheless, Allen’s indictments were often damning especially those relating to RAF inflexibility and inadequate gunnery training. His charges ran contrary to statements such as that made by H Montgomery Hyde, *British Air Policy Between the Wars 1918-1939*, which praised the ‘superb quality of the Royal Air Force’.⁵ Yet Allen’s observations were made in considerable detail and carried special authority from a Battle of Britain ace of 66 Squadron and who later became its Squadron commander. Along with A Zamoyski’s *The Forgotten Few: the Polish Air Force in the Second World War*, Allen revealed that the most effective pilots in the RAF at this time were not British, but usually Czechs and Poles.

The popular novelist, Len Deighton attacked some minor myths in his *Fighter: The True Story of the Battle of Britain* in 1980 but in romanticising the conflict as a ‘gentleman’s war’ tended to strengthen the arguments of the traditionalists. He did however manage to upset the celebrated but egocentric ace Douglas Bader by lambasting his ‘big-wing’, tactical concepts. Bader responded through his biographer by stating that his ideas were misunderstood and contemptuously dismissing Deighton as ‘that imaginative writer of fiction’.⁶ Utilising his Ph.D. thesis on aspects of the Battle of Britain,

⁴ Dowding’s ‘Despatch on the Battle of Britain.’ Para 106, TNA: PREM 4/3/19 & AIR 20/5202.

⁵ H Montgomery Hyde, *British Air Policy Between the Wars 1918-1939*, Heinemann Ltd, 1976, pp.503.4

⁶ P B Lucas, *Flying Colours*, Hutchinson & Co., 1981, p.135.

John Ray's *Battle of Britain: New Perspectives* took an insightful look explaining the 'behind the scenes battle'. This included the 'big-wing' debate that nearly prejudiced the RAF's survival and attacked the widely held perception that Dowding's summary dismissal was merely the outcome of a dastardly plot by 'big-wing' proponents. Ray also defended Churchill for his perceived failure to protect Dowding from his critics, concluding that Dowding's faults had contributed to his dismissal. Many of these points tend to contradict the portrait of Dowding as a 'tactical genius' as earlier projected by Dowding's former aide, Robert Wright in *Dowding and the Battle of Britain* and more recently by Phil Craig, whose hagiography of Dowding 'The tactical genius who ensured that so much was owed by so many to so few' appeared in the *Daily Express* in 2000. Craig's article also claimed Dowding's system of combining new Radio Direction Finding technology with a complex command and control system worked as Dowding 'dreamed' it would.

The best monograph for understanding this specialised topic is D Zimmermann, *Britain's Shield: Radar and the Defeat of the Luftwaffe*. This analysed the political and technical factors that lay behind the development of this technology but perhaps subconsciously influenced by 'core' histories and strong popular perceptions, it did not give the evidence highlighting the inadequacies of the equipment and operatives much emphasis.

Probably the best book dealing with the German planning for *Operation Sealion* is German historian Peter Schenk's *Invasion of England 1940* containing a considerable amount of technical detail relating to proposed logistics, minefields and landing craft. A more recent publication from another German historian, E Kieser's *Hitler on the Doorstep* is similarly useful though its conclusion that Hitler should have gone ahead with the invasion anyway, seems almost bizarre given the whole host of problems he described

including the unsuitability of the equipment and the lack of enthusiasm from the Naval Staff. A crucial book dealing with technical issues concerning how warships coped with aircraft during World War II is David Hamer's *Bombers V Battleships* with detailed sections on the development of anti-aircraft gunfire and radar. Hamer also drew attention to the weakness of the *Luftwaffe* in a maritime role. There is also J Campbell's *Naval Weapons of World War Two*, useful for technical information on German bombs. Another crucial monograph is Manfred Griehl's *Junkers Ju87 Stuka*, important for data on what is generally regarded as the *Luftwaffe*'s most effective ship-destroyer.

Despite being written in 1970, Vice-Admiral Hezlet's *Aircraft and Seapower* remains an influential work on operations involving the interaction of sea and air power during World War II. Hezlet's arguments that the system of flotilla defence was probably unworkable and that the Home Fleet would have suffered more extensively in an invasion scenario than it later did at Crete are powerful arguments that will be addressed in this study. Not to be neglected is the television documentary *Timewatch: Hitler and the Invasion of Britain*, valuable for the recorded insights into operations as given by ordinary members of the *Wehrmacht*. Here, a former Heinkel He.III pilot, Lt. Gerhard Baeker reflected on the 'suicide' of engaging a ship's anti-aircraft guns. Bernd Rebensberg, an officer then serving in an E-boat also mused on the 'madness' of his orders for Sealion.

Today there is greater academic consensus that Fighter Command's position was not as disadvantageous relative to the *Luftwaffe* as once supposed. The weight of modern writing from academics such as Richard Overy holds that the RAF did not solely depend on a public school elite for its pilots, the *Luftwaffe* performed well in the circumstances and the *Kriegsmarine* faced massive problems in launching a successful invasion in 1940. Overy also contributed to Paul Addison and Jeremy Crang's *The Burning Blue*, a collection of modern perspectives commemorating the Battle of Britain's sixtieth anniversary in

2000. Here, German writers Klaus Mier and Horst Boog argued that Germany's rapid, unexpected victory in France left the *Wehrmacht* ready for neither seaborne invasion nor airborne assault. Sebastian Cox maintained his view that the RAF was near to collapse before the *Luftwaffe* focussed on London during September and Overy pointed out that the battle was essential for British self-esteem, vital for maintaining the wider conflict. More recently Dr Chris Bellamy, Reader in Military and Security Studies at Cranfield University has used a BBC website to demythologise the Battle of Britain pointing out that the Navy was capable of dealing with German troopships whatever the outcome of the air campaign.

Unfortunately this sixtieth anniversary was marked by a rash of articles in the tabloid press more likely to be read and believed by the general public than anything contained in the *Burning Blue*. 'Their Finest Hour' in the ultra-right *This England* was a simple old-fashioned account of how we gave 'Fritz' a good thrashing in the air and saved the world from the Nazis. Phil Craig's 'Bunkum and the Blitz', written for the notoriously Euro-phobic, populist *Daily Mail* deplored the alleged wave of revisionism surrounding the blitz. Even the otherwise excellent Niall Ferguson succumbed to temptation by writing his essay, 'The unthinkable', in the *Daily Mail*, a simplistic account of 'what-might-have-been' had Hitler launched an invasion around the time of Dunkirk. Ferguson leaned on K Macksey's *Invasion: The German Invasion of England, July 1940*, but the underlying motive for publication had more to do with raising fears about losing sovereignty to Europe than promoting good history

More recently, journalist Patrick Bishop's unashamed tribute to 'the few' maintained the process of exaggerating the air-campaign's significance. But to his credit, Bishop's *Fighter Boys* contained a wide span of oral evidence from former pilots revealing both good and bad experiences that do not necessarily support popular perceptions. Signs that some popular views are beginning to change are shown by Derek Robinson's *Invasion*,

1940, published in 2005 in which he rightly concludes the Royal Navy won the Battle of Britain. However, their 'silent victory' was not one likely to motivate the USA to throw their vast industrial and military might behind Great Britain and this was why the RAF was hailed as the victor. Like Len Deighton, Robinson is a good example of the fiction writer-turned - historian species but unfortunately the book lacks the authority of substantial primary source material for academic historians to take seriously.

In addition to the secondary literature reviewed above, there are a number of published primary sources including diaries and memoirs. Some authors such as H R Allen and P B Lucas have played a dual role both as commentators of events and as participants in the air war. Official historian Captain S W Roskill worked in the Admiralty Operations Intelligence Centre during the war and knew some of the admirals personally. Others such as Adolf Galland in *The First and the Last*, important for his experiences as one of the *Luftwaffe*'s most successful fighter pilots do not always make it clear whether their comments stem from personal experience.

Although many important German documents were destroyed, Admiral Doenitz defied Hitler's orders and kept intact the records of the German Naval Staff, published most recently with a foreword by J P Mallman Showell as *Fuehrer Conferences on Naval Affairs 1939-1945*. This collection covers *Operation Sealion* in the form of conference notes made by Admirals Raeder and Doenitz. Clues to Hitler's thinking are contained together with operational details relating to the preparations. Supplementing this further are Raeder's memoirs, *My Life*. A published portfolio of various German Admirals reflections by G H & R Bennett, *Hitler's Admirals* is similarly useful. While these recollections have now been examined in their original unedited form at The National Archives, their commentary helps place these in context.

Admiral Kurt Assman's membership of the 1940 German Naval Staff makes his article in the *United States Naval Institute Proceedings*, published in 1950, an essential guide to German military thinking during 1940. Essential to any account of Churchill's actions is John Colville's diary *The Fringes of Power*, owing to the fact that Colville's position as the Prime Minister's secretary gave him access to some private conversations of the 'inner-circle'. Another fascinating diary has been published in recent years with earlier cuts restored. Field Marshal Lord Alanbrooke's, *War Diaries 1939-45* is a record of Britain's most successful staff officer of World War II revealing distinctly unflattering opinions on the military competence of Churchill and Dudley Pound. The memoirs of Britain's most successful sailor of the period, Viscount Andrew B Cunningham, *A Sailor's Odyssey*, is particularly valuable for his experience of commanding a fleet against massive and repeated air attack.

Representing the published memoirs of 1940s media figures, American war correspondent Eric Sevaried's memoirs *Not So Wild A Dream* originally published in America shortly after the war revealed the thoughts of a reporter from the isolationist heartland of the USA. While sufficiently well written to be included among the *New York Times* 'Ten Best Books of the Year' in 1946, the commendation was probably less for its historical accuracy than its literary qualities. Even so, it confirmed the anti-Axis stance of US reporters; their impossibly romantic perceptions of British flyers and disapproval of aspects of British society. Another American media figure, the much better known Frank Capra published his recollections in *The Name Above the Title*. An undeniably talented director of Hollywood feature films in the 1930s, Capra was given considerable freedom in the making of propaganda films for the indoctrination of US military personnel and claimed British civilians also saw them on Churchill's orders. If not exactly the architect of 1940s mythology, Capra was a most effective propagandist using many of the assertions originally expressed in the Air Ministry's HMSO pamphlet *Battle of Britain: August to*

October 1940. While Churchill's initial reference to The Battle of Britain in his speech of 18 June 1940, took a holistic approach to the matter of national defence, it was this pamphlet's concept of the air campaign-that-prevented-invasion subsequently adopted for his post-war memoirs.

Finally, for all its well-documented faults, Churchill's own justifications are laid out in some detail within his *The Second World War Vols I-III*. Mindful he had been no more successful protecting Poland than Chamberlain and that Britain and the Empire had emerged from the war victorious but with a substantially weakened world position relative to the USSR and USA and with the 1945 election defeat a painful memory, it was natural that Churchill sought to provide justifications for his actions. To the general readership at which they were aimed, they remained a powerful case, but his coverage of the events of 1940 appealed primarily to the heart rather than the head. The appeal to emotion was, as ever, his strongest suite but with a range of official memoranda selectively reproduced, his books have always been a convenient primary source.

The study commences with an examination of German political, military and strategic perspectives in order to discover why an invasion was never launched.

Chapter 2

The Other Side of the Hill

‘Not one of the responsible persons was inclined to take a clear-cut stand against the operation ... Yet all felt relieved when, failing to gain air supremacy, they had a valid reason which justified calling off the operation.’¹

(Admiral K Assman, German Naval Staff.)

The popular concept of Britain’s ‘finest-hour’ rests heavily on a number of assumptions not necessarily shared by former members of Germany’s wartime forces. It is not ‘academic’ writing in its highest form having the greatest impact on current British perceptions. A recent popular biography written for schoolchildren in a semi-comic strip format is Alan MacDonald’s *Winston Churchill and his Great Wars*. Unfortunately, his assertion ‘If the German Army crossed the Channel by barge they would be sitting ducks for the British RAF to swoop down and bomb them’² takes no account of Bomber Command’s inability to hit small targets and the fact that the initial German crossing was to be made in darkness. A more ‘serious’ reference book, R Castleden’s *The History of World Events*, ‘perfect for home and school’ published in 2003 stated clearly that Hitler’s invasion plans foundered ‘thanks to Britain’s victory in the air at the Battle of Britain in 1940’.³ R Parson’s revision guide, *GCSE Modern World History*, (for 2003 onwards) made the bullet point that ‘these [German] troops would be easy targets for the RAF to attack’.⁴ More advanced students might still read Martin Robert’s 2001 textbook *Britain 1846-1964: The Challenge of Change*, claiming that the chances of successful invasion would have been good if the *Luftwaffe* had won air supremacy, implying that German aircraft would then have sunk the Royal Navy. These authors should not be judged too harshly as even heritage historian, Sir Roy Strong’s 1996 popular *The Story of Britain*, ignored the

¹ Vice Admiral K Assman, ‘Operation Sealion’, *United States Naval Institute Naval Proceedings*, Vol.76, No.1, Jan.1950, pp.1-13.

² A MacDonald, *Winston Churchill and his Great Wars*, Scholastic Children’s Books, 2004, p.135.

³ R Castleden, *The History of World Events*, Armadillo Books, 2003, p.218.

⁴ R Parsons, *GCSE Modern World History 20th Century Britain*, Coordination Group Publications, 2001, p.38

Royal Navy by pronouncing that the German barges 'could only sail if the victory of the skies was won'.⁵

All of the above placed great emphasis on the need for German air superiority. However, a major German contention is that the *Luftwaffe*, even with air superiority could not overcome the Royal Navy.⁶ An examination of Admiral Raeder's published conference notes, *Fuehrer Conferences*, his later published memoirs, *My Life*, Admiral Kurt Assman's post war article published in *The United States Naval Institute Naval Proceedings* and a synthesis of captured German documents that Assman helped to prepare for the Director of Naval Intelligence will indicate how the Germans really viewed the significance of air superiority among their many operational problems.

Another contention relates to the supposed vulnerability of the British Isles to German airborne assault between 9 and 15 July. This was argued by K Macksey in 1980⁷ and was given further prominence by Niall Ferguson in the *Daily Mail* in 2000. German sources are also supplemented by the Air Ministry's own evaluation of the prospects of glider borne attack in 1940. These will indicate whether the potential of air power to change the situation during this period differed from that of the main air campaigning which only took place from the following month.

The attitudes of several German admirals maintaining that Hitler had always desired an accommodation with Great Britain will also be examined. It is impossible to know the innermost workings of Hitler's mind and it is claimed that British historians are

⁵ R Strong, *The Story of Britain*, Hutchinson, 1996, p.498.

⁶ *Timewatch: Hitler and the Invasion of England*, UKTV History. According to the narrator, Field Marshal Albert Kesselring made the remark.

⁷ K Macksey, *Invasion: The German Invasion of England, July 1940*, Greenhill Books, 1980.

uncomfortable with psychoanalysis anyway.⁸ Yet his desire for a deal during 1940 is plain enough, for military pragmatism alone dictated this was necessary. Certainly the depth of any conviction for a genuine understanding would have been rooted in the preceding years, though it is unnecessary to go back to childhood. There seems little point in relying any longer on the evidence in *Mein Kampf*, or the so-called *Hossbach Memorandum* that historians have thoroughly dissected without producing overwhelming consensus as to their significance.

A comparatively neglected source for re-examining British assumptions is the essays of German admirals written in the aftermath of defeat at the behest of British Naval Intelligence. Although somewhat hastily translated, they have the advantage of being written while the events were still relatively fresh in mind, mainly from memory and without the possible distortions arising from access to other records and editing by former colleagues. Furthermore the admirals do not agree on everything, yet their attitudes towards *Sealion* and opinions of German intentions towards 'England' are remarkably consistent even if they differed on matters such as the need for all-out U-boat production. This is not to say they were untainted by what Bennett and Bennett have described as 'the need to produce a new narrative of defeat that Admiral Doenitz had identified in May 1945'.⁹ Yet such 'corruption' was likely to have been less than in later memoirs where figures convicted of war crimes had more time to provide justifications for faithfully serving a regime the world now rightly condemned as evil. Even so, the memoirs of Doenitz and Raeder were reasonably consistent with the views of colleagues expressed in the immediate aftermath of defeat. All of these figures preferred the West to contemplate

⁸ H Costello 'History on the Couch' *BBC History*, Vol.6, No.9, September 2005, pp.22-3. This interview between Costello and Psychoanalyst Daniel Pick suggests that psychoanalysis has been much more powerful in the USA and France than the UK. In 1943, American scientists led by Walter Langer tried to analyse Hitler's mind to divine his future actions. They diagnosed a Messiah complex because his elder siblings died as children and the team were said to have made 'some chillingly accurate predictions'. Pick warns that there are limitations and one 'can't simply say Hitler's psychopathology explains everything'. He also states that 'without a prolonged period of analysis you can say very little about someone'.

⁹ G H Bennett & R Bennett, *Hitler's Admirals*, Naval Institute Press, 2004, p.14.

the present ‘dangers’ of communism rather than dwell on past German crimes, but no reasonable motive for distorting Hitler’s attitudes to Britain can be divined. In addition to these sources, there is a report from the British Naval Attaché in Berlin revealing the powerful influence of Vice Admiral (ret’d) W Wegener on the Fuehrer. The perceived influence of the book described as his ‘sea-gospel’ is a source rarely taken into account.

. Air ace Adolf Galland’s most publicised allegation is that there never was a Battle of Britain as such.¹⁰ The chapter’s conclusion will look at the evidence to see how reasonable this would have seemed from the standpoint of virtually any senior military or political figure in Berlin.

Perceptions of the Importance of Air Superiority and other Operational Problems

The German Naval Staff seriously doubted that air supremacy would be enough to make an invasion of England possible and hoped the *Luftwaffe* would fail. Suspicions over the true feelings of these officers may have contributed to Hitler’s later orders to Vice Admiral K Assman to investigate whether he had been deceived over the viability of *Operation Sealion*. Assman’s report got them off the hook but his later reflections, confirmed a sense of relief among the 1940 Naval Staff who were thankful they did not have to put the invasion into practice. His later report for British Naval Intelligence stated that the ‘Naval Staff also appreciated clearly that air supremacy alone could not provide permanent security against vastly superior enemy naval forces in the crossing area’.¹¹

¹⁰ L Mosley, *Battle of Britain*, Pan Books, p.35. Although Adolf Galland did not make this allegation in his memoirs (*The First and the Last*, Cerebus, 2001 edn) but when asked to be a consultant for the film *Battle of Britain*, he told Ben Fisz that ‘he didn’t believe there was any such thing ... from which it followed that Germany certainly hadn’t lost it’.

¹¹ MOD NID 24.GHS/1, Feb.1947 ‘German Plans For the Invasion of England in 1940: Operation “Sealion”’, p.51.

The reason that air supremacy had ever become a key factor in the invasion scenario can be put down to the enormous operational difficulties faced by the German Naval Staff in mounting an invasion at short notice without the benefit of specialised landing equipment and sufficient ships to protect the transports. According to his memoirs it was Grand Admiral Erich Raeder who put the idea to Hitler on 21 May 1940, a date well before the French capitulation and before the evacuation from Dunkirk. The commentary in *Fuehrer Conferences* indicates that the meeting was a private one following a routine discussion with other leaders on various matters.¹² Raeder and Hitler were to discuss the Navy's contingency plan for invasion drawn up in November 1939 but it appears that Raeder did most of the talking. His motive was to prepare Hitler's mind for the 'impossible tasks' that invasion would entail bearing in mind the likelihood that some 'irresponsible' person would use the strikingly successful invasion of Norway as a precedent. Raeder's involvement in this campaign leading to his questionable conviction for 'waging aggressive war' meant that his accounts concerning advice to Hitler on these matters were defensive. There is room for some scepticism regarding his motives for raising the matter, but it is hard to seriously dispute the truth of this. Hitler was told the *Luftwaffe* would have to defeat the RAF and inflict enough damage on the British fleet to keep it away from the landing areas. Raeder emphasised the economic consequences of diverting the huge amounts of shipping required for the task and would certainly have explained the differences between landing in Norway and England. In other words the Norwegian landings involved placing troops in fast passenger liners; dashing across the docile Baltic Sea; evading the British fleet once through the Denmark Gate and seizing lightly defended harbours using all the advantages of surprise. Hitler listened without comment and ordered no preparations be made yet.¹³

¹² 'Report of the C in C Navy, to the Fuehrer on May 21, 1940 at 12.00', signed Raeder. J P Mallman Showell, *Fuehrer Conferences on Naval Affairs, 1940*, Greenhill Books, 1990 edn, p.5.

¹³ E Raeder, *My Life*, United States Naval Institute, 1960, pp.319-23.

Events moved quickly from this point. The British Admiralty ordered the Dunkirk evacuation on 26 May 1940 and the *German Naval High Command War Diary* entries for 30 and 31 May paid tribute to the resistance of Anglo-French troops holding the Dunkirk perimeter. It predicted the success of the British operation in getting 'a considerable part of their troops to England'. Admiral Schniewind had already warned the *Luftwaffe* that the Navy could not prevent this, presumably in part because they were still engaged around Norway where the Home Fleet was disrupting German sea communications.¹⁴ With the French armistice request under discussion by 20 June, the question of England was bound to assume increased importance and Raeder reported to Hitler the progress of invasion preparations. This seemingly defied Hitler's earlier order not to make preparations but might be explained by clumsy drafting or imprecise translation if Raeder was only referring to the contingency plans made the previous November. Raeder must have been dismayed to find that the invasion of England was now the subject for a directive. This Raeder implied, was the result of a sudden interest by the *Oberkommando der Wehrmacht* (OKW), or more likely the Army – *Oberkommando des Heeres* (OKH).¹⁵

The directive of 7 July 1940 was nevertheless cautious in tone, mentioning air superiority and other 'necessary conditions' with no date for launching. After all, it was 'still only a plan'.¹⁶ The report to Hitler on 11 July 1940 indicated agreement that invasion would be a 'last resort' and economic warfare using submarines and air attacks on ports and convoys would be the best means of forcing Britain to ask for peace.¹⁷ Faced with bullish optimism from the Army representatives and no response from Britain to peace overtures, Hitler was clearly thinking a show of intent was now needed.

¹⁴ From Schniewind to Supreme Command (Air), Fuehrer Headquarters, 26 May 1940; entries of the *German Naval High Command War Diary*, 30 & 31 May 1940 as quoted in *Fuehrer Conferences*, pp.106-7.

¹⁵ Raeder, *My Life*, p.332.

¹⁶ Directive from Fuehrer Headquarters, 7 July 1940', signed Keitel as quoted in *Fuehrer Conferences*, pp.112-13.

¹⁷ 'Report of the C.in.C Navy to the Fuehrer' on 11 July 1940, signed Raeder. *Ibid*, pp.113-14.

Thus far, Raeder had not quite impressed upon Hitler the impossibility of landing troops and equipment on a wide front. This became the nub of a series of acrimonious arguments regarding the landing site. Not unreasonably, the Navy felt that only the Dover Straits could be provided with adequate sea and air defences to cover the transports, yet the Army understandably felt landing on such a narrow front meant the British would find it much easier to concentrate their land forces in defence. The influence of the Army can be observed in the next directive (no.16) issued on 16 July 1940. This stated that S-Day (D-Day) was to be any time from 15 August 1940 and reflected the Army lobbying for a broad front from Ramsgate to an undefined point west of the Isle of Wight.¹⁸ Two days earlier, General Halder and Field Marshal von Brauchitsch had given Hitler an invasion plan that was approved after minimal scrutiny and a lengthy exposition as to why he did not want to destroy England in any military sense. With the British Empire shattered, the USA and Japan would pick up the pieces but Germany would gain nothing, ran the monologue.¹⁹ Hitler undoubtedly genuinely thought this but he was also being indecisive while struggling to appear in control of the situation.

Whether Raeder already guessed this is unclear but it would have been irresponsible not to re-acquaint Hitler with the operational difficulties. Raeder no doubt recalled the difficulties that Napoleon's Minister of Marine, Decres experienced in having to patiently explain the situation to a sceptical (and sometimes volatile) audience with no nautical awareness. Over a century before, Decres had told Napoleon why navies cannot be easily subordinated to mechanical timetabling independent of moon and tide and how the Channel had violent characteristics altogether different from inland waterways. Raeder forcefully reiterated his arguments to Hitler in a memorandum sent via the Naval Staff on 19 July 1940, the day the German implicit peace offer was made before the *Reichstag*. This

¹⁸ 'Directive No.16 Preparations for the Invasion of England', 16 July 1940, signed Hitler and initialled by Keitel and Jodl. *Ibid*, pp.116-17.

¹⁹ H A Jacobsen (ed), *The Halder Diary*, as quoted by E Kieser, *Hitler on the Doorstep*, Arms and Armour press, 1997 edn, p.95.

internationally reported speech by Hitler stated he saw no reason why the war should continue between Germany and Great Britain but the 'offer' was rejected by a BBC spokesman later that day. Hitler was undoubtedly already aware of the problems that Raeder reiterated, but it is worth paraphrasing these below to gain a sense of the operational problems that *Sealion* entailed:

- a) The troops must be transported from war-damaged harbours, installations and adjoining canal systems or are otherwise inadequate.
- b) The Army's plan involves landing on a particularly difficult part of the Channel with regard to weather, tides and rough seas.
- c) Strongly defended harbours mean the initial waves of troops must land on beaches with complications from swells, currents and tides.
- d) The enemy can mine the coast; the position of such minefields cannot be determined day-to-day.
- e) The restricted area in which the Navy will work requires air supremacy.
- f) The Royal Navy will treat the situation as life-or-death and will throw all units into the fight. Weather uncertainty alone means the *Luftwaffe* cannot guarantee keeping the enemy fleet away. German minefields flanking the crossing zone must supplement the *Luftwaffe* efforts, but as minefields are not absolute barriers, the enemy may cut the supply line of the first wave.
- g) Despite previous *Luftwaffe* success in negating enemy installations, the enemy has made long-term preparations and the lack of conventional artillery support makes German ability to disable coastal defences doubtful.²⁰

For Raeder, the most important point (f) was that the Royal Navy would use their full power 'to the last ship, and the last man, into an all-out fight for survival'.²¹ He would

²⁰ From the Naval Staff to Hitler, 19 July 1940 as quoted in *Fuehrer Conferences*, pp.117-18.

not have known that Admiral Forbes had told Churchill at an early invasion conference that he would not bring his capital ships south of The Wash 'under any circumstances'. General Ismay wrote that Churchill, from whom everyone expected apoplexy, kept his temper, spoke indulgently and refused to believe him.²²

The first point (a) relating to the condition of harbours is dealt with in more detail later in the chapter but there is no doubt many were badly damaged even though some successful repairs had been made. *Zeebrugge* was essentially out of action until November 1940, but *Dunkirk* was in service after only a 'few months' with *Calais* and *Bolougne* from mid-September.²³ Harbour geography was as important as their state of repair. According to General Gunther Blumentritt representing Field Marshal von Runstedt at *Sealion* conferences, the only harbours large enough for loading the essential panzer divisions in the short embarkation timetable were within the Antwerp area. Given the landing area along the Kent and Sussex coast, these transports, he believed, were particularly vulnerable on the long 'flank-march' with the inadequate naval protection available.

As for the flanking minefields that Raeder described as 'not absolute barriers' in (f), Blumentritt noted that the Navy lacked 'sufficient mines for viable barriers and every eight to fourteen days the mines would break away and need replacing'.²⁴ Vice Admiral Ruge, a former C-in-C Minesweepers West who was more qualified to speak about this topic commented in his book that the 'flanks were poorly guarded' and could 'provide only partial protection because of the strong tides and the big rise and fall', meaning the British

²¹ Raeder, *My Life*, pp.324-25.

²² Lord H Ismay, *The Memoirs of Lord Ismay*, Heinemann, 1960.pp.188-89. These relationship problems are dealt with in a subsequent chapter.

²³ *Minsterialdirektor Eckhardt*, 'Construction of Naval ports in War', *Nauticus*, 1944 and other sources in P Schenk, *Invasion of England 1940*, Conway Maritime Press, 1990, p.112.

²⁴ ROSK 5/124 Extract from 'An Constantoir', *The Irish Defence Journal*, Vol.1, No.1, Jan. 1949, by G Blumentritt, translated by T B Dunne, British Intelligence Section.

would be able to steam over the top at high tide.²⁵ The main purpose of the mine barriers was to allow time for subsequent landings of troops and equipment, but as Field Marshal von Runstedt later remarked to Liddell Hart: 'While the leading part of the forces might have landed, there was the danger that they might be cut off from supplies and reinforcements.'²⁶

Ruge clarified the tidal current problems in (c) by explaining the effect on the proposed barge convoys. These convoys comprised mainly un-powered barges needing tugboats that could make up to three knots in speed. Unfortunately, these were likely to meet currents of up to five knots, but assuming these could be avoided, Ruge estimated the convoys would need to travel forty or fifty miles taking a minimum of fifteen hours. As he correctly surmised, any advantage of surprise would have been lost, bearing in mind the large assortment of small craft that had been posted by the British in the Channel to watch for any unusual activity.²⁷

However something was being done to offset the lack of conventional artillery mentioned at (g). Coastal batteries *Grosser Kurfürst*, *Friedrich August* and *Siegfried* with guns ranging from 28 cm to 38 cm were being installed at the narrow end of the Channel to bombard Dover and contest the movement of shipping through the shallows. These would certainly have been capable of damaging heavy ships but as the water widens considerably each side of *Griz Nez*, only a tiny part of the English coast could be covered and exposure of the warships to coastal fire would have been for a limited time. Ruge pointed out that

²⁵ Vice Admiral F Ruge, *Sea Warfare 1939-1945*, Cassel & Co, 1957, p.85. Ruges's reputation was sufficiently known to enable his participation alongside General Adolf Galland in a war game simulation of *Sealion* at the Royal Military Academy in the 1970s. Ruge claimed that if Royal Navy units had penetrated the mine barriers, the *Luftwaffe* would have had serious problems identifying friend from foe within the crossing zone.

²⁶ LH15/15/149/3 'Notes for History: Talk with Field Marshal von Runstedt. 26 October 1945.'

²⁷ Ruge, *Sea Warfare*, pp.84-5. Ruge mentions thirty-three tugs each towing two barges. However it is generally accepted that some barge lines would have been much longer and very hard to manoeuvre.

the British could concentrate their medium and heavy artillery in the threatened areas as well as installing their own heavy gun emplacements using guns from older warships.²⁸

There is no reason to suppose that Hitler had the expertise to argue against Raeder's points and there is no indication that he made any serious attempt to do so. Instead he refereed the ongoing feud between the Army and Navy in the sort of 'hands off' management style that might be used when there is uncertainty how to proceed. Raeder's influence on Hitler was clearly discernable at the next conference on 21 July 1940. Hitler summed up the 'hopelessness' of the British long-term position, but also spelt out much of what he had been told, stating that the invasion of Britain was 'an exceptionally daring undertaking', not a river crossing and lacking the degree of surprise that characterised the Norwegian expedition. Because of the unreliability of the weather, the operation would need to be executed by 15 September to facilitate the essential factor of air cooperation. In what can clearly be regarded as a further admission that the operation was not definite, he demanded that preparations be completed by early September, otherwise 'other plans' would be considered.²⁹

On 25 July 1940, Raeder met Hitler and senior army officers to discuss their requirements of the Navy. The heavy gun batteries were to be ready for 15 August 1940 except for the heaviest 38 cm gun battery that would not be ready until mid-September because of the need to construct concrete air defence shelters. Raeder needed these guns working as soon as possible in order to close the Straits of Dover to British shipping and provide cover for his minesweepers. He stressed the Navy's inability to finalise its own preparations before mid-September and the gulf that still existed between the Army and Navy regarding the size of the invasion force and width of the landing area. The need for

²⁸ Ruge, *Ibid*, p.85. Schenk, *Invasion of England*, pp. 327-28. These coastal batteries only sank the auxiliary minesweeper *Brighton Queen* in June 1940 although they certainly deterred merchant ships from entering this area. Schenk believed the guns would have taken a heavy toll of larger warships but not the smaller ones.

²⁹ 'Conference on 21 July 1940', *Fuehrer Conferences*, pp.119-20.

air supremacy was again stressed though the *Luftwaffe* had yet to make its major effort, contenting itself attacking shipping while its resources were being concentrated behind French, Dutch and Belgium coasts.

No doubt trying to dampen enthusiasm, Raeder pointed out the consequences to the economies of occupied Europe of having to commandeer and convert some 3,000 miscellaneous craft, mainly from inland waterways to meet the Army's transport needs. They were still demanding 260,000 men transported, less than half their original requirement but still requiring them beached on a broad front. While probably aware of its unacceptability, the naval planners were insisting the landings should only take place around Dover but Raeder was undoubtedly hoping to bargain for something more workable.³⁰ Raeder later conceded the Army's demands were justifiable but he could easily prove the Navy's inability to provide the necessary shipping.³¹ As for Hitler, he was usually happy for subordinates to compete for his favour but the acrimony developing between his service chiefs must have been increasingly difficult to manage.

Yet again the naval difficulties were repeated to Hitler and the Army on 1 August 1940. The earliest date for *Sealion* was recommended as 15 September 1940 although Raeder gave his personal preference as May 1941. The barge conversion programme was due for completion by the end of August prior to stationing in harbours for mid-September. Shortages of merchant shipping were also reported due to mine losses in the Norwegian campaign and ice damage during the winter.³² Skilled personnel for crewing the transports were also urgently required. Minesweeping had begun but could only be carried out in earnest once air superiority had been gained, and this would be needed for two weeks. In

³⁰ 'Conference on 25 July 1940', *Ibid*, pp.120-21. Also see Raeder, *My Life*, p.327.

³¹ Raeder, *My Life*, p.327.

³² J Adams, *The Doomed Expedition*, Leo Cooper, 1987, p.176. Adams points out that an unexpected compensatory bonus from the Norwegian expedition was control of the large Norwegian merchant fleet of 1,500,000 tons passing to the British via the Norwegian Trade Mission in London.

response to a question about likely weather conditions, Hitler was told the North Sea was usually inclement around 20 September but satisfactory around the end of the month. Fog would probably be light in mid-October but heavy at the end of the month. This was obviously pure speculation based on Raeder's 'gut-feeling' and guesswork. He proceeded to lay down the conditions paraphrased below:

a) The safest time for unloading would be two hours following high tide, otherwise having to land at low tide means grounded vessels re-floating prematurely. Conversely, landing at high tide means craft stuck on the beach for long periods waiting for a tide that may not re-float them again. No point within a rising tide is useful since beached vessels will then re-float quickly disrupting unloading. As the Army requires a dawn landing 30-60 minutes before sunrise, craft would have to cross in darkness. Hard to manoeuvre transports with limited room to navigate need the light of a rising half-moon at 23.00. The best periods for this would be 20-26 August or 19-26 September, but August would be too soon. Early dawn carries the danger of interception from enemy units in the Firth-of-Forth and other locations having left their bases the previous evening and entering the Channel unobserved by early morning. A crossing by day would allow reconnaissance meaning the operation could be aborted if necessary. Good weather is crucial, as only a calm sea would allow beaching without rock/ground damage endangering the loads. Heavy seas would also prevent the transfer of cargo between steamers and barges. Favourable weather in the opening stages would not guarantee the same conditions for succeeding landing waves, as the intervals would be lengthy. Harbours must be taken quickly to unload significant quantities of material as no worthwhile quantities could cross for several days.

b) The wide front crossing from the Straits of Dover to Lyme Bay means Le Havre and Cherbourg transports running unescorted near the major British naval bases at Plymouth and Portsmouth. Attrition from the air will not stop numerous destroyers and motorboats intervening. Given full operational readiness by the British, the risk to steamers off the enemy coast for thirty-six hours would be unjustifiable.³³

Reader wound up by highlighting the *Luftwaffe*'s difficulty in supporting a landing in three locations. He still thought May 1941 would be the best date from an operational perspective but was still working towards 15 September 1940, although this would depend on the forthcoming air offensive. The directive issued through Keitel the next day overrode the Navy's broad front objection but the Naval Staff continued to object driving General Halder to state dramatically, 'I might just as well put the troops that have been landed through the sausage machine!'³⁴

The Navy C-in-C now tried to put Hitler on the spot asking him to adjudicate on 13 August 1940. Again it was agreed that invasion should only be a last resort 'if Britain cannot be made to sue for peace in any other way'. Both recognised the consequences of failure in terms of increased British prestige, meaning that British resolve would be stiffened especially now she was receiving increased support from the USA. Conceivably stalling for time, Hitler said he needed to discuss it with the Army C-in-C to discuss how crucial the broad front factor was to him. It is inconceivable he did not know. Raeder noted the British were thought to have gained much of their equilibrium on land, with estimates running at one and a half million men under arms including 300,000 Dunkirk veterans plus 150,000 others, all of who had been rearmed. The last item to be discussed was the manufacturing priority of torpedoes. Higher consumption resulting from the use of Lorient

³³ 'Conference on 31 July 1940', *Fuehrer Conferences*, pp.123-24.

³⁴ Mallman Showell, *Fuehrer Conferences*, p.125. Showell's commentary refers to a meeting between Admiral Schniewind of the Naval Staff and Colonel General Halder on 7 August 1940.

as a base was hammering British merchant shipping despite a high proportion of torpedo failures.³⁵ Another reason not mentioned here is the fact that many potential British escorts were tied up in anti-invasion duties instead of trade protection, but Raeder was undoubtedly concerned with building up the viability of dealing with England by 'other means' in Hitler's mind.

Inevitably perhaps, Hitler had to force a compromise on his staffs by issuing a directive dated 16 August 1940 stating:

'Main crossing to be on a narrow front, simultaneous landing of four to five thousand troops at Brighton by motor boats and the same number of airborne troops at Deal-Ramsgate. In addition on D-1 day, the *Luftwaffe* is to make a strong attack on London; which would cause the population to flee from the city and block the roads.' ³⁶

The bickering continued, mainly over whether Brighton was to be a diversionary or the principal landing point. The final plan involved dawn landings at Folkestone-Dungeness, Dungeness-Cliff's End, Bexhill-Beachy Head and Brighton-Selsey Bill. A line from the Thames to Southampton represented the first operational objective for the Army. A diversionary operation, *Autumn Mist (Herbstreise)* was intended involving the deployment of the heavy cruiser *Hipper* with three other cruisers and four transports from Norway to an area between Aberdeen and Newcastle followed by a planned withdrawal to the Kattegat. The battleship *Scheer* would also break out to the Atlantic to commerce-raid and provide a further diversion. Other diversions would also be made in the direction of Iceland.³⁷

³⁵ 'Report of the C-in-C Navy to the Fuehrer on 13 August 1940', signed Raeder, *Fuehrer Conferences*, p.126. See Raeder, *My Life*, pp.328-29 for details of the torpedo problems. See Churchill, *Second World War II*, App.4, p.639 for details of shipping losses. British losses alone were 82,429 gross tons in May rising to 278,322 gross tons in August 1940.

³⁶ 'Directive from the Fuehrer's Headquarters', 16 August 1940, *Fuehrer Conferences*, p.128.

³⁷ Mallman -Showell, *Fuehrer Conferences*, p.128.

The German writer Egbert Kieser has viewed this as a plan acceptable to both services,³⁸ but it seems likely that cooperation was achieved largely because those principally involved had already observed Hitler's lack of enthusiasm and did not expect to have to go through with it. On 20 August 1940, one week before final decisions on the landing points were made, a written briefing appearing to come from Hitler's HQ to *Wirtschafts-und Rüstungsamt* (Department for Economy and Armament) of the OKW advised that England's defeat in 1940 could 'no longer be assumed'. Doubts had already been expressed at the end of July over the planned peacetime restructuring of the Army and by 2 August 1940 the 'Fuehrer was now seeing things differently and that we should prepare ourselves for any conceivable political situation that might arise in 1941'.³⁹ Herbert Doering, Hitler's Berghoff manager has explained how the Fuehrer and his generals had pencilled in lines of attack over maps of the USSR during August, and left them for Doering to clear up.⁴⁰ *Barbarossa* was now competing with *Sealion* for Hitler's attention.

According to information gained from the post war interrogations by Basil Liddell Hart, the chance of a successful airborne operation diminished around the end of August. General Putzier, who had temporarily replaced the wounded General Kurt Student as commander of the airborne forces was to seize a twenty-mile zone near Folkestone and was keeping the designated fields under observation. By the end of the month these were fitted with anti-landing vertical stakes and it was presumed the fields were mined.⁴¹ This can only have supported Naval Staff perceptions that the British anticipated the plan.

³⁸ Kieser, *Hitler on the Doorstep*, p.132.

³⁹ IWM EDS docs, AL1492, Aktennotiz, OKW, 20 Aug.1940, translation by Dr I Roberts, Dartmouth Naval College, May 2004. Dr Roberts's translation notes advises it is unclear whether the brief is to or from the head of *Wi Rüst Amt*.

⁴⁰ Doering personally related this account in '*Timewatch: Hitler and the Invasion of Britain*', UKTV History, seen 18 Nov.2003.

⁴¹ A B Liddell Hart, *The Other Side of the Hill*, Papermac, 1993 edn, p.220.

Prospects for gaining air superiority looked better now the *Luftwaffe* had commenced operations against RAF airfields in earnest. However faulty intelligence meant ‘the effect of the air attacks was generally over-estimated in Germany’ allowing the Naval Staff ‘to be influenced ...by these exaggerated hopes’ or so it was claimed.⁴² It was almost impossible for *Luftwaffe* intelligence sources to gain an accurate picture. Fighter pilots of all nations tend to over-claim, and lacking a reliable network of agents the Germans were worst placed than the British, who could in theory, count the wrecks. There was also no way of knowing how long a bombed airfield would remain un-operational. Craters could be quickly filled with rubble and personnel re-housed in tents or boarded out with civilians. They could only assess the strength of the fighter opposition each time bombers crossed into English air space and by the beginning of September they sensed correctly that the fighter defence was weakening.⁴³

Another problem noted by German historian Karl Klee was Fighter Command’s evasion of the German fighter sweeps. The solution proposed by *Luftwaffe* General Paul Deichmann, was to throw the weight of future attacks against London. He argued that London was so important to the British they would have to commit their entire fighter-resource to defend it. Deichmann later complained that when the suggestion was first mooted, Hitler would not hear of it.⁴⁴ According to Nicolaus von Below, Hitler’s *Luftwaffe* adjutant, this was because of the risk of British retaliation against Germany.⁴⁵

This is important because so many writers blame this change of focus to London as revenge for RAF attacks on Berlin and even the radical Allen considered this to be a

⁴² MOD Naval Historical Branch, NID 24/GHS/1 ‘German Plans for the Invasion of England in 1940-Operation Sealion’, February 1947, pp.77-8.

⁴³ MOD *Ibid*, p.56.

⁴⁴ Report of General Paul Deichmann to Air Fleet II as quoted by K Klee, ‘The Battle of Britain’ in H A Jacobsen and J Rohwer, *Decisive Battles of World War II: The German View*, Andre Deutsche, 1965, p.83.

⁴⁵ N von Below, *At Hitler’s Side: The Memoirs of Hitler’s Luftwaffe Adjutant 1937-1945*, Greenhill Books, 2001 edn, p.73.

‘fateful error of judgement’ without properly analysing the German dilemmas.⁴⁶ This nuisance bombing undoubtedly irritated Hitler but it is hard to believe the slight damage inflicted on 25/26 August 1940 inflamed his emotions to the extent of seriously impairing his judgement. Hitler’s displays of violent emotion were usually invoked for the purpose of political manipulation and it should not be assumed that Hitler’s military decisions were irrationally based. Possibly as the Director of Naval Intelligence’s synthesis of captured German documents showed, ‘it hastened the plan for reprisal attacks on London’.⁴⁷ Quite possibly the minimal damage to Berlin encouraged Hitler to believe Germany was safe from effective reprisal.

If, towards the end of August, Hitler had given up hope of imminent peace with England, either by threat of, or by actual invasion, then he required a political excuse for action that suited both the military situation and the political object of negating England as a hostile power. ‘Douhet’ bombing theory indicated that bombing London had the potential for forcing England to the negotiating table. It is not controversial to assert that the idea of heavy conventional bombing against civilians was then universally regarded with such terror as to make it comparable with the possibility of nuclear destruction during the Cold War era.⁴⁸ This course suggested that destruction of the RAF and mass psychosis inflicted on London’s population would be enough to bring down the Churchill coalition. If these aims could be achieved, then Hitler’s overriding objective would be attained. That this bombing theory subsequently proved erroneous has no bearing on what was then widely believed.

⁴⁶ P B Lucas, *Flying Colours*, Hutchinson & Co, 1981 edn, p.125. J Terraine, *The Right of the Line*, 1998 edn, pp.207-9. Allen, *Who Won the Battle of Britain?* p.124 & 178.

⁴⁷ MOD ‘German Plans for the Invasion’, p.56.

⁴⁸ H Macmillan, *Winds of Change*, London, 1966, p.522 as quoted by E Ranson, *British Defence Policy and Appeasement Between the Wars 1919-1939*, The Historical Association 1993, p.27. According to Harold Macmillan, ‘we thought of air warfare in 1938 rather as people think of nuclear warfare today’.

Hitler knew that an unsuccessful invasion would entail the prospect of thousands of German troops drowning in the Channel, or even worse, British newsreels shots of an endless line of German prisoners being marched down Whitehall shattering the recent myths of German invincibility and his own infallibility. It might even embolden the Soviet Union to make aggressive moves in the East. Even if he succeeded, the British government and the Royal Navy could still operate from Canada and the subsequent weakening of the British Empire would only assist future rivals and adversaries.

The Naval Staff believed that *Luftwaffe* chief Herman Goering was so confident that an air offensive of this nature would succeed that he took no interest in the plans for *Sealion*.⁴⁹ Authors such as Allen believe the Naval Staff were using Goering's ego to get themselves off the hook.⁵⁰ Goering's ego may have been overdeveloped but his comic-opera persona also concealed a shrewd brain. He had shown sufficient ability as a young man to command the elite *Richthofen Jagdgeschwader I* in 1918 and though only an *oberleutnant* (lieutenant) he was effectively an acting wing commander. As a holder of the *Pour le Mérite* (Blue Max), an equivalent of the Victoria Cross and a score of twenty-two destroyed allied aircraft he did not lack physical courage although most accounts suggest he was unpopular with his subordinates in *JG1*. Goering may not have kept up to date with technological developments but he must have known the limitations of the *Luftwaffe* in dealing with the Royal Navy. He had encouraged the development of the *Luftwaffe* as a tactical air arm and that decision had paid off in terms of the successful land campaigns, but there had been no reason for a continental air force to prepare for a major maritime role. An airman of his experience would also have appreciated the difficulties of operating in bad weather. His air fleet commanders, particularly the capable Albert Kesselring would

⁴⁹ MOD 'German Plans for Invasion', p.59.

⁵⁰ Allen, *Who won the Battle of Britain?* p.204.

have told him they did not relish the prospect of facing the Home Fleet meaning there was little option now but to attempt strategic bombing.⁵¹

These factors make the shift in focus towards an all-out assault on London a logical decision that can only be seen as erroneous with hindsight. Hitler now needed time for the bombing to show results and his hesitancy during September is further explained by the need to maintain the threat of invasion. Not only was this necessary to pressurise the British but to maintain face in front of his generals with whom he always had a difficult relationship.

By mid-September, there was no sign of the *Luftwaffe* diverting its attacks towards warships and coastal defences or anything connected with the *Sealion* operation. Raeder noted that Hitler had gone along with Goering and both were clearly focussed on forcing Britain into negotiations without risking an invasion. Raeder told Hitler on 6 September that minesweeping in the Channel had commenced but owing partly to the air situation was now behind schedule. Tactfully, he did not criticise the *Luftwaffe* and still described the operation as 'possible' but heavily qualified this with the conditions of air supremacy and favourable weather. Significantly more time appears to have been given to U-boat operations in the Atlantic and the increasing problem with the USA as evidenced by the Destroyers-for Bases deal.⁵² This was the day the *Luftwaffe* launched its first main assault on London. Hitler was expected to give the order for S-day (D-Day) on 11 September, 1940 bearing in mind ten days were needed to implement the decision. The previous day the Naval Staff reported a weakening of the RAF fighter defence and it can be taken for granted that 'the German forces have a considerable fighter superiority over the English area'. This was not enough for the Naval Staff however as they claimed RAF bombers and

⁵¹ This opinion of Kesselring's is mentioned in *Timewatch: Hitler and the Invasion of Britain*, UKTV History, 18 Nov. 2003.

⁵² Raeder, *My Life*, p.330. Also 'Report of the C-in-C Navy to the Fuehrer in the Afternoon of 6 September 1940', as quoted in *Fuehrer Conferences*, pp.132-36.

minelayers were still proving very active. Weather difficulties were also mentioned but most significantly it was claimed the main pre-condition for invasion had still to be achieved. In other words, 'clear air superiority in the Channel area' and negation of enemy air activity in naval assembly areas. This demonstration that the Naval Staff no longer believed in *Sealion* as an ongoing operation is shown in the War Diary entry for 10 September 1940:

'It would be more in the sense of the planned preparation for operation "Sealion", if the *Luftwaffe* would now concentrate less on London and more on Portsmouth and Dover, and on the naval forces in or near the operation ... the Naval War Staff, however, does not consider it suitable to approach the Fuehrer now with such demands, because the Fuehrer looks upon a large-scale attack on London as possibly being decisive ... bombardment of London might produce an attitude in the enemy which will make the "Sealion" operation completely unnecessary.'⁵³

Hitler postponed his decision until 14 September 1940. Meanwhile the RAF applied its own pressure by destroying barges moored in Ostend. The Royal Navy had been actively bombarding minesweepers and barges and moved capital ships from Scapa Flow to Rosyth in obvious readiness for a descent upon the Channel. There is some dispute as to the number of barges sunk by the British during this month, arising from Roskill's detection of a mistranslation of German documents⁵⁴ However, the synthesis of captured German documents by British Naval Intelligence stating that 12.5% of transports had been lost, 12.6% of barges and 1.4% of tugs appears reliable. These were held to be replaceable, but not if the attrition was to continue for much longer, thus placing even more pressure on Hitler to decide.⁵⁵ The *Daily Express* of 12 September 1940 reported 'strong and repeated offensive actions are being taken by our naval light forces against German shipping

⁵³ War Diary entry for 10 September 1940, *Fuehrer Conferences*, p.136.

⁵⁴ ROSK 4/86 From M Saunders, Cabinet office to S Roskill, 20 March 1952 alleges mistranslation of p.98 of the 1940 edition of *Fuehrer Conferences*.

⁵⁵ MOD 'German Plans for the Invasion', pp.67-8 A Martiensen, *Hitler and his Admirals*, Secker & Warburg Ltd., 1948, p.87 indicated eighty barges sunk at Ostend on 13 September 1940. Schenk, sums up losses from all location as 'twelve transports, four tugs and fifty-one barges, putting them out of action permanently or temporarily'. He also mentioned that 'nine transports, one tug and 163 barges were damaged, though they could be replaced from reserves'.

movements, ports and concentrations of shipping'.⁵⁶ Naval attacks had certainly been made at Calais, Ostend, Bolougne and Cherbourg, yet the damage attributable to warships and aircraft respectively has not precisely been ascertained. Raeder clearly had reason to stress the attacks of 'English bombers'.⁵⁷

At the conference on 14 September 1940, Hitler claimed that *Sealion* was 'not yet practical' because air supremacy had not been obtained. If the invasion failed it would enable the British to endure the air attacks with greater fortitude. Imminent landings plus air attacks meant the 'total effect would be very strong after all'. No doubt relieved, Raeder agreed, though the operation could not be formally called off yet, as such an action would only encourage the British. The decision was again postponed, this time until 17 September 1940. By then Hitler knew the *Luftwaffe* had suffered heavy losses over London on 15 September 1940 without any apparent slump in civilian morale providing him with an excuse to postpone the operation indefinitely. Finally on 19 September 1940, he ordered limited dispersal of the barges to reduce the impact of British attacks on the harbour installations. The Fuehrer was now openly considering 'other plans'.⁵⁸

The Prospect of Airborne Invasion After Dunkirk

Quite apart from the German ability to launch a full-scale invasion of the British Isles in 1940, there remains the question as to whether a *coup de main* by parachute and glider borne troops around the time of the Dunkirk evacuation stood any realistic chance of success. Kenneth Macksey asserted the viability of an air and sea assault launched between 9 and 15 July as originally proposed by *Luftwaffe* General (later Field Marshal) Albert

⁵⁶ 'Channel Bases Shelled', *Daily Express*, 12 September 1940, p.1.

⁵⁷ 'Report of the Naval Staff, 10 September 1940', *Fuehrer Conferences*, p.136.

⁵⁸ 'Conference Between the C-in-C Navy and the Fuehrer in the Afternoon of 14 September 1940' signed Raeder and directives of 14 and 19 September 1940, *Fuehrer Conferences*, pp.137-39.

Kesselring and Field Marshal Milch.⁵⁹ Supporting these arguments and stressing British weakness at this time, Niall Ferguson stated through the *Daily Mail* that ‘if control of the skies, the Channel and the capital had been lost, defeat would have been the reality’.⁶⁰ It needs to be emphasised here that airborne troops cannot carry heavy weaponry and would at some point have required reinforcement by sea.

As Vice Admiral Kurt Assman revealed after the war, other ‘Englishmen’ had put the same arguments to him to which he replied ‘we Germans could not simply swim over’. Assman who was well qualified to answer these questions, said his questioners invariably took as ‘fact’ there had been plans for an invasion of England since spring 1938, to which he emphatically stated no such plans had been made and the English should know from their own experience ‘just how long it takes to prepare for such a gigantic undertaking’.⁶¹ In fact there had been no plans until after war started in September 1939 and these contingency plans were made on the assumption that the Germans might capture a significant stretch of the Belgian-French Channel coast. It is now generally accepted that the overwhelming success of the German offensive in May 1940 was as surprising to the German High command as it was to the British and French.

General Admiral Otto Shniewind, responsible for the contingency plan ‘Case-Red’ in November 1939 later co-wrote an essay for British Naval Intelligence with Admiral Shuster dealing with this question of invasion immediately after Dunkirk. Their essay stated that some of the harbours necessary for loading the heavy equipment had yet to be captured. Those already captured required so much repair and clearance ‘as to preclude

⁵⁹ K Macksey, *Invasion: The German Invasion of England, July 1940*, Greenhill Books, 1980,p.209.

⁶⁰ N Ferguson, ‘The Unthinkable’, *Daily Mail*, 4 Sept.1999, pp.12-13.

⁶¹ Vice Admiral K Assman, ‘Operation Sealion’, *United States Naval Institute Proceedings*, Vol.No.76, No.1 Jan.1950, pp.1-13. Presumably Assman’s questioners had in mind the Hossbach Conference of November 1937 when Hitler vented his frustration with British foreign policy and where he defined the principles upon which his own policy rested. As head of the Historical Section of the German Naval High Command in 1933 he was the official German naval historian for WWI and lectured on naval strategy at the German Naval Academy.

their immediate use as invasion ports'. Transports and loading installations had also been successfully destroyed.⁶² It is worth noting here that as late as 19 July 1940, the date of Hitler's 'implicit peace offer' from the Kroll Opera House, Admiral Raeder had sent a list of damage to these installations and adjoining canal systems to him.⁶³ Schniewind and Shuster also argued that the French army was still 'sufficiently intact' to preclude the removal of sufficient troops, a point made independently by Admiral Assman a few years later.⁶⁴ Furthermore, Schniewind and Shuster argued the necessary degree of air superiority had not been attained.⁶⁵

These objections are difficult to fault. The British were sufficiently satisfied with the harbour demolitions to justify awarding two Distinguished Service Orders, two Distinguished Service Crosses, six Distinguished Service Medals with eleven others mentioned in despatches for Operations XD and XDA. This was a time when heroes were badly needed and the British may have been inclined to exaggerate the damage but their reports indicate the Germans would have had problems making rapid repairs. For example at Ymuiden, the facilities 'rendered useless' included the power installation and machinery of the locks; the iron foundry control board and structure, the two floating docks together with the guns and ammunition at the fort. The channel was blocked with six sunken ships, one of which jammed the gates of the South Lock. Twelve other vessels had been destroyed or scuttled in the harbour including a floating crane. The damage at Amsterdam was less clear although it should be noted the entire oil stocks at this important port had been destroyed.⁶⁶ As the French did not request an armistice until 17 June 1940, the time available to throw together a surprise operation was clearly limited. Contrary to popular belief the French did not lack fighting spirit, and as Calder has remarked, the French

⁶² TNA ADM 223/696 Essay by General Admiral O Schniewind and Admiral Shuster, 26 Nov.1945.

⁶³ Memorandum from Raeder to Hitler, 19 July 1940, as quoted in *Fuehrer Conferences*, pp.117-18

⁶⁴ Schniewind & Shuster, *Ibid*, and Assman, 'Operation Sealion', pp.1-13.

⁶⁵ Schniewind & Shuster, *Ibid*.

⁶⁶ TNA ADM 1/11397 'Operations XD and XDA: Recognition of Officers and Men'. Also Appendix III: 'Demolitions Carried Out.'

defenders of Lille held out so bravely, the Germans allowed them to keep their weapons for the surrender parade.⁶⁷

Fuelling speculation as to whether an exclusively airborne operation against England would have been successful, General Kurt Student's interview with Basil Liddell Hart for the purposes of the latter's book on German decision making, revealed a claim that had he not been hospitalised with wounds, Student would have recommended an airborne assault during or immediately after Dunkirk. Liddell Hart considered this idea 'optimistic' taking account of the small, lightly armed forces that could be carried this way.⁶⁸ According to Field Marshal von Runstedt, the system of large-scale air supply later used in Russia was 'not sufficiently developed in 1940'.⁶⁹ Typical of Student's flights of fancy was his later plan to invade Ulster with paratroopers in early 1941. Intended as a diversion from proposed landings in southern England in 1941, his forces were to capture airfields so that *Luftwaffe* units could immediately occupy and make them operational. The enormous vulnerability of sea communications required for reinforcement and heavy equipment as identified by von Runstedt in his interview with Liddell Hart do not appear to have figured heavily in his calculations for Ulster.⁷⁰

Student may not have known that while he was in hospital in July there were only around 750 available transport aircraft with 150 gliders each carrying up to eight soldiers, suggesting the delivery of no more than 1,200 glider borne troops. Assuming 600 Ju.52 transport aircraft each carried 20 paratroopers, theoretically some 13,000 airborne troops could have been deployed, roughly the same number later deployed in Crete. In reality the troops available were likely to be substantially less because of the heavy casualties sustained in earlier operations and a shortage of parachute silk. Schenk has estimated the

⁶⁷ A Calder, *The Myth of the Blitz*, Pimlico, 1997 edn, p.94.

⁶⁸ Liddell Hart, *The Other Side of the Hill*, p.94.

⁶⁹ LH 15/15/149/3 'Notes for History: Talk with Field Marshal von Runstedt, 26 October 1945'. P.2.

⁷⁰ *Ibid*, p.3.

7th Airborne Division, the only unit with paratroopers to be around 10,000 strong.⁷¹ How many of these, like Student, were still recovering from wounds received during the fierce fighting around The Hague is unclear.

While this study has been sceptical of the role that airpower played as traditionally perceived, it is conceded that had the political will for an assault then existed it would have been essential for deterring an attack of this nature. As the operational range of the Me.109 fighter barely reached London, an attack on Ulster or even the south east coast of England, meant the slow Ju.52 transport aircraft would have received scant protection especially as the German *Jagdstaffeln* were unable to move into their new Channel bases until the French surrender. A secret British Air Ministry report on possible invasion by glider borne forces indicated that the British had anticipated an attempt of this nature and assessed the threat. It considered such an attack might seize a bridgehead or an aerodrome near a port. However, it noted that a glider needed 'to be towed to within a few miles of the coast by powered aircraft'. Gliders could fly around twenty miles in still air after casting off at 10,000 feet. The British gliders used in these experiments had escaped the visual detection of the Observer Corps but RDF (Radar Direction Finding) easily detected the slow-moving towing aircraft. Their slow approach speed indicated that it was indeed a glider formation. Surprisingly, given its wooden construction, it was asserted that 'gliders can themselves be detected by RDF'. As the report suggested, glider borne attack was vulnerable to fighter interception as it was only necessary to bring down the towing aircraft for the whole tow to be destroyed.⁷² As will be seen in a later chapter, RDF was rather less effective than generally assumed but it appears clear that without air supremacy, a glider borne attack was likely to fail. This does not prove the Germans fully appreciated these points but the British evidence suggests caution was justified. Heavy fighter escort was clearly essential

⁷¹ Schenk, *Invasion of England*, pp.197-98. Also LH15/15/149/3 'Notes for History: Talk with Field Marshal von Runstedt.'

⁷² TNA AIR 20/226 Appendix A 'Invasion by Glider-Borne Troops', 24 July 1940.

but as Schenk noted, after the exertions of the Western campaign, the *Luftwaffe* was exhausted, making the prospect of an immediate attack ‘inconceivable’.

Hitler's Attitude Towards Britain Pre-1940

A fundamental consideration of German attitudes has to focus heavily on the personal attitude of Adolf Hitler. The evidence already discussed suggests Hitler was hopeful of seeking an accommodation with Britain without necessarily eradicating her as a world power. This was one area in which Hitler was consistent, notwithstanding his occasional bouts of frustration when British foreign policy obstructed his own aspirations. Whether or not Hitler wanted war is an ongoing controversy. Nazi expansionism can hardly be denied but it is clear enough that Hitler did not want war with Britain in 1940. It might be argued this attitude was merely conditioned by military pragmatism relating to the 1940 situation rather than a desire for an accord deeply rooted in the experience of previous years.

One of the earliest expressions of Hitler's foreign policy towards Britain was the *Anglo-German Naval Agreement, 1935*. This was heavily criticised in *Guilty Men* during 1940, a work setting the tone for the mythmaking of later years. The first influential publication to lay into the pre-war appeasers, *Guilty Men* was written in ‘a rush and a rage’ by three London journalists including the well-known Michael Foot, a future leader of the Labour party.⁷³ One of the main targets was Sir Samuel Hoare, the British Foreign Secretary responsible for negotiations on the British side. The essence of criticism was that Hoare encouraged the erosion of the *Treaty of Versailles* by overturning restrictions on German naval building with a pact enabling Germany to build up to 35% of British naval

⁷³ Cato, *Guilty Men*, Penguin Books, 1940, p.vi.

tonnage and up to 45% in submarines. Churchill publicly supported this criticism after the war, though without mentioning he had voted with the government on this issue.⁷⁴ As Hitler set aside the agreement in April 1939, it tends to be seen as an expression of hostility towards Britain and Hoare comes over as a 'dupe'. The German Naval Staff had a rather different view of this supposed symptom of British moral weakness.

The attitude of Admiral Herman Boehm, was that the treaty represented a genuine German attempt to clear the air with England.⁷⁵ It fully recognised that England needed to maintain her position as the strongest sea power in Europe and that Germany was imposing a limit of one-third upon herself so as to reassure Britain over German intentions. His essay blamed Hitler for a political gesture that 'disappointed' the Navy by restricting battleships to a 26,000-ton displacement equipped with 28 cm guns as main armament. Having left the League of Nations in 1933 and faced with France building the *Dunkerque* battleships with 33 cm guns, Germany was theoretically free to build what it liked. Therefore, Boehm implied, the *Scharnhorst* and the *Gneisenau* were not built to the optimum specification. The *Anglo-German Naval Agreement, 1935*, demanded no counter concessions from England and in his opinion 'there never was a more generous offer made, nor more honestly meant'. With regard to Hitler's later cancellation of this treaty, Boehm considered that further naval expansion was not inconsistent with Germany's position as a European power and it was only in 1938 that the possibility of war with England began to be taken into account. The 'Z'plan may have been a considerable fleet expansion but this, to his mind, was still no threat to England, recalling the plan encompassed ten large battleships and battlecruisers by 1948 which still did not match England's fourteen in 1939.⁷⁶

⁷⁴ I S Wood, *Churchill*, Macmillan Press Ltd, p.81. Churchill, *Second World War, I*, pp.108-11.

⁷⁵ Bennett and Bennett, *Hitler's Admirals*, p.13,21 Boehm was a favourite of Admiral Raeder and assisted with the latter's defence at Nuremberg after the war.

⁷⁶ TNA ADM 223/692 Essay by General Admiral Boehm, 26 October 1945. According to D Miller, *The Illustrated Directory of Warships*, Greenwich Editions, 2004, edn, pp.186-87, the *Scharnhorst* class were indeed under-armed and vulnerable even to older British battleships. Displacement was 31,850 tons standard. Details of the Z-Plan are contained in Bennett and Bennett, *Hitler's Admirals*, pp.23-4. The finalised plan was for 6 battleships of 56,000 tons; 2 battleships (*Bismark* and *Tirpitz*) of 42,000 tons; 2 battleships

Vice Admiral Heye also mentioned that a fleet of about eight 'Washington standard' battleships was not expected before 1947 or 1948. Furthermore the hope of avoiding enmity was best illustrated by the fact that 'the navy was forbidden until shortly before the war...to carry on studies and make plans in case of war with England'.⁷⁷ Admiral Shultze claimed Germany did not have to take account of warships under 600 tons in this agreement, meaning she could build destroyers and E-boats to protect her vital iron-ore supply routes across the Baltic.

Admiral Shultze also mentioned the treaty was 'cordially welcomed both by me and by practically the whole corps of German naval officers'. Echoing Boehm, he stated that it was fully recognised England's imperial requirements obliged her to have 'a considerably stronger navy' whereas Germany 'with her central position and unprotected frontiers, based her defences primarily on the army and the air force, relegating her navy to a secondary position'. The protection of sea communications was better achieved through political understanding, than through extensive naval rearmament. Therefore the treaty 'conformed to the permanently expressed wish of the German national leaders'.⁷⁸

Grand Admiral Doenitz's essay laid emphasis on Germany's need to give priority to land rearmament because of her geographical position as also argued by Shultze. The Navy could not protect Germany's long unprotected land frontiers, a point later echoed by Vice-Admiral Weichold.⁷⁹ Therefore the great naval powers (Britain, Italy, Japan and perhaps the USA) were not considered potential enemies. This was evidenced by the fact that Germany initially created a 'balanced fleet' to deal with those of continental

(*Scharnhorst* and *Gneisenau*) of 31,000 tons; 3 battle cruisers of 31,000 tons; 3 pocket battleships; and two aircraft carriers.' Implementation of the plan was severely handicapped by the lack of an adequate naval infrastructure, hence the long period over which the programme was envisaged.

⁷⁷ TNA ADM 223/690 Essay by Vice-Admiral H Heye, 15 October 1945.

⁷⁸ TNA FO 371/47018 Essay by Admiral O Shultze, 1 November 1945.

⁷⁹ TNA ADM 223/797 Vice-Admiral E Weichold, 26 November 1945.

neighbours. Such a fleet might produce opportunities for an alliance with England, should the opportunity arise. If England had been a principal target, then a larger U-boat fleet would have been the logical building objective.⁸⁰

According to Admiral Kranke, 'the Fuehrer was always emphasizing the fact that war with England was politically out of the question, as there was no grounds for conflict, hence the naval treaty'.⁸¹ For Admiral Meyer, 'it was beyond question that Hitler never wished a quarrel with England, and that everything he ever said ... with regard to coming to arrangements with England was seriously meant'.⁸²

Meyer, a former commander of the *Tirpitz* was considered by the DNI as a 'non-political' figure.⁸³ It was Meyer whose essay drew attention to the influence of Vice Admiral Wegener on Hitler, especially with regard to his intentions towards Norway. *Seestrategie des Weltkrieges* published in 1929 was also identified as an important influence on Hitler by the British Naval Attaché, Berlin in May 1939. This analysis of the sea war of 1914-18 was written by a retired German admiral who told the Fuehrer through his book that there was no point in trying to compete with the British in terms of fleet size. Wegener made this important assertion:

'The German were so impressed with the tactical superiority of the British fleet, that they did not understand that strategically the relative size of fleets plays no part; it is geography that counts and a smaller fleet can perfectly undertake a strategic offensive.'⁸⁴

⁸⁰ TNA ADM 223.688 Essay by Grand Admiral K Doenitz, 24 September 1945.

⁸¹ TNA ADM 223/689 Essay by Admiral T Kranke, 2 October 1945.

⁸² ADM223/691 Essay by Rear Admiral H Meyer, 16 October 1945.

⁸³ ADM223/691 Preface to Meyer's essay by R G Rushbrooke.

⁸⁴ TNA ADM 1/9956 Translation of Vice Admiral W Wegener, *Seestrategie des Weltkrieges*, p.1 submitted by Naval Attaché, Berlin, 1939.

The idea of the primacy of geography as a major factor in British maritime supremacy is less firmly held now than it was, but Wegener was certainly convinced of it. In essence, the British did not need to go on the offensive; rather it was the Germans who needed to do this bearing in mind the slow economic strangulation of the central powers via the blockade towards the end of World War I. The concept of the 'fleet-in-being' had encouraged a negative psychology apparent in the actions of both Scheer and Jellicoe at this time. Wegener argued the Germans should have tried harder to capture Brest in 1914 to allow U-boats access to the Atlantic and also pressurise Denmark to open up the Belts for German shipping.⁸⁵ The importance of operating from Norway, the Kattegat and the Atlantic coast of France were stressed. Wegener also attacked the theories of Tirpitz, the architect of the German High Seas Fleet and claimed that neither Tirpitz nor Fisher (his opposite number) really understood strategy. Germany had assumed England would not attack her because the casualties would erode British supremacy over other European powers. Although initially the British made mistakes, she finally geared her strategy towards her geographical advantages, by which he presumably meant protecting trade routes and strengthening the blockade of Germany rather than further extensive land campaigning. One final point is the advocacy of a unified high command; a point made because he thought German leaders would, contrary to their traditional view, see any future conflict as primarily a sea war. As the Naval Attaché correctly recognised, Hitler would be sympathetic to the idea of placing power in as few hands as possible, a similar notion underpinning the concept of *Fuehrerprinzip* that maximised power into his own hands.

⁸⁵A Herman, *To Rule the Waves: How the British Navy Shaped the Modern World*, Hodder and Stoughton, 2005, p.220. The phrase 'fleet-in-being' was probably first coined by Lord Torrington who used it to defend himself at his 1690 court martial following the Battle of Beachy Head. Torrington was accused of abandoning his Dutch allies but he was able to argue that by keeping his fleet more-or-less intact the French would not then be able to invade England. Herman argued that the concept became a 'hallmark of British naval policy for 200 years' and justified maintaining a large fleet in peacetime. Reference to the 'Belts' seems to mean the channels between Norway and Denmark labelled Lilla Bælt and Store Bælt through which shipping from the Baltic must pass into the Kattegat, Skatterak and North Sea. The German coastline directly open to the North Sea including Wilhelmshaven around the Heliogoland Bight is short and susceptible to blockade

The Naval Attaché did not agree the British had nothing to gain by fighting, though he accepted the idea of small fleets gaining by offensive action. But irrespective of the actual validity of Wegener's theories, the seeds of German strategy are laid bare. They help explain the lack of priority for a big fleet and the unwillingness to compete with England in terms of big-ship rivalry such as had occurred with Kaiser Wilhelm's support for naval aggrandisement - actions that had antagonised the British prior to 1914. It meant that Hitler could afford to be diplomatically generous in 1935, as a big fleet did not accord with his own priorities for resources. Geography heavily dictated where the military efforts must be directed, therefore enemy naval bases had to be captured by land power meaning the Army must take priority. Hitler did indeed make an early move towards Norway and Denmark and the objective for his western offensive in 1940 were the Channel ports. It must also be stated that Wegener made no mention of needing to invade England. This is not to say that Wegener was solely responsible for the direction of German strategy in 1939-40 but his influence on the German Naval Staff alone was likely to predispose Hitler in these directions.

Was There a Battle of Britain?

What the admirals did regret was not the failure to gain air supremacy, but the inability to invade England in 1940. For Germany, the Battle of Britain was *Operation Sealion*, the battle that was never fought. This was because in the years prior to 1939, it had not been necessary to plan for it and no advantage the *Luftwaffe* might gain over the RAF could make up for the lack of long term preparation. Even if the change of *Luftwaffe* focus from the airfields to bombing London had been calculated to bring about a change of policy in England, there is no direct evidence stating occupation was to be part of any subsequent armistice. The Royal Navy was still the primary obstacle to invasion and

‘everyone connected with the operation’ knew this and was relieved when the *Luftwaffe* seemed to have failed though the question of ‘failure’ is more complex than usually allowed and is discussed in a subsequent chapter. On the balance of probability Admiral Raeder had worked to insert the ‘get-out clause’ of air supremacy in Hitler’s directives concerning an operation that both men hoped would never need to be implemented. The sources discussed show a remarkable respect for British sensibilities and an acknowledgment of the power of the British fleet. The essays by the admirals indicate that Hitler did not regard Britain as a ‘natural’ enemy even if at a later stage British rearmament made it necessary to plan for the event of war with her. British naval power had been a factor in his drive for the self-sufficiency of *Autarky*, but prior to the *Ribbentrop-Molotov Pact, 1939*, a naval blockade against Germany had the potential to wreck his ambitions. Hitler therefore formulated his own policy of appeasement to suit strategic requirements that found expression in a naval treaty better known as a milestone of Britain’s appeasement policy.

Naturally it was political pragmatism that drove Hitler to take a cautious attitude to what he accurately perceived as British sensibilities but there was no reason to think he had any overwhelming motive to see the downfall of Britain and her Empire in 1940 or any earlier point. In theory, a potential Anglo German peace treaty in 1940 would not have prevented Germany taking an aggressive stance towards Britain at a later date, but this did not necessarily mean the British would have been more vulnerable in the state of ‘armed neutrality’ that must have followed such an agreement. A Nazi Europe would certainly have made an uncomfortable neighbour in the 1940s but the ‘inevitability’ of war resuming once Hitler’s other declared expansionist aims had been achieved is something often asserted but never convincingly argued. Yet if long standing political pragmatism had played a major part in Hitler’s attitude towards ‘England’ in 1940, any change of attitude would have had to encompass military realities. Some broad strategic and tactical

difficulties have been shown to undermine German confidence but one fundamental problem had to be faced. The question at the back of German minds prior to the end of August must have been whether the comparatively recent phenomenon of 'airpower' had matured to an extent that the bomber could now defeat the battleship. The next chapter will attempt to answer this.

Chapter 3

Bombers Versus Battleships

‘The hasty conclusion that ships are impotent in the face of air attack should not be drawn from the Battle of Crete.’¹

(Viscount Andrew Cunningham)

F W Winterbotham of the Secret Intelligence Service claimed in his published memoirs that it was as a result of the Battle of Crete that the British finally learned that warships were incapable of surviving in the face of exposure to large numbers of land-based enemy aircraft.² For reasons that will become clear, it seems doubtful that this assertion published many years after the event and entirely from memory, can really be representative of what he actually thought at the time. His conclusion seems self-evident in the light of subsequent actions. The dramatic loss of the *Prince of Wales* and *Repulse* to Japanese naval dive and torpedo bombers and the great sea-battles of the Pacific where aircraft played the dominant role masked a situation in western waters where the Navy was facing an enemy air force that was undeniably powerful but hardly comparable with that of the United States or Japan. This assertion that the warship of 1940 could not stand up to mass air attack without substantial air cover remains stubbornly rooted in the public consciousness despite the comparatively recent work of academics.³

Dr Chris Bellamy, Reader in Military and Security Studies at Cranfield University has recently used a BBC website to demythologise aspects of the Battle of Britain pointing

¹ Viscount A B Cunningham, *A Sailor's Odyssey*, Hutchinson & Co., 1951, p.391.

² F W Winterbotham, *The Ultra Secret*, Weidenfeld & Nicolson, 1999 edn, p.68.

³ For example, Dr C Bellamy, 'The Battle of Britain', http://www.bbc.co.uk/history/war/wwtwo/battle_of_britain_print.html, BBC, Viewed 3 May 2004 and M Middlebrook & P Mahoney, *Battleship: The Loss of the Prince of Wales and the Repulse*, Penguin Books, 1979 edn, pp.17-20 testify to the power of the Royal Navy warship of 1940.

out the 'enormous strength of the Royal Navy' and arguing that even if the RAF had been destroyed, the Navy 'was very capable of repulsing German troop ships'.⁴ As mentioned previously, a former German pilot, Lt. Gerhard Baeker articulated the doubts of the *Luftwaffe* in overcoming the Royal Navy in these circumstances through the medium of a television documentary repeated periodically on digital history channels. As Middlebrook and Mahoney pointed out as far back as the 1970s, prior to the loss of the *Repulse* and *Prince of Wales* there was no reason to think, even in late 1941, that heavy ships could not operate in areas without guaranteed air cover and where there was a likelihood of enemy air attack. Only three of the twelve capital ships sunk between September 1939 and November 1941 had succumbed to air attack alone and these were Italian battleships sunk at anchorage (but not permanently negated) by torpedo-bombers. One attack (the *Bismark*) was made by a combination of gunfire and torpedo strikes. Four ships were sunk by gunfire alone and four by torpedoes from submarines. Significantly, none sank by bombing, though twenty-eight British destroyers and five cruisers had been eliminated in this form of attack.⁵ For reasons that will be discussed none of this will mean that long established views are bound to change.

A publication by a writer with a service background tending to emphasise British naval weakness during this difficult phase of the war is less widely read but remains influential because it is a key textbook for another level of reader. Vice Admiral Sir Arthur Hezlet's *Aircraft and Seapower*, published in 1970, was dismissive of the ability of small warships to operate a flotilla defence in the English Channel in the face of *Luftwaffe* superiority. He also stressed the reluctance of the Home Fleet to face a single Air Corps (*Fliegerkorps*) in Norway, pointing out that the fleet would have needed to contend with five Air Corps based in France. If the Navy had needed to engage in a suicide operation without air support, he argued the result would probably have been worse than at Crete as

⁴ Bellamy, 'The Battle of Britain', BBC website.

⁵ Middlebrook & Mahoney, *Battleship*, pp.17-20.

naval forces would only have been slightly greater, whereas the enemy air force would have roughly four times the strength it was to have at Crete. Hezlet also doubted the ability of the fleet to use the repair facilities between Portsmouth and the Humber while under air attack and asserted that Hitler did not invade 'because the *Luftwaffe* could not defeat the Royal Air Force'.⁶

A fresh look at the *bombs versus battleships* debate as it applied to the situation in 1940 will be the major focus of this chapter examining one of the naval perspectives of the so-called Battle of Britain. In this context 'battleships' means all Royal Navy ships including their personnel, together with the AA defence of bases providing replenishment and emergency repairs. There was far more involved with *Operation Sealion* than the question of whether German airpower was a match for British warships in 1940 but it is the fundamental assumption that British warships could not stand up to *Luftwaffe* attacks that is challenged here.

The first area to be reviewed is that of anti aircraft defence and takes account of the opinion of Lt. Commander J A Dennis along with official Cabinet papers regarding the problems of supplying close range machine guns before the war. Technical publications written by experts such as D Hamer and J Campbell are deployed to explain aspects of AA defence. With some obvious limitations inherent in the system, it might be expected that the Admiralty's own retrospective analysis of German attacks on shipping during 1940 would indicate an overall vulnerability to the *Luftwaffe* and their report will be examined for detailed conclusions.

Grand Admiral Karl Doenitz had told British Intelligence after the war that German bombs were then inadequate for the task of incapacitating British capital ships, but

⁶ A Hezlet, *Aircraft and Seapower*, Peter Davies, 1970. pp.155-56.

for a more detailed look at bomb effectiveness against the 1940 warship, other sources including an analysis of a letter from Air Marshal Sir Hugh Dowding in Sir Henry Tizard's papers, will help illuminate the complexities surrounding armour penetration.

There was far more involved in assessing the threat from the air than trying to decide whether it was the aeroplane or the warship able to mete out the most effective punishment. Passive defence capabilities of HM ships are illustrated using the evidence of both official records and the testimony of naval figures held in the records of official naval historian, Captain S W Roskill. The crucial importance of morale within the fleet is asserted but cannot be proved by methods of quantitative analysis. However, using oral testimony from a member of the Home Fleet serving below decks on *HMS Rodney* and official papers from The National Archives a reasonable conclusion is reached on the balance of probability.

As Hezlet has rightly made some comparison between the Battle of Crete in 1941 and the situation in home waters during 1940, it is appropriate to attempt this in greater detail. While a great many changes may have occurred over a period of eight months, Crete provided useful indications into the strength of naval morale at this early stage of the war as warships and crews were subjected to unprecedented attack from the air. Here, a variety of sources including the memoirs of Admiral A B Cunningham and the papers of Lt. Commander J A J Dennis are contextualised. Bearing in mind Hezlet's doubts on the likelihood of using naval bases for replenishment and emergency repair, sources such as the Director of Naval Air Division's report on the vulnerability of shipping in harbour are examined to see how justified these fears really were.

The AA Defence of the Fleet

The anti aircraft defence of the Home Fleet and the local flotillas operating in the Channel had limitations although it is usually held that senior naval opinion was initially satisfied with it, considering this more important than fighter defence. That this over confidence pervaded all levels of the Navy may be doubted. Describing the anti-aircraft capability as 'pathetic' Lt. Commander Dennis, then serving on *HMS Griffin* as a junior officer noted in his papers how during one pre-war fleet exercise in 1939, a radio controlled Queen Bee target aircraft flew straight and level through the fleet's barrage emerging unscathed the other side.⁷

Hamer has classified anti aircraft guns of a medium calibre to be within the range of 3" to 5.25" firing explosive shells with timed fuses. These were supplemented by anti ship guns to provide a barrage often timed to burst at 1,500 yards. If not particularly accurate, these barrages could be very effective in closely packed formations of enemy bombers trying to make low level bombing runs at this distance. Close range guns automatically rapid-fired projectiles at less than 1,500 yards. The main weakness seized upon by writers such as Correlli Barnett was in the fire-control system for the medium guns, though this was a common weakness in all navies other than that of the United States.⁸

A detailed explanation of the working of the High Angle Control System is complex but was explained by Admiral Brownrigg in a wartime book written for a general readership. In essence fire control was managed by means of a director, which is a dummy

⁷ IWM 95/5/1 Papers of Lieutenant Commander J A J Dennis RN p.14.

⁸ C Barnett, *Engage the Enemy More Closely: The Royal Navy in the Second World War*, Hodder & Stoughton, 1991 p.47.

sight usually mounted on the bridge or as high as possible. The elevation and direction positions were then transmitted to gunlayers who directed the guns on to the target in accordance with the received information.⁹

Unfortunately the guns did not automatically follow the directors and required the manual following of pointers for aiming, an operation difficult to accomplish in the heat of battle. John Campbell's judgment is that it was only likely to work properly with experienced operatives fighting slow aircraft. In an effort to improve the air defence capability of the fleet, some older cruisers had their 6" guns replaced by 4" in order to act as specialist anti-aircraft ships. This appears to have been something of a stopgap solution as the AA cruisers were made unfit for any other role necessitating the invention of a new class of cruiser carrying 5.25" guns giving greater flexibility. This *Dido* class was just beginning to come into service in 1940. The most vulnerable ships were the destroyers most of whom relied on WWI (World War I) vintage 4.7" anti-shiping guns for air protection. Unfortunately, their guns could not elevate above 40 degrees making them vulnerable to dive-bombing attacks between 40 and 90 degrees, although a few Hunt class destroyers had 4" guns capable of high elevation. According to Hamer, most ships had close-range machine guns from 0.303 rifle calibre to 40mm and in 1939, a situation one assumes to be close to that of 1940, a typical major warship armament 'would be two 8-barrelled 2- pounder pom-poms and four twin Lewis guns' all of which depended on the skill of the individual sailor.¹⁰

Hough blamed the 40 degrees restriction on 'reactionary' Admiralty attitudes that mountings permitting elevation above 40 degrees might compromise LA (low-angle) ship-

⁹ Admiral Sir Studholm Brownrigg, 'Gunnery in the Royal Navy', in Admiral Sir Reginald Bacon (ed), *Britain's Glorious Navy*, Odhams Press Ltd, c.1942, p.213. Brownrigg had been C-in-C of the Nore at the outbreak of war before his replacement by Admiral Drax at the end of 1939.

¹⁰ D Hamer, *Bombers Versus Battleships*, Conway Maritime Press, 1998, pp.41-5. J Campbell, *Naval Weapons of World War II*, Conway Maritime Press, 1985, pp.8-18. Quotation from Hamer, p.45.

to ship performance.¹¹ Even so, by the mid 1930s the Admiralty needed to take account of having to fight a Japanese Navy that reports indicated were already achieving gunnery accuracy well beyond anything the British could then achieve and were understandably reluctant to make the differential worse.¹²

A sub-committee of the Committee of Imperial Defence had considered the problem of close-range anti aircraft gun shortages at least as early as 1937 and included such well-known 'appeasers' as Neville Chamberlain and Sir Samuel Hoare. Unfortunately the Admiralty had been unlucky in backing the development of a gun from Vickers, which despite a higher rate of fire than the Bofors could then deliver, 'trials had proved most unsatisfactory'. Assuming the minutes gave a reasonably accurate reflection of what was said, even the much-maligned Neville Chamberlain argued that the financial effects of ordering the weaponry abroad were not 'necessarily over-riding' and that he recognised 'the essential need of obtaining a satisfactory weapon'. It was finally agreed that the War Office would be allowed to negotiate with Messrs Bofors for 100 of these guns plus ammunition with an option for extra ammunition later. Attempts to develop close range British anti aircraft guns were to be continued, as there was no guarantee at this stage that Bofors production would satisfy demand.¹³ Doubtless subconscious hopes that substantial contracts could ultimately be given for British designs were never far from these deliberations. According to Hough the Vickers was 'slow to bear on to the target and slow in rate of fire'.¹⁴

That these attempts failed can largely be put down to the necessity for cost cutting in the inter war period. Though the Chamberlain government is traditionally blamed for

¹¹R Hough, *Bless Our Ship, Mountbatten and the Kelly*, Coronet Books, 1991edn, p.51.

¹² TNA ADM 186/338 C.B 3001/36 – *Progress in Naval Gunnery— Part VII – Gunnery in Foreign Navies*, 1936 edn, p.96. This mentions the Japanese practicing at very long range. 28,000 metres was mentioned in this connection.

¹³ TNA CAB 16/137 'Proposed Purchase of Anti Aircraft Guns from Messrs Bofors (Paper No.D.P.R. 187)', 29 April 1937.

¹⁴ Hough, *Bless Our Ship*, p.48.

being neglectful and over concerned with cost cutting, they were merely continuing a trend apparent since the beginning of the 20th century. Naval technical development had become so expensive that the Admiralty had circumscribed the activities of its own research establishments increasingly leaving this to the private sector. Despite the Anglo-German arms race prior to World War I, the naval budget was subject to severe financial restraint in order to pay for the Liberal welfare reforms from 1908. For their part, private sector armaments firms had little commercial incentive to spend money on unprofitable military development in peacetime. It is the view of naval historian Nicholas Lambert that even in 1909 the Navy may have been over reliant on Vickers and Armstrong.¹⁵ The situation had not improved much given the nation's financial state during the 1930s and Hough claimed that in 1937, Vickers 'were almost a branch of the Admiralty'. It was British gunmakers, he claimed, who helped delay acquisition of more useful weapons such as the Oerlikon for the next two years though he also dubiously blamed the Admiralty for its alleged 'age-old naval custom of opposing change'.¹⁶ Given these problems and the apparent over reliance on an inadequate AA defence it might be expected that the *Luftwaffe* would have achieved spectacular results against Royal Navy warships in this early phase of the war. Surprisingly perhaps, this is not borne out by the evidence the Admiralty collected.

The Admiralty Experience of German Air Attack

As would be expected, the Admiralty was very concerned about the effect of aircraft against shipping as the war progressed and prepared a report entitled *Tactical Summary of Bombing Aircraft on HM Ships and Shipping from September 1939 to February 1941*. Written in 1941, this report put together the results of the experiences of

¹⁵ N Lambert, *Sir John Fisher's Naval Revolution*, University of South Carolina Press. Ltd., p.145 & pp.147-51.

¹⁶ Hough, *Bless Our Ship*, p.49.

the Merchant Navy and the Royal Navy in this early phase of the war. As the authors of the report admitted, the data only included attacks where enough detail for analysis was obtainable. Furthermore, it did not include ships damaged at anchorage, as it was not clear whether the bombers were primarily concerned with hitting the ship or the harbour facilities. Neither was it thought relevant to include ships refitting, as presumably these were not considered operational.¹⁷ Such a synthesis could not exactly mirror the situation faced by the Royal Navy during a naval Battle of Britain, however it does bring out some points regarding the effectiveness of German bombing techniques.

For example, it becomes clear that the *Luftwaffe's* most effective ship-destroyer at this time was the Ju.87 Stuka.¹⁸ A glance at the chart in Appendix I compiled from this Admiralty data (excluding that of attacks against merchant shipping) shows clearly that dive-bombing was the most effective bombing method deployed in 1940 and the main weapon for this was the Stuka. As will be seen in the section on bombs, the bombing potential of the Ju.87 B varied depending on whether it was the B-1 or B-2 version.

What the report does not mention is that dive-bombing is subject to reasonably clear visibility and a high cloud ceiling, preferably between 10,000 feet and 15,000 feet. This was not a problem in the clear light and relatively predictable weather around Crete, but in the notoriously unreliable meteorological conditions in the North Sea and English Channel, it is easy to see that an unexpected deterioration in the weather could have negated the dive-bomber as a weapon. It is also well known that the Ju.87 was slow and vulnerable to AA fire, which was no problem when diving steeply against isolated smaller ships unable to elevate their guns above 40 degrees but against the larger ships, would have

¹⁷ TNA ADM 199/1189 A/NAD326/41 'Tactical Summary of bombing Attacks by German Aircraft on HM Ships and Shipping from September 1939 to February 1941'.

¹⁸ Stuka is an abbreviation for *Sturzkampfflugzeug* meaning dive bomber. Strictly speaking this term applied to all aircraft that employed dive-bombing techniques but it is popularly applied exclusively to the Ju.87. E Angelucci & P Matricardi, *World Aircraft*, Sampson Low, 1978, p.106.

necessitated flying through intense barrages. Even in a dive, the Ju.87 was slow, seldom exceeding 200 mph as opposed to most American and Japanese equivalents that could do this at up to 350 mph. It was during the pullout when the dive-bomber was within a few hundred feet of AA units that it was often most vulnerable.¹⁹

In any case the bulk of the *Luftwaffe*'s bomber arm was not the Ju.87, but more typically twin-engine medium bombers such as the Heinkel He.III, and the Dornier Do.17 which could dive-bomb but were really more suited to high-level bombing. The exception was the twin-engine Ju.88, a competent level bomber, and arguably, a better dive-bomber than the Ju.87. As can be seen from the chart, the aircraft engaging in high-level bombing had very little success. High-level bombing took place at altitudes of between 6,000 and 19,000 feet, almost certainly because of the deterrent effect of the ship's long-range anti-aircraft barrage, which usually broke up formations as soon as the shells exploded in front of the formation. This also encouraged the bombers to accelerate from 200 knots up to 250 knots as soon as the first shells burst, making the sudden movement hardly conducive to bombing accuracy.²⁰ Had this method proved effective it seems unlikely the Germans would have abandoned the practice after May 1940. Low-level bombing runs were made at altitudes of around 1,000 feet and undertaken mainly by twin-engine bombers but sometimes by Stukas on their way to, or coming back from other targets. These were slightly more effective against Destroyer/Escort and Trawler/Auxiliary classes but unsuccessful against anything heavier. Very low-level attacks at 600 feet or less were usually machine-gunning runs with very little effect against warships. What was described as a 'flat bombing trajectory', where the biggest target was the ship's side made the use of

¹⁹ G Paust & M Lancelot, *Fighting Wings*, Essential Books, 1944, p.136 & p.145.

²⁰ TNA ADM 199/66 'Page 2 of Enclosure No II to Commanding Officer, HMS Curacoas's letter No.0307/19 of 5 May 1940', Para 13.

bombs impractical and merely exposed the aircraft to anti-aircraft fire in exchange for a negligible chance of succeeding.²¹

As the foregoing report has indicated, dive-bombing was clearly the most effective method for a *Luftwaffe* aircraft to engage a warship. From around 1 August 1940, the Germans could deploy 1015 bombers and 346 dive-bombers.²² In other words the *Luftwaffe* could deploy 1361 bombers, of which only 25.4% were effective ship-destroyers, and then mainly against the Destroyer/Escort and Trawler/Auxiliary classes. If this is compared with Crete, the Germans had 430 bombers of which 150 were Ju.87 Stukas, although the Ju.87s were also supplemented by a few dive-bombing twin-engine Ju.88s. From this admittedly incomplete data, the indirect implication in Hezlet's book that with four times the aircraft available at Crete, the *Luftwaffe* could be four times as effective in the Channel would be a crude oversimplification.

Despite what has been said about the effectiveness of dive-bombing it is well known that this method was less effective than torpedo bombing. Bombs needed to penetrate armoured decks and superstructures to do appreciable damage, whereas torpedoes could do extensive damage below the waterline. This was an area where the *Luftwaffe* was almost completely ineffectual against warships. Their limited expertise was concentrated in a single unit *Kampfgeschwader 26* comprising former naval pilots flying the Heinkel He.III, a large slow aircraft, vulnerable to AA fire when making the necessary long, slow and straight approaches. The low speed and altitude was necessitated by the relative fragility of the aerial torpedo then in use, and this unit seems to have used them exclusively against merchant shipping.²³

²¹ TNA ADM 199/1189 A/NAD326/41 'Tactical summary of Bombing Attacks by German Aircraft on HM Ships and Shipping from September 1939 to February 1941', Tables I & II.

²² MOD NID 24/GHS/1, February 1947, 'German Plans for the Invasion of England in 1940 – Operation Sealion' Statistics p.53.

²³ Schenck, *Invasion of England*, p.246.

The Efficiency of Maritime Bombs

Much would have depended on the efficacy of the bomb against the warship. Admiral Doenitz told British Naval Intelligence after the war that the *Luftwaffe* had ‘bombs of far too small a calibre ...to prevent heavy ships from coming to grips with the landing force’.²⁴ Doenitz was recalling this several years after the event and his own source is unknown but it is well established that the Germans were so short of bombs at the outbreak of war that the desperate expedient of manufacturing concrete bombs was used. This suggests that in 1939-40, priority would have gone to general- purpose bombs rather than the specialised types more suited for maritime operations. Even if a shortage of this nature still existed by 1940, it must be remembered that the brunt of any assault would initially have fallen on the more vulnerable destroyers and cruisers based around the south coast. An indication of the effectiveness of bombs against warships can be obtained from the files of government scientist, Sir Henry Tizard, better known for his work in the development of the Radar Direction Finding System.

Tizard’s papers contained a letter dated 25 November 1939 from Hugh Dowding, head of RAF Fighter Command addressed to the Air Ministry regarding an undated report from the Ordnance Board. This report was made in the wake of failed RAF attempts to successfully bomb German warships at anchorage on 4 September 1939 and related to experiments known as ‘Job 74 trials’. To be effective against armour, the bombs used must detonate after contact in order for the explosion to cause damage to the inside of the ship. Essentially, Dowding was contesting an ‘expert’ assertion that the semi armour-piercing (SAP) bombs did not pre-detonate on the armour plate with the explosive fillings in use. In

²⁴ TNA 95419 CAB 120/438 L G Hollis to Prime Minister’ 19 October 1946, enclosing ‘German Preparations for Invasion in 1940’, p.2.

other words he was saying that contrary to what had been asserted the bombs had been bursting on impact as opposed to being detonated with a time delay fuse as intended. In Dowding's opinion, those involved were ' "specialists" who are too lazy to read, or too stupid to understand the reports'. Much of the letter consisted of extracts from technical reports but a number of interesting points are clear.

Quoting from the report he drew attention to the fact that the 250lb bombs with 0.1-second delay, dropped from 4,000 feet hit the armoured deck and rebounded before exploding. One 500lb bomb dropped from 12,000 feet did more damage, achieving much higher velocity but only succeeded in penetrating to the inside of the ship by striking concrete, as opposed to armour. In this case the ship's bottom was blown out.

Unfortunately, the other two 500lb bombs were ineffective, one hitting an armoured deck, the other an armoured hatch resulting in detonation on contact i.e. by impact rather than fuses. Quoting an enclosure to a report 0365/74/S, dated 29 November, 1938 on earlier experiments, he pointed out that a 500lb bomb with a 0.1- second fuse dropped from this altitude should rebound before exploding after hitting an armoured hatch but in this case it burst on impact. Three 250lb bombs with a 0.3- second fuse were actually more effective despite half the velocity and weight of the 500lb bombs. Another 250lb bomb but with a 0.1- second fuse penetrated one deck further than the 500lb bomb before rebounding three feet against 4-inch armour. It concluded that the latter bomb might have detonated 'owing to the sensitivity of the filling, rather than its lack of armour piercing qualities' suggesting that the casing was probably satisfactory.

Dowding also doubted that fuse delays of 0.2 and 0.3- seconds would work properly for a semi armour-piercing bomb. A 0.1- second bomb dropped from 12,000 feet 'not stopped by armour' burst in the bottom of the ship but one with a longer fuse went straight through the bottom and exploded far below. Dowding argued the longer fuses for

non-armour-piercing 250lb bombs existed because there was no expectation of piercing the armour and it was considered more effective to allow the bomb to bounce around before detonating. The letter is unclear why bouncing was desirable but it seems doubtful if he was referring to the concept of a bomb emulating a stone skipping across the sea but to direct contact with decks and superstructures. The implication is that a ricocheting bomb might drop down an open hatch or even of it exploding in the sea immediately next to the hull where water compression would exacerbate the explosive effects. In effect, this would result in what the Admiralty defined as a 'near-miss', something capable of inflicting heavy damage because of the vulnerability of brittle cast iron machine components.²⁵ The long delay was only acceptable, he argued, if it were known the longer fused bomb would not penetrate the armour but if it did, then the full effect could be wasted, no doubt because the bomb would probably explode too far beneath the ship. Finally Dowding ridiculed what he termed an 'American idea' that bomb-blast effects can decisively damage a heavy ship and quoted trials that took place ten years before showing 1,200lb light-case bombs only did localised damage. This was clearly because the casing would not permit penetration of the deck. Finally Dowding quoted another paper 0365/74/S, dated 29 November 1938, which further confirmed that the semi armour-piercing bomb was 'weight-for-weight' more effective for these purposes than the general-purpose instantaneously fused bomb. Understandably, Dowding was annoyed that the results of expensive tests he was involved with during his earlier career appeared to have been lost and were being ignored by the Air Ministry. Consequently 'we now have no means by which we can sink a German Battleship'.²⁶

Dowding's ridicule of an 'American idea' is probably rooted in the experiments of US General William Mitchell to sink warships by bombing during the 1920s. Mitchell had

²⁵ See explanatory notes to Appendix 1.

²⁶ IWM, HTT 226 Tizard Papers FC/S.18093. Letter from Dowding to Wing Commander J, Whitworth Jones, Air Ministry, 25 November 1939.

worked with British bomber advocate Sir Hugh Trenchard (no friend of Dowding) towards the end of WWI and by the end of the war was Chief of the Air Service Army Group. His well-publicised experiment to sink a series of warships by bombing was exactly the sort of showbiz stunt that would have irritated the cold, dispassionate scientist that made up much of Dowding's character. In one test, a 2000lb bomb sunk the obsolete battleship *Alabama* with a centre hit.²⁷ The experiments were rightly criticised by the US military for their artificiality even though the ships had been sunk. After all, the warships had not been conducting an anti aircraft defence or taking avoiding action. Also importantly, they would have possessed heavy armour only for the purpose of deflecting shells from the side rather than bombs from the vertical suggesting that non-armour piercing bombs would have been sufficient in these instances. Mitchell subsequently made himself a nuisance to those in authority and as with many colourful characters, alienated those who may have responded to a more tactful approach. But to the public his showmanship made him a hero and ensured his place as one of the prophets of air power.

Bombs used against the armoured ships of World War II needed to be at least semi armour- piercing with a stronger steel casing to allow penetration, and fused for 0.1-seconds if 500lb. They also had to be dropped from an appropriate height (the report implied 12,000 feet) to achieve the desired velocity. As already indicated by Admiralty data, high level bombing, though achieving the necessary velocity, was generally ineffective because the bomb-aimer had to cope with factors including the smallness of the target; the fact it was invariably moving and the drift created by wind. What the Ordnance Board said about Dowding's comments is not known, but they deserve some weight bearing in mind the RAF never showed much expertise in sinking warships by conventional bombing until 1944 against *Tirpitz* and this was only achieved using bombs of

²⁷ Paust & Lancelot, *Fighting Wings*, Essential Books, 1944, p.65.

immense power.²⁸ It might also be remarked that the British experience may not have mirrored exactly that of the Germans. Even so, it is a reasonable indication of the problems that had to be faced. An anonymous 'Serving Officer in the Naval Air Arm' informed a general readership around 1942 that fuse settings varied from several days to hundredths of a second but when used against ships it would usually be a tenth of a second. This suggested that Dowding's wisdom was ultimately accepted.²⁹

British experts studied some unexploded German bombs and the tactical summary referred to earlier states that these were of various types and fuse settings. The summary tends to confirm much of what Dowding had said earlier about the greater effectiveness of bombs with slightly delayed fuse settings. Bombs that penetrated deeply into a warship or those that exploded in the water as very near misses would do much more damage than those going through and bursting well below the ship or those that simply exploded upon impact.³⁰ The fact the Germans were using a variety of fuse settings might be taken as evidence of their uncertainty as to what fuse settings to use but not too much should be made of this. The report indicated that German bombs varied in size from about 50kg to 600kg, though the latter only represented 2% of reports. The majority of the bombs reported, (70%) were up to about 100kg (no more than 250lb) and 73% of these were fused for impact.³¹ Needless to say, 'bombs reported' is not necessarily an indication of actual bombs available, and the precise accuracy of the observations of men under fire can be doubted, but it does provide some evidence of Doenitz's assertion that the bombs were far too small. That a few large bombs were reported in this Admiralty analysis can perhaps be put down to the report covering the period up to February 1941, moving outside the

²⁸ J Terraine, *The Right of the Line*, Wordsworth, 1999 edn, p.674. Terraine mentions that on 15 September 1944, *Tirpitz* was attacked and damaged by 27 Lancasters using 'Tallboy' (12-14,000lb) and 'Johnny Walker' anti-shipping bombs. Only on 12 Nov.1944 did bombers carrying 'Tallboys' finish her off.

²⁹ A Serving Officer in the Naval Air Arm, 'The Naval Air Arm – Yesterday and Today', in Bacon, *Britain's Glorious Navy*, p.127.

³⁰ TNA ADM 199/1189 A/NAD326/41 'Tactical Summary of Bombing by German Aircraft on HM Ships and Shipping from September 1939 to February 1941', pp.4-5.

³¹ *Ibid*, p.10.

danger period ending in October 1940 for this thesis. Griehl has advised that PC 1000kg armour-piercing bombs were used against the modern British carrier *Illustrious* on 10 January 1941 without sinking her³² suggesting the larger bombs were only just coming into service (at least on any scale) by the end of 1940 and would not have been a factor in a large-scale Channel battle.

Dowding's letter tells us that the matter of obtaining an effective bomb for use against armoured warships is more complex than of weight alone and this issue was one the Germans were likely to have found confusing. In the *milieu* of competing priorities there would have been no reason before the war for Germany to devote significant resources to acquiring enough bombs of a maritime specification. German diplomatic efforts, however incompetently executed, were intended to avoid war with Britain, the only major maritime nation likely to be offended.

John Campbell's detailed textbook on naval weapons states that Germany developed effective bombs against warships. These were semi armour-piercing bombs designated *Sprengbombe Dickwandig* (SD) of 500kg (1100lb), 1000kg (2200lb) and 1400kg (3090lb), but Campbell does not say when they were introduced.³³ Another source mentions reports of a heavy armour-piercing *Panzerdurchschlags Cylindrisch* (PC) of 1400kg (3,200 lb) used against shipping and heavily protected targets, some of which fell on the Bristol area. Again precise dates are not available but indications are that this latter type was not used until 1942.³⁴ The latter type may have been developed because of the disappointing attack on *Illustrious* using lighter PC 1000kg bomb in January 1941, as described above.

³² M Griehl, *Junkers Ju.87 Stuka*, Airline Publishing Ltd, 2001 edn, p.201.

³³ J Campbell, *Naval Weapons of World War II*, Conway Maritime Press, 1985, p.276. Precise labelling of bomb types from www.bombdisposalclub.org.uk/BD_history.htm, 'A Short History of Royal Engineer Bomb Disposal', *The Royal Engineers Bomb Disposal Officers Club*, 27 June 2004, p.1. Details of PC bomb from www.fishponds.freeuk.com/nluftbri5.htm, 'The *Luftwaffe* Over the Bristol Area – *Luftwaffe* Weapons, 27 June 2004.

³⁴ Telephone interview with Lt. Col. E Wakeling on 2 July 2004.

In his memoirs, Galland stated that during the attacks on London which commenced in September, German aircraft bomb loads varied between 2,500 lb and 4,500 lb and comprised individual bomb weights of between 150 lb to 1,250 lb 'and very rarely 2,500 lb high explosive bombs'.³⁵ Of course Galland was probably only talking about *Sprengbombe Cylandrich* (SC), thin cased general-purpose bombs as opposed to the thicker cased semi-armour piercing bombs needed against warships although his reference to the rarely used 2,500 lb bomb might conceivably have included the SD 1000kg bomb. As a fighter pilot, he obviously obtained this data from a source outside his personal experience, but it does tend to confirm what has been said about the lack of large bombs. The main bomb for the Ju.87 could be as small as 250kg (551 lb) and could be augmented by four wing-mounted SC 50kg (110lb) bombs. Given that bombs were of necessity, externally mounted, the opportunity to last-minute adjust fuse settings according to the type of target presenting itself did not exist for the Ju.87 crew.

According to aviation specialist Manfred Griehl, it was the Ju.87 B-2 onwards that carried the larger SD 1000kg bomb and from February 1940, a deflection fork designed around this bomb was being tested at Rechlin.³⁶ This appears to have taken some time. The Ju.87 B-2 was fitted with a more powerful engine (Jumo 211D) to lift 1000kg bomb loads but availability of this aircraft was limited in 1940. Twenty-nine B-2s were ordered in June 1940 for production between July and September 1940. Shortly afterwards a further 100 were ordered to be produced between July and October 1940 and a final order of ninety-eight presumably soon after that. Griehl also indicated that during 1940, the Ju.87 B-1 started to be brought up to B-2 standards on a piecemeal basis by installing the Jumo 211D motor as aircraft were repaired in the workshop for battle damage. Nevertheless, it seems likely that only around half of Ju.87 types had the capacity to deliver this more

³⁵ Galland, *The First and the Last*, p.61.

³⁶ Griehl, *Junkers Ju.87*, pp.71-2.

deadly bomb load by September 1940. Indeed, only 230 B-2s were constructed up to the summer of 1941 and some of these went to Italy in the late summer of 1940.³⁷

The Passive Defence Capability of HM Ships

No matter how effective these *Luftwaffe* bombs were, a major consideration had to be in placing the bomb in or on a vulnerable part of the warship. It must be remembered that the first wave of German shipping were to cross at night, meaning that the problems of scoring hits on warships were greatly exacerbated anyway. As far as the battleship was concerned, naval architect John Narbeth and Admiral Bacon revealed the weak points to the public even before the war had ended. According to their diagram reproduced at Appendix 2 (more closely resembling an old battle cruiser) the points where bombs may have caused severe damage were the lightly armoured stern where there was a possibility of damaging the screws or shafts; the funnel destroying the boiler uptakes; the control top nerve centre of the ship; the operating mechanism of the turrets at their bases and the relatively thinly armoured bow.³⁸ The diagram did however imply these were fairly small and difficult to hit targets. Bearing in mind what has already been said about the limitations of AA fire, all ships had to rely on their passive defensive qualities to some extent.

As the smaller ships were most vulnerable to air attack it was necessary for these vessels to evade the bombs coming their way. Destroyers could be quite skilled at this. The papers of Commander J A J Dennis reveal an incident when he was serving on the destroyer *HMS Griffin*. While on lone patrol in the Channel on 6 July 1940, the ship was attacked by thirty-six Dornier Do.17 medium-bombers arranged in four formations of nine

³⁷ Griehl, *Ibid*, p.69 & p.137. Griehl mentions an unspecified number of Italian Ju.87 B-2s bombing on and around Malta around the end of August to early September 1940.

³⁸ J H Narbeth & R H S Bacon, 'Battleship Construction' in R H S Bacon et al., *Britain's Glorious Navy*, Odhams Press Ltd., c.1942, pp.110-11.

each. Swinging around at thirty knots, the ship evaded the bombs from the first three groups but the fourth group landed bombs that exploded all around. Surprisingly, the ship was not seriously damaged only sustaining a few minor leaks from near misses. *Griffin* went into harbour for repair but almost immediately was out again chasing E-boats.³⁹ This incident confirms the ineffectuality of high level bombing against supposedly vulnerable destroyers and validates the captain's decision to take violent avoiding action. An oral history interview with Ron Babb who served on a Class 1 Hunt class destroyer in 1941 also confirmed the reliance of small ships on evasion, maintaining he had survived many German aircraft attacks.⁴⁰ A close colleague of Admiral Forbes, Rear-Admiral L H K (Turtle) Hamilton wrote to him from the cruiser *HMS Aurora* in May 1940 on the way back from Norway. *Aurora* had been subjected to a combination of continuous dive and high level bombing for thirty-six consecutive hours. He was still able to write:

‘From my experience, I think that provided one has sea room and independence of manoeuvre in a ship of this size, one is most unlikely to be hit.’⁴¹

The importance of evasion was also recognised by the captains of even larger ships. In one of the earliest actions, Heinkel He.III's attacked the aircraft carrier *Ark Royal* on 26 September 1939 in the North Sea. Rear-Admiral T V Briggs, then Gunnery-Officer of this ship was ideally placed to view the action up in the air defence position of the top platform deck mounted on the bridge. According to his account, the cloud base was 6,000 feet and visibility was three to five miles. A Heinkel made a shallow dive from 5,000 feet along a 3,000-yard line on the port quarter. A ‘huge bomb’ was dropped at 1,500 feet, narrowly missing the ship as the captain pulled sharply to starboard. Passing over at 150 feet, the AA batteries open fire but the sharp manoeuvre had thrown out the tracking. The aircraft, though not shot down, was almost certainly damaged. Attracting fire from 4 X 8 pom-

³⁹ IWM 95/5/1 Papers of Commander J A J Dennis RN, p.68.

⁴⁰ Interview by A J Cumming with Ron Babb at Huntley, Bishopsteignton, Devon on 7 April 2004.

⁴¹ ROSK 4/49 Letter from ‘Turtle’ Hamilton to Forbes from *HMS Aurora* dated, 27 May 1940.

poms and 4 X 0.5 machine guns, a second attack from 100 feet was made by another Heinkel. The pilot lost his nerve and jettisoned the load prematurely in the face of a terrific AA barrage. Almost immediately another Heinkel strafed the flight deck with machine gun fire. He recorded that several lessons were learned on this occasion but this incident revealed a problem associated with this type of rapid evasion, namely the throwing out of the anti-aircraft defence.

In 1939, the *Air Defence Instructions* forbade avoiding action against dive-bombing attacks. As a result of these initial experiences, some commanding officers expressed opinions that avoiding action for ships steaming at 20 knots when the dive-bomber started to attack was justifiable.⁴² Because of the effect on the AA defence, the matter was referred in October 1939 to the Director of Naval Air Division. G M B Langley gave a reasonably detailed response in which he pointed out that the displacement of the ship was small during 'time of fall' yet high speed avoiding action might result in the pilot trying to change his aim in the dive but stating this was difficult to do. Langley made the point that trials showed avoiding action at low speed was ineffective (the implication being that high-speed trials had not been made). He agreed to a probability that high speed avoiding action would increase bombing error but it all depended on the pilot's skill and experience and the speed and manoeuvrability of the ship. Interestingly, he gave an opinion that it should not be resorted to if it would throw out the AA fire, indicating that there was still an unjustified confidence in the effectiveness of the AA system.

Less controversial was the endorsement of other types of manoeuvring. These included 'changing course to bring the guns to bear, and to produce a high relative wind across the direction of attack' and this was what ships should do when placed in these

⁴² TNA ADM1/9920 1536368 Register No. TSD 295/39/G 'Air Attacks on Home Fleet, 26 September 1939.' Para 9.

circumstances.⁴³ The Director of Naval Ordnance was unsurprisingly unhappy about avoiding action 'with the use of large wheel' at high-speed stressing the negative handicap on long and close range AA defences. Some reluctant recognition of the deficiencies were recognised with the statement that 'ideal' long and close range weapons systems would not become available until 1942/43 and until then the only improvements attainable were likely to 'come from practice'.⁴⁴

Sidney Tyas, Gunnery Officer of the *SS Southgate* in 1942/3 was in general agreement with the above official views but acknowledged his merchant ship was perhaps less manoeuvrable than naval destroyers and that the vessels of 1940 were less well equipped with Oerlikon multiple cannon. When 'dodging' was necessary, he preferred the method of spinning 90 degrees back to the dive-bomber in order to make the pilot overshoot.⁴⁵ As will be seen, captains were going to depend heavily on the ability of their ships to dodge for some time to come.

The Importance of Morale

Bearing in mind what has already been said about the vulnerability of smaller ships to air attack and the deficiencies of the AA fire, the possibility of a desperate incursion into the English Channel by the capital ships of the Home Fleet could never have been ruled out. In these circumstances, the morale of the Home Fleet was clearly a crucial factor. At this stage, it is perhaps worth reflecting on what 'morale' actually is. Gary Sheffield says, 'it is an imprecise term'. Clausewitz divided morale into two components of 'mood' and 'spirit', the first being transient and liable to change in relatively short periods depending largely on the state of the soldier's physical comforts. On the other hand 'spirit' is needed

⁴³ *Ibid*, Minute from G M B Langley for Director of Naval Air Division, 18.Oct.1939.

⁴⁴ *Ibid*, Minute from Director of Naval Ordnance, 11 Dec.1939.

⁴⁵ Interview by A J Cumming with Sidney Tyas, 25 October 2005.

to maintain cohesion under extreme conditions, including ‘murderous fire’. The latter can be created by ceaseless military activity ‘warmed by the sun of victory’. More recent research indicates that western armies create and maintain morale by attending to a variety of factors including a belief in the cause; effective training; leadership; a sense of honour and good logistics. Logistics in this sense means the provision of comforts, food, postal services and the fostering of self-worth. It is particularly important for the western soldier to feel part of the substitute family represented by his mates who rely on mutual support. This research also shows this sort of commitment can temporarily hold off the mental breakdown liable to occur when soldiers are placed under extreme stress for prolonged periods.⁴⁶

When the fleet is at anchorage for long periods, morale is liable to be steadily eroded with disastrous outcomes. The revolt of the lower decks in the German High Seas Fleet and the crucial participation of Kronstadt’s naval garrison in the Russian Revolution of 1917 testify to the corrosive effects resulting from long periods of inactivity which predispose men to defy the orders of incumbent authority. The Admiralty were aware of this danger having been forced to deal with discontent among the Fleet during the Invergordon Mutiny of 1931. Neither does it seem likely they had completely forgotten the much earlier naval mutinies of 1797, particularly serious events as Britain was at war with France and facing the prospect of invasion. All of these situations indicate a failure of ‘spirit’.

One potential problem identified by Admiral Forbes at the beginning of the war, was the youth of junior ratings without experience of combat, even to the extent of ‘not [having] even heard a gun fire before’.⁴⁷ Forbes claimed that in the flagship alone, 37% of

⁴⁶ G Sheffield, ‘Morale’ in R Holmes (ed)., *The Oxford Companion to Military History*, Oxford University Press, 2001. pp.599-600.

⁴⁷ TNA ADM1/9920 Minute from G N Oliver, Director of Training & Staff Duties, 13 Oct.1939.

ratings were under nineteen years. The Director of Naval Intelligence (DNI) noted that some 22,000 Ordinary Seamen and Boys had entered the Fleet during the rapid expansion of the previous three years. This amounted to 50% of all active seamen and the DNI considered that in the circumstances, the high proportion of young men in all active service ships was not surprising.⁴⁸ Whether this concern was prompted primarily by a concern over potential fighting-efficiency or the paternalistic concern shown by a middle age man for those little more than children is impossible to say. But ‘youth’ would not necessarily have been an obstacle to efficiency in itself. Conscripts are often teenagers and it is generally asserted they lack the imagination to envisage the fatal consequences to themselves of engaging in battle. Members of the Hitler Youth fought with extreme tenacity despite an average age of sixteen in the fierce Normandy battles of 1944, though it seems likely the factor of ‘youth’ may work best if coupled with that of an intense ideological drive and training.

The early months of the war were quiet for the Home Fleet. Despite the sinking of the *Graf Spee*; the penetration of the Scapa Flow defences and consequent sinking of the *Royal Oak* by Gunther Prien’s U-boat and the expedition across the North Sea to test equipment against the *Luftwaffe*, there was not a great deal of action for the men beyond routine patrolling and escort work. According to Ron Babb of *HMS Rodney*, there was a certain amount of frustration below-deck that the enemy were not being engaged. He did not see this as being a significant problem of morale or a symptom of ‘no confidence’ in the leadership. The men were kept busy practicing drills and getting used to the equipment. Even so, Admiralty files do reveal some concerns over morale at the end of 1939. The Director of Personal Services (DPS) commented on ‘very real and widespread resentment’ among the men and their families that much of their work was not being adequately publicised. The DPS discounted the idea of mutiny as ‘absurd’, but noted how

⁴⁸ *Ibid*, Minute from Director of Naval Intelligence, 9 Nov.1939.

disheartening it was for the men to see other services receive 'inspired publicity' while 'they themselves and their arduous work are the main bulwark of the country' are largely ignored. Interestingly, it was the lower deck that felt this the most and the ratings did not understand why it was not feasible for the Navy to have the type of regular radio broadcast on the lines of 'our observer attached to the Army/RAF' enjoyed by the personnel of the other services.⁴⁹ The file was passed to the desk of Admiral Godfrey, Director of Naval Intelligence who obtained an interview with Mr Ogilvie of the BBC. A discussion ensued on the lines of reducing the depressing frequency of broadcasting shipping losses and giving the Navy a higher profile. On the latter item, some substantial progress seems to have been made. The BBC commentator, Bernard Stubbs, had already increased his output on Naval matters and possibilities of broadcasts from battleships or shore canteens were discussed. A proposed system of accrediting newsreels and photographers to Naval Commands was also being considered.⁵⁰ This was all considered 'satisfactory' and the file closed. One can at least conclude that consciously or otherwise, the Admiralty was following principles stemming from Clausewitzian theory; in other words paying attention to maintaining naval 'spirit' by trying to bolster the sailor's feelings of self-worth.

The first serious test of morale occurred with the Norwegian campaign in the spring of 1940. The Commanding Officer of the AA Cruiser *HMS Curacoa* reported on 5 May 1940 that his gun crews, consisting mainly of Royal Navy Volunteer Reserve ratings were 'very much shaken after the first bomb salvo of near misses but after a few encouraging remarks, their behaviour was all that could be desired'.⁵¹ Ron Babb in the engine room of the battleship *HMS Rodney* recalled hearing the wail of the Ju.87 Stuka through the air ventilation system. As an Engine Room Artificer, busy with gauges, machinery, alterations

⁴⁹ TNA ADM 1/10225 'Morale in the Home Fleet', Minute from Director of Personnel Services, 13 Dec.1939.

⁵⁰ Ibid, Minute dated 20 Dec. 1939 from Admiral Godfrey, Director of Naval Intelligence.

⁵¹ TNA ADM 199/66 'Page 2 of Enclosure No II to Commanding officer, HMS Curacoa's letter No.0307/191 of 5th May 1940', Para 12.

in speed and a multitude of other jobs, this did not overly concern him. He conceded some working deep in the ship worried about getting out should the ship sink, but he was not aware of anyone driven to mental breakdown over it. Expressing confidence in the ship, he rated *Rodney's* ability to withstand attack highly in terms of both gunnery and construction. This is perhaps surprising considering *Rodney* was built under the terms of the *Washington Naval Agreement 1921-22* imposing what was often thought of as 'unrealistic' tonnage limits on capital ships. When questioned further about morale in the Home Fleet during 1940, he asserted that it was high throughout the fleet and denied that it ever fell in the face of bad news. He participated in rugby matches with other ship's crews and had conversations in the mess at Scapa Flow strongly maintaining the attitude was one of 'give us six months and we'll knock 'em to kingdom come!'⁵²

During this campaign, Admiral Hamilton wrote to Admiral Forbes from *HMS Aurora* praising his men who on 27 May had done fifty-one consecutive days 'under weigh with no leave or let up to the sailors'. He allowed there had been a moment when the men got 'a little jumpy over the bombing' but this was only at the end of thirty-six hours of constant air attack. Hamilton confirmed that it was the men between decks that got the most jumpy but even they eventually reached a point where exhaustion enabled them to sleep through a raid. One Petty Officer did go to the Sick Bay but a threat to 'disrate him and put him in cells, and if necessary I would shoot him', kept him at his post. A Chinese crew attempting to abandon a merchant ship was similarly dissuaded by threat of armed force. Hamilton was particularly complimentary of the 'alertness and awareness of the destroyers attached to me' suggesting that even in the ships most vulnerable to air attack morale was high. One factor likely to unsettle the men at Norway was the greater need for alertness given that the *Luftwaffe* were often able to utilise the hills and mountains surrounding the fjords to mount sudden attacks, thus reducing the available time to bring

⁵² Interview with Ron Babb.

the guns to bear or take avoiding action. As the CO of the *Curacos* observed, 'in the fjords, everything is to the bomb-aimers advantage'. This was also a clear reference to the limited room for ship manoeuvre in these waters.⁵³ Those most susceptible to a breakdown in confidence were not directly involved in the fighting and could not see what was happening suggesting imagination was the most destructive force. But in any case the possible option of fleeing was hardly a feasible one. Where the captain decided to go, the sailors had no option short of mutiny but to follow.

Crete: The Ultimate Test of Morale

Perhaps the ultimate test for naval morale came with the campaign at Crete the following year. It must be emphasised that the circumstances of this battle could not have exactly mirrored that of 1940 as by then each side had some different equipment and the geographical and metrological conditions were not quite the same. Even so, as would have been the case in *Sealion*, the Navy was forced to operate within easy range of large numbers of enemy bombers while the enemy wished to land troops and equipment by sea. Crete is approximately 160 miles in length with mountainous terrain. As all the harbours, bays and airfields were in the north more-or-less facing the Greek mainland, it was necessary for the Navy to enter the Axis 'controlled' Aegean. It also meant having to operate nearly 450 miles away from the main naval base at Alexandria. As RAF fighters from North Africa lacked adequate range to operate over Crete for long periods and the Fleet Air Arm could only bring to bear small numbers of low performance fighters from a single aircraft carrier, the brunt of air defence from frequent and sustained attacks fell on AA gunners and the ability of the captains to dodge the bombs. Even in the summer of

⁵³ TNA ADM 199/66 Page 2 of Enclosure No II to Commanding Officer, *HMS Curacoa's* letter No. 0307/19, 5 May 1940, Para 13.

1941, there were still not enough guns and those on the vulnerable destroyers were still generally incapable of high angle elevation. Much then, still depended on the individual skill of gunners sighting through a primitive 'spiderweb' sight.⁵⁴ Unfortunately, many sailors would go into action already tired from the recent evacuations of Greece and from escorting convoys to Malta. Shortly before the battle, the C-in-C of the Mediterranean Fleet, Admiral A B Cunningham (ABC) had warned First Sea Lord, Dudley Pound, about the strain being experienced among both officers and ratings 'particularly in the anti-aircraft cruisers and destroyers...Never a trip to sea without being bombed'.⁵⁵

The battle opened on 20 May 1941. As German paratroopers fell on Crete, the Mediterranean Fleet moved to prevent Axis seaborne reinforcements from reaching the island. The fleet was organised into four surface 'forces', A, B, C and D. As the battle progressed, these groups would change their components but the ships would usually operate together, rather than as individual units. Unfortunately there was a shortage of AA ammunition from the outset with most carrying approximately 25% shortfall.⁵⁶

The destroyer *Griffin* was part of Force B with her sister ship *Greyhound* and the cruisers *Gloucester* and *Fiji*. J A J Dennis, still serving as an officer on the *Griffin* has described how Force B came under heavy air attack during 21 May. The first attack observed by Dennis was made by twenty Ju.87s coming down in 'groups of three, one after the other, dividing their attention among all four ships. It was a classic attack, technically interesting, physically terrifying and, actually, ineffectual.' Dennis went on to explain how all the bombs missed as they weaved around at full speed with the cruisers throwing up large amounts of flak. The AA fire was equally ineffectual:

⁵⁴ R Spector, *At War At Sea*, Allen Lane, p.169.

⁵⁵ Cunningham, *A Sailors Odyssey*, p.358.

⁵⁶ Cunningham, *Ibid*, p.363.

‘We pooped of with our 3” museum piece and our .5” machine guns did their best with their antedeluvian control system. They deserved better luck as one could see holes appearing in the aircraft, but little bullets like that weren’t much use unless they hit the pilot in a painful place.’⁵⁷

Force B steamed west to join the battleships beyond Kithea but in less than two hours after the commencement of the first attack, the same Ju.87s returned for a second strike, but without scoring any hits. The previous night, Admiral Glennie’s Force D obliterated an invasion convoy of twenty-five vessels including fishing boats (caiques), and coasters carrying troops, artillery, anti-aircraft guns, anti-tank guns and some tanks. The next morning, (the 22nd) at approximately 10am, Admiral E L S K King’s Force C forced a second invasion convoy of forty caiques back to Greece and would have undoubtedly destroyed it completely had not Force C come under heavy air attack. Writing with a degree of frustration at what he must have considered a bad error of judgment on the part of King, Cunningham was to write that the safest place for King would have been amidst the enemy fleet.⁵⁸ Sadly, King may not have been the best person to command Force C, as he could not maintain a calm demeanour in a crisis. According to Commander Sir Godfrey Style, when there was a problem on the bridge ‘ELSK would come in and push one out of the way’.⁵⁹ These mistakes ended King’s seagoing career.⁶⁰ Even so, these contributions by the Navy ought to have won the Battle of Crete for the British thus representing a triumph of seapower over airpower.

The story of the subsequent evacuation of British and Commonwealth troops by the Navy under fire is well known. Evacuation imposed extra strain on the naval forces and the ships coming under air attack were now heavily laden, something which now hindered the passive AA defence. Dennis wrote later:

⁵⁷ IWM Papers of J A J Dennis, p.121.

⁵⁸ A B Cunningham ‘Report on the Battle of Crete’, reproduced by M Simpson, (ed), *The Cunningham Papers*, The Navy Records Society, 1999, p.422.

⁵⁹ ROSK 4/50 Letter from Godfrey Style to Captain S Roskill, 10 March 1979.

⁶⁰ Hough, *Bless Our Ship*, p.159.

‘Johnny avoided all nine [Stukas] with great skill, turning as far as possible into the dive at 30 knots. With all the extra weight on board, this meant a sickening roll over at each turn, and one wondered ... whether we might turn over anyhow.’⁶¹

The fleet now took a serious pounding but everything the Navy had been called on to do, had been done. Cunningham was later to write:

‘That the fleet suffered disastrously in this encounter with the unhampered German Air Force is evident but it has to be remembered on the credit side that the Navy’s duty was achieved and no enemy warship or transport succeeded in reaching Crete or intervening in the battle during these critical days.’⁶²

That the fleet did do its duty in these circumstances was clearly a function of the facts that the sailors’ morale was sufficiently high to endure this trauma and that the ships were robust enough to withstand hours of constant air attack. The ships that went down did not do so easily. The light-cruiser *Naiad* sustained an estimated 108 hits over two hours having dodged over thirty-six near-misses in one ten minute period. The cruiser *Fiji* endured over thirteen hours of air attack before being hit by a bomb in the forward boiler room. Another strike half an hour later, caused the captain to order ‘abandon ship!’ Many other ships endured heavy and sustained punishment including the destroyer *HMS Kipling* that staggered through an astonishing eighty-three attacks within a few hours. Another destroyer *HMS Kandahar* was commended by Cunningham for her part in rescuing survivors from the *Greyhound* and *Fiji* while enduring heavy machine gunning and bombing and noting that she had undergone twenty-two separate air attacks over some four and three quarter hours.⁶³ Dennis condemned the initial splitting away of *Greyhound* to sink a caique as ‘a serious mistake’. He claimed that her fate could have been foretold by any of the men at the scene and on trying to rejoin the other ships, she was sunk by eight

⁶¹ IWM Papers of Commander J A J Dennis. p.56.

⁶² Cunningham, ‘Report on the Battle of Crete’, in Simpson, *Cunningham Papers*, p.422.

⁶³ *Ibid*, p.423.

Ju.87s. The subsequent need to rescue survivors led to the splitting away of *Fiji*, which in turn was sunk, the same fate befalling *Gloucester*.

As Dennis commented, these ships had been detached singly and consequently had received casualties and damage. *Gloucester* and *Fiji* were both low on ammunition, and in the case of the latter had been down to practice-ammunition. Ruefully noting that *Griffin* was the last survivor of Force B, he commented 'the lesson of it all, which should have been known already, was: stick together'.⁶⁴

The strain of enduring such an intensive and sustained attack was unprecedented in naval history and not surprisingly, some mental breakdown occurred. Psychologists now recognise that the human endocrine system helps the body respond to emergency situations by flooding it with adrenaline in preparation for the 'fight-or-flight' syndrome. When this situation occurs, some fifteen bodily changes occur. This response works better in the short term, and if it occurs repeatedly or for longer periods the body will continue to pump hormones into the system. In the longer term the body will consume more resources that it can produce meaning that the victim can no longer perform normally. In time a loss of perspective will occur where the body will adopt an extreme reaction to even minor stress, having lost the ability to differentiate. Thus life-stressors, as the psychologist Hans Seyle suggested, are cumulative.⁶⁵ Delayed and recurring stress reactions to life threatening events are currently categorised as post-traumatic stress disorder. The implications are that even if combatants are temporarily removed from the arena, they can remain stressed at the prospect of returning, even to the extent of behaving as if they are still under fire.

⁶⁴ IWM Papers of J A J Dennis, pp.123-24.

⁶⁵ J Johnston, *The Complete Idiot's Guide to Psychology*, Alpha Books, 2000, pp.192-93.

Mental breakdowns were most seriously marked aboard *Ajax* where around thirty breakdowns were reported among a crew of 800 men.⁶⁶ None of this deterred Cunningham from forcing damaged ships and battle-weary personnel back into the fight. Enormous resentment was reportedly incurred among the crew of the *Ajax* their vessel having been damaged by a 1000lb bomb. He told them they had been 'a little peppered but this is no time for men and ships to be loafing around the harbour'.⁶⁷ This was a little rich coming from a man who was directing the campaign from the safety of Alexandria and was not the most sensitive way to deal with men who had been through such an ordeal. On the other hand, if the way Admiral Hamilton dealt with men attempting to opt-out was indicative of the military culture in the 1940s, then Cunningham was not out of line. It was after all, his job to try and ensure that 'fight' was going to win over 'flight'. The situation clearly demanded ruthless determination if the Army was going to be successfully evacuated. He was nevertheless sufficiently moved (or concerned over future criticism) to signal his acute concern over the mental state of his sailors to the First Sea Lord on 30 May 1940, suggesting he was not entirely oblivious to their suffering. His harsh words have to be read in the context that other ships were being forced to endure even more than *Ajax*, which had, he believed spent ten out of the previous sixty days in harbour. He compared this with the AA cruiser, *Dido*, which had only one day in harbour in the previous twenty-one days, with other warships in a similar position. He was therefore surprised to find the only real signs of 'cracking up' were in *Ajax*.⁶⁸ Post-Combative Stress is perhaps a medical problem only fully recognised and understood in our more tranquil and enlightened era.

Cunningham's ruthless determination made it possible for 17,000 troops to be withdrawn in less than five days. Trite as it may now sound, he was undoubtedly correct in

⁶⁶ Cunningham, 'Report on the Battle of Crete', in Simpson, *Cunningham Papers*, p.181.

⁶⁷ IWM Dept of Sound Recordings. Interview with G W Deacon 9316/4/4, as quoted by Spector, *At War At Sea*, p.183.

⁶⁸ Signal from Cunningham to First Sea Lord, dated 30 May 1941 as quoted in Simpson, *The Cunningham Papers*, p.417.

stating that abandoning the troops would mean 'our naval tradition would never survive such an action'.⁶⁹ No doubt Cunningham was aided in driving men to the limit by the simple fact that once the ship is at sea, only the captain can decide to flee the action. Short of mutiny and taking over the ship, the sailor cannot run very far.

The C-in-C was also right about not drawing the hasty conclusion that ships could not stand up to air attack. As he correctly recognised, no system of AA defence was likely to be able to deal with heavy and repeated air attack coming in from all directions. Experience had shown that ships needed to keep together for mutual support in the face of such attack and with hindsight, Cunningham realised it was a mistake for units to have been detached from the main formation to rescue *Greyhound's* stricken crew instead of sending the whole force in support.⁷⁰ Yet Dennis and his comrades on *Griffin*, with previous experience of attack from the air were correct in stating that this was a lesson that should already have been learned. As a result, the Mediterranean Fleet had suffered more than it needed too. The Axis sank three cruisers, six destroyers, plus thirteen ships heavily damaged including the sole aircraft carrier. More importantly perhaps, 1,800 personnel were killed in action. Of the ships sunk, the Italian *Regia Aeronautica* destroyed at least one destroyer, the *Juno* on 20 May 1941. As for the *Luftwaffe*, around 147 aircraft had been lost, mainly to the Mediterranean Fleet, plus seventy-three 'from other operational causes', representing over 25% of German aircraft.⁷¹ Even so, the Navy had achieved its objectives and without the massive psychological casualties that might have been expected.

⁶⁹ Cunningham, *Sailor's Odyssey*, p.378. Also see Spector, *At War At Sea*, p.183.

⁷⁰ Cunningham, 'Report on the Battle of Crete', as in Simpson. *Cunningham Papers*, p.423.

⁷¹ S David, *Military Blunders*, p.347. David's estimate of naval losses confirmed by W S Churchill, *Second World War*, III, Cassell & Co., 1950, p.269. *Luftwaffe* losses from Hezlet, *Aircraft & Seapower*, p172.

The Vulnerability of Bases for Repair and Replenishment

Hezlet suggested that in the event of German air superiority in the Channel and North Sea, it would not have been possible to use local bases. With the Ju.87B-1 having a limited operational range of 490 miles it seems likely this particular warplane operating from the Calais area would have difficulty flying north of The Wash with enough fuel to return, although those bases between Portsmouth and The Wash would have been within range.⁷² It is also known that the *Luftwaffe* had a small number of extended-range Ju.87R aircraft that might have reached some northern bases although these would certainly have lacked fighter escort. Bases closer to the landing area would at least have had the benefit of a ground based AA system with barrage balloons to protect the warships.

R M Ellis, Director of Naval Air Division examined the question of bombing effectiveness on ships in port for the Chamber of Shipping in December 1939. At this early stage he relied heavily on the Spanish Civil War experience. Ellis was dismissive about the skills of the Italian Air Force in this earlier conflict, stating 'their average distance error against stationary targets might be estimated at 300 yards from an assumed height of release of 1000 feet.' He somewhat arbitrarily calculated the accuracy rate of hits and effective near misses as 'an unremarkable 0.025% per bomb'. Ellis recognised the superior quality of the *Luftwaffe* in attacks on British ports but recognised that the AA defence might offset factors of bigger bombs and loads. He suggested a hitting figure of 10% against a large merchant ship. In the case of dive-bombing 5-10% was suggested but disturbing the bombers with AA fire and posting balloons to deter dive-bombers should

⁷² Range for the Ju.87B-1 from E Angelucci and P Matricardi, *World Aircraft: World War II-Part 1* but Deighton quotes the Ju.87b radius as only 150 miles, thus suggesting this aircraft could reach nowhere near as far as The Wash. Presumably he meant the Ju.87B-2 with a more powerful engine and heavier bomb load that may have resulted in a more limited range than the B-1. L Deighton, *Fighter: The True Story of the Battle of Britain*, Jonathan Cape, 1977, p.138.

reduce the accuracy rate to the low levels achieved by the Italians. Admitting that larger ships in crowded docks provided bigger targets, he was still inclined to think the rate would still be less than 1% per bomb 'though DNAD has no information on this point.'⁷³ Limited and arbitrary as this was being based on an earlier conflict between different combatants, there is sufficient doubt to query Hezlet's rather sweeping assertion about the 'impossibility' of not being able to use the bases between the Humber and Portsmouth. His own assertion seems to be at least partly contradicted by his statement relating to the 'phoney war' period that 'the bombers of both sides had very little success against the fleets, either at sea or in harbour', qualified by an admission that neither side had tried very hard and that the ships endeavoured to keep out of the way.⁷⁴

One problem hindering the defence of harbour installations was identified by Rear Admiral Fraser and forwarded to the Admiralty on 26 July 1940 through Admiral Drax, C-in-C, Nore. This report complained about the over centralisation of fighter and AA defences and highlighted an incident when a German seaplane landed close to the RDF (Radar Direction Finding) station at Bawdsey. Incredibly, a Bofors AA unit stationed within range failed to fire, as it needed permission from Fighter Command at Uxbridge. Unfortunately, it could not obtain a clear telephone line to Uxbridge and did not obtain permission until the seaplane had left. The report indicates confusion and a problem with the organisational structure relating to early warning. Drax argued that RDF stations needed to alert AA units direct before the enemy aircraft came into sight, implying that the built in delay of passing enemy aircraft information gleaned through RDF and the Royal Observer Corps via the Filter-Room at Fighter Command HQ meant an unacceptable delay. Delays occurred because of the need to differentiate between enemy and friendly aircraft movements before alerting all units. Nevertheless, as Drax argued, it was probably

⁷³ TNA ADM 199/65 1486/39 'Air Attacks Against Ships, 1939', Minute from R M Ellis for DNAD to Director of Trades Division, dated 14 Dec.1939.

⁷⁴ Hezlet, *Aircraft and Seapower*, p.145.

better to risk shooting at friendly aircraft than to risk not shooting at an enemy who might destroy a cruiser or destroyer with a mine.⁷⁵ Yet as Fraser indicated in a separate report, in the circumstances of 'maximum air warfare', a situation that had yet to develop, large numbers of enemy aircraft were more likely to be readily identifiable than single aircraft. Though he did not mention this in the context of an invasion, it seems clear that it would form part of this 'maximum air warfare' scenario and would not have been a major problem.⁷⁶ Neither Drax nor Fraser made reference to paragraph 14 of the *Recognition Instructions* (2nd Edition, July, 1939) which stated that 'Friendly aircraft should avoid naval anchorages' which they could have argued put the onus of responsibility on friendly aircraft to keep away from coastal defence establishments.⁷⁷

One final example of disappointing air attacks on vessels at anchorage can be seen in the RAF's attacks upon the invasion armada during September. Churchill was unimpressed:

'What struck me about these photographs was the apparent inability of the bombers to hit these very large masses of barges. I should have thought that sticks of explosive bombs thrown along these oblongs would have wrought havoc, and it is very disappointing to see that they have all remained intact and in order with just a few damaged at the entrance.'⁷⁸

An RAF aerial photograph corresponding to Churchill's description showing damage inflicted to barges and installations at Dunkirk is reproduced at Appendix 3.⁷⁹

⁷⁵ TNA ADM 199/64 From Admiral Drax to the Admiralty, dated 3 August 1940. 'Suggestions by Rear Admiral Fraser. (F.O.I.C. Harwich No.Q.102.A/40 of 26 July, 1940.).

⁷⁶ TNA ADM 199/64 From Rear Admiral Fraser to Flag Officer, Harwich, dated 26 July 1940. 'Interception of Enemy Aircraft Attacking the Coast and Shipping off the Coast'.

⁷⁷ TNA ADM 1/9920 1546368. T.S.D.295/39/G 'Air Attacks on Home Fleet, 26 September, 1939' (8).

⁷⁸ Prime Minister to Secretary of State for Air, 23 September 1940, as quoted by Allen, *Who Won the Battle of Britain?* p.139.

⁷⁹ Aerial photograph of Dunkirk in 'Why the Invasion Armada Never Sailed', in *Bomber Command: The Air Ministry Account of Bomber Command's Offensive Against the Axis September, 1939 – July 1941*, HMSO, 1941, p.67.

One must now consider again Winterbotham's assertion that after Crete ships could no longer survive against large numbers of land-based aircraft, which is similar to Hezlet's claim that 'it was now proved beyond any doubt that command of the sea could not be regained by ships alone'.⁸⁰ 'Command' implies absolute control and one has only to remember that the Germans transported their Army to Norway in the face of overwhelming British naval superiority before the *Luftwaffe* had chance to establish itself and influence events. If the Germans held the upper hand in the Aegean, then it was in terms of inflicting admittedly 'crippling' losses but without the power to prevent either the interdiction of its seaborne reinforcements or to prevent the evacuation of the British and Commonwealth forces.

There are some indications the Germans did better around Crete than they might have done in British waters. The *Luftwaffe* had reliable weather; some better bombs than the inadequate types available in 1940 and more time to sort out the optimum fuse delay for use against warships. They also received some limited help from the *Regia Aeronautica*. During the evacuation, the British ships were heavily loaded, a factor inhibiting their bomb dodging capabilities. Mistakes made in the heat of the battle contributed to the heavy losses and despite operational experience around Norway suggesting that ships needed to keep together for mutual support, this was ignored during the *Greyhound* incident. Rear Admiral King's failure to press home the attack against the second convoy meant a potentially damaging blow to the enemy was not made and Force C consequently suffered the full effects of air attack. A further point for consideration is that a shortage of AA ammunition contributed to the difficulties experienced by the Mediterranean Fleet and easy replenishment of stocks would not have been possible from

⁸⁰Hezlett, *Aircraft and Seapower*, p.172.

Alexandria owing to the distance involved. These points from the Battle of Crete suggest that Hezlet was unduly pessimistic about the possibility of the Navy being unable to use bases between the Humber and Portsmouth for emergency repair and replenishment. On the contrary, with AA defences including barrage balloons around the naval bases, the danger of effective air attacks during replenishment and emergency repair operations seemed relatively low. The exception to this would have been Dover, closed to the Navy because of fire from heavy German coastal batteries and the proximity of Ju.87 bases. Finally, at Crete, only one carrier was deployed. Had the RAF been destroyed in 1940, it remained open to the Admiralty to use all of its seven carriers in the defence of the nation, together with approximately 130 low-performance fighters.⁸¹ These would have fared badly against the Me.109 fighter but the Fairey Fulmar was faster than the Ju.87 and surely would have disrupted many of its attacks.

Admiral Forbes and the various flotilla commanders might not have avoided tactical errors but we do know from Forbes's correspondence with Admiral Hamilton that he at least, was told about the importance of ships keeping together. An all-out Channel battle would have been a desperate affair and in such a situation, morale would have been a crucial factor with indications showing that the Home Fleet personnel vigorously standing up to constant air attacks with the Ju.87 B-2 as a dangerous adversary. This vigour may have been even greater than in the Mediterranean bearing in mind firstly what was at stake and secondly, that Cunningham's men went into battle already tired from previous exacting operations. The evidence indicates that German bombers, including the Ju.87 were not necessarily a match for British warships in 1940 and what can be said with certainty is that with or without air support, the ships and men of the Royal Navy in home

⁸¹ Data relating to RN resources at time of Crete in Hezlet, *Aircraft and Seapower*, pp.172-73. It cannot be assumed that all of these 130 aircraft would have been manned or even that the numbers of naval fighters were exactly the same in September 1940 as they were in May 1941. Churchill indicated that fifty-five pilots were transferred from the Navy to the RAF and took part in the Battle of Britain. Churchill, *Second World War, II*, p.144.

waters were a significant force to be reckoned with. Whether the RAF existed as a similarly effective force will be examined next.

Who Won the Battle of Britain?

‘So whoever won the Battle of Britain, surely the *Luftwaffe* did not lose it.’¹

(Wing Commander H R Allen DFC)

Previous chapters have indicated German planners were privately content to let the supposed failure to win air superiority over England postpone and ultimately cancel any invasion attempt. Also owing to training, equipment and morale deficiencies, *Luftwaffe* intervention against the Royal Navy in partnership with the *Kriegsmarine* was unlikely to have gained ‘control’ of the Channel. Though air superiority was not the dominant factor assumed in core-histories, this chapter examines Wing Commander Allen’s statement that the *Luftwaffe* did gain sufficient air superiority over Kent and Sussex for an invasion, an assertion criticising the effectiveness of Fighter Command. If so, then had Hitler proceeded it would not have been too much to say, as Admiral Forbes did about the invasion threat, that ‘it would be a great opportunity’.² A second ‘Trafalgar’ involving the dramatic submerging of vast quantities of German men and materiel beneath the waves together with the surrender of thousands of troops cut off from supply, would have created opportunities for an advantageous peace treaty from a desperate Hitler, though the fascinating question as to how the British might have exploited these belongs to the realm of counterfactual history. In the event, Forbes’s ‘opportunity’ of a truly decisive victory at sea was shrouded by the perceived victory in the air that Churchill called the Battle of Britain.

¹ H R Allen, *Who Won the Battle of Britain*, Panther Books Ltd., 1976, p.191.

² TNA ADM 1/10556 From Forbes to Admiralty, 4 June 1940.

Many attitudes and values of writers such as Winston Churchill in publications such as his multi-volume *The Second World War* dominate the unceasing torrent of popular literature almost hyping the conflict beyond recognition. The guardians of the 'finest hour' are now writers such as Phil Craig. Craig co-wrote *Finest Hour* with Tim Clayton. Their successful and frequently repeated documentary television series rightly celebrated the contribution of ordinary men and women to successful British resistance. But as a significant influence on populist opinions today, Craig wrote an article for the *Daily Mail* in which he attacked revisionists, John Charmley and Clive Ponting for their supposed belittlement of the wartime spirit and the people who endured the horrors of the blitz.³ Like the article by Niall Ferguson referred to in the previous chapter, Craig seems to have owed his newspaper commissions to a willingness to comply with the *Daily Mail's* editorial policy of producing historical articles that influence and reinforce the prejudices of a Europhobic readership. Taking a leaf out of Craig's book, former journalist Patrick Bishop's more recent, 'Top Ten Bestseller' *Fighter Boys* also attacked revisionists for underplaying the significance of the Battle of Britain.⁴ Bishop enthusiastically threw himself into the personal stories of the RAF participants but in common with many biographers and writers has become slightly over-emotionally attached to his human subjects.

Conceivably, one reason why Craig is a detractor of Ponting's work is because *1940, Myth & Reality* is perhaps the only successful academic book to incorporate the work of Wing Commander H R Allen's provocative *Who Won the Battle of Britain?* Significantly, Allen was a Spitfire pilot of 11 Group, serving as a Pilot Officer of 66 Squadron during the Battle of Britain at Kenley, where he later became the squadron commander. Allen's book came out in 1974, representing a scathing indictment of the Air

³ P Craig, 'Bunkum and the Blitz', *Daily Mail*, 26 August 2000, pp.12-13.

⁴ Interview with Patrick Bishop by Max Arthur in P Bishop, *Fighter Boys: Saving Britain*, Harper Perennial, 2004, pp.5-6.

Staff from someone on the 'sharp end' of their policies. Historians have given it scant attention possibly because of an emotive review from F K Mason in a prominent defence journal.⁵ Also, when the paperback edition was issued in 1976, H Montgomery Hyde's *British Air Policy Between the Wars, 1918-1939* was published praising the 'superb quality of the RAF' and claiming that the 'RAF exhibited the highest qualities in training, organisation, skill and morale, amply proved in the Battle of Britain'.⁶ It may also have been as Allen suggested, that myths endured because the pilots who wrote about the conflict were not trained historians and the main Battle of Britain historians lacked flying combat experience and thus could not understand the intimate details. The latter group, including Basil Liddell Hart, were forced to rely on the accounts of operational participants who, in Allen's words, may have 'wanted to put the best possible light on their performance, and this led to factual misinterpretations'.⁷

Conceivably, even surviving German airman found it difficult to criticise their RAF counterparts. Since the end of World War II, the Germans were told this was an unambiguous defeat for the *Luftwaffe*, with commentators linking the failure to destroy Fighter Command with the failure to invade and even linking this to the long term German defeat of World War II.⁸ Even in a bad cause, failure has to be justified and lauding an opponent's virtues can be an effective way of explaining away one's own shortcomings. Adolf Galland became friendly with British airman such as Douglas Bader after the war with Bader even writing the foreword to Galland's book. *The First and the Last* was understandably concerned to explain the failings of the *Luftwaffe* during the battle by

⁵ F K Mason, 'Well who did? - and who didn't?' *RUSI Journal of the United Service Institute for Defence Studies*, Vol.119, No.4, Dec.1974, pp.84-5.

⁶ H Montgomery Hyde, *British Air Policy Between the Wars 1918-1939*, Heinemann Ltd., 1976, pp.503-5.

⁷ Allen, *Who Won the Battle of Britain*, p.182.

⁸ For example, German historian Dr Karl Klee wrote that 'the invasion and subjugation of Britain was made to depend on victory in that battle, and its outcome therefore materially influenced both the further course and the fate of the war as a whole'. K Klee in Dr H A Jacobsen & Dr J Rohwer (eds), *Decisive Battles of World War II: The German View*, Andre Deutsche, 1965, p.91. Also there is Luftwaffe General Werner Kreipe's statement that it was a strategic failure contributing 'to our ultimate defeat'. Kreipe also described the decision to fight the Battle of Britain as a 'turning point' and asserted that the 'German Air Force ... was bled almost to death' as quoted by Terraine, *The Right of the Line*, p.219.

praising the quality of the RAF, stressing the military incompetence of the Nazi leadership and what Galland considered to be the unjustified demands of his less glamorous bomber colleagues. The book tactfully refrained from pushing his oft-quoted opinion that there never was a Battle of Britain so Germany could not have lost it.⁹

The extent to which a certain ‘comradeship of the air’ might distort the expressed opinions of former British and German airmen is not conducive to measurement, yet it is surely a force transcending national boundaries, making former *Luftwaffe* personnel socially acceptable in today’s more liberal world. For Germans sensing the importance of the battle to the British psyche, it can be conveniently forgotten that the *Luftwaffe* was the arm of the *Wehrmacht* most imbued with the spirit of discredited National Socialism. It has been difficult for *Luftwaffe* veterans to win the acceptance of their former enemies. In 1968, Battle of Britain Association members turned down a proposal for German ex fighter pilots to meet their old enemies at Bader’s old Duxford base. It was turned down ninety-five to five following speeches that it was too soon and would be offensive to the widows and orphans whose men were ‘murdered’ in 1940. Passions have now cooled and individual friendships forged. Undoubtedly, many have followed Galland’s line that the air war was a ‘fair war’ and without politics.¹⁰ The situation also allowed the British to bask in confirmation from their former enemies that the Battle of Britain represented a British moral triumph and the *Luftwaffe* personnel to believe their discreditable political leadership automatically doomed their own Herculean efforts to failure. Thus a certain unspoken consensus has arisen in which both groups can, to paraphrase Allen, ‘put the best possible light on their actions’. All this aside, it still seems mean-spirited to make implied criticism of ‘the few’ given their genuine sacrifices and the many popular presentations giving the

⁹ Conversation between Galland and Ben Fisz in 1967 as reported in L Mosley, *Battle of Britain*, Pan Books, 1969, p.35.

¹⁰ Mosley, *Battle of Britain*, pp.196-97.

unavoidable impression that for a few weeks it was only the men of Fighter Command maintaining an active resistance.

Naturally this ignores the little publicised fact that while the air battle raged over southern England, German U-boats and surface raiders were in the process of sinking 243 British merchant vessels, representing what must have been a far higher loss of life in the crucial but unglamorous cause of keeping the Atlantic supply lines open.¹¹ Churchill, in correspondence with President Roosevelt and his *The History of the Second World War*, chose to express the supply situation for 1940 in impersonal terms of tonnage and ships lost, rather than human casualties.¹² Even Churchill admitted, that he was ‘even more anxious about this battle [of the Atlantic] than I had been about the glorious air fight called the Battle of Britain’.¹³ Naturally, he did not say this publicly at the time. Churchill’s praise of ‘the few’ made much better propaganda. After all, the inhabitants of southern England could see for themselves the drama unfolding over their rooftops, whilst the merchant ship was largely invisible to their gaze. But Churchill was an incurable romantic and as his daughter-in-law revealed on television, he had a natural empathy for young people and wanted to pay his tribute.¹⁴

This chapter establishes the weakness of Fighter Command by September 1940 and suggests it took a long time to recover from its summer exertions. It will also seek to show that the pilot shortage (particularly of experienced pilots) became the ultimate limiting factor and highlights training deficiencies as part of the explanation why. Little can be contributed now to the relative merits of the fighter aircraft involved. However, a detailed examination will be made of the relatively neglected question of armament. It will be

¹¹ Table II ‘Monthly Totals of Shipping Losses, British, Allied, and Neutral May 1940 to December 1940’ as quoted by Churchill, *The Second World War II*, p.639. Figures quoted represent British losses for the period June to September 1940 inclusive.

¹² Churchill, *Ibid*, Churchill to Roosevelt, 8 Dec.1940, p.499.and p.529.

¹³ Churchill, *Ibid*, p.529.

¹⁴ Churchill’s daughter-in-law Pamela Harriman, speaking on ‘Churchill’ *UKTV History*, viewed 26 Oct.2004.

suggested that the inadequacy of the eight-gun fighter's weapon system was a major constraint on pilot efficiency, tactics and other aspects of combat effectiveness in 1940 and it will be seen how this might have been drastically improved. Close-range firing will be shown as the necessary expedient to many of the problems mentioned and the surprisingly low performance of pilots in 1940 will be illustrated using Polish and Czech pilots as a comparison. Finally, 'Who won the Battle of Britain?' will be addressed here.

Churchill's Aggravation of the Pilot Shortage

The pilot shortage came as a shock to Churchill whose attention was drawn to it even before the Battle of Britain had begun. Writing to Archibald Sinclair, Secretary of State for Air with some damning accusations on 3 June 1940, he expressed the War Cabinet's distress that the Air Ministry was running short of pilots and these were now 'the limiting factor'. Pointing out that this was the first time this 'admission of failure' had been made, he claimed that only a few months ago they were told about 7,000 pilots existed, some with considerable flying experience who did not have machines to fly. Many of these allegedly had more flying experience than some of the German airmen now being captured. Churchill was now asking 'how then therefore is this new shortage to be explained?'¹⁵ The Prime Minister did not reproduce the reply in his *History of the Second World War* and did not disclose where he had obtained his information, but it is clear that Sinclair was unable to achieve any significant improvement in time for the battle. Sinclair had only been Secretary of State for three weeks at the time of this memorandum but he could have said that many of these pilots were civilians, or trained in bombers or transports requiring extensive conversion training. Most were probably too old or otherwise unfit for the extreme physical exertions of fighter combat. In fairness to the Air Staff, the Prime

¹⁵ Prime Minister to Secretary of State for Air, Churchill, *Second World War*, Vol. II, p.561.

Minister was almost certainly now regretting his generous provision of fighters and pilots in a vain effort to keep France in the fight and this was surely the real cause of his anger.

Churchill and the Cabinet may conceivably have been misled in September 1939 about pilot numbers, but as a pre-war MP who had constantly agitated about air strength and as a member of the War Cabinet, he must have known about Dowding's protests over the reduction of his Home Defence Fighter Squadrons below the level previously set by the Air Council – fifty-two squadrons. Dowding's twenty-eight-paragraph letter to the Air Ministry dated 16 September 1939 reminded them that on 3 September, he had the equivalent of only thirty-four squadrons. In August he had been asked to reassure the country by radio broadcast that this lower figure was still enough to deter an attack on Britain and that 'in a comparatively short space of time his [the enemy's] attacks would be brought to a standstill'. Having understood an all out effort was being made to expand Home Defence he was shocked to discover his establishment was to be reduced to 26 or 27 within a few months in order to bolster a commitment to France.¹⁶ This letter was couched in terms of aircraft and squadrons rather than pilots, and Dowding's worst fears were not realised but it does suggest that when Churchill came to power, he should have realised the likely consequences to Home Defence of sending more resources abroad.

A 'continental commitment' had been vociferously advocated by Churchill throughout much of the 1930s as the best defence against Germany, and any veering away would doubtless have gone against the grain whatever the circumstances. Five days after he became Prime Minister, Churchill came under intense pressure from a desperate French government for Dowding's strength to be reduced further. Nevertheless, his decisions to send yet more aircraft and pilots abroad went against expert advice and strong opposition from Dowding, though the latter clearly resented what he saw as a lack of support from

¹⁶ TNA AIR 16/677 Dowding to Air Ministry, 'Strength of Fighter Squadrons Necessary For the Defence of Great Britain', 16 Sept. 1939.

Cyril Newall, Chief of Air Staff. Emotions were running high on all sides and Dowding was vulnerable to political accusations of allowing the fighter strength to ebb away. Not one to weigh the strength of pragmatic considerations over emotionally charged appeals, Churchill disregarded Dowding's carefully prepared statistical evidence at a Cabinet meeting on 15 May with the result that four more fighter squadrons were to be put through the mincing machine.¹⁷

Newall's initial 'failure' to give Dowding adequate support was doubtless rooted in the difficulty of countering Churchill's steamroller personality, however Newall must have been in a dilemma. A note written by him on 9 May, the day before the German attack in the West reveals that the Air Staff were under pressure from John Dill, then Chief of the Imperial General Staff. The note suggests that Dill was pressing for Bomber Command to be used tactically against any German columns that might advance into Holland or Belgium. All previous assumptions had been made on the basis of strategic efforts against the industrialised Ruhr area, described as 'Germany's most vital spot'. The note reveals the Air Staff view 'that to employ the heavy bomber force in this new role – except as a last resort...would not only be ineffective but disastrous'.¹⁸ The long-standing bomber orientation of the Air Staff made it difficult contemplating risks to what they undoubtedly considered the main war-winning asset but Churchill's dislike of Dill limited his influence. At the later Cabinet meeting, Newall must have thought that if he argued in support of Churchill, then not only would he alienate a difficult subordinate, but the Air Staff would find it harder to argue that medium and heavy bombers could not operate tactically because of a lack of escorting fighters. On the other hand, if he opposed him, not only would Churchill's displeasure be incurred but also the focus of support for France might turn in favour of sending in the bomber force with no fighter escort whatsoever. Finally, Newall

¹⁷ R Wright, *Dowding and the Battle of Britain*, MacDonald, pp.103-9.

¹⁸ TNA AIR 10/5556 'The Employment of the Bomber Force in the Event of Invasion of Holland and/or Belgium. Note by the Chief of the Air Staff.' 9 May 1940.

did lend some belated support for Dowding; Bomber Command were not ordered to use their heavy bombers tactically, and the subsequent massacre of the Fairey Battle light bomber force in a tactical role must have been seen as confirmation of all their fears.

Wishing to 'cover his back' and probably to save face with junior colleagues, Dowding famously iterated his advice to the Air Ministry on 16 May 1940, the original of which now hangs on the library wall at the RAF College, Cranwell. He reminded the Air Council that it was they who had estimated the minimum strength for Home Defence as fifty-two squadrons and that he was now down to the equivalent of thirty-six squadrons. Furthermore, he now needed to know what the revised minimum strength was to be set at, and then receive an assurance this would be adhered to. In no uncertain terms, he urged that Allied Commanders on the Continent be told that no further aerial reinforcements would be sent irrespective of the situation abroad. Providing that adequate fighter forces were retained, Home Forces suitably organised and the fleet remained in being, then the nation could carry on singled handed, for some time 'if not indefinitely'. He rounded off by starkly warning of 'complete and irredeemable defeat' if forces earmarked for Home Defence continued to be drained in order to 'remedy the situation in France'.¹⁹

Unrepentant, Churchill demanded a further six squadrons, the spirit of which was denied by the Air Staff in keeping the squadrons based in England and allowing the aircraft to stop in France long enough for rearming and refuelling only.²⁰ An unsigned draft memorandum, dated 'about 24 May, 1940' written possibly by Newall, and later filed in *Second World War: Fighter Control and Interception 1952*, must ultimately have found its way to Churchill, perhaps in revised form, prompting his scathing memo of 3 June 1940. In paragraphs 5 and 6, it was stated that between 10 May (the day Churchill came to power) and 24 May (approximately), nearly 200 fighter pilots were lost, representing the loss of a

¹⁹ TNA AIR 2/7068 Dowding to Air Ministry, 16 May 1940.

²⁰ Wright, *Dowding*, pp.102-7 and pp.111-17.

fifth 'of our most highly trained fighter pilots'. So devastating was this loss of trained personnel, that the 'number of pilots available per squadron was now little more than adequate to man the available aircraft. More serious is the loss of a considerable proportion of trained leaders'. While many of the aircraft had been replaced, 'there remains a grave deficiency in pilots'.²¹ Of course, Churchill was not directly responsible for the units already in France on 10 May and it is not possible to ascribe a specific number of pilot losses linked to the above decisions but they cannot have been insignificant. If the battle was won by a narrow margin, as is usually claimed, then Churchill's 'generosity', must have significantly imperilled the effectiveness of Fighter Command. The sense of guilt he must have experienced certainly explains the anger expressed in his missive to Sinclair and partly explains his subsequent gratitude to 'the few' ironically a group he helped diminish in number.

The Significance of the Pilot Situation and Inadequacy of the Training Organisation

Fortunately, for the RAF, the measures taken by the Baldwin and Chamberlain administrations during the 1930s combined with the later efforts of Lord Beaverbrook at the Ministry of Aircraft Production, allowed for adequate fighter aircraft availability when the critical time came. However, fighter production was only one prerequisite for survival as the *Luftwaffe* discovered in 1945, with plenty of new aircraft hidden in forests and under autobahn bridges yet with few trained pilots to fly them. For the Germans in 1944/5, the problem was rooted in a shortage of aviation fuel that starved the training schools of the means to conduct training programmes. With no enemy bombers pounding petroleum installations in the period prior to the Battle of Britain, RAF training establishments had less obvious excuse for the inability to maintain a supply of well-trained pilots capable of

²¹ AIR 10/5556 Loose draft 'Fighter Strength' dated 'about 24 May, 1940'.

filling the ranks of the fallen. However, like other organisations within the armed services, the RAF training organisation suffered from problems resulting from the rapid expansion of the 1930s.

It would be easy to blame the Baldwin and Chamberlain administrations for not bankrolling the perceived needs of the RAF but the plans for air expansion involved astronomical expenditure. A minute by the Chancellor of the Exchequer in 1937 stated:

‘ If that scheme is approved without reservation the Air Ministry will need to expand in the five years to 1942 a sum which exceeds by nearly £350 millions the amount which could be allotted to it out of the total five years expenditure of £1,650 millions for all Defence Services (including Civil Defence)...’.²²

It needs to be understood that defence spending as a whole had risen from £100,000.000 in 1933 to over £700,000.000 in 1939, rising by approximately 40% pa from 1935. It had also opened up a yawning balance of payments gap from £18,000.00 in 1936 to £250,000.00 in 1939 because most raw materials required for rearmament had to be imported. Ponting believed the government ‘got it right’ in 1934 by setting their rearmament programme to peak in 1939. If it climaxed before war broke out, the armed services would be saddled with too much obsolete equipment. On the other hand, if it had peaked later they could have been inadequately equipped.²³ The post-Munich decision to expand Fighter Command by 30% prompted the Chancellor’s warning that it was ‘so costly as to raise serious doubts whether it can be financed beyond 1939-40 without the greatest danger to the country’s stability’.²⁴ Serious deficiencies still remained in 1939 but given the country’s economic predicament and an acknowledgment that resources are always finite, Fighter Command had secured more of these than the nation could afford and probably more than it had any right to expect in the circumstances.

²² TNA CAB 27/648 ‘Appendix. Air Ministry Programme. CP. 218(38). Minute by the Chancellor of the Exchequer.

²³ C Ponting, *1940 Myth & Reality*, Hamish Hamilton Ltd, 1990, pp.30-2.

²⁴ TNA CAB 27/648 CP 247 (38) Minute by the Chancellor of the Exchequer.

The Air Ministry plan had been to train 5,800 pilots per year, rising to 11,000 by 1942, but in the event, this proved inadequate.²⁵ That pilot shortage became the ultimate limiting factor is hard to dispute, but nobody on either the British or German side seriously viewed the likelihood of the *Luftwaffe* operating from bases in northern France before the sudden collapse of May 1940. Dowding told the historian Basil Liddell Hart in 1943 that ‘our greatest danger lay in the failure of the training organisation to stand the strain’.²⁶ According to Deighton, the training schools were still working at peacetime levels even after the war had begun yet Dowding’s pleas to the Air Staff went unheeded.²⁷ The truth was a little more complex.

Shortly after the battle commenced in earnest, the Air Council met to discuss increasing the output of pilots. In a note dated 6 August 1940, the main limiting factor was identified as ‘deficiencies of advanced trainer type aircraft’. The solution was seen as using operational type aircraft to supplement existing trainer types, reducing the length of courses in Group II schools from fourteen to twelve weeks and reorganising the training so that more time was spent at Operational Training Units (OTUs) at the expense of Service Flying Training Schools (SFTS). These necessitated additional OTUs, some of which might be based abroad. It was envisaged the various proposals would increase weekly output from 124 to 204 over a period of ‘some months’. Incredibly, given the crisis in Home Defence by this date, the emphasis in the note was on the training of bomber pilots with no specific reference to fighter pilots or the grave situation currently facing Fighter Command.²⁸

²⁵ N Gibbs, *Grand Strategy*, Vol.I, HMSO, 1976, pp.38-9.

²⁶ LH 11/1943/27. ‘The Battle of Britain’, Extract From a Letter from Air Marshall Sir Hugh Dowding, 9 May 1943.

²⁷ L Deighton, *Fighter*, Jonathan Cape Ltd., 1977 p.68.

²⁸ TNA AIR 6/60 Air Council, 6 August 1940, ‘Increase of Output of Pilots.’ Note by AMT and AMSO.

The Air Historical Branch Narrative of the Ministry of Defence represents the starting point for any student of the air battles. This shows that in August 1940, the training schools could only deliver 260 trained fighter pilots to partly fill the gaps caused by the 304 killed or wounded. In the critical period of 24 August to 6 September, 103 pilots were killed/missing with 128 seriously wounded, meaning 231 pilots would not be available to resist an invasion, had one come after 6 September. This meant that from not quite 1000 pilots making up his fighting strength, Dowding was losing 120 pilots per week.²⁹ Another Air Ministry table shows the total killed on operations between 22 August and 11 September 1940 to have been 127, which seems consistent with the above figures.³⁰ Clearly this was not a situation that could be sustained for long without a major impact on efficiency and it was noted that fresh squadrons rotated into the main battle area suffered more heavily than tired but experienced ones. Squadrons now averaged only ten operational pilots per unit out of an establishment of twenty-six, though in the all-important 11 Group the operational pilots averaged nineteen.³¹

Even if the entire casualty list could have been fully offset by the influx of new pilots, a 'rookie', or non-operational pilot can hardly have been much of use to his squadron for some time to come in view of the fact that the training course had recently been cut from one month to two weeks. Before the war it had been twelve months. In terms of practical experience, a new Spitfire pilot could (and undoubtedly did) enter combat with a mere ten hours solo flying experience and without ever having fired his guns.³² Of course, even a well trained 'rookie' would have been at least a short term liability to his experienced comrades but one that was only half-trained was a menace to his own side. Whatever efforts were made to enforce R/T discipline at OTUs, excitable new pilots were

²⁹ TNA AIR 41/15 *The Air Historical Branch Narrative*, pp.395-97. Also see Churchill, *Second World War*, pp.291-92.

³⁰ TNA AIR 16/609. Table 'Casualties to personnel of Fighter Command, 10 July – 31 October 1940- Killed on Operations.'

³¹ TNA AIR 41/15 *Narrative*, p.396.

³² TNA AIR 41/15, *Narrative*, pp.395-97.

notorious for jamming up airways with unnecessary verbiage, thus preventing warnings and interfering with directions from the ground.³³ In an interview conducted by Nigel Lewis, Battle of Britain ace Peter Brothers maintained it was the pilots who went into combat after a few hours training that suffered the worst attrition rate. 'The new boys were the poor chaps who got the chop.' Brothers also made the telling observation that 'of the 20 pilots in the pre-war 32 Squadron, not one was killed'.³⁴

On 23 October, towards the end of the battle, a training conference was held at Fighter Command HQ, chaired by Dowding's aide, Air Vice Marshal Douglas Evill. The background was Dowding's decision of 8 September to discontinue his system of rotating squadrons in and out of the 11 Group's area in favour of feeding squadrons in Groups 11, 12 and 10 with individual pilots. The so-called 'stabilisation system' was an operational expedient intended to last only until the OTUs could provide enough pilots to meet the wastage problem. By mid-September, 11 Group's squadrons were reduced to under sixteen per unit on average, but the situation had now improved to nineteen per unit. At one stage Fighter Command was receiving four-fifths of SFTS output, overloading OTUs that were forced to accommodate eighty to ninety pupils to be turned out at the end of a fortnight 'as best they can'. Consequently 120 replacement pilots per week needed to be brought up to operational standard in mainly 'C' Class Squadrons located in quieter backstop areas. This meant that on 23 October, there were 440 non-operational pilots, representing one-third of all Fighter Command pilots. This implied that the twenty 'C' Class Squadrons with approximately sixteen non-operational pilots each were virtually non-operational units. At this date, 11 Group had about nineteen operational pilots per Squadron, despite an aspiration to bring them up to twenty-five operational pilots, or perhaps twenty-two with a few non-operational pilots to train. This suggests that in terms of operational pilots, a

³³ T Hamilton, *The Life and Times of Pilot Officer Prune*, HMSO, 194-? p.39.

³⁴ Interview by Nigel Lewis with Peter Brothers, 'The Fewer', *BBC History Magazine*, Vol.1, No. 2, June 2000, p.16.

‘typical’ 11 Group Squadron would have been no stronger at the end of October than in the ‘critical period’ of 24 August to 6 September 1940.

The solution was seen as increasing the number of OTUs and making changes to the syllabus.³⁵ Nevertheless, a picture emerges of an organisation that probably had enough pilots overall, but not enough of whom were fit enough to engage the enemy. The ‘stabilisation system’ was unpopular with squadrons generally, many of which lost the operational pilots they had just trained. In Dowding’s words, ‘The stabilisation of squadrons in the line and the creation of class ‘C’ squadrons was a desperate expedient forced upon me by the heavy losses’.³⁶ But internal correspondence within the Air Ministry shows it was not until the end of November 1940, that Fighter Command’s new C-in-C felt the organisation had recovered sufficiently to discontinue it, and even then a significant factor seems to have been the lighter scale of enemy daylight attack.³⁷

The Importance of Pilot over Aircraft Quality

Yet it may be misleading to suggest the performance of Fighter Command was primarily determined by the ability of the training schools to churn out a sufficient number of adequately trained pilots. The *Luftwaffe* disposed of the fledglings presented to them quickly enough but perhaps as Allen suggests, it was the diminishing pool of experience as the conflict progressed that became the true limiting factor. That 231 pilots were killed or seriously wounded between 24 August and 7 September was bad enough, but the real significance lies in the fact that these figures included approximately fifty of 11 Group’s

³⁵ TNA AIR 16/636 ‘Minutes of Conference on Training held at Headquarters, Fighter Command at 11.00 Hours on 23.10.1940.’

³⁶ TNA AIR 41/15 Dowding – US of S.15 Nov. 1940. *Narrative* p.400.

³⁷ AIR 19/488 Minute to DCAS 23. 11.40, minute to S of S dated, 25.11.40 and undated minute signed AHMS.

experienced flight leaders.³⁸ As the casualty rate mounted, there were fewer experienced flight leaders for the fledgling pilot to turn to.

Veteran fighter pilot P B (Laddie) Lucas, representing what were clearly the views of himself and Douglas Bader wrote that:

‘Subject to height (which was critical), there was not a lot to choose between the Hurricane I, the Spitfire I and the Messerschmitt 190E *in actual combat*...pilot quality counted for much – much more than most would credit’.³⁹

The ‘critical period’ was marked by *Luftwaffe* attacks on Fighter Command airfields and Sector Stations of which the latter were the most important. German tactics were to use large formations of bombers closely escorted by Messerschmitt Me.109 fighters weaving around their charges with engines throttled back. This airborne battering ram proved difficult to stop. To begin with, the close escort policy reduced the effectiveness of the German fighters, but as more fighters became available from Air Fleet III to serve with Kesselring’s Air Fleet II, a high altitude escort layer was usually added to the formations giving the initiative back to the *Luftwaffe*’s fighter arm. The majority of German fighter pilots were very experienced, in some cases from serving in the Spanish Civil War. A memorandum from Park to Dowding on 12 September remarked that these tactics meant raids ‘on several occasions ...barged through our first and second screen of fighters and reached their objectives by sheer weight of numbers.’⁴⁰

RDF aside, the main advantage possessed by the defending eight-gun fighters was the tighter turning circle essential in the classic dogfight. The advantages conferred by this were now negated as German fighters could swoop in at speed, open fire with their

³⁸ Allen, *Who Won the Battle of Britain?* p.186.

³⁹ P B Lucas, *Flying Colours: The Epic Story of Douglas Bader*, Hutchinson & Co, 1981 edn., p.95.

⁴⁰ TNA AIR 2/7355 Park to Dowding, ‘German Air Attacks on England 8 Aug-10 Sept’, 12 September 1940. Para 18.

superior firepower and climb back faster than their opponents could follow. The top-cover Messerschmitts could often launch their attacks from the altitude and direction best suiting the attacker. When the Spitfires, whose job it became to engage the top layer, reached the level at which the Messerschmitts were operating, they remained at a disadvantage because the German aircraft performed better at the higher altitudes. As RAF aces Johnnie Johnson and Laddie Lucas put it, 'tight-turns did not win air battles, as tight-turns are more of a defensive than an offensive tactic.' They went on to state that only superior height could save a fighter from the 'bounce' and that the Messerschmitt Me.109E was 'decidedly superior' at the higher altitudes where many fights occurred.⁴¹

With the *Luftwaffe* now holding the tactical advantage enabling the full exploitation of their equipment it was only pilot quality that might have redressed the balance. Sadly, this was a fast deteriorating asset for the British. In the circumstances, an adverse effect on pilot morale might be expected. This is not something susceptible to measurement but if the views of three experienced combatants during the 'critical phase' are typical then it is hard to see how the circumstances permitted any of these men to continue giving their best. Group Captain Peter Townsend admitted that the enemy were now 'wearing us down; we were weary beyond caring, our nerves taughtened to breaking-point'.⁴² The normally ebullient Al Deere, reflecting on the fact that only four pilots originally with him since the battle started were left, remarked that the prospects of victory 'could only get worse, progressively worse'.⁴³ Even the imperturbable Sailor Malan was said to have 'burst into tears' at this time.⁴⁴

⁴¹ J E Johnson and P B Lucas, *Glorious Summer*, Stanley Paul & Co Ltd., 1990, p.3.

⁴² P Townsend, 'Townsend gave way to his emotions', *Time and Chance*, p.111, as quoted by Bishop, *Fighter Boys*, p.314.

⁴³ IWM no 10478 as quoted by Bishop, *Fighter Boys*, p.315.

⁴⁴ IWM Archie Winskill no.11537 as quoted by Bishop, *Fighter Boys*, p.315.

The Wrong Gun?

One of the most serious shortcomings in the new pilot's training lay in the inability to use his guns ineffectively. The pre-war pilot may have had a sounder grounding in all aspects of flying training, but the financial constraints referred to earlier would severely restrict his access to target ranges, practice ammunition and towing aircraft. Later it would be the pressure to produce trained pilots within a short space of time blamed for neglecting what should have been an essential part of the syllabus.⁴⁵

In a letter to Sir Henry Tizard, Chief Scientific Advisor to the Chief of Air Staff written in November 1939, Dowding responded to Tizard's earlier remark that the 'shooting has gone off'. On the basis of two combat reports, he pointed out that inexperienced pilots tended to fire their guns in short bursts. Each time the guns fire, the recoil forced the aircraft's nose downwards and bullets were wasted until the line of sight was realigned on the target. The displacement of the pilot's aim would then cause him to cease firing, meaning that the fighter would never get the chance of firing a steady burst of fire into the enemy bomber.⁴⁶ Bearing in mind the eight-gun fighters of the RAF could fire continuously for only fourteen seconds, a desire to conserve ammunition was understandable. Furthermore, the lack of round-counters made it impossible to monitor ammunition expenditure in combat.⁴⁷

Undoubtedly firing 'short bursts' was good advice for 1918 when gun stoppages due to overheating from extended firing were commonplace. Aircraft dynamics were also

⁴⁵ Bishop, *Fighter Boys*, pp.92-3.

⁴⁶ IWM HTT 226 Tizard papers. Letter from Dowding to Tizard, 25 Nov.1939

⁴⁷ Another factor likely to compound this error would have come from the literature the pilots read as boys during the inter-war years. Capt. W.E Johns, in *Biggles of 266* advocated the use of short bursts to bring down the 'Huns'. More serious students may have read Manfred von Richthofen's *Der Rote Kampfflieger* (The Red Battle Flyer) in which the same point was made. Only inexperienced pilots fired long bursts.

different, but by 1940, the weaponry was more reliable. At this early stage of the war, Dowding believed some 300 strikes were necessary to bring down a Heinkel He.III medium bomber, largely because of their 'extremely efficient self-sealing [fuel] tanks'.⁴⁸ If correct, then even more strikes would have been needed to bring down a machine such as this in the Battle of Britain when they carried more armour. Indeed, Allen emphasises Group Captain Peter Townsend's failure to bring down a German bomber with 220 strikes. This was no fault of Townsend. In fact, it represented good marksmanship, but it was a number probably not achievable by the average pilot.⁴⁹ According to Dowding's post battle despatch, the Germans adopted more armour plate to protect the crew and vulnerable parts of the aircraft as the Battle of Britain progressed, suggesting the chance of a 'rookie' downing a bomber with a short burst was likely to be negligible.

The Inspector General's visit to Sutton Bridge OTU on 3 May 1940 revealed the problems faced by establishments in bringing gunnery trainees up to standard. Gunnery practice for visiting units consisted of firing at 4 X 20' target drogues from the beam. The training was limited by the serviceable state of the four Henley towing aircraft. A spares shortage limited these to one or two aircraft at a time. Air Chief Marshal Ludlow Hewitt, a former C-in-C Bomber Command, with a special interest in gunnery was sceptical of the OTU's claim that the targets 'get shot to bits at once' even though 'the target is very big and was being towed very slowly'. Ludlow Hewitt also criticised the small twenty-five yard firing ranges and noted that the other Fighter Command OTU at Aston Down needed a 400 yards range to 'enable fighter aircraft to fire their fixed guns at various ranges on the ground'. He was also critical of Sutton Bridge's location, stating that the 'air defence

⁴⁸ IWM HTT226 *Ibid.* Deighton also mentions an incident during the Battle of Britain when six Spitfires of 74 Squadron failed to bring down a Dornier Do.17 despite firing 7,000 bullets. L Deighton, *Fighter*, p.107.

⁴⁹ Allen, *Who Won the Battle of Britain?* p.79.

restrictions there are most hampering to every form of training' though it is unclear exactly what he meant by this.⁵⁰

From this, it is obvious that a further limiting factor for the marksman must have been the quality of the armament carried. After all, the guns represented the final point of contact between the attackers and defenders without which everything else counted for little. Armament also had a fundamental effect upon tactics.

Even though he was already aware of the problem, Dowding had it all spelt out to him again by a letter from the RAF Staff College at Andover, dated 3 October 1940, towards the end of the battle. This quoted the opinion of an anonymous 'test pilot who was attached to a Squadron and bagged four Huns'. He asserted that the existing armament was good for destroying enemy fighters but 'is rapidly becoming obsolete for use against enemy formations' and went on to describe the heavy armour German bombers were carrying in the rear together with rear-mounted cannon and cross-fire. 'The armament of eight .303 guns is therefore insufficient, both in range and penetrating power for effective attack in these formations.' Also interesting was the recommendation that fighters be re-classified as 'Dogfighters' whose role would be to engage enemy fighters and 'Destroyers', equipped with frontal armour and with a minimum of four Hispano cannon to take on the lower flying bombers. Both types would operate in close co-operation.

It was already too late. The large-scale daylight battles were over by October, and in any case Keith Park, AOC 11 Group had used these tactics as far as he could by using the Spitfires against the escorts and the slower but slightly more effectively armed Hurricanes against the bombers where circumstances permitted.⁵¹ The author was undoubtedly correct

⁵⁰ TNA AIR 33/10 'Report No.11. Visit to Sutton Bridge on 3 May 1940. Notes by the Inspector General.' Dated 14 May 1940, signed Ludlow Hewitt, Air Chief Marshal, Inspector General.

⁵¹ TNA AIR16/659 Letter from RAF Staff College to Dowding, 3 Oct.1940.

in his analysis as the *Luftwaffe* later proved by blowing apart the early American Flying Fortress attacks over Germany with the heavily armed Messerschmitt Me.110 ‘Destroyers’ that earlier proved so disappointing in fighter to fighter combats in the Battle of Britain. With hindsight, it might be said that the Air Ministry should have pushed for earlier delivery of the Bristol Beaufighter, a twin engine fighter aircraft that was only available in small numbers during the battle but had been in development since late 1938.⁵²

One of Allen’s more dramatic assertions is that the Air Ministry should have fitted American Colt 0.5 calibre machine guns instead of the Browning 0.303, the latter being a scaled down version of the former (though much modified) and made under license in Birmingham. In view of the foregoing evidence, the inadequacy of the 0.303 cannot be denied and Allen quoted figures to support his contention that the Colt 0.5 (Mk 2) battery would have been fifteen times more effective than the Browning, and these are reproduced in Appendix 4. Mason’s review of Allen’s work deplored the ‘unnecessary (“computerised”) lengths’ in proving the superiority of the 0.5’ bullet to the 0.303 fired from a Spitfire or Hurricane however, as most writers have ignored this aspect the need for a detailed comparison was evident.⁵³

The inconsistency in Allen’s data with that of Deighton related to the Browning. Allen quoted the Browning 0.303 muzzle velocity at 2,240 ft per second, while Deighton allowed a higher 2,660 ft per second explainable by differences in ammunition used. Allen also allowed a rate- of-fire of 1,350 as opposed to Deighton’s slower 1,200 rounds per minute. Deighton did not specify which mark of Browning he referred to and unfortunately, neither author has specifically attributed their sources. However, even if Deighton’s figures are preferred, there is still a substantial advantage in favour of the Colt.

⁵² Angelucci and Matricardi, *World Aircraft World War II*, p.57.

⁵³ Mason, *RUSI*, p.85.

The Air Ministry could have opted for this in 1933 but according to R Wallace Clark, after trials with other products including Vickers, the Air Ministry decided that the advantages in terms of range and hitting power were outweighed by the lighter weight and faster cyclic rate of the 0.303 Browning. Paul Cornish of the Imperial War Museum has also suggested that overheating problems in earlier versions of the gun may have influenced the decision but these problems were overcome during the 1930s.⁵⁴ According to the notes of Air Marshall Sir Ralph Sorley, Controller of Research and Development, the 0.5 had developed little. He went on to say that:

‘although it possessed a better hitting power, the rate of fire was slow and it was a heavy item of installed weight and ammunition ... The 5” gun although attractive from the point of view of hitting power did not lend itself to the rapid build-up of lethal density within the limits of weight which could be allowed for such a fighter at such a time.’⁵⁵

What Sorley meant by ‘rapid build-up of lethal density’ was the ability to deliver maximum destruction within the two seconds it was thought possible for a pilot to keep an enemy within his sights. He went on to admit defensively that the whole question of an appropriate gun was ‘something of a nightmare during 1933-34’.⁵⁶

If Allen’s figures are accepted, then any idea of the Browning 0.303 outperforming the Colt 0.5 is ludicrous but the term ‘within the limits of weight’ is the crucial one. Significantly, the Spitfire prototype of 1933 bore little resemblance to that of 1940, and was built around the inadequate Goshawk II engine demanded by the Air Ministry in an earlier specification, giving a top speed of only around 238mph. The armament

⁵⁴ Deighton, *Fighter*, Table 2, p.106. This gives a gun weight of 22lbs for the Browning and advises each gun carried 300 rounds. Table does not include details of the Colt. Letter from the Imperial War Museum to A J Cumming dated 21 September 2000 quoting R Wallace Clarke, *British Aircraft Armament Vol2*.

⁵⁵ Note by the Controller of Research and Development’ (Air Marshal Sir R Sorley) in Appendix VI ‘Factors Involved in the Conception of the 8-Gun Fighter’, in Postan et al, *History of the Second World War: Design and Development of Weapons: Studies on Government and Industrial Organisation*, HMSO, 1964, pp.538-39.

⁵⁶ Postan, *Ibid*, pp.538-39.

specification was only four machine guns at this stage. This was also prior to the full development of 100-octane aviation fuel and the variable pitch propeller that gave a significant performance boost to the British fighters in time for the battle. Furthermore, the speed margin between fighters and bombers was much narrower in 1933.⁵⁷ Heavier guns would therefore slow a fighter down, and Wallace Clark indicates the Colt 0.50 M2 weighed 29 kg as opposed to 9.9 kg for a Browning MkII.⁵⁸ Assuming the Browning Mk VII was a similar weight to the MkII, Sorley's dilemma was genuine.

The impression from Sorley's notes is that the Air Ministry was still thinking largely in terms of fighter versus fighter WWI dogfights, where snap shots with short bursts at fragile fast manoeuvring targets were the norm. One does not have to be a pilot to realise that twin-engine bombers did not generally move in this way. Bombers needed to keep together in tight formations for mutual defence and sharp manoeuvring of a heavy bomb laden aircraft would jeopardise mutual safety by upsetting the defensive cross-fire. With fighters attacking from above, the problem related to fast overtaking speeds giving little time for aiming and firing. The problem with a two-second burst is that if eight guns deliver 2,400 rounds over fourteen seconds, calculations suggest no more than 343 rounds can be fired in that time. If one takes Dowding's standard (or guesstimate) of 300 hits against an un-armoured bomber to bring it down, then a very high standard of marksmanship would have been required. This needed improving as the Germans progressively adopted armour protection.

The Air Ministry's decision was correct at the time given that every air force in the world was predominately equipped with flimsy wood and fabric biplanes. Furthermore, the

⁵⁷ Postan, *Design and Development of Weapons*, p.103. Also see Deighton, *Fighter*, p.102. The gull-wing prototype flew in 1933, but the redesigned prototype with curved wings and Rolls Royce engine flew in 1936.

⁵⁸ R Wallace Clark, 'Main Aircraft Guns Used by the Major Powers in the Second World War', in P Jarrett (ed), *Aircraft of the Second World War*, Putnam Aeronautical Books, 1997, p.199.

designers of the Spitfire had difficulty fitting the Browning to this machine once the Air Ministry decided to increase the specification to eight guns in 1935. This meant the wing had to be completely re-designed as a result of the new armament specification. Therefore, if the new wing had been designed around the Colt, the distinctive thin elliptical wings would not have been developed with a likely adverse effect on aircraft performance. Had the decision been made to use Colts at any point after the elliptical wings had been produced, it would have involved fitting large 'blisters' to the wing, a modification inevitably affecting speed and manoeuvrability as happened when cannons were fitted. However, drastic modifications were much less likely for the Hurricane. As it transpired, the Spitfire was most effective in a fighter versus fighter role, where the advantages of hitting power were clearly less crucial given the relative fragility of fighters to bombers.

None of this is covered in Allen's critique lending substance to Mason's complaint about his 'bland ignorance of aircraft design'. Mason also stressed the need for economy linked to the availability of World War I surplus 0.303 ammunition, a point mentioned by Sorley, however, it seems doubtful if this was other than a subsidiary factor.⁵⁹

By 1933 the Air Ministry might perhaps have anticipated that other powers would soon be following the British lead introducing sturdier metal monoplane fighters and bombers and keeping at least the substitution of the Hurricane's armament under review. This would doubtless have engendered the development of the tactics referred to by the Staff College letter at an earlier stage of the battle. Armoured protection of vital parts in some aircraft was even carried out in World War I. Quoting a letter from the Imperial War Museum, Allen attributed the original introduction of the 0.5 to the death in air combat of

⁵⁹ F K Mason, *RUSI*, p.85. Also see Sorley, Appendix VI in Postan, *Design and Development of Weapons*, p.538.

former President Theodore Roosevelt's son, Quentin. This was partly due to the inability of his twin 0.303 machine guns to penetrate the armour of his adversary.⁶⁰

Postan et al. stated that it was only in 1935 when armour was becoming more widely adopted, and fighter designs sufficiently robust to take the recoil of larger guns that attention began to be paid to developing these weapons. The Air Staff took a strong pro-cannon line, and one can only conclude this prevented any further serious consideration being given to installing the 0.5 Colt until the war began.⁶¹ This does not necessarily mean the Air Staff lacked reservations about cannon installations in fighter wings. It has been suggested those reservations were overridden by Lord Beaverbrook, Minister for Aircraft Production in 1940 'as completely as only he knew how'.⁶² It would still be wrong to blame Beaverbrook for not adopting the Colt. By the time Beaverbrook came on to the scene, it was too late. The emphasis needed to be on aircraft numbers now the battle was about to begin.

The correspondence between Dowding and Tizard in November 1939 throws some light on this matter as it considered the possibility of higher calibre guns offsetting the armour plating defence capability of the German planes. Tizard opened with comment on recent fighter combats which he did not think very satisfactory. He raised the possibility of pilots standing off 'too much' and firing at too long a range. Tizard suggested that ranges of up to 400 yards and down to 100 yards would result in the 'bomber ...dead every time'. He had also been looking at the problem of penetrating armour plate and mentioned an 'American Browning of (? .55 inch)' which one assumes to be the Colt 0.5 referred to by Allen. Tizard was told the muzzle velocity of the larger weapon was 2,800, and plenty were available. He thought very high muzzle velocity (presumably over 2,800) was counter

⁶⁰ Letter from Imperial War Museum as quoted in Allen, *Who Won the Battle of Britain?* pp.78-9.

⁶¹ Postan, *Design and Development of Weapons*, p.108.

⁶² Postan, *Ibid*, p.109.

productive in that the bullet tended to break up on impact. Although there was a difference of opinion about their use in fighters, 'everyone' was keen on developing it. He ended by asking Dowding if he was prepared to accept this gun.⁶³

In paragraph 12 of his reply, Dowding claimed that a 0.5 Vickers had been tried but tests proved it could not penetrate aircraft armour plate. Dowding's information in paragraph 13, which he admitted was 'probably quite unreliable' is that the muzzle velocity of both the Vickers and the 'Browning' 0.50 is 2,450 ft per second. While some clash of evidence can be seen on the effectiveness of a 0.5 calibre weapon perhaps explainable by types of ammunition used, it is interesting to observe Dowding's characteristic rant in paragraph 14 about "'Scientists'," "Experts", and "Practical men" all arguing about a point which can quite easily be settled by practical experiment'.

Dowding's contention was that the ordnance institutions at Woolwich and Farnborough preferred to defend their positions 'at all costs' rather than resort to a reasonable method of resolving differences.⁶⁴ Even allowing for the streak of paranoia in Dowding's personality it is an interesting commentary on the difficulties of trying to push through technological improvements. Such entrenched stances can be found in most organisations to some extent, but it does tend to support the tone of Allen's writing. In other words it strongly suggests that the inherent dissention amongst the technical advisors may have influenced the quality of the original decision to install the Browning. Yet later on Tizard was claiming 'everyone' was for developing the 0.5 and there were plenty available. Whether 'everyone' referred to members of the Air Defence Committee or the technicians at Farnborough and Woolwich is unclear. Sadly, for the fighter pilots of the RAF this last chance to partially

⁶³ IWM HTT226 Letter from Tizard to Dowding, 24 November, 1939. Though a civilian scientist in WWI, Tizard had learned to fly at his own expense. On one occasion, while flying a Sopwith Camel he unsuccessfully attacked a German Gotha bomber, breaking off when his guns jammed. Wallace Clark in Jarrett, *Aircraft in the Second World War*, p.199 indicated the Browning 0.50 and Colt Browning M2 were separate guns but with almost identical specifications.

⁶⁴ HTT226 Dowding to Tizard, dated 25 November 1939

re-equip with a dramatically more effective weapon in time for the Battle of Britain was lost.

As can be seen from Allen's table, the muzzle velocity quoted by him is 2,900 ft per second, which is reasonably close to Tizard's figure. It must be stated here that Allen's figures are purely theoretical, though he does observe that the Colt 0.5 x 6 was the weapon used by the USAF in the formidable Mustang fighter, generally attributed with achieving air supremacy against the *Luftwaffe* over Germany in 1944.⁶⁵ Dowding on the other hand seems to have based his conclusions on memories of actual practical tests (presumably the trials held in 1933) but it must be remembered he did not have complete faith in his source. It seems that Tizard had correctly identified this problem prior to the Battle of Britain and saw the Colt as an obvious remedy. Sadly, neither man was completely sure of their facts and one can only conclude that if they had looked into this matter more thoroughly, something much better than the unsatisfactory Hispano 20 mm cannon that saw experimental service in small numbers during the latter stages of the battle may have been found. So unsatisfactory was the Hispano at this time in terms of reliability that RAF pilots using these asked to revert to the Browning. Ironically the Hispano was one of the weapons rejected in 1933 because of insecure mountings. Some belated acknowledgment was given to the 0.5 calibre genre in Dowding's post-battle despatch when he mentioned arrangements for it to be fitted in the Spitfire universal wing 'if the production of cannons is insufficient for requirements' but whether this referred to 'requirements' in terms of quantity or quality can only be guessed at.⁶⁶ The tone of the correspondence suggests that Dowding preferred cannon, rather than further machine gun development and tests at Farnborough during 1940 seemingly confirmed that cannons would be better. Whether the

⁶⁵ Allen, *Who Won the Battle of Britain?* p.79.

⁶⁶ TNA AIR 20/5202 Dowding's Despatch, Paragraphs 14-19 (iii).

Colt 0.5 was tested alongside the cannon in this later round of testing is unknown but in any case it was probably too late to help the fighter pilot in the Battle of Britain.⁶⁷

Dowding had considered the possibility of enemy aircraft adopting armour protection by 1938 at least. He advised Air Vice Marshal Sholto-Douglas that the eight-gun fighter was 'at present a very effective and deadly weapon' but recognised that protective devices might 'make it comparatively ineffective in the future'. He agreed with Sholto-Douglas that a new type of air cannon was needed for the future but gloomily (or sarcastically) expressed an opinion that the Woolwich Arsenal would probably take seven years to develop it. In his view, the situation was not helped by a 'fixed-idea' in the Air Ministry that such a weapon would entail the concurrent development of sophisticated long-range sighting apparatus, something he felt would unnecessarily delay the implementation of the weaponry.⁶⁸ The Air Ministry, if this were really their attitude, would not have been completely wrong about the need for a sophisticated sight. Those used by pilots in the battle were essentially the same primitive ring design as in WWI and this was probably a factor in their poor gunnery performance. In the very long term, cannons would indeed largely supersede machine guns but it was by no means obvious at this stage they would bearing in mind the lesser number of strikes obtainable from cannon shells because of their slower rate of fire.

While it was reasonable to think in terms of the cannon as a long-term solution at this stage, indications are that Dowding would have done better to adopt the Colts as a medium term solution to the problem of piercing German armour. As may be gathered from the tone of his correspondence, Dowding seemed to have had difficulty dealing with 'experts' in the ordnance field.

⁶⁷ L Deighton, *Fighter*, p.107.

⁶⁸ IWM HTT113 Letter from Dowding to Air Vice Marshal W S Sholto-Douglas, dated 6 July 1938.

Nevertheless, a caveat has to be added to this. It has been claimed the system of operational requirements was not one in which the Commander-in Chief's views could always be represented to the technical departments of the Air Ministry through a single channel. Postan et al. mentions 'the absence of anything that might be described as a strictly concerted progression of ideas'. Technical demands from the squadrons to the Directorate of Operational Requirements through to the Ministry of Aircraft Production were made in a multiplicity of ways, although specific examples of how this might have been done are not given. Senior staff such as the Director of Operational Requirements (DOR) had enormous scope for making and interpreting requirements and staff would often act on their own initiative. In such a chaotic environment and lacking a proper system of evaluating requirements, there was no guarantee that Dowding's opinions on fighter development and armament would receive prominence. The 'uncertainties and vacillations which occasionally marked the Air Staff policy' go some way to explain the impatient and intemperate language adopted by Dowding in his correspondence.⁶⁹

The Importance of Close Range

Because the Spitfire's wings were thin, its eight machine guns were spread out along the wings. This made a reasonable concentration of fire impossible without harmonising them to converge at a fixed point ahead of the aircraft. Deighton advises that during the battle the Spitfire's Brownings were set to converge 650 yards ahead, though other sources state this was 400 yards.⁷⁰ Perhaps as a result of Dowding's long range firing policy, the official distance had been lengthened but this is little more than speculation. With regard to the alleged 650 yards harmonisation, Deighton quoted one

⁶⁹ Postan, *Design and Development of Weapons*, p.53.

⁷⁰ Sorley, App VI in Postan, *Design and Development of Weapons*, p.540. Also see J D Scott, *Vickers: A History*, George Weidenfeld and Nicolson Ltd., 1962, p.204. This claims Sorley conducted experiments in the 1930s confirming the optimum range for eight Brownings was 400 yards.

anonymous pilot from 54 Squadron who claimed, 'all this guarantees is a few hits by the indifferent shot; the good shot on the other hand is penalised'.

Unfortunately, the number of 'indifferent' shots was probably quite high and it has already been shown that the OTU's were desperately short of resources. Gunnery instructor George Unwin believed many fighter pilots during the early part of the war lacked the ability to calculate the distance to the target. His first flight commander taught him that if a 'Wellington' size bomber exactly filled the ring sight, the range was 400 yards, but if it was just outside the twin engines, it had closed to 200 yards. Although this was both simple and effective, Unwin believed the method was never applied universally throughout the service.⁷¹

Allen claimed that it was only as a result of camera gun analysis over Dieppe in 1942 that the RAF realised their pilots could not shoot. No confirmation of this could be found at The National Archives. However Dowding's successor, Air Marshal Sholto Douglas was recorded in late 1941 as being 'very concerned about the standard of air gunnery in Squadrons and anxious that more gunnery training should be given to pilots prior to joining their squadrons'. Stating it was 'imperative' standards be improved he noted that pilots at OTUs fired their guns only two or three times per week. Furthermore there was a serious shortage of towing aircraft and this 'would exist in the near future'. If this was the situation at the end of 1941, when the OTUs had the opportunity to re-organise and 'get their act together' the standard of 1940 must have been very low and the leadership slow to realise the magnitude of the problem.⁷²

⁷¹ Bishop, *Fighter Boys*, p.92.

⁷² TNA AIR 16/636 'Notes on the Conference Held at Headquarters, Fighter Command on 5 December 1941 to Discuss Raising the Standard of Training at Fighter Command OTUs.'

Dowding's correspondence with Tizard suggests that exceptionally brave pilots who closed in to near point blank range either to increase penetration or to overcome the limitations of his gunnery training would have been exposed to return fire from the bomber's gunners for no commensurate advantage if his machine had the official harmonisation. Dowding told Tizard in 1939 'that my policy of long-range firing has nothing to do with the safety of the fighter pilot, who is (at the moment) very safe from return fire'.⁷³ Some pilots ignored the 'regulation on 650 yard harmonisation' and the South African ace 'Sailor' Malan had his armaments officer re-harmonise them at 250 yards.⁷⁴ Indeed, Hough and Richards claim that it was as a result of the air battles over Dunkirk shortly before the battle that 'more than one squadron learnt to harmonise its guns at 250 yards instead of 400 yards and to forget about text book tactics'.⁷⁵ How many squadrons actually did so is not known, yet if Allen is to be believed - and he should have known - no general edict to do this was issued. Patrick Bishop has also commented on the apparent 'lack of effort' in promulgating the lessons learned at the front line to the fresh squadrons waiting their turn to move into the major combat zones.⁷⁶

Although no specific instruction on this subject could be located in the Fighter Command Tactical Memoranda file at The National Archives, it is clear that machinery for issuing these from a central point did not exist until June, albeit a little late in the day. Concern was registered at Fighter Command HQ on the growing amount of correspondence on the subject of tactics (which would include gunnery) 'which if allowed to accumulate, may well defeat its own object.' It also noted the tendency of Groups to circulate their own notes and that 'War Tactics' were considering issuing their own notes. In future, it was considered that correspondence would be co-ordinated at the Air Fighting

⁷³ HTT226 Dowding to Tizard, 25 November 1939.

⁷⁴ Deighton, *Fighter*, pp.172-73.

⁷⁵ R Hough and D Richards, *The Battle of Britain: The Jubilee History*, Hodder and Stoughton, 1989, p.95.

⁷⁶ Bishop, *Fighter Boys*, p.305.

Development Unit, bringing together both Fighter Command and Air Ministry War Tactics.⁷⁷

While it was desirable not to submerge pilots in mountains of potentially conflicting papers from different sources, it seems strange that the need for lessons learned the hard way should not have been consolidated in a single set of technical memoranda long before this. Arguably, the relative inaction of the ‘phoney war’ may only have provided limited opportunity to test out the gunnery issues with which this section deals, but the well-known failure of fighter squadrons to adopt the more effective flying formations used by the *Luftwaffe* in the opening stages of the battle, despite their earlier use in the Spanish Civil War and the Polish Campaign, suggest a general unwillingness to temper theory with practice and tends to support the lack of a concerted progression of ideas mentioned earlier. Furthermore, while the file indicates that an attempt was finally made to disseminate important technical information, it does not confirm how successful these arrangements actually were in practice. A failure to disseminate ‘best-practice’ is surely a major flaw in any organisation.

Perhaps no general order on closer harmonisation was issued because Dowding did not agree with this tinkering. A memorandum circulated to the Group Commands in October 1939 attempted to draw several conclusions from the handful of engagements with German aircraft over Rosyth and the North Sea. The first conclusion Dowding drew was ‘there is nothing much wrong with the harmonisation of the guns of an 8-gun Fighter at the ranges for which this harmonisation has been designed’. Without defining ‘close-range firing’ he wished to discourage the practice, as the cones would not have chance to open out.

⁷⁷ TNA AIR 2/3146 From Fighter Command HQ to Air Ministry, ‘Fighter Tactics’, 30 June 1940.

The tone is complacent and dubiously suggests the German Air Force had a general fear of the eight-gun fighter. But bearing in mind the target audience, it must be supposed that Dowding was trying to build the confidence of his men in their machines.⁷⁸ It must be conceded that Dowding acknowledged the conclusions were 'tentative' at this stage. Even so, it does suggest that Dowding was slow to acknowledge the problem in assessing an optimum range for gun harmonisation and was awry in his estimates.

A memorandum from the Air Ministry's Air Tactics Directorate supported Dowding's views on harmonisation but cavilled over his discouragement of close range firing on the stated grounds of the cones failure to open out. They considered this point to be fallacious and in practice 'a minor point' as a 'well-handled' fighter should have inflicted sufficient damage before closing to such short ranges. However it must be emphasised that the Air Tactics view was based on an assumption that Dowding meant ranges of less than 100 yards. It also noted that a 'fighter pilot closing on an enemy bomber whilst firing is unlikely to break away until he is forced to do so to avoid collision'.⁷⁹ It is obvious that a pilot's decision as to when to open and close firing would have largely depended on his closing speed, which in turn would have been governed by the direction of approach he would have been forced to make.

Although this correspondence seems to lump the Spitfire and Hurricane together as if they had the same characteristics, it should be noted that differences in wing design meant differing configurations for the installation of their Brownings. As described, the Spitfire's widely spaced guns converged in a single cone of fire. The Hurricane on the other hand had a much thicker wing enabling a closely grouped battery of four guns to deliver a 'shotgun' effect, which with the other battery fired two cones of shot ahead of the

⁷⁸ IWM HTT226 Memorandum from Dowding to Group AOC, 25 October 1939, 'Lessons From the First Air Combats in the Fighter Command'.

⁷⁹ TNA AIR 2/3146 Minute from DSD to ACAS, dated 7 Nov.39.

aircraft. This has been universally acknowledged as a more effective configuration against more robust bomber types. Fortunately, there were more Hurricanes than Spitfires at this time although even the Hurricane was outranged by the Messerschmitt Me.109, which could open up with cannon fire well beyond the range of the 0.303.⁸⁰ The German fighter could also deliver eighteen pounds of firepower as opposed to its British contemporaries equivalent of thirteen pounds from a three second burst.⁸¹ From this, one can only draw the conclusion that Dowding's policy of long-range firing against bombers was one likely to have damaged the effectiveness of the defence.

Unfortunately, 'getting in close' was not an easy thing to accomplish, especially if circumstances forced the pilot to approach from the rear of his target where the bomber's slipstream could easily upturn a small pursuing aircraft. Furthermore, the German air gunners had often been trained to a high standard, a factor helping to offset their inferiority to the firepower of an eight-gun fighter. It would therefore take 'nerve' and flying ability to accomplish close shooting. Hough and Richards referred to a 1988 survey in which 100 Battle of Britain veterans gave opinions on the quality of German air gunners. Forty considered it excellent or good, with thirty-two rating it average and thirty classing it poor. Pilot Officer Donald Stones DFC thought it varied greatly according to the individual unit. He gave an example of his squadron's 'badly thought-out and executed attack' on 29 September against nine Heinkel He.III bombers of a specialist unit, which led to the loss of three Hurricanes as a result of the bombers disciplined and concentrated cross-fire facilitated by the pilot's perfect formation flying.⁸²

Yet being prepared to get in close marked out the more successful pilots. The *MOD Narrative* also mentioned the success of pilots prepared to risk collision but also to avoid

⁸⁰ Hough & Richards, *The Battle of Britain*, p.206.

⁸¹ Deighton, *Fighter*, p.77.

⁸² Hough and Richards, *The Battle of Britain*, p.156.

the German gunners and rear armour protection by attacking formations head-on. Dowding did not approve of this either but doubtless out of desperation was forced to endorse the tactic by 25 August.⁸³ Even so, getting in close was no guarantee of success in all situations and head-on attacks were not the answer. Dowding's opposition was partly justified by Flt. Lt. Dr. Alfred Price's research indicating that fighter attacks never once succeeded in breaking up a high-flying German bombing formation. Aircraft would only leave formations and lag behind after suffering damage or mechanical failure which often meant being overcome by a swarm of British fighters. Therefore, for a bomber to leave a formation when under attack would have been 'foolhardy in the extreme'. Price blamed over-hyped accounts for establishing this myth.⁸⁴ But even if German formations were not broken up like this, firing at close ranges was still the best way of overcoming the shortcomings in the eight-gun fighter weapons system.

The Superiority of Foreign Pilots

Three 'foreign' units had entered the fray during July to offset the pilot shortage and both Allen and Deighton have remarked on the comparative success of foreign pilots serving in the RAF and trained in other air forces. With lower performance aircraft with less effective armament flown prior to RAF service, not only was it natural for them to fire from comparatively short ranges but in the case of Czechs and Poles, a burning hatred of the enemy made them relatively oblivious of risk. The main debate about using these personnel centred on the issue of either integrating them into British squadrons or forming the men into their own units. Once again, seemingly inappropriate consideration of the bomber situation was given, this time at the Expansion and Re-Equipment Policy

⁸³ TNA AIR 41/15 Signal C.82, Dowding – Group Commanders, *Narrative*, p.351.

⁸⁴ A Price, 'Myth and Legend', *Aeroplane Monthly*, Vol.25, No.10, Iss.294, October 1997, p.23.

Committee of 3 August 1940. If more Fighter Squadrons were formed, it would be seen as 'necessarily reducing our strength in bombers' unless pilot establishments to these units were reduced from twenty-five down to twenty-one or twenty-three. Fortunately, this consideration did not prevent the formation of three more Polish and one more Czech squadron.⁸⁵

Deighton warned not to draw too many conclusions from the apparent success of these foreign pilots bearing in mind the small sample presented. Considering what has already been said about the deficiency in RAF pilot training some tentative conclusions can be drawn. The highest scoring ace in the Battle of Britain was the Czech Sergeant-Pilot J Frantisek, DFM with 17 kills attributed. A Polish pilot Flying officer W Urbanowicz, DFC scored fourteen (some say fifteen). Allen argues that only seventeen pilots claimed more than ten aerial victories between 10 July and 31 October, the official Battle of Britain dates. Considering mid-European pilots made up only 184 out of 2749 participants, the comparative success of these foreign trained airmen illustrated the bankruptcy of RAF training methods and fighter tactics.⁸⁶ Of course, this is a small sample and Allen's source is necessarily unofficial, but it is generally accepted that mid-Europeans were effective pilots who tended to disregard personal safety and fired at point blank range. 310 (Czechoslovak) Squadron Commander Blackwood remarked:

'Then I saw how Czechoslovakian airman can fight. There was no need for commands by radio, they dashed at Germans without abashment. Excepting the fact that I have been shot down...I was absolutely content with the result of the first encounter.'⁸⁷

⁸⁵ TNA AIR 2/5196 Minute from DCAS to VCAS dated 29 July 1940 and Extract From the Minutes of the Meeting of the Expansion and Re-Equipment Policy Committee Held on 3 Aug.1940.

⁸⁶ Allen, *Who Won the Battle of Britain?* pp.191-95. Analysis based on unofficial score lists.

⁸⁷ Squadron Leader Blackwood, 'No.310 (Czechoslovak) Squadron', [www://.geocities.com/Pentagon/4143/310.html](http://www.geocities.com/Pentagon/4143/310.html), viewed 10 Jan.2001.

The Polish air historian, Zamoyski, has claimed that during the course of the war, statistics showed that Polish pilots destroyed 10.5 aircraft for each death as opposed to 4.9 kills per death for the RAF as a whole, thus suggesting they were not unduly reckless. Polish pilots represented 5% of the RAF's participants but still accounted for 7.5% of German aircraft destroyed (including those downed by AA and balloons) During the Battle of Britain, 303 Squadron had shot down three times the average RAF score but with only one third of the casualty rate.⁸⁸ His sources have not been specifically referenced. However, there appears no alternative evidence in publication to disprove these assertions.

The seventeen top scorers were responsible for 221 aircraft destroyed, out of 1200 *Luftwaffe* aircraft destroyed or damaged (less 15% repairable) between 10 July and 15 September, meaning that this minority destroyed around a quarter of the overall total. Leaving aside the method of 'half-scoring', whereby any number of aircraft could attack an enemy bomber and each be credited with a half, a mere 15% of pilots could claim a 'whole' aircraft of which based on random sampling only 12% scored two and 7% over four whole German aircraft.⁸⁹ The problems with this analysis are the unavoidably poor quality evidence, the small sampling and absence of referencing. The case remains technically unproved. However, it is an indication that the average RAF pilot was somewhat less effective than is generally imagined. Even the relatively uncritical Patrick Bishop conceded that 'most pilots never shot anything down' with less than 900 of some 2,330 pilots of Fighter Command claiming (though not necessarily achieving) victories between July and November.⁹⁰ Unfortunately, neither Allen nor Bishop have revealed their sources on this point. They do not quite tally with each other but if one looks at the overall statistics for the battle, it becomes clear that through no fault of his own, the average RAF

⁸⁸ A Zamoyski, *The Forgotten Few: The Polish Air Force in the Second World War*, John Murray, 1995, p.91.

⁸⁹ Allen, *Who Won the Battle of Britain?* pp.194-95.

⁹⁰ Bishop, *Fighter Boys*, p.322.

fighter pilot was not very effective. Indeed, when one considers the difficulties described in this chapter, it would be surprising if he were.

As John Terraine points out, source statistics for aircraft destroyed disagree (see Appendix 5) and if estimated losses of Bomber and Coastal Commands are added (according to Terraine, they never are) the aircraft exchange rate is approximately three to two in favour of the RAF instead of the two to one more usually quoted. The casualty ratio favouring the RAF also plummets from nearly five to one to less than two to one if all commands are vectored into the calculation. Jenkins's view that the British bomber force was 'not part of the battle as such' ought to be disregarded if one accepts (as most British authors do) that the bombing of Berlin caused a crucial change of focus from the airfields to London.⁹¹ Whichever view one takes, the rate of attrition was disappointing for a defending force operating with all the advantages of fighting over home territory. Bearing in mind some of these German aircraft must have been destroyed by the AA ground defence, including guns and balloons, the RAF pilots and aircrew probably did not shoot down many more aircraft than the *Luftwaffe* inflicted on the RAF.

Who Won the Battle of Britain?

In many respects, Allen's version of the battle has not been fully taken on board by other historians and remains starkly at odds with populist accounts. Some historians have moved towards Allen's version of events though they baulk at using him as a source. Sebastian Cox, head of the MOD's Air Historical Branch (RAF) has described Fighter Command as being 'on the ropes' during this period but neither Cox nor any other modern

⁹¹ R Jenkins, *Churchill*, Pan Books, 2002 edn, p.632. However, *Luftwaffe* General Deichmann was 'adamant' that this decision was based mainly on military considerations but with the political implication of preparing Britain for peace negotiations. See TNA AIR 2/781 as quoted by J Ray, *The Battle of Britain: New Perspectives: Behind the Scenes in the Great Air War*, Arms & Armour Press, 1994, pp.92-3.

day writer has gone as far as claiming that Fighter Command's 11 Group was a 'defeated force' by September 1940.

The most important of Allen's assertions is that the *Luftwaffe* did achieve the necessary degree of air superiority for *Operation Sealion* and that the RAF was a far less efficient organisation than generally supposed. Insofar as the air dimension was operationally relevant it has been seen how ineffective Fighter Command was during September and beyond. As described in a previous chapter, it is well known that prior to 15 September, *Luftwaffe* intelligence was telling Goering and Hitler that Fighter Command had been virtually destroyed.

The crisis in Fighter Command during the critical period of 24 August to 6 September was extreme but the re-emergence in strength of the RAF over London on 15 September is usually taken as evidence of recovery. As described previously, the result of the air fights this day provided the excuse needed by German military and political figures to postpone the invasion without anyone having to suffer the consequences of admitting nerve failure. Superficially it would seem that Fighter Command did exceptionally well shooting down fifty six in exchange for twenty seven aircraft (although the newspapers inflated the former figure outrageously) but what impressed itself particularly on the German airman was the number of RAF fighters aloft. But it might have been the case that most fighting was being done by experienced veterans while many relatively untrained, inexperienced pilots or even non-operational pilots' made a show of strength on the periphery of the combat. Craig and Clayton describe Hurricanes and Spitfires nearly colliding with each other, with some flying through friendly AA fire in 'eagerness to get at their prey',⁹² which might alternatively be seen as evidence of poor pilot skills. Whilst Bishop has admitted to the relative ineffectiveness of most pilots in combat terms, he has

⁹² P Craig & T Clayton, 'Bravery in the Blitz: Our Finest Hour', *The Daily Mail Weekend*, 28 Nov.1999, p.18.

understandably preferred to stress the ‘simple presence of a Hurricane or Spitfire’ and the ‘demoralizing effect on the enemy’, and the ‘courage that was needed to simply maintain yourself in the air’.⁹³ This is true enough but maintaining an impression of strength, however hard, does not compare with the actuality of being strong. *Luftwaffe* intelligence may have been awry in the overall number of RAF fighters remaining but in terms of the only ones that really counted, i.e. those flown by thoroughly trained and experienced pilots who knew how to shoot, they may not have been so far out in stating the RAF could not muster more than around 100 fighters in any operation.

Adolf Galland commanding *Jagdgeschwader 26* was disparaging about the effectiveness of *Luftwaffe* Intelligence on this point but his own perception of the strength of the opposition was also flawed. In 1945, the Senior Narrator, Air Historical Branch queried Galland’s assertion that ‘anything from two hundred to three hundred [British fighters] might be found. The Narrator claimed instead that even with the squadrons that engaged from 12 Group, there were rarely more than three hundred available fighters in the whole south-east and ‘it would be surprising if Galland ever saw all of them in the air at once’.⁹⁴

The air battles of 15 September would also herald a further demonstration of Fighter Command impotence. The subsequent re-evaluation of tactics forced on the *Luftwaffe* regained the initiative for Germany and bombing by night continued until Hitler began his assault on the Soviet Union. For the rest of 1940, thousands of tons of bombs fell on British cities with Fighter Command unable to prevent it and the balance of modern writing is that the failure to make an adequate response was a direct cause for the dismissal of its two most prominent leaders. Later on, it proved convenient for Dowding and others to differentiate between the Battle of Britain – otherwise known as the air battle that

⁹³ Bishop. *Fighter Boys*, p.322.

⁹⁴ TNA AIR 41/16 Appendix 37 ‘German Views on the Battle of Britain’, *Narrative* p.4.

prevented invasion – and the night blitz – the campaign to bomb Britain into a negotiated peace (or surrender as most commentators prefer to view it). To ensure this was understood he told Liddell Hart, arguably the leading military historian of his day, that the Battle of Britain was a day fight to gain command of the air, while the night bombing was a ‘sideline with an entirely different object’.⁹⁵ The second stage was technically a failure for the Germans in that it did not secure their overriding political objective, but their failure had nothing to do with Fighter Command.

If any individual RAF commander could claim to be the victor of the Battle of Britain it was surely Keith Park, Officer Commanding 11 Group. Yet even he was disappointed by the performance of his units at this climatic moment. Writing on the events of 15 September 1940 he stated he ‘was far from impressed with the performance of 11 Group’. He reasoned that with 1,600 potential targets, and 300 defending fighters in the air, his pilots should have shot down many more than fifty-six bearing in mind the defenders advantages of fighting over home territory and being close to bases.⁹⁶ No doubt if the Hurricanes had been armed with the Colt 0.5 this would have been achieved despite the pilot limitations. Needless to say, this opinion of Park’s was unpopular with the pilots, yet 11 Group ‘failed’ largely because the damage inflicted on Fighter Command during the earlier period had drained too many experienced pilots away. Even Dowding, who wished to emphasise the way his organisation had stood up to the strain contradicted the assertion made by the authors of the best-selling official HMSO pamphlet *The Battle of Britain* that ‘the fighter squadrons of the Royal Air Force ... were indeed stronger at the end of the battle than at the beginning’. Dowding pointed out that whatever the paper return showed,

⁹⁵ LH 11/1943/27 Dowding to Liddell Hart, 9 May 1943.

⁹⁶ Air Marshal Sir Keith Park’s statement on 16 September 1940 at Fighter Command HQ as quoted by the Battle of Britain Historical Society, www.battleofbritain.net, viewed 3 October 2005.

the situation towards the end was extremely critical and most squadrons were 'fit only for operations against unescorted bombers. The remainder were battling against heavy odds'.⁹⁷

At this point, Dowding might also have mentioned the damage incurred to Fighter Command's supporting infrastructure during this period. The system had been heavily damaged, though not put out of action. Many of Fighter Command's airfields had been heavily bombed and some were vital Sector Stations meaning vital communications centres were no longer functioning properly. Park wrote to Dowding on 22 September 1940. His views expressed below have the virtue of raw immediacy being written within a fortnight of the 'critical period' coming to an end:

'Contrary to general belief and official reports, the enemy's bombing attacks by day did extensive damage to five of our forward aerodromes, and also to six of our seven Sector stations. The damage to forward aerodromes was so severe that Manston and Lympne were on several occasions quite unfit for operating fighters.'⁹⁸

For some unknown reason, the buildings containing the technical equipment and personnel were in flimsy surface constructions rather than in underground installations where logically they ought to have been placed. Worse perhaps, no real effort had been made to protect their vulnerable power and communications cables. Consequently, Kenley and Biggin Hill were transferred to emergency facilities that were far less well equipped. Park remarked that the 'Emergency Operations Rooms were not only too small to house the essential personnel' but lacked enough GPO landlines to 'enable normal operations of three squadrons per Sector'.⁹⁹ Only the respite offered by the *Luftwaffe* in switching to other targets enabled a complete reorganisation of the Station organisation.¹⁰⁰

⁹⁷ TNA PREM 4/3/9 & AIR 20/502 Paragraph 106, 'Dowding's Despatch on the Battle of Britain'.

⁹⁸ TNA AIR 2/7355 Park to Dowding 'German Air Attacks on England -6 Aug - 10 Sept.' Para 36.

⁹⁹ *Ibid*, Para 38.

¹⁰⁰ *Ibid*, Para 39.

The Sector Stations were the final point in the command system, containing operations rooms fed by data from Group level. As Cox pointed out, if the Sector Operations Room was a 'smoking ruin' or the telephone line was bombed, then pilots at the dispersal point could not be scrambled to meet the incoming raids. Unsurprisingly, Park wrote that the damage to the command and control infrastructure between 28 August and 5 September was to seriously affect the tactical handling of the squadrons.¹⁰¹ All of these problems were 'seriously felt for about a week in the handling of squadrons by day to meet the enemy's massed attacks'.¹⁰² Experienced flight leaders were losing confidence and other problems would be seriously felt for some time to come. The level of operational pilots in 11 Group squadrons had not improved by early October and was only slightly better by the end of December.¹⁰³ The ability of pilots to shoot accurately would not improve until 1942, a damning indictment of any training organisation. Although there were days when the *Luftwaffe* sustained heavy losses, an admittedly simplistic comparison of losses shows the battle of attrition did not favour the RAF to any great extent. Shortly after the main day fighting had ended, Park and Dowding were sacked, hardly representing recognition of a job well done.

For several reasons, the *Luftwaffe* did not lose the air battles even if they did not achieve the overriding objective of forcing Britain into negotiations. Firstly, the *Luftwaffe* had seized the initiative from Fighter Command from 24 August and demonstrated their air superiority by day until approximately the middle of September. Secondly, having realised that air superiority alone could not ensure the success of *Operation Sealion*, Hitler and Goering finally geared their strategy towards applying political pressure by targeting civilians. Even then, the *Luftwaffe* showed its ability to bomb targets at night with minimal Fighter Command interference for the rest of 1940. Thirdly, if subsequent campaigns by

¹⁰¹ *Ibid*, Para 41.

¹⁰² *Ibid*, Para 41.

¹⁰³ TNA AIR 2/7396 Sholto Douglas to Air Ministry 'Pilot Strength in Fighter Command', 7 Jan. 1941.

several air forces to break civilian morale in later years with heavier bomb loads and more sophisticated technology have usually failed, then it is hard to blame the supposed shortcomings of the *Luftwaffe* for the failure to force a political solution in favour of Germany. As failure or victory can only be tenuously linked to Fighter Command's strenuous but disappointing exertions, it is the *Luftwaffe* that emerges as the most effective organisation and in this sense at least - the victor. A fuller appreciation of Fighter Command's leadership and 'command and control' follows in the next chapter.

Chapter 5

Dowding as Tactical Genius

‘Where would we have been if Stuffy had lost the battle?’¹

(Squadron Leader ‘Ginger’ Lacey)

‘Dowding should go.’² (Air Marshal Sir John Salmond to Lord Trenchard, 25 Sept. 1940)

The previous chapter has challenged perceptions of Fighter Command’s effectiveness and significance during 1940. No evaluation of this organisation can be complete without also considering whether the reputation of its leader and his command and control system has been exaggerated, and if so, why? This chapter will try to assess Dowding’s effectiveness both before and during the battle in order to ascertain whether he was really the ‘tactical genius’ that legend allows.

Hugh Caswell Tremenheere Dowding (1st Baron Dowding; 1882-1970) has attracted considerable sympathy from almost all of the pilots’ memoirs published since the battle. Robert Wright’s biography published with Dowding’s cooperation in 1969, effectively broke the C-in-C’s silence on the circumstances of his summary dismissal and established the legend that it was the result of a dastardly plot by ‘big-wing’ proponents Trafford Leigh-Mallory and W Sholto-Douglas. A J P Taylor further supported this in a letter to *The Times* implying that the politicians had let the C-in-C down.³ This period also

¹ R Wright, *Dowding and the Battle of Britain*, MacDonald, p.280. ‘Stuffy’ was Dowding’s nickname on account of his dour personality.

² Salmond Papers, B2638 as quoted by J Ray, *The Battle of Britain: New Perspectives*, Arms & Armour Press, 1944, p.139.

³ A J P Taylor, ‘Letters to the Editor: The Dowding Dismissal: A Key Document Now Revealed’, *The Times*, 22 Jan.1970, p.11.

saw a sympathetic portrayal by Laurence Olivier in the feature film *Battle of Britain* that held itself up as an objective account of the operation, which like the earlier *The Longest Day* (covering D-Day, 1944) viewed events from both sides of the Channel.

Dowding's death in 1970 spawned at least one eulogistic newspaper article hinting at tactical dissension without allowing any flaws in his leadership and attributing the 'victory' in 'large part to Dowding's outstanding qualities as a commander'.⁴ Nevertheless, an article in *The Times* hinted at Dowding's difficult personality, noting that he was not an easy man.⁵ The favourable press created an atmosphere in which any criticism was likely to receive a hostile reception, as in fact happened when Allen released his book in 1974 only to be savaged by F W Mason in a defence journal.⁶ By 1988, sympathy for Dowding culminated in the unveiling of his statue in St Clement Danes by the Queen Mother. Writing for the *Daily Express* during the battle's sixtieth anniversary celebrations, Phil Craig wrote a sycophantic article praising the leadership of RAF Fighter Command's leadership to the point of hyperbole and claiming that the radar chain he helped to create 'worked as he dreamed it would'.⁷ This 'martyr' image was maintained in a recent television presentation to mark the sixty-fifth Battle of Britain Day in 2005.⁸

After briefly reviewing his pre-WWII career, the system of 'command and control' associated with him will be examined. The 'Dowding system' was largely based on a WWI model but with Radio Direction Finding (RDF) as the predominant eye. That RDF was recognised and nurtured by Dowding is not in dispute but it needs to be seen if such a complete reliance on this was justifiable. Dowding was criticised for not reforming the filtering aspect, yet the Air Staff felt unable to fire him until after the battle. The

⁴ LH 1/145, 'The Leader of the Few', *The Guardian*, 16 Feb.1970, p.65.

⁵ *The Times*, 16 February 1970, p.10, as quoted by Ray, *The Battle of Britain*, p.18.

⁶ F K Mason, 'Well who did? - and who didn't?' *RUSI Journal of the United Service Institute for Defence Studies*, Vol.119, No.4, Dec.1974, pp.84-5.

⁷ P Craig, 'The Tactical Genius Who Ensured So Much Was Owed To So Few By So Many', *Daily Express*, 14 August, 2000, pp.22-3.

⁸ 'Fighting the Blue', *UKTV History*, viewed 12 Sept.2005.

symptomatic extent of both Dowding's obstinacy and the Air Staff's forbearance will be shown. It is a truism that any organisation is only as good as its personnel and a scrutiny of internal Air Ministry correspondence will assess the standard of radar operators and mechanics and indicate whether Dowding was justified in relying on a largely reactive defence without using more varied and aggressive methods demanded by pilots such as Douglas Bader. A desperate attempt to change the psychology of the defence manifested itself in the muddled 'big-wing' concept, something requiring clarification in itself. The tactical dissension might further illuminate essential shortcomings in the C-in-C's leadership style, helping to explain the circumstances of his apparently shabby dismissal.

Dowding Before the Battle

Like many WWII officers in senior appointments, Dowding had served in WWI, first as a squadron commander, later in charge of a wing. After quarrelling with Sir Hugh Trenchard, head of the Royal Flying Corps over unduly forcing his pilots into offensive action, Dowding was posted to a training command.⁹ Trenchard was a difficult character and an unfortunate potential enemy bearing in mind his major influence on the development of British military aviation in the inter-war period. Fortunately, they reconciled in the 1920s but it was a sign of the poor relations Dowding would later have with key figures. In 1930 he became a member of the Air Council, serving as Air Member for Supply and Research. Later he became Air Member for Research and Development and along with the other members has to be viewed as jointly responsible for the successes and failures of technical development until he took over Fighter Command in 1936. His

⁹ 1st Viscount Hugh Trenchard 1873-1956. Known as 'Boom' because of an exceptionally loud voice and abrasive manner. Led the Royal Flying Corps as Major-General in WWI. Usually condemned for sending crews in death trap aircraft over enemy lines in the teeth of enemy air superiority for little operational gain during the *Fokker Scourge* of 1915-16. Largely credited with being an important influence on the merging of the Royal Flying Corps and the Royal Naval Air Service into the Royal Air Force in 1918. Chief of Air Staff 1919-1929 and Commissioner of the Metropolitan Police 1931-35, he was recognised as a forceful and effective advocate of strategic bombing and offensive action.

doctrine '*Fear of the Fighter*' would not endear him further to Lord Trenchard, whose bomber theories dominated Air Staff thinking until Sir Thomas Inskip, Minister for the Co-ordination of Defence forced a change of priority in the matter of increased fighter production during December 1937.

Although constrained by having to work within the framework laid down by the Air Staff, his personal responsibility for overseeing the technical development of aircraft and other equipment must have been considerable. It would be easy to follow Allen and criticise Dowding and the Air Council for the design 'turkeys' of the 1930s that failed to meet the demands of 1940. Aircraft such as the Hampden bomber and the Fairey Battle light bomber were disappointing in the event but Mason is correct to point out that development in Britain was comparable with most other countries at that time.¹⁰

Dowding's work bringing the eight-gun fighters into service is well known and doubtless as Wright suggests, it was his idea to invite tenders from the private sector to capitalize on the technical achievements arising from the British victory in the Schneider Trophy air races of 1931.¹¹ Even here it must be remembered that the Spitfire and Hurricane's birth owed more to the willingness of Messrs Vickers and Hawker to finance and develop their own designs rather than adhere to the official operational requirements of design specification F7/30. As Allen pointed out, the later specification F5/34 was written with these partly developed aircraft in mind, and theoretically the object of design specifications is for the users to dictate what the manufacturers will produce, not the other way around.¹² However, Allen made too much of this. By the time F5/34 was written, the

¹⁰ Mason, RUSI, p.85. Confirmation that Britain was developing more advanced types than France, Italy and Poland in Angelluci and Matricardi, *World Aircraft World War II*, pp.9-11, pp.183-85, p.243.

¹¹ Wright, *Dowding*, p.53.

¹² Allen, *Who Won the Battle of Britain?* pp.43-5 Also see J D Scott, *Vickers: A History*, Weidenfeld & Nicolson, 1962, pp.201-2. It is not unheard of for manufacturers to anticipate and influence design trends in this way. At the time of writing DML, based at Devonport gave publicity to one of their warship designs that will never be built because it does not adhere to MOD specifications. Even so, they must be hoping that the MOD will alter their future specifications to fit their design.

Air Ministry's representatives were working closely with the aircraft designers and Squadron Leader Sorley was the driving force behind the eight-gun concept. This does not quite explain why the Air Ministry did not lead the way towards fighter monoplane development more proactively, but it was a period of rapid technological change and it can be argued that a truly collaborative approach was now being taken.¹³

Command and Control

Zimmerman's study of RDF praises Dowding for supporting the Bawdsey scientists development of RDF especially after test failures during 1936/7 but not without admitting to some errors of judgment that 'pale in comparison to his central role in developing the Dowding system'.¹⁴ However, the so-called Dowding system was not entirely original, though the use of RDF for early warning was truly innovative.

An early warning system had been put in place during WWI because successful German raids on London in the summer of 1917 provoked widespread rioting leading to Lt General Jan Christian Smuts's examination of the air organization. This culminated in the appointment of Brig. Gen E B Ashmore who organised information gathering and dissemination through a central command structure bearing many resemblances to Dowding's system. Signals traffic was analysed for volume and content and a dedicated telephone communications system installed. Twenty-five regional sub-control rooms used large-scale maps with counters to represent aircraft. Plots would then be read to a 'teller' in the central control room in Whitehall. Within the central control room stood a large table

¹³ F Mason, *Battle over Britain*, McWhirter Twins, 1964, p.86.

¹⁴ D Zimmerman, *Britain's Shield: Radar and the Defeat of the Luftwaffe*, Sutton Publishing Ltd., 2001, p.226.

map, surrounded by plotters with headphones who moved around coloured counters. The activity could be viewed from a gallery behind the plotters. Having assessed the information a central control room could then pass it back to the sub-control rooms for action. A primitive form of radio- telephone (R/T) communication also linked the aircraft to ground control.

The system was never fully tested because the Germans decided it was more profitable to concentrate resources on tactical bombing in France. The information gathering was dependent on high - flying aircraft on standing patrols, lightships and ground observers, as there was no effective long- range early warning device.¹⁵ However, World War I bombers flew more slowly than their *Luftwaffe* equivalents over longer approaches meaning less warning time was then needed. Post war continuity was aided by Ashmore's membership of the *Romer Committee, 1924* resulting in the formation of Sir John Salmond's Air Defence of Great Britain (ADGB), responsible for all home air forces. ADGB took responsibility for homeland defence against air attack until the formation of Fighter Command and Bomber Command in 1936.¹⁶ The system Dowding helped create was ingenious but lacking from most accounts is the observation he was able to develop it from a partially tested earlier model.

The system used in 1940 was officially described in *Notes on the Air Defence of Great Britain* and included both the RDF system and the Royal Observer Corps (ROC). This undated document was sent to the Admiralty and appears to have been obtained as a result of Admiral Drax's complaint about the non-engagement of a German seaplane off Bawdsey described earlier. This suggests it was written either sometime before or during an early stage of the Battle of Britain. A chain of RDF Stations on (or near) the coast was directly connected by telephone landline to Filter Rooms in various geographical locations.

¹⁵ Zimmerman, *Ibid*, pp.1-10.

¹⁶ Zimmerman, *Ibid*, p.16.

Aircraft positions over the sea were to be plotted, their numbers and height estimated prior to passing this to the relevant Filter Room where it would be plotted on the Filter Room Table. The Filter Room staff would then have to differentiate between friendly, hostile and doubtful aircraft. With each aircraft formation marked according to these categories, the information would be disseminated via a multiphone to the Command Operations Room (Fighter Command HQ, Stanmore) and the Group Operations Room, together with the Sector Operations Room. The data would then be displayed on the Operations Rooms Tables at all of these establishments. Coastal Observer Corps Centres would also receive the information in order to track the course of the raid after it passed the coast. A web of Observer Corps posts situated approximately eight miles apart had telephone links to Observer Corps Intelligence Centres that would plot the aircraft on their own Centre Tables. These Intelligence Centres filtered out friendly aircraft and passed the data on to Command, Group and Sector Operations Rooms and plotted accordingly.

The Command Operations Room at Fighter Command HQ would, therefore, have an overall view of the nationwide situation. Air raid warnings were issued from here and liaison maintained with the Admiralty and Home Office. The position of convoys would also be plotted here with information from Naval Liaison Officers. The next tier was the Group Operations Room of which there were six. Here the Area Officer Commanding (AOC) controlled the squadrons under his command. The AOC would use his information to instruct Sector Commanders to intercept specific raids. Group Operations Rooms would also have Gun Liaison Officers to provide Gun Operations Rooms with intelligence on raids. At the Sector Operations Room, the Sector Commander would be responsible for working out how to accomplish the interception. The normal establishment of a Sector Station was three squadrons. Each sector had satellite airfields where aircraft could be dispersed if necessary.¹⁷

¹⁷ TNA ADM 199/64 'Notes on the Air Defence of Great Britain.'

Appendix B gave average times for information processing. From the moment an incoming raid from north eastern France was detected at the RDF station, it would take twenty seconds to plot on the Filter Room Table. Placing a directional arrow added a further five seconds. Plotting the transmitted data at the Operations Rooms would add a further thirty seconds, meaning it had had taken fifty-five seconds for the raid information to appear in visual form at the Operations Rooms. Observer Corps information took approximately one minute and forty-five seconds, presumably because it was more difficult for observers to identify friend from foe and the need for information to go through the Intelligence Centre before transmission to the Operations Rooms. A separate section shows times between the appearance of a plot on the Operations Table and the take-off of defending fighters. If the aircraft were in a state of 'readiness', it would be six and a half minutes, otherwise if only at 'available', this would be sixteen and a half minutes.¹⁸

Whether these official figures had been subjected to independent validation seems unlikely in view of the fact the system was relatively new. These would also have been average figures, as take-off time would also be limited by runway congestion with two squadrons sometimes sharing the same facilities. Needless to say, aircraft cannot always be at 'readiness' as refuelling and rearming is necessarily time consuming with some units achieving a faster turn-around than others. Furthermore, as these times were given before the fighting reached its peak, the figures were probably unrealistic because even ground personnel could become exhausted. These times would have been far less crucial had it been possible to use the system to its maximum potential. In other words the RDF system was designed to detect raids from a distance of 200 miles but with German aircraft now based just over the Channel, this distance was reduced.

¹⁸ TNA ADM 199/64 Appendix B to 'Notes on the Air Defence of Great Britain.'

The similarities of the systems used in both wars are obvious, from the use of Operations Rooms and plotters to coordinate aircraft and AA guns to the use of what would now be called 'No-Fly' zones in which any aircraft found were assumed to be hostile. Even the 1940 system had to place heavy reliance on primitive ground observation, as once German aircraft had crossed the coast they could no longer be tracked by RDF. In clear weather, the ROC were proficient at this but in bad weather with bombers concealed by cloud, they were virtually ineffective.

The Filtering Debate

The system had many problems, the most contentious being response times. For Allen, the Filter Room had 'some importance, but it is doubtful whether this exceeded its operational limitations ...The Filter Room, in fact, never functioned effectively in 1940'.¹⁹ Allen considered the filtering process meant a built-in delay of some four minutes within the system. He explained this by stating that the indicator plaque showing the raid on the Operations Table might be showing the enemy aircraft twenty miles from its precise location if the raid was moving at 300mph, meaning the intercepting pilot was often vectored on to the wrong position. His experience as a pilot and commander told him that the average pilot had difficulty spotting aircraft at even two miles, especially at high altitudes where the pilot is without a frame of reference. Furthermore, the information on altitude was frequently inaccurate. If it came from the ROC in cloudless conditions, it was reasonably accurate, but with the CH (Chain Home) it was much less reliable. Indeed, with reference to his flying logbook, Allen claimed that 'only on 50% of occasions did my

¹⁹ Allen, *Who Won the Battle of Britain?* p.58.

squadron achieve an interception after the order was given'.²⁰ What was needed and later adopted (but not in time for the battle) was a second chain of stations sited further inland to maintain the tracking of enemy incursions. Large raids would also flood the screens with light; meaning little useful information could be deduced about the incoming raid.

Allen suggested that Dowding might not have placed such reliance on the system if he had appreciated the magnitude of these problems beforehand. The only caveat that should be added to his comments is that during the large daylight battles, a typical raid would be moving at a speed of approximately 175 mph. What Allen referred to here must have been the later 'gadfly' fighter-bomber attack phase, designed to wear down the nerves of the civilian population during the day while much greater physical damage was done by the heavier bombers at nights. Even so, an error of some thirteen miles was still likely to result.

The *MOD Narrative* states that September–December 1939 was a quiet period for Fighter Command, but some fifty-one enemy aircraft had been engaged, with thirteen confirmed destroyed. It conceded that the filtering process was 'still giving much trouble' at this time which it implied was solved by using a radar officer as a dedicated Filtering Supervisor.²¹ This was an inadequate description of the problem.

Dowding's correspondence with the Air Ministry in January 1940 reveals the C-in-C's annoyance with what he clearly viewed as criticism from ill-informed individuals. The C-in-C objected to a note written by Assistant Chief of Air Staff, Air Marshal Joubert containing 'certain inaccuracies of fact' indicating to his mind that Joubert 'was

²⁰ Allen, *Ibid*, p.136.

²¹ TNA AIR 10/5556 *Narrative*, p.37.

imperfectly acquainted with all aspects of the problem'.²² Joubert had been appointed by Newall 'to investigate the RDF chain from the point of view of service control', no doubt because of Joubert's interest in the command system and his previous responsibilities under the old ADGB organisation.²³

The note was intended to form the basis of discussion on RDF policy in Newall's room on 12 January, though as Newall had no time to study it, the discussion was made on general lines. The meeting alleged that some interceptions had been missed following delays within the Filter Room. Dowding admitted there had been delays in order to avoid 'nugatory flights' but did not believe this had resulted in any missed interceptions. Newall accepted this but wanted delays reduced and an experiment conducted in devolving filtering from HQ to Group. Without saying why, Dowding opposed this as 'thoroughly unsound and would lead to a grave loss of efficiency'. He had already ordered adequate minor procedural adjustments, with the 'first arrow' (or plaque) immediately 'told' (relayed) to Groups and Sectors with an identity (friend or foe) allocated when established. The principle that Dowding was apparently seeking to establish was that his three and a half years of developing the system should make him the sole arbiter of organisational practicalities while the Air Staff should confine themselves to improving the equipment.²⁴ Unfortunately for Dowding the committee system of waging war was not one in which any single officer could be allowed the complete autonomy he clearly desired and as will be seen in a later chapter, Admiral Forbes also had his freedom of action severely circumscribed by staff officers and politicians.

²² Air Chief Marshal Sir Philip Joubert de la Ferté, KCB, CMG, DSO, Assistant Chief of Air Staff in 1940. Joubert was sufficiently closely associated with Churchill during 1940-3 to be asked to write a contribution on him for C Eade (ed), *Churchill by his Contemporaries*, The Reprint Society, 1955 edn.

²³ Zimmerman, *Britain's Shield*, p.178.

²⁴ TNA AIR 2/5056 Dowding to Air Ministry, 'RDF Policy', 17 Jan. 1940.

The note that Dowding referred to above could not be positively identified beyond all doubt at The National Archives, but a separate file contains an unsigned, undated note headed 'Present Filtering Organisation'. The statement 'in the few months of comparative inactivity which may yet remain to us' seems to place it in early 1940. It makes some criticism of the filtering system implying 'missed interceptions' and does not mention decentralisation as a remedy. The note claimed that since the Filter Room had been located at Fighter Command HQ there had been a decrease in filtering efficiency and an overlap of function between NCO Filterers and Filter-Officers resulting in duplicate requests for information. The author stressed this was 'not meant to be an indictment of anyone or any system' and that problems were to be expected as a result of the expansion of the RDF chain. However, despite the improvement in instrument quality the operators now have 'much less average ability than they formerly possessed'. The recommendations were that the Filter Room should drop the operational functions it had recently acquired and that 'it should be staffed with competent personnel'.²⁵ If this is the note referred to earlier by Dowding, then his minor procedural changes may have addressed the former, though nothing seems to have been done about the latter.

Another letter from Dowding dated 31 January 1940 seems to have been prompted by his earlier failure to explain why he opposed the decentralisation experiment. Paragraph 6 explained that sometimes Groups delegated tactical control to Sectors and a raid appearing on the Table over 100 miles away may make several alterations in course making it seem that several targets would be attacked. Each Sector might then scramble formations unnecessarily. Dowding also emphasised the cost of relocating new Filter Rooms in underground locations. All of this was reasonable, but however unenviable his predicament, paragraph 11 would almost certainly have angered the Air Staff:

²⁵ TNA AVIA 7/183 Note unsigned and undated headed 'Part I. Present Filtering Organisation.'

‘ My contention is that the Air Council have the right to tell me what to do but should not insist on telling me how to do it so long as I retain their confidence.’²⁶

This had the desired effect insofar as the Air Council backed down and did not raise the matter again for several months. They obviously had to ‘back him or sack him’ but inevitably the problem re-emerged during the course of the battle. So acrimonious did this become that Dowding involved Churchill. Despite the earlier problem in their relationship, and doubtless because Dowding was then the only commander of 1940 who had delivered something describable as a victory, Churchill pressed Sinclair to investigate.²⁷

An Air Ministry draft reply to Churchill, prepared by Joubert during October 1940 revealed that the Air Ministry was ‘unconvinced of the rightness of the C.in.C’s views ... but decided not to press him further at that time’. As the *Luftwaffe*’s night offensive from September highlighted interception problems relating to insufficient warning, ‘the question of decentralisation of filtering very naturally was reconsidered’. The only real advantage of filtering at Fighter Command HQ was the presence of liaison officers from other commands, though only until IFF (Identification of Friend and Foe) apparatus became widely available in operational aircraft. Consequently the Committee on Night Air Defence chaired by Sir John Salmond, recommended ‘the operation of filtering should be transferred from Fighter Command [HQ] to Group Headquarters in order to reduce delay.’ As far as Joubert was concerned, it was a matter of either retaining a system giving ‘the simplest dissemination of air raid warnings and one which at a moderate expense ... gives us a vital addition to the time ... to attempt to intercept the enemy’. With IFF devices widely available soon there was no reason why decentralisation should not be made.

²⁶ TNA AIR 2/5056 Dowding to Air Ministry, 31 Jan. 1940.

²⁷ TNA AIR 19/476 Churchill to Sinclair, 12 October 1940.

The Air Staff view was that the *Luftwaffe* would resume 'intense operations' next spring with 2000-2500 aircraft aloft simultaneously and this could only result in 'impossible congestion' if the relocation was not made soon. A further justification for change was that decentralization of filtering had already been carried out in the more far-flung Groups that had resulted in no 'ill-effects' but with many advantages including the 'savings in the cost of land lines'. Decentralization would mean the tracking of raids would be 'told' simultaneously from Groups to Fighter Command HQ and Sector Operations Rooms.²⁸ Quoting correspondence under AIR 19/476, Zimmerman mentioned that the draft reply was edited to delete a paragraph to the effect Joubert was claiming that removing a step in the process saved between thirty seconds to several minutes depending on the scale of enemy activity. This was because some members of the Air Staff considered this claim dubious.²⁹

On 8 October, Dowding wrote to the War Cabinet referring to a meeting in the Central War Room on the seventh. Sir John Salmond's report had been discussed where Dowding stated he only agreed to some of the proposals under pressure. His main objection was to the proposal that 'filtering should be transferred ... to Group headquarters in order to reduce delay'. The C-in-C explained that the principle of filtering was to process the information from RDF Stations in order to weed out individual plots unsuitable for display on operations tables. He complained that much of his time had been consumed resisting this proposal when first made and was surprised it had been more recently 'disinterred' by this committee. In paragraph eight he explained he advised the Air Ministry on 27 September 1940, that he thought the matter had been closed. Nothing had changed except for the increased night attacks and filtering was not particularly relevant to

²⁸ TNA AIR 19/476 Draft Reply to Prime Minister, undated but probably Oct/Nov.1940.

²⁹ TNA AIR 19/476 Churchill to Sinclair, 27 Oct.1940; Joubert to Assistant Private Secretary and Chief of Air Staff, 30 Oct.1940; Draft of letter to Prime Minister, 9 Nov.1940; Assistant Private Secretary to Vice Chief of Air Staff, 9 Nov.1940; Private Secretary to Vice Chief of Air Staff to Private Secretary of the Secretary of State, 10.Nov.1940, as quoted by Zimmerman, *Britain's Shield*, p.210.Except for the draft letter, this correspondence could not be found at the TNA under the quoted reference during A J Cumming's visit in 2005.

this. Finally, he asked he 'may be spared the necessity of discussing the question afresh'. Only at paragraph nine did Dowding finally get around to explaining his objections. Until IFF was fitted to all operational aircraft the proposal was not feasible and even then, the filtering could not be done on the Operations Table itself but in separate Filter Rooms. These required excavation and construction representing wasted resources actually reducing efficiency. As the CAS was determined to go ahead once the IFF devices were installed, Dowding had his objections placed on record in the minutes and these are reproduced in Appendix 6. These stated that delegation would not improve night interception. Sectors already acted on direct information from RDF Stations in relation to interceptions over the sea, but as far as land interceptions were concerned the information went to Sectors from Fighter Command HQ via Groups. Delegation would therefore mean a 'very small saving of time' against which there would be a greater time-lag in sending information to Fighter Command 'with resultant further delay in the issue of air raid warnings'.

These objections must have been confusing to members of the War Cabinet, who may not have understood precise details. Despite his pre-war membership of the Air Defence Committee, Churchill may not have quite grasped the intricacies of the system either. Bearing in mind it was the Prime Minister who had instructed Dowding to make his case on paper; his order may have been a stalling manoeuvre. As illustrated by the pilot-shortage affair, Churchill was not normally partial to long involved paper based arguments or messy details and Dowding's arguments were not particularly clear. He was probably right about the irrelevance to night interception in the sense that it was not enough to place interceptors across the raiding track. If the average pilot had problems seeing aircraft at distances of more than two miles in daylight then this was going to be much reduced at night, meaning bombers would usually slip past fighters scrambled by ground control especially as altitude estimates were frequently inaccurate.

Dowding's minute to Churchill, dated 24 October 1940 revealed that Dowding received a personal minute No. 225 from the Prime Minister dated 23 October 1940 containing information of a personal nature that Dowding promised not to reveal. The major bone of contention remained in accepting the 'undoubted fact' that time would be saved by filtering at Group Headquarters. At paragraph 11 he stated that if the *Luftwaffe* came over at full strength simultaneously, then the saturation point would occur throughout the system anyway. By double banking Operations Room Controllers the filter staff would not otherwise be overloaded beyond the point at which Groups could respond, though it does beg the question as to how efficiently the staff could be expected to work in what must have been very noisy and overcrowded conditions.

Paragraphs 14 – 18 give brief scenarios referring to a diagram no longer available for inspection. As RDF stations are often inaccurate directionally, 'cross-cuts' may be made by using stations situated in 12 Group to plot aircraft moving within 11 Group. A decentralised system would mean this 'cross-check' would be lost or attained only at the expense of duplicating communications from those stations to both Group Headquarters.

At this point he might also have mentioned the need for two stations to report on the altitude of enemy raids when this was in doubt. The second example suggests that if a raid flew along the boundary of 11 and 12 Groups, perhaps both Groups would allocate a raid number. Alternatively neither might allocate a number - meaning consultation would be required between each Group in order to decide who should respond. At present, he claimed, there is no confusion as Fighter Command HQ would allocate a raid number and decide which Group would act.

Dowding also used this opportunity to throw darts at the Air Staff, especially Joubert, who was accused of ‘dumping the problem’ of how to discriminate between friendly and enemy aircraft on his shoulders. With some justification, the Salmond Committee was accused of reaching conclusions with ‘phenomenal rapidity and without any adequate examination of this particular problem’. Admitting the ‘system which I have devised may not be perfect’, he lashed out at ‘people who did not understand it as a whole’ for making ‘disruptive incursions’:

‘My main grievance, however, is the matter of the expenditure of my time in arguing with the Air Staff every intimate detail of my organisation. Surely a Commander-in Chief should be left to manage his own affairs if the general result is satisfactory. I have expended not less than 50 hours of my time in this controversy.’³⁰

One point needing clarification was that if filtering was done at Group where tactical control was invested, then the delay in sending information to Fighter Command HQ was surely irrelevant, as they would effectively be cut out of the loop anyway. Zimmerman points out that some members of the Air Staff did not see the advantage of cutting out a step in the process, since the filtering task had to be done somewhere. The advantage in the reform proposals was that additional filter rooms would handle ‘less total information’, thus reducing the possibility of the system being saturated with information.³¹ The majority of raids were also occurring within just one Group, making a centralised control of warnings unnecessary in most instances. Possibly he was trying to say that if a raid moved across Sector boundaries within the Group, then the defence would be thrown into chaos with fighters being scrambled over a wide area. The *Luftwaffe* had already sowed confusion in the system by sending bombers to fly up and down the French coast to deliberately flood RDF screens. If Groups lost control of the situation, then Fighter Command HQ would have to sort out the mess and processing would be even more time

³⁰ TNA AIR 16/677 Dowding to Churchill, 24 Oct.1940.

³¹ Zimmerman, *Britain's Shield*, p.210.

consuming. Unfortunately the onus of making his technical explanations clear to the uninitiated was Dowding's.

The fact that Churchill was writing to Dowding on a personal and confidential level suggests that he was broadly sympathetic to Dowding's plight.¹ In fact John Colville's diary, (PM's Private Secretary) mentioned that Churchill held a high opinion of Dowding's abilities during the Battle of Britain, even describing Dowding's paper on Airborne Interception as 'masterly' in the entry for 21 Sept. 1940.³² The note to Dowding may even have given the C-in-C an unjustified feeling that the PM would support him irrespective of criticism. But Churchill's long record of meddling in military affairs indicated he was unsympathetic to C-in-Cs' managing their own affairs. Furthermore, even if Dowding's performance up to mid-September was 'satisfactory', German night bombing was proceeding with minimal interference, and so the 'general result' was by no means satisfactory for Churchill politically. In addition, it must have been dawning on Churchill by now that Dowding's relationships with colleagues were unsatisfactory.

Dowding may have been justified defending centralised filtering, and the arguments that have gradually emerged from his correspondence revolve around the undoubted difficulties of responding to the changing directions of enemy raids. He was also probably right about the Salmond Committee who only involved Dowding on the last day and after the Committee had written most of its recommendations. It had only taken three days to complete its task, and as Zimmermann notes, Salmond disliked Dowding and may have allowed personal factors to influence his judgment.³³

³² J Colville, *The Fringes of Power: Downing Street Diaries 1939-45*, Hodder & Stoughton, 1985, p.246.

³³ Zimmermann, *Britain's Shield*, p.212.

Dowding knew that the only long-term solution to night interceptions lay in AI (night fighters carrying their own radar) but this did not excuse him from cooperating with attempts to find interim solutions. Pressures to reduce response times stemmed from the fact that even slow bombers could move substantially off-track in the time between the first positioning of the arrow on the Table and the moment of anticipated interception. Dowding was probably so personally and closely involved with AI he became intolerant of factors diverting attention away from the 'real' solution. Added to his hypersensitivity to personal criticism and a desire to 'talk-up' an RDF system which was now linked to his reputation, this sort of tinkering was exasperating and the resentment interfered with his ability to communicate to colleagues and laymen effectively.

However, the Air Staff were not hounding Dowding to the extent he claimed, having backed away from confrontation at the beginning of the year and only returning to it at the end of the large day battles when 'response times' were becoming a genuine matter for concern. Neither could it really be said that Dowding was unduly distracted from controlling the battle as minute-to minute control had been delegated to the Group AOCs, mainly Park, but also Leigh-Mallory and Brand. If anything, it is remarkable how relatively free Dowding was to concentrate on those matters that interested him. As the acknowledged technical expert, it was only Joubert who had enough overall technical knowledge of the air defence systems to seriously put him on the spot and this may provide some explanation for Dowding's diminutive remarks about him. Dowding's apparent inability to make clear unambiguous explanations of some of the problems appertaining to the RDF chain might also be explained by a subconscious desire to conceal the shortcomings from politicians as he clearly wished to be remembered for his role in introducing it.

The Shortcomings of RDF Training

The inadequacies of the training system did not extend merely to fighter pilots or colleagues in the Filter Room but also to RDF operators and mechanics and this can be seen as part of the wider problem relating to the rapid pre-war expansion of the RAF.

‘Joubert’s note’ mentioned in relation to filtering problems had made reference to RDF operators having much less ability than before, and this is supported by other documents.³⁴

Shortly after the war commenced, J A J Tester, Officer Commanding at the RDF School, Bawdsey, sent the Air Ministry proposals for expanding the school to meet the increased demand for personnel. With regard to the training of operators, the ‘operators at present leave the school with little or no idea of the following points, which are considered essential’. These were then listed as:

- ‘1) The R.F type of receiver.
 - 2) The Anti-Jamming Devices.
 - 3) Multiple Raids.
 - 4) I.F.F.
 - 5) Plotting and filtering.
 - 6) Counting.’
- .

This left RDF stations to finish off the training of operators, which was obviously an unsatisfactory situation. The school lacked a ‘complete dummy RDF system for training purposes’ and a detailed shopping list of equipment was included. Mechanic’s training was also in a ‘lamentable state of affairs’ down to the lack of equipment to train on. The limitations of mechanic’s training meant that trainees graduated with a good theoretical, but a poor practical knowledge. This included:

³⁴ TNA AVIA 7/183 Note unsigned and undated headed ‘Part I. Present Filtering Organisation.’

- ‘1) Any transmitter.
- 2) Any receiver, with the exception of the mobile one.
- 3) Any work culminating in the equipment actually going “on the air”.
- 4) Phasing.
- 5) Stand-by power equipment.
- 6) G.M.’

It may have been quicker to state what tasks the graduates could competently have done. Again the solutions were seen largely in terms of more equipment.³⁵ The school was probably exaggerating problems to obtain resources, but this was not the only indication of trouble.

As the day fighting in the Battle of Britain was about to enter an intense phase, E C Williams of the Stanmore Research Section (SRS) at Fighter Command HQ commented on the declining standards of operators on the RDF Chain. The minute explained that SRS continuously reviewed standards and found this ‘is lower than it ever has been’. This was held directly attributable to shortening the Radio School Course, sending ‘completely untrained personnel to the Chain’ and employing ‘totally unsuited personnel’. Williams was most concerned by personnel being trained by operators who were themselves only ‘half-trained’ and remarked that the question of recruiting the wrong people had ‘probably never been tackled courageously’. He did not think the Radio School course should ever have been shortened to a fortnight, as the original course was not long enough. Training needed to be carried out at the RDF Station longer under ‘live conditions’ by competent individuals. Williams concluded by stating that ‘a large part of the efficiency of the R.D.F. Chain is lost by poor operators, whose course of training has been curtailed’.³⁶

The minute suggests a difference of opinion as to whether the training should be finished off at the schools or at the RDF Stations. More importantly, it represents a

³⁵ TNA AVIA 7/410 J A J Tester to Air Ministry dated 9 October 1939.

³⁶ TNA AVIA 7/410 E C Williams to Sigs 1, Air Ministry, dated 6 August 1940.

validating opinion on the low standard of operators detrimentally affecting the operation of the RDF Chain while the Battle of Britain was being fought.

This is unsurprising in view of the way the RDF organisation was rushed into service and without the priority for resources it deserved. As Robert Watson-Watt (later Sir Robert Watson-Watt, 1892-1973) remarked in a minute to Sinclair on 21 December 1940 ‘we have not yet proportioned our efforts in the installation of R.D.F coastal stations to the size and urgency of our programme’. He went on to emphasise the ‘rudimentary state of R.D.F cover in the West’ and ‘six months lateness in the East coast programme’ in support of his pleas for a larger and more powerful organisation. Not surprisingly, in view of Watson-Watt’s central role as the government scientist who originally persuaded the government to develop RDF, he stated his belief that the ‘First Battle of Britain was won by R.D.F and the 8-gun fighter’ and that the value of the defence had been multiplied by three to five times, an assertion repeated in very similar terms by Montgomery Hydes’s influential *British Air Policy Between the Wars 1918-1939*.³⁷ Using both this and the prevalent assumption that the day fighting would resume in the spring, Watson-Watt wanted the War Cabinet to start thinking on a grand scale and with the ‘highest priority’ for resources. What he also required was a single engineering organisation dealing with all aspects of RDF installation.³⁸ The document amounts to an official admission that the system still had many holes and was incomplete.

Shortly after this minute, further training problems were iterated by Air Marshal Joubert. He conveniently recapitulated the history of RDF personnel problems and the efforts of the Air Ministry’s Signals 4 in January 1941 on a loose minute sheet. While it is unclear exactly who he was writing this for, it was clearly connected with the rapid expansion advocated earlier by Watson-Watt. He described the recruitment of Radio

³⁷ Montgomery Hyde, *British Air Policy*, p.505.

³⁸ TNA AIR 20/2268 From R Watson-Watt to S of S, Air Ministry, 21 Dec. 1940.

Officers and Radio Mechanics/Radio Operators from January 1940 as ‘haphazard and mainly on a civilian basis’. Various appeals had been made recruiting over 1000 technicians, for whom there had been inadequate training facilities, resulting in embarrassment and opposition from the Ministry of Labour on the grounds that too many men had already been taken from industry. It was still possible to recruit a limited number of Radio Mechanics, but shortages of key personnel in other signals fields led to some being diverted elsewhere. Enough Radio Operators ‘up to the capacity of the training facilities’ were finally obtained. By the end of June, it was realised that the sources of recruitment for Radio Officers and Radio Mechanics were nearly depleted and an attempt to obtain 100 Signals Officers from Canada was instigated, together with an unsuccessful attempt to set up a school in that country. Sadly, investigating the various options for placing a school out of enemy bombing range consumed too much time, meaning that the additional school at Cranwell would not be operational until April 1941. Meanwhile a ‘serious bottleneck’ was likely to occur if additional personnel were to be recruited for the system.

Nevertheless, it was claimed that Signals 4 had been ‘instrumental in recruiting 200 Signals Officers (Radio) and over 2000 Radio Mechanics in the past eleven months’. It also claimed to have met Fighter Command’s demand for sixty Filter Officers, though this had proved very difficult, inferring that quality standards had not been maintained. If the RDF system continued to expand, then overseas recruitment was necessary, but even ‘a minor success would seriously embarrass our training facilities’. The arrival of Canadian Radio Officers and Radio Mechanics had got the system out of ‘serious difficulties’ but to avoid the situation re-occurring, Joubert felt it was necessary to reconsider the question of a Canadian school. Plans for expansion now being considered could only be met if the training recruitment criteria could be relaxed, and he reluctantly recommended the Radio Operators course be reduced from four to three weeks. Alternatively, some reorganisation

might bring about more efficient deployment of existing personnel, but this was doubtful. Plans for expansion also took no account of the requirement for heavy airborne equipment 'which will be heavy'.³⁹

Despite the Stanmore Research Section's heartfelt complaint of the previous August, a shortening of the Radio School Course was again being proposed though less drastically. It must be remembered that Williams thought the original length of the course was still inadequate. The general dilution of recruiting standards reluctantly advocated by Joubert also stands in marked contrast to William's comments regarding the unsuitable standard of recruits. Even so, Joubert had to take an overall view of the problem and a whiff of panic over the *Luftwaffe* resuming the day battle during the spring was discernable. The significance of this later correspondence written after the day battles is that it placed the recruitment and training for RDF technicians up to the end of the Battle of Britain within the context of an early phase of the long-term grand scale expansion needed for maximum effectiveness.

Because RDF had to compete with other sectors of a rapidly expanding manpower-consuming war economy with a voracious appetite for all types of resources, it seems unlikely the RDF Chain was at anything like the state of efficiency usually assumed and was still a long way from achieving this. Like the training of fighter pilots in 1940, much 'muddling through' and desperate expedients were being resorted to because events forced the pace of change faster than planners could provide for a steady and systematic expansion. Most importantly, it was necessary for Watson-Watt to trumpet the alleged achievement of RDF in helping win the Battle of Britain if he was going to win the battle for resources with competing organisations such as Bomber Command.

³⁹ TNA AIR 8/577 Loose Minute Sheet from Joubert, 14 Jan. 1941.

Other Problems With RDF

No doubt the radar chain was far better than anyone could have imagined in 1934 when research had begun.⁴⁰ Yet the ‘manning’ problems in 1940 were significant and the evidence shows it could not have functioned well with the existing low calibre of personnel and training. To these problems must be added that of calibration, a factor also exacerbated by the poor quality of many operators. RDF stations were particularly inaccurate in their measurement of height and this deficiency tended to complicate the process of filtering. As the *MOD Narrative* stated, filterers would often receive wildly conflicting height estimates from two separate RDF stations. As striking an average between the two readings was clearly useless, the filterer had to work out which station was likely to have given the most accurate report.⁴¹

One Operation Requirements report in June was said to have stated that ‘interception over the sea usually failed because CH [Chain Home] was not accurate enough, and CHL [Chain Home Low] had no capability to measure height as it had originally been designed as a Coast Defence Set.’⁴² E C Williams, of the Stanmore Research Section who was responsible for investigating the RDF chain’s performance in 1940, provided notes indicating that RDF stations needed to calculate the elevation between a half and fifteen degrees, but owing to a lack of suitable equipment, most stations could only measure between a half and six degrees. Whilst aircraft flying between 5,000 and 25,000 could still be detected, if the elevation was outside the half to six degrees band, a wildly inaccurate height reading would be given, especially if the operator was inexperienced.⁴³

⁴⁰ Zimmerman, *Britain’s Shield*, p.193.

⁴¹ TNA AIR 10/5556 *Narrative*, p.37.

⁴² Zimmerman, *Britain’s Shield*, p.189.

⁴³ TNA AVIA 7/183 E C Williams. ‘Height Measurement by RDF’, 3 June 1940.

As previously seen, height was an extremely important factor for a fighter pilot and the difficulties of night interceptions increased considerably if the precise height of attackers could not be established. The minutes of an Air Ministry meeting chaired by Joubert towards the end of the battle gives some insight into the difficulties. This states that the 'requirements of calibration were stated on 3rd April, before the full extent of expansion was under way'. These were 'ignored or disputed ...and only now being taken seriously' and consequently it was considered that all the calibration problems stemmed from this 'underlying cause'. The meeting was also advised that crews for Radio Maintenance Units were inexperienced; that flight crews provided for test aircraft did not have the necessary training in blind flying and mostly were straight out of training schools. Aircraft were not fully equipped with oxygen or blind flying gear and lacked standard equipment such as parachutes and life-saving jackets. A very high standard of training was required for all aircrew, particularly W/T operators, but this had not been provided. There was also a complaint about the inadequacy of the Blenheim aircraft, both in terms of numbers and poor serviceability. These limited resources and bad weather made accurate calibration impossible throughout the winter; therefore most stations were only partially calibrated throughout the battle. ⁴⁴

Again, Dowding and his colleagues had not been able to secure adequate resources from the Air Ministry for essential work. The Blenheim was a most unsatisfactory aircraft by 1940 standards and obviously cast-off aircraft were all that Bomber Command was prepared to release for testing a system that belonged to Fighter Command anyway. By now it must be clear that it did not yet work as Dowding 'dreamed it would', even though it was eventually perfected and exported abroad. Vital radar parts including a cavity magnetron were later shipped to the USA as part of Tizard's technical and diplomatic mission intended to help secure the vital continuing co-operation of that country. Although

⁴⁴ TNA AIR 16/877 'Minutes of a Meeting Held at Air Ministry on 19 October, 1940 to Discuss the Calibration of R.D.F. Stations.'

invented in February 1940, the first cavity magnetrons only started production in August 1940 and became the basis of a new radar system entering service in 1942. US scientists were very impressed and the magnetron was a major offering to the USA in 1940.⁴⁵

Neither Dowding, Watson-Watt, nor even Churchill could benefit from acknowledging the limitations of the Dowding system, but it is argued here that relying so completely on this brilliant but as yet un-perfected technology was unwise and may have blinded the C-in-C to a number of tactical initiatives.

Dowding, the Big-Wing and Other Dilemmas

On his own admission to Liddell Hart in 1943, Dowding played little part in directing the battle once it had begun:

‘During the Battle of Britain I was personally more occupied with the development of Night Fighting defence than with the Day Battles. I had made my contribution to the former in the 4 previous years...’⁴⁶

Dowding was talking about AI (Airborne Interception) or night fighters carrying special radar sets to make them less reliant on ground control. Given what the *Luftwaffe* did to British cities at night, AI was of crucial importance but there was no obvious reason why it could not have been delegated to another officer and is indicative of Dowding’s tendency towards micro management of technical aspects. This isolation from the nitty-gritty of fighting the air battle would have unfortunate consequences.

⁴⁵ Zimmerman, *Britain’s Shield*, p.228. This device would revolutionise RDF technology by emitting more radio waves than other short wave valves and advanced models were 100 times more powerful than the original prototype that by itself was twice as powerful as anything the Americans or anyone else possessed.

⁴⁶ LH 11/1943/27 Dowding to Liddell Hart, 9 May 1943.

Dowding's system revolved around centralisation, yet having set up a heavily centralised system, in true 'hobby-manager' style, he relinquished control where he was least comfortable and left it to his Group commanders to conduct the actual fighting. This is not to say that a 'hands-off' management style is not a perfectly valid way of running an organisation. The style worked well for Admiral Nelson but he did not allow differences between key subordinates to escalate beyond control to the extent that the outcome of the battle might become seriously prejudiced. Fortunately, the subordinate officer on whose shoulders the burden of fighting the Battle was a competent man. Sir Keith Park would later establish himself as the victor in the air battles over Malta and with the freedom to conduct the defence as he saw fit, Park proved to be a flexible commander.

Park's effectiveness during the Battle of Britain would be limited by a damaging squabble over the so-called 'big-wing' with his opposite number in 12 Group, the equally strong-minded Trafford Leigh-Mallory. The balance of serious historical writing is that Dowding should have intervened in the dispute before it got out of hand. Ray believes that the C-in-C was merely being indecisive in choosing between Park struggling to implement the Dowding system and Leigh-Mallory, whose tactical ideas were more in tune with the C-in-C's thinking than generally acknowledged.⁴⁷ After all, it was Dowding who was responsible for the large formations of fighters sent over Dunkirk to ineffectually cover the evacuation of the BEF. Whatever the real reason, the affair says little for the C-in-C's ability as a manager of people.

Leigh-Mallory's position on the subject of two or more squadrons operating in the air as a 'big-wing' appears to have stemmed from Douglas Bader's frustration at being on the periphery of the action together with his admiration and possible misconception of Manfred von Richthofen's so-called Flying Circus of 1917/18. Bader was a forceful

⁴⁷ Lucas, *Flying Colours*, p.129. Hough and Richards, *Battle of Britain* p.321. J Ray, *Battle of Britain*, p.103.

character probably more temperamentally suited to the individualistic style of the WWI flyers he admired. The role of the *Geshwader* in the words of the German Chief of Staff in 1917 was 'to attain and maintain air supremacy in Sectors of the Front as required'.⁴⁸ The reason for the introduction of this concept in 1917 was clearly more strategic than tactical.

Back in 1917/18 air-fighting rarely involved intercepting large formations of bombers. The role of the German fighter aircraft was mainly to intercept Allied two-seater aircraft engaged in reconnaissance or artillery spotting over German lines. Bombing and ground attack only gradually emerged as a secondary activity. The Royal Flying Corps engaged in fighter sweep by flights of five to six single-seat scouts to clear the way for vulnerable two-seaters and this led to 'dogfights'. Air supremacy was then about gaining or denying the freedom to see what was happening on the ground than about bombing, as bombers were severely limited in range and bomb-load. Large-scale fighter-versus-fighter battles were rare in WWII and did not occur in the Battle of Britain because the RAF declined to meet the challenge of the *Luftwaffe* fighter sweeps.

The essential weakness of the 'big-wing' plan was in the time it took to assemble the aircraft in order to meet an incoming raid. Though the significance should not be over emphasised, an official war game fought after the war attempting to recreate the Battle of Britain using big-wings, indicated these tactics did not work.⁴⁹ Proponents were relatively

⁴⁸ Telegram from Chief-of-Staff, Army referring to Order Nr. Ic.5834-1op, 23 June 1917 as quoted in B Robertson (ed), *Von Richthofen and the Flying Circus*, Harleyford Publications Ltd, 1964 edn, p.65. The term 'circus' was applied by the Royal Flying Corps because of the garish colours on the aircraft and perhaps because the units were shuttled around the Front by train. In order to overcome the deteriorating position of the Imperial German Air Force from mid-1917, it began concentrating their best pilots and machines into elite units of four squadrons that could be switched from one area of the front to another in order to gain local air superiority for an offensive or to be a 'fire-brigade' when emergencies arose. It rarely meant very large formations going aloft. Because there was no radio communication between the aircraft, it was difficult to handle the large formations of forty to fifty aircraft, which sometimes appeared in early evenings, only in good weather and usually on the German side of the lines.

⁴⁹ Deighton, *Battle of Britain*, p.217. Also see A Price, 'Battle of Britain Day', *Royal Air Force Historical Society*, No.29, 2003, p.15 as quoted by D Robinson, *Invasion, 1940: The Truth About the Battle of Britain and What Stopped Hitler*, Constable & Robinson, 2005. Dr Alfred Prices's research shows that on 15 September 2005, the Duxford Wing only shot down five whole German aircraft plus two with other units.

unconcerned about the targets being bombed so long as the bombers were severely mauled coming back. When the targets were important sinews of 11 Group's command and control system, this view was intolerable. Unfortunately, the forming up of so many aircraft out at sea also tended to flood the radar screens, blinding RDF to the approach of enemy raids. As will be realised from the earlier discussion on filtering, sudden incursions of fighters into a neighbouring Group's territory without pre-arranged flight plans was bound to sow confusion. What Park required from 12 Group was for their fighters to guard 11 Group's airfields while his own fighters engaged the *Luftwaffe*.

As Bader is universally recognised as the instigator of the 'big-wing' it is important to assess his defence of these tactics. Through his biographer and brother-in-law, P B Lucas, Bader complained that none of the 'experts' on this tactical controversy ever discussed it with him before relating their own interpretations. If three squadrons were to be used, he would take them to 20,000 ft, their optimum operating altitude. Meanwhile a squadron of Spitfires would be climbing to 25,000 or 26,000 ft above in order to deal with high-flying German fighters. He claimed that on average it took four to six minutes to assemble the formation at battle height. Bader claimed that 11 Group often failed to call the Duxford wing in good time for interception to be made. Furthermore, having to guard 11 Group's northern airfields 'wasn't much of a main dish'.⁵⁰

Deighton has related well-known ace 'Johnnie' Johnson's statement, 'the Duxford wing had recently taken 17 minutes to leave the ground and a further 20 minutes before it set course from base' with a remark that concentrating so many aircraft in this fashion left the Midland industrial belt vulnerable to air attack.⁵¹ Lucas, speaking for Bader, denied

Having been responsible for the equivalent of six German aircraft shot down it also sustained the loss of six fighters.

⁵⁰ Lucas, *Flying Colours*, pp.135-36

⁵¹ Deighton, *Fighter*, pp.271-72.

Johnson ever said such a thing claiming he was a lifelong friend of Bader.⁵² Johnson, he said, never served with the Duxford wing in 1940, only moving within the 12 Group perimeters to 'rest and regroup'. He was then praised in the text as one of the great 'Allied wing-leaders of the war' before the reader was advised that Johnson and Bader did not fly together until 1941. Naturally, Johnson did not mention these criticisms in his history of air warfare *Full Circle*, and would hardly have made such a reference in the book he co-wrote with Lucas, *Glorious Summer*.⁵³ The earliest reference to Johnson's remarks was by Robert Wright in 1969, but as neither Wright nor Deighton referenced their sources in line with current practice, it is now impossible to check. Probably Johnson once made a casual remark he could not repeat because of his friendship with Bader and Lucas. It is also interesting that Allen, whose book was published years before Deighton's, mentions that the Hurricane took seventeen minutes to reach 20,000 ft. If a *Luftwaffe* bomber formation only took twenty minutes to reach Croydon after crossing the coast, then it is hard to see how these tactics could have worked in any area south of London, especially when a further period of time on top of the seventeen minutes was clearly necessary to sort the aircraft into a battle formation.⁵⁴ This further period of time would inevitably increase in cloudy conditions.

Bader and Lucas went on to deny that assembling the big-wing ever took fifty-five minutes during August or September. Duxford to Tilbury (the border with 11 Group) was forty-seven miles and the Duxford wing 'invariably' got there at 18,000 ft 'within 18-19 minutes of setting course'.⁵⁵ In practice a lot would depend on the wind. When the Duxford wing made their well-known interception over London on 15 September, a ninety mph

⁵² P Wright, *Dowding and the Battle of Britain*, Macdonald & Co., 1969, p.221.

⁵³ J Johnson, *Full Circle: The Story of Air Fighting*, Chatto and Windus, 1964 and J Johnson & P B Lucas, *Glorious Summer*, Stanley Paul & Co, 1990.

⁵⁴ Allen, *Who Won the Battle of Britain*, Panther, 1976, pp.117-18.

⁵⁵ Lucas, *Flying Colours*, pp.135-36.

wind from the northwest had propelled their aircraft down from East Anglia while German bombers slowly struggled against the headwind.⁵⁶

If the warning from 11 Group was indeed too slow during the ‘critical period’, it was because the technical and personnel flaws in the RDF chain had not been ironed out yet. Therefore, it was up to Leigh-Mallory to devise alternative strategies taking this limitation into account, particularly when 11 Group had at least the moral right to expect his aircraft to be in the right place at the right time. Unfortunately, with the system set up by Dowding, Park could not order Leigh-Mallory to comply with his tactical needs, and this led to conflict.

It is also reasonable to query whether it was desirable for all of the Duxford squadrons to arrive simultaneously. Allen has denied that having so many aircraft airborne would dramatically add to effectiveness. In fact he felt the reverse was the case. Using his own logbook as evidence, Allen stated that ‘whenever a squadron of twelve aircraft were ordered into the air, only six fired their guns’. The Duxford wing, which sometimes comprised forty-eight aircraft, might only mean that fifteen of these would see action, or in other words fire their guns. Because of the ‘difficulty’ in controlling such a large formation, the interception rate was likely to have been even less. Allen also alleged that unlike Bader’s fighter-sweeps into France during 1941, the basic formations used in 1940 did not allow for as many pairs of eyes to scan the sky for enemy aircraft, thus increasing the chances of being ‘bounced’ by enemy fighters.⁵⁷

⁵⁶ A Price, ‘Battle of Britain Day’, *Royal Air Force Historical Society*, No. 29, 2003, p.6, as quoted by Robinson, *Invasion*, p.191.

⁵⁷ Allen, *Who Won the Battle of Britain*, p.119.

Johnson seems to confirm this. While relating his personal experience of leading larger formations in sweeps over the Low Countries, Johnson stated his preference for leading two squadrons, rather than three because in the latter:

‘I found we got in each other’s way in a fight, and only the leaders were able to bring their guns to bear. I also found that a single, common radio frequency made it difficult to control the activities of more than four or five sections.’⁵⁸

Park was understandably incensed about what he came to see as Leigh-Mallory’s attempts to dictate tactics while the latter merely saw these objections as indicative of 11 Group’s parochial attitude to fighting the campaign. Relations between the two Groups became so bad that Park was unable to rely on 12 Group to guard his airfields while his fighters were airborne. Thus North Weald and Hornchurch were badly hit on 24 August and Debden the following day. On 30 August, Bader’s Duxford wing was told to cover Biggin Hill but failed to intercept with the result that the airfield took heavy damage including 39 dead and 26 injured.⁵⁹

The debate on larger formations did lead to the compromise of having two squadrons fight together in the air. As Dowding noted in his post-battle Despatch, ‘when time was the essence of the problem, two squadrons were desirable. Otherwise, fighter formations in the greatest strength should be used’. In other words, Dowding was claiming that when the *Luftwaffe* was concentrating its effort in the area of 11 Group, there was value in slightly larger formations, but when London became the principal daylight target, the more extreme methods of Leigh-Mallory and Bader were more effective. Interestingly, Dowding mentioned here that 11 Group ‘have now developed the technique of using wing

⁵⁸ Johnson, *Full Circle*, pp.236-37.

⁵⁹ Terraine, *The Right of the Line*, p.200.

formations. These enable as many as 20 squadrons to be concentrated rapidly in the air'.⁶⁰ It must be remembered that Dowding was writing this in 1941 and it is not a reference to the Battle of Britain, but the policy of his successor, W Sholto-Douglas, (and Leigh-Mallory, who replaced Park at 11 Group) in making large-scale fighter-sweeps over France. Dowding might also have mentioned the need for squadrons working in pairs to be using compatible equipment. When Allen's squadron attempted this pairing with a faster climbing Spitfire Mk II squadron, they were left standing 'in a haze of 100-octane petrol fumes, and we were on our own, which is how we preferred it'.⁶¹

Dowding's despatch was likely to have been informed by information from Park who distributed a note headed *Wing Formations* to 11 Group's Sector Stations in October 1940. Reacting to Leigh-Mallory's criticisms and betraying some fears about morale, the note was defensive in tone and the introduction made it clear he was responding to feelings in some units that using wings of three squadrons 'is the only way to defeat the enemy raiders'. This was done during the campaign in France but those circumstances were different in that operations were carried out according to pre-arranged plans. Even then, the best results were obtained by fighting in two pairs, two to engage the fighters at higher altitudes and two to engage the bombers. The experience over recent weeks had shown that short warnings, adverse cloud conditions and lack of time, made the use of three-squadron wings generally unsuitable. When there were two or more cloud layers, these squadrons had difficulty making a rendezvous and maintaining contact afterwards. Park's experience was that enemy fighters often attacked RAF fighters as they struggled up below them. Sometimes in clear weather, flanking Sectors formed up larger wings to meet a third incoming wave or to cut off the retreat of escaping bombers. Such decisions had to be at the discretion of the Group Controller who was the only one with the complete picture. Most commanders believed that until VHF radio was fitted throughout all units, it was

⁶⁰ TNA 20/5202.Dowding's Despatch. Para 198-204

⁶¹ Allen, *Who Won the Battle of Britain?* p.120.

impractical for three squadrons to work together on a common frequency, a comment substantiated by Johnson's remark reproduced above.⁶²

Yet even if Leigh-Mallory's methods were at fault, at the heart of 12 Group's dissatisfaction was a justified complaint that the full resources of Fighter Command were not being deployed. Dowding's policy was not to apply his full resources in case the Germans launched an invasion, a policy for which he has received fulsome praise. Yet as Allen suggested, he could have used his entire fighter force to strafe the *Luftwaffe* aircraft on their bases in northern France before the Battle of Britain had begun. Adolf Galland expressed surprise in his memoirs that the RAF did not take advantage of *Luftwaffe* vulnerability immediately prior to the Battle of Britain as they assembled near the Channel.⁶³ Without established warning systems, adequate telephone lines and limited AA defences, success was reasonably assured. Should that be doubted, one only has to note how easily British bombers were able to bomb invasion ports as late as September.

Even a force of inadequately trained and inexperienced *Luftwaffe* pilots flying obsolete machines managed to achieve complete surprise against Allied airfields in January 1945, destroying 200 (Allen claims 400) aircraft on the ground by strafing operations. Of course the *Luftwaffe* in 1945 were operating in far less favourable conditions than the RAF in 1940 and its own losses were catastrophic, but it showed how a heavy blow could be delivered by these means. Such an operation against French airfields in 1940 could well have severely damaged the German effort before it had even started.⁶⁴ Unfortunately given the number of aircraft required for such an operation, only Dowding could have authorised it. No doubt sensitive to these criticisms, Dowding's former aide

⁶² TNA AIR 16/281 From Park to AOC Debden; North Weald; Hornchurch; Northolt; Tangmere; Biggin Hill and Kenley.

⁶³ A Galland, *The First and the Last*, Cerberus Publishing Co, 2001, p.100.

⁶⁴ Allen, *Who Won the Battle of Britain?* p.137. A Price, *Pictorial History of the Luftwaffe*, Ian Allan, 1970 edn, p.58.

claimed the C-in-C did ask the Air Ministry for attacks to be launched by Bomber Command against various targets during the early (contact) phase of the battle. These were intended to 'slow up the impetus of the German air attack' and included airfields, aircraft on the ground, industrial plant and oil stocks.⁶⁵ Only after the air campaign began in earnest did Bomber Command launch some limited raids on French airfields but the opportunity had gone. The most obvious conclusion to be drawn from this is that the Air Ministry could not have seriously believed that the forthcoming German air offensive was capable of knocking Britain out of the war. As previously explained, the Air Staff were predisposed to be overprotective of the bomber force because they still believed this to be the main war-winning asset.⁶⁶ That Bomber Command was not prepared to accede to this suggestion did not mean Dowding could not have gone ahead with the resources at his disposal.

Another option open to Dowding might have been to send his fighters over to France as soon as German formations were seen assembling over the promontories of the French/Belgian coasts. 421 Squadron equipped with faster Spitfire MkIIs did undertake effective missions on behalf of the Royal Observer Corps to estimate the size, height and direction of enemy bombers, thus providing even more information about the build up of raids than radar alone could have given. Large formations of bombers laden with fuel were seen laboriously climbing to 15,000 feet from several airfields arranging themselves slowly into an attack 'balbo'. German escort fighters with notoriously low fuel capacities would conserve fuel by delaying take off, thus leaving the bombers in a vulnerable position. Had squadrons been scrambled to intercept at first sighting, Allen with his flying combat experience predicted the bombers would have been thrown into chaos with British fighters

⁶⁵ P Wright, *Dowding*, p.126.

⁶⁶ TNA AIR 10/5556 'The Employment of the Bomber Force in the Event of Invasion of Holland and/or Belgium. Note by the Chief of the Air Staff' 9 May 1940.'

back at base before the Me.109s could arrive.⁶⁷ Perhaps Dowding was concerned over the German fighters following his aircraft back to base and catching them on the ground without fuel or ammunition, but no consideration seems to have been given to this. Such tactics were similar to suggestions made by Bader, later successfully adopted by Park during the air defence of Malta. In this situation, fighters were successfully sent out in offensive sweeps well out to sea and over Sicily to intercept massing bombers. Without doubt, Dowding's well-known aversion to sending his fighters over the sea militated against these sorts of schemes.

The Fall and Rise of Dowding's Reputation

Dowding's system was not perfected by 1940. At the end of the 'critical period', Park found it necessary to supplement the system by using VHF radio equipped Spitfires 'to shadow enemy raids, and report to Sectors, who report to Group'.⁶⁸ Commenting on this to the Air Ministry, Dowding supported the need for this supplementary measure. So important did Dowding feel this supplement to be, that he requested an additional flight in 66 Squadron to fill this need without delay 'as the need is immediate'.⁶⁹ This, taken with the introduction of standing patrols in the final stage of the battle, represented something of an admission of failure for the RDF system.

The defence adopted was not proactive but reactive. In fact, Dowding took an enormous risk in leaning so heavily on a modified command and control system from WWI that now relied heavily on inadequately tested new technology. This system had already been compromised from the outset by the German occupation of northern Europe

⁶⁷ Allen, *Who Won the Battle of Britain?* p.137.

⁶⁸ TNA AIR 2/7355 Park to Dowding, 'German Air Attacks on England –8 Aug,-10 Sept', para 31.

⁶⁹ TNA AIR 2/7355 Dowding to Air Ministry, dated 22 September 1940, para 4.

where maximum warning was unattainable because enemy bases were already within the maximum range of radar. This left the Germans to take the initiative in each phase of the battle. Dowding's actions were not what would normally be expected of a senior executive in virtually any large organisation. That Fighter Command survived at all had more to do with the efforts of Keith Park, pilots and countless support staff, but mainly because of German political decisions that released the pressure just in time. Unfortunately Dowding was not a team player. The view held by academics such as Sebastian Cox and John Ray is that Dowding was not fired as a result of a dastardly plot by 'big-wing' proponents, as claimed by former aide Robert Wright, but because of a stubborn attitude and inability to compromise that manifested itself in a negative attitude to several issues, including the decentralisation of the filter-room and Night Air Defence.⁷⁰ As Churchill had been subjected to many complaints about Dowding's negative attitudes from the Air Council, Ray probably came closest to the truth when he speculated that Churchill's chairmanship of the Night Air Defence Committee gave him an opportunity to closely observe Dowding's poor relationship with colleagues.⁷¹ Apart from a good relationship with General Pile, head of AA defences, the controversial figure of Lord Beaverbrook at the Ministry of Aircraft Production and Sir Henry Tizard (already eclipsed by Professor Lindemann) Dowding seems to have irritated almost everyone he had to work with. On 14 November, Coventry was virtually obliterated in exchange for only one German bomber and immediately afterwards, large tracts of London were destroyed for minimal enemy loss. This was the last straw.

Fortunately for the C-in-C's reputation Churchill saw no advantage in denigrating Dowding after the sacking and obtained a GCB and a baronetcy for him. He also arranged a further appointment in the USA as head of a technical mission, though it should have been obvious from the start that Dowding lacked the sort of PR skills required. Sir John

⁷⁰ S Cox, 'The RAF's Response' in P Addison and J Crang, *The Burning Blue*, Pimlico, 2000, p.60.

⁷¹ J Ray, *The Battle of Britain*, pp.160-67.

Slessor wrote to Newall from Washington on 4 December warning that Dowding should avoid any comment outside of a carefully prepared statement concerning the nature of his immediate duties. The message confirmed the intense interest of the American 'man in the street' in the exploits of the RAF and that Dowding would find the questions of the American press 'distasteful to him' but nevertheless, answers should 'be given with as good grace as possible'.⁷² However, Dowding's posting to the USA must have seemed a shrewd move at the time given that the Americans had seen the *Luftwaffe* abandoning its large-scale daylight bombing campaign and that the invasion had seemingly been thwarted by Fighter Command's continued survival.

For all this, Churchill was clearly grateful. When the HMSO booklet, *The Battle of Britain* was produced in 1941, Churchill argued (albeit unsuccessfully) against the non-inclusion of Dowding's name in it. A *Daily Herald* article covering the pamphlet's release and making some mild criticism that Dowding's name was not mentioned had clearly stung Churchill. However, this was the only article making the comment and the Air Ministry files record satisfaction that HMSO were predicting sales exceeding a million which would be 'an all time record for such a pamphlet. A similar response is believed to await it in the United States'.⁷³ The official attitude was that everyone knew who the C-in-C was anyway and that the pamphlet was about how a thousand anonymous young men had 'fought one of the decisive battles of the world'.

This was entirely consistent with a long-standing official policy of not glorifying individuals in case it detracted from the efforts of the many. In 1914-18 there was no official glorification given to successful airmen such as Mick Mannock and Albert Ball.

⁷² TNA AIR 75/63 From Morris Wilson to Ministry of Aircraft Production, BRINY 1763, 4 Dec.1940. Text includes message from Sir John Slessor to CAS, 2 Dec.1940.

⁷³ TNA AIR 19/258 Churchill to Sinclair dated 3 April 1941; APS to S of S, 5 April 1941; 'Air Ministry sells Threepenny Thriller, *Daily Herald*, 28 March 1941, p.3. TNA STAT 14/226 From J M Parrish, MOI to C Plumbly HMSO dated 28 March 1941 indicated that thousands of copies of the illustrated edition were being printed in a wide variety of languages.

The press ensured these names were well known but the publicity did not compare with German equivalents such as Manfred von Richthofen, who enjoyed something comparable to the pop star status of today. In the Battle of Britain, it was again left to the press to make the names of aces known and it was common for children to avidly listen for the names of ‘fighter-pilot heroes’ on the BBC and look for their photographs, ‘especially those being decorated at the Palace’.⁷⁴ Dowding’s concern to protect his reputation did not mean he was a glory-seeker and the file indicates that Dowding did not wish for any personal publicity.⁷⁵

Following his return to the UK, Dowding won the admiration of Basil Liddell Hart, one of the foremost military historians and theorists of the day. A letter from Liddell Hart to a contemporary admired Dowding’s honesty, his empirical approach to scientific problems and his ‘eagerness for new ideas’. Liddell Hart even went so far as to wish that Dowding had been ‘in charge of our defence policy as a whole’. The letter also revealed an enthusiasm for Dowding’s unorthodox spiritual ideas, and his other ‘hobby horse’ of a common world language indicating they were well attuned to each other’s wavelength.⁷⁶ The pair subsequently met and became friends with Dowding being consulted for Liddell Hart’s subsequent publications including his *History of the Second World War*. Unfortunately, this distinguished writer may have also blinded himself to Dowding’s faults. Subsequent authors such as Robert Wright have done the same.

⁷⁴ Interview with John Marquis ‘Meeting With the Germans’, *BBC*, 19 Nov.2003, www.bbc.co.uk/dna/ww2/A2061875, accessed 12 June.2005.

⁷⁵ TNA AIR 19/258 APS to S of S, dated 5 April, 1941. Despite official disapproval, British newspapers did publicise the exploits of outstanding British airmen. Albert Ball VC is one of Nottingham’s local heroes and the smashed windscreen of his aircraft was in the Castle Museum when A J Cumming saw it in the 1960s.

⁷⁶ LH 1/245/1 From Liddell Hart to Jerrold, dated 20 February 1942.

Was Dowding a Tactical Genius?

The ability to work as a team with senior civil servants, politicians and service colleagues was surely fundamental to the type of committee system run by the British for determining policy. Certainly Dowding had no interim solution to night raids and was dismissive of suggestions. Later in the war, the *Luftwaffe* disproved the impossibility of an interim solution to night raids. When the RAF temporarily blinded the German *Himmelbett* system, Allied bombers were silhouetted with flak, flares and searchlights so that high flying day fighters could attack from above with visual sighting. Though unpopular with the Air Ministry, Dowding retained the affection of his pilots. Yet both Allen and Lucas believe this only spread after the campaign and deny he was widely loved during the battle itself, claiming that this was an image promoted by the media in a repeatedly published photograph of Dowding surrounded by his ‘chicks’ at an anniversary celebration.⁷⁷

Dowding was perhaps the best available officer to lead Fighter Command in 1936 and if he had been replaced by Sholto-Douglas at an earlier date, then an attempt to fight the battle on the basis of big-wings was likely to have worsened the situation. On the other hand, Sholto-Douglas may have proved sufficiently flexible to modify the idea before 11 Group had been dragged to disaster. He would probably have been open to more offensive initiatives and proved more resourceful dealing with night bombing, but ultimately this is speculation.

Those subscribing to the psychological model of convergent/divergent thinkers will not be surprised to see Dowding fitting into Liam Hudson’s convergent thinker category typified by engineers while divergent thinkers were said to make better managing director

⁷⁷ Lucas, *Flying Colours*, pp.164-65 and Allen, *Who Won the Battle of Britain?* p.48. This photograph is widely published and appears in Terraine, *The Right of the Line*, p.430. Dowding appears uncomfortable in a bowler hat and carrying an umbrella amidst a group of laughing and relaxed pilots.

material and better placed to 'think outside the box' and to thrive in a milieu of fast changing situations demanding flexible responses.⁷⁸ In these circumstances, it is not surprising that Dowding found his outlet in the pre-war period, but was perhaps too rigid, uncommunicative and unimaginative to become a really great commander. At fifty-plus, Dowding was perhaps too old for this appointment anyway and while he deserved high marks for supporting the development of the RDF chain and the eight-gun fighter, there is no real evidence that the mantle of 'tactical genius' was deserved. While this chapter has suggested that Dowding's place in the pantheon of national heroes has been over-exulted, the next will examine his naval equivalent and ask whether the relatively unknown Admiral Forbes deserves greater recognition than Dowding for his contribution towards national defence.

⁷⁸ L Hudson, *Contrary Imaginations*, Penguin, 1966, as quoted by R Barry, 'History Shakers', Times Educational Supplement, 10 Jan. 1998, p.10.

Chapter 6

Wrong-Way-Charlie

‘He [Forbes] was in my opinion quite one of the soundest and best of our war admirals, and was never given credit for his doings.’¹

(Admiral A B Cunningham)

Compared with that of Lord Dowding, the reputation of Admiral of the Fleet, Sir Charles Morton Forbes (1880-1960) is clouded in obscurity. For the reasons detailed in the two previous chapters, Dowding’s name is synonymous with the Battle of Britain but it is rare for Forbes to be accorded even a cursory mention. Even publications dealing with the Norway campaign of 1940, an action in which he played a major part, have made surprisingly few direct references to the C-in-C Home Fleet by name.

An article in *The Sunday Post* dated 21 April 1940 observed that prior to the commencement of the Norway campaign, ‘hardly anyone knew his name’ despite the fact that the war was now seven months old and Forbes had been in command of the Home Fleet for two years. While the article was naturally positive about Forbes’s qualities as a commander, it also contrasted his anonymity with naval predecessors, Fisher, Jellico and Beatty, all of whom were household names in 1914.² Not surprisingly, no attempt was made to analyse the reason for this. Lord Nelson’s dramatic victory at Trafalgar in 1805 marked the symbolic beginning of so-called *Pax Britannica*, and could only prove a hard

¹ S Roskill, *Churchill and the Admirals*, Collins, 1977, p.120.

² ‘Our No.1 Sailor’, *The Daily Post*, 21 April, 1940, p.18. A small article under the series heading ‘Great Scots in the War’ headlined ‘I-Admiral Sir Charles Forbes’, also appeared the same day in the Glasgow edition of what appears to be the *Daily Express*. L Kennedy, *War Papers*, Fontana, 1989. Despite detailed front page-coverage of the Norway campaign on 9 and 25 April 1940 in the *New York Post*, there is no mention of any British commander by name.

act to follow.³ The failure to impose the same crushing defeat on the German High Seas Fleet at Jutland in 1916 had proved a great disappointment to the press and public. Though by now out of the Admiralty, Churchill also suffered (and allegedly accepted) some public criticism over Jutland for failing to appreciate the value of aircraft as spotters for the fleet when he was First Lord.⁴ This is not to say the British had lost touch with their maritime tradition in 1940 as is said to have happened in the second half of the century. The Navy was still a source of pride but since Jutland, German Gotha bombers had bombed London and the great technological strides in aviation accompanied by doomsday scenarios of destruction from the air had focussed attention away from the sea and towards the sky. The diversion of staggering amounts of public money into the RAF inevitably at the Navy's expense during the 1930s can therefore be seen as a reflection of the public's unspoken yet diminished regard for the Senior Service and its leaders. Nothing much happened to change this view during 1940. Churchill proclaimed the RAF's victory in the Battle of Britain and by November 1940 severe parliamentary criticism of the Navy's leadership was being reported in the British press.⁵ Richard Hough, a naval historian who was also a core Battle of Britain author wrote that until 'March 1941 the RAF with its triumphant record in the Battle of Britain, the only great pivotal battle to be witnessed by half the nation, had attracted the greatest acclaim among the three services'.⁶

³ Strictly speaking, this period begins with the final defeat of Napoleon at Waterloo in 1815, which is the date ascribed to it by P Kennedy, *The Rise and Fall of British Naval Mastery*, Penguin Books, 2001 edn, p.150. In terms of British naval superiority (not supremacy) it all started well before then but as far as Britain's 'control' of the sea is concerned, the era begins here.

⁴ Lord Montagu of Beaulieu, 'Aircraft for Victory: Lord Montagu on Lessons of Jutland Bank', *The Times*, Iss. 41221, 17 July 1916, p.10. The article claimed: 'In the future more than half of the work of the Navy would be done in the air ... An airship was the equal of at least three cruisers from the scouting point of view and even more destroyers.' Montagu claimed the results of Jutland were 'not all that could be wished' because there was only one seaplane and no scouts.

⁵ 'Admiralty Reply to Criticism', *The Times*, Iss.4876, 8, Nov.1940, p.9. This lengthy article focussed on attacks by Mr Stokes (Ipswich Lab) and Commander Bower (Cleveland U) referring to the public being 'disturbed' by the culture of secrecy surrounding the loss of the aircraft carrier *Glorious* and other events allegedly to protect officers in senior positions. Bower, a Service MP, was complaining about being 'victimised' because of his efforts to 'discuss' the conduct of operations with the First Lord. Much criticism focussed on the First Sea Lord, Dudley Pound who in turn was strongly defended by Mr Alexander, the First Lord.

⁶ R Hough, *Bless Our Ship: Mountbatten and the Kelly*, Coronet Books, 1991, edn. p.188. Hough also co-wrote with D Richards, *The Battle of Britain: The Jubilee History*, Hodder and Stoughton, 1989.

None of this fully explains Forbes's continued obscurity. His colleague, Admiral A B Cunningham has enjoyed well-deserved fame to the present day. Taranto was one of those battles that caught the world's imagination, and in gaining a spectacular success with Fleet Air Arm aircraft against Italian capital ships in November 1940, Cunningham could only benefit from the validation this bestowed on British airpower especially when turned against warships. In turn, this can only have reinforced the perception of the Battle of Britain as a decisive victory won by airpower alone.⁷ Forbes never had the opportunity of delivering a similar success and unlike Cunningham and the majority of senior military men; he did not bother to write memoirs after the war. In consequence, the historiographies of the 'finest hour' and the Royal Navy in WWII do not hold Forbes in any position of prominence.

Belying many of his actions in 1940, Winston Churchill wrote of Forbes in his *Second World War* that following his second meeting aboard *HMS Nelson*, he 'formed a strong feeling of confidence in the Commander-in-Chief'.⁸ Official historian Captain Roskill summed up Forbes by noting that 'his fifteen months bought no great sea victory ... as might catch the public's imagination'. However, despite many constraints he felt that his policy and strategy was 'generally justified by subsequent events, and that his steady hand on the reins contributed greatly to bringing the country through this anxious period'.⁹ For Martin Stephen, Forbes was 'guilty of not backing his hunches' in the matter of ship dispositions during the Norway campaign. Along with Admirals Harwood and Whitworth, he was among the 'decent men doing a very competent job' but who were 'not going to set

⁷ 'Master of the Med', *Daily Mirror*, 10 February 1941, p.1. Cunningham was certainly a well-known personality during the war. A blow-up of his photograph appeared on the front page of the *Daily Mirror* following the naval assault on the Italian naval base at Genoa on 9 February 1941. A random sweep of newspaper front pages in the early phases of the war rarely mentions the names of military commanders. This changed as the war progressed.

⁸ Churchill, *Second World War* 1, 1948 edn, p.338.

⁹ S Roskill, *The War At Sea 1939-45*, HMSO, 1954 edn, pp.267-68.

naval warfare alight'.¹⁰ With regard to the invasion crisis, Cox merely acknowledged that Admiral Forbes took a less pessimistic view of German capabilities than the Admiralty.'¹¹ More positively, popular naval writer Anthony Preston has compared Forbes with the distinguished First Sea Lord of 1803, Lord St Vincent, in the sense that both personalities had argued forcefully in their time against the likelihood of an invasion of Britain.¹² Roskill's 'friend', the controversial and widely read Correlli Barnett considered Forbes shared Cunningham's characteristic 'unshakability' but quoted a subordinate's opinion that the C-in-C lacked 'panache'.¹³ A book by Dan van der Vat aimed at the general reader came close to the truth in tending to stress the C-in-C's 'ill-luck' to be in charge during 'a period of setbacks and uncertainties', praising his strategic grasp and noting his command 'immobilised the bulk of the German surface ships during the Norwegian conflict'. Concluding that he was a scapegoat for the Navy's ill-preparedness at this time, he pointed out that Forbes later handed over a stronger fleet than existed at the commencement of hostilities.¹⁴ Forbes gained some limited praise from Admiral Dudley Pound's biographer, in stating that it was Forbes rather than the Admiralty who read the invasion situation correctly. He also absolved Forbes from blame over the sinking of the *Royal Oak* in 1939 by pointing out that he 'had moved heaven and earth to get the Scapa Flow defences improved'.¹⁵

The only academic to examine Forbes's career in any detail has been the American scholar James Levy who wrote an upbeat article praising Forbes as 'a solid strategist and a fine admiral' but who could not be considered a 'great commander' owing 'to his inability to see through the intelligence muddle [during the Norway campaign] and guess his

¹⁰ M Stephen, *The Fighting Admirals: British Admirals of the Second World War*, Leo Cooper, 1991, p.44 and p.47.

¹¹ R Cox (ed), *Operation Sealion*, Thornton Cox Ltd, 1975 edn, p.148.

¹² A Preston, *History of the Royal Navy*, W H Smith & Son Ltd., 1985, p.154.

¹³ C Barnett, *Engage the Enemy More Closely: The Royal Navy in the Second World War*, Hodder & Stoughton, 1991 edn, p.34.

¹⁴ D van der Vat, *The Atlantic Campaign*, Birlinn Ltd., 2001 edn, pp.227-28.

¹⁵ R Brodhurst, *Churchill's Anchor*, Leo Cooper, 2000, p.167 and p.129. This event is dealt with in some detail by G S Snyder, *The Royal Oak Disaster*, William Kimber, 1976.

enemy's actions and intentions'.¹⁶ Levy considered that Forbes would have made a better First Sea Lord than Dudley Pound, except perhaps for an outspokenness that antagonised Churchill and led to his eventual dismissal. With justification, Levy complained that Forbes has been completely ignored by some of the best known military writers such as John Keegan in his *Who Was Who in World War 2* and Stephen Howarth's *Men of War*. He is also conspicuous by his absence from Paul Kennedy's classic *The Rise and Fall of British Naval Mastery*.¹⁷ At least a brief and rudimentary biography appears in Heathcote's naval biographical dictionary, but as far as most literature is concerned, Forbes remains a figure with only tangential significance.¹⁸

A detailed blow-by-blow account of the Norway campaign is outside the scope of this study, but to a significant extent, Forbes's reputation is bound up with the 'intelligence muddle' that Levy has referred to. The propensity of Churchill and the Admiralty to interfere in operations with the justification of 'superior' knowledge must also be examined. These are relevant to the efficiency of a C-in-C as they fundamentally relate to an ability to contact and destroy enemy ships. The unfortunate lower-deck sobriquet of 'Wrong-Way-Charlie' clung to him almost from the beginning of hostilities, and the question is asked whether this was deserved? Forbes's lone stand against the Admiralty over ship dispositions throughout the summer of 1940 echoes Dowding's complaints over third party interference. For Dowding it was the detachment of fighter squadrons to France; for Forbes it was the tying down of too many ships for home defence, but both might seem to have represented a misuse of resources in the pursuit of the Prime Minister's flawed military aims. On the other hand, it may have been a reflection of the clash in temperament that existed between Forbes and his immediate superior at the Admiralty, First Sea Lord

¹⁶ J Levy, 'Lost Leader: Admiral of the Fleet Sir Charles Forbes', *The Mariner's Mirror*, Vol.88, No.2, May 2002, pp.186-93.

¹⁷ P Kennedy, *The Rise and Fall of British Naval Mastery*, Penguin Books, 2001 edn.

¹⁸ T A Heathcote, *The British Admirals of the Fleet 1734-1995: A Biographical Dictionary*, Leo Cooper, 2002, pp.84-6.

Dudley Pound. Before these questions can be considered, a brief review of Forbes's personality and pre-war career must be outlined.

The Personality and Early Career of Forbes

Forbes was born into an expatriate Scottish family in Ceylon in 1880. It was a family with naval traditions – hence his father's intention for his son to join the Navy. This was fine by Charles and his early education at Dollar Academy in Scotland proved a happy one. He was prominent in the prize lists and in later years retained his association as an advisory governor.¹⁹

He entered the Navy in 1894 and in passing out from his training programme with a reported five out of five first class certificates gained a twelve month seniority advantage over many of his peers.²⁰ Forbes was then posted to a series of sea-going appointments but in 1903 served on the staff of the gunnery school *Cambridge* at Devonport. This was undoubtedly a shrewd career move given the primacy of big-gun specialists that would prevail for years to come. A variety of other postings followed and in 1916 was present at the Dardanelles as commander of the battleship *Queen Elizabeth*. At Jutland he was flag commander to Sir John Jellicoe in the battleship *Iron Duke* where he won the

¹⁹ 'FP Notes', *The Dollar Magazine*, 1931 pp.217-18, 'Vice-Admiral C M Forbes DSO, CB, *The Dollar Magazine*, Vol.XXXII, No.127, October 1933, pp.1-2. Letter to A J Cumming from Dollar Archivist, 29 January 2005.

²⁰ R H S Bacon (ed), *Britain's Glorious Navy*, Odhams Press Ltd., c.1942 pp.63-4.

According to this excellent wartime book on the working of the Royal Navy, cadets sat an entrance exam conducted by the Civil Service Commissioners. Gunnery training was then conducted for one term at *HMS Excellent*, then sea-going training at *HMS Vindictive* for two terms to prepare for an examination in seamanship. Now rated as an acting sub-lieutenant, he would have joined the RN College at Greenwich and later taken gunnery, torpedo and navigation course at Portsmouth. He would therefore have taken five examinations rated one, two and three, the results of which determined the date of seniority as sub-lieutenant.

Distinguished Service Order and a mention in despatches.²¹ His relationship with Jellicoe was clearly a positive one. Now Captain of the light cruiser *Galatea*, Forbes commiserated with Jellicoe over his dismissal as First Sea Lord in December 1917 and thanked him 'for all that he has done for me'.²² In August 1919, he became a naval member of the Ordnance Committee and was Deputy Director of the Royal Naval Staff College, August 1921 to May 1923. From 1923 he served in flag captain appointments in the Atlantic and Mediterranean before serving as Director of Naval Ordnance with the rank of rear admiral in 1928.²³ Following a period as Rear-Admiral (destroyers) Forbes became Third Sea Lord and Controller and promoted vice-admiral on 21 January 1933. This post was considered by Caslon to be one 'calling for exceptional qualities of technical knowledge and ability in committee'.²⁴ It covered responsibility for material including ships and armament and was over the Directors of Naval Construction, Dockyards; Naval Ordnance; Torpedoes and Mining, Armament Supply; Compasses; Scientific Research and Experiment; Electrical Engineering and the Fleet-Engineer-in Chief.²⁵

Later Second in Command of the Mediterranean Fleet, he received the KCB in 1935. He was promoted to admiral in 1936. The appointment as C-in-C Home Fleet was made in April 1938, shortly after the *Anschluss* crisis drew to a close. *The Times* obituary article, from which much of his entry in *The Dictionary of National Biography* was drawn

²¹ 'Naval Honours: The Jutland Bank Battle: Sir John Jellicoe's Despatch: Supplement to the London Gazette', *The Times*, Iss. 41274, 16 September 1916, p.3. Jellicoe placed Forbes's name on the list of officers recommended for service in the Battle of Jutland. 'My Flag Commander who has always allowed me great assistance. This officer was Executive Officer of *HMS Queen Elizabeth* during the whole period the ship was employed at the Dardenelles.'

²² BL The Jellicoe Papers Add.52565 f.117 Letter from Forbes to Jellicoe. The letter also indicated he had been a guest at Jellicoe's home and wanted to be remembered to his children.

²³ Bacon, 'The Command of the Navy and its Ships', in Bacon, *Britain's Glorious Navy*, p.66. The C-in-C normally had as a personal ADC, a Flag Lieutenant responsible for the signalling of the fleet. The Flag-Captain is usually the flagship's captain but also has the responsibility of organising the domestic routines of all the ships as well as his own. Bacon described this as a responsible and onerous position.

²⁴ C Caslon, 'Forbes, Sir Charles Morton (1880-1960)', in E Williams and H Palmer (eds), *Dictionary of National Biography, 1951-1960*, Oxford University Press, pp.369-71.

²⁵ Bacon, *Britain's Glorious Navy*, pp.49-66 The Second Sea Lord and Chief of Naval Personnel dealt with manning and training issues. The First Sea Lord and Chief of Naval Staff was responsible for dealing with larger issues of policy and maritime warfare and was assisted by the Vice-Chief of the Naval Staff and numerous assistant chiefs of naval staff. The First Lord is of course, a politician and member of the Cabinet.

claimed there ‘was nothing spectacular ... nor on first acquaintance, did he give the impression of possessing outstanding personality’. Nevertheless, it acknowledged ‘no man ever saw him “rattled”: he had full confidence in himself, and he inspired it in those under his command’. It went on to say that those in ‘closest contact with him knew best the reserves of power ... the clear vision, sound judgement, and strong sense of proportion’, whilst also likening him to ‘a tower of strength’. Obituaries, by their nature, focus on the positive aspects of the deceased but not without hinting at the subject’s perceived shortcomings. By emphasising that those in ‘closest contact’ knew his virtues the impression was given that many people were unaware of these qualities.

Many years after the war, his former flag officer wrote to the official historian about him. Godfrey Style stated that ‘he [Forbes] dodged the publicity cult like mad’. An aversion to publicity was a disadvantage when there were problems with the morale of the fleet at the end of 1939, resulting from the perception that the public was not appreciating the Navy’s efforts.²⁶ The same source also remarked upon:

‘his extreme loyalty both upwards and downwards ... he stood on his own bridge, always calm, always the same and ALWAYS CORRECTLY DRESSED without mufflers or other fancy gear.’

This behaviour contrasted with another admiral against whom it was claimed, if there was a problem on the bridge ‘ELSK would come in and push one out of the way.’²⁷ The sartorial comment was probably made to support the remark about Forbes’s aversion to publicity. Style was doubtless thinking of egocentric self-publicists such as Lord Louis Mountbatten, a controversial but well-connected officer with enough influence to take him

²⁶ TNA ADM 1/10225 ‘Morale in the Home Fleet’, Minute dated 13 Dec 1939 from Director of Personal Services. This has been dealt with detail in chapter 3 and the problems seem to have been resolved by the beginning of 1940.

²⁷ ROSK 4/50 From Sir Godfrey Style to Roskill, dated 10 March 1979. This can only be a reference to Forbes’s chief of staff, Admiral E L S King.

from the captaincy of a destroyer to Supreme Allied Commander, South-East Asia by the end of the war.

Commander J A Dennis's papers also remarked that 'poor Admiral Forbes came in for a lot of criticism – indeed it is said that some called him "Wrong way Charlie". While Dennis went on to defend Forbes, stating that the fault lay with the higher command and Churchill himself, these recollections appear to have been formulated sometime after the war and were almost certainly influenced by hindsight and subsequent reading.²⁸ An interview with Ron Babb, serving as an engine room artificer on *HMS Rodney* before and during the Norway campaign suggests that Forbes was not badly thought of by the personnel of the Home Fleet except that 'it was always considered he wasn't doing enough to push the war effort forward'. He did not 'come over as a striking force' at the time and people thought he was a little more cautious than he should be. When questioned directly about whether the 'lower deck' had confidence in Forbes, he replied that to the best of his knowledge they had. He 'never heard anyone knock him on the lower deck'. A suggestion (originally made by Admiral John Tovey) was put to him that he failed to visit his ships enough. As far as he could recollect, Forbes did come aboard and make regular inspections. Much of the problem appeared to be rooted in the sailor's frustration at the relative inactivity during opening months of the war and they took it out on their superiors.²⁹

The relative inactivity was perhaps inevitable. Hough has remarked that the *Draft Hague Rules of Air Warfare, 1923* did not permit the harrying of German coastal traffic,

²⁸ IWM 95/5/1 Papers of Commander J A J Dennis RN, p.40.

²⁹ Interview with Ron Babb by A J Cumming at Huntley Officer's Country Residence, Bishopsteignton on 7 April 2004. Mr Babb was in his nineties but remained a clear and coherent witness. Later in the war, Mr Babb was made an officer and put in charge of the engine room of a Hunt class destroyer. Also see ROSK 4/17 Letter from Tovey to Roskill, dated 1 January, 1962. The allegation that Forbes may not have visited his ships enough was made tentatively to Roskill by Forbes's successor as C-in-C Home Fleet.

despite the fact that they were self-imposed, un-ratified and not part of international law.³⁰ Nevertheless, the Allies decided to adhere to them until the Norway campaign and it is clear this ruling put a severe restraint upon the activities of the Home Fleet at this time.

The Influence of Forbes on Inter-War Naval Development

The biographical bones above show a steady rise through the strata of naval hierarchy and as *The Times* pointed out shortly after his death, his career shadowed closely that of his predecessor as C-in-C Home Fleet, First Sea Lord, Sir Roger Backhouse, a fact suggesting Forbes was being groomed for Backhouse's job. This may well have happened after the death of Admiral Pound in 1943, had circumstances been a little different.³¹

Forbes's *Dictionary of National Biography* entry reveals a great breadth of naval experience but throws little light on his specific contributions within these posts. The mere fact he occupied several important posts signifies a share in collective responsibility for the state of the Navy in 1939. There has been a tendency among some writers, typified by Correlli Barnett; to portray the Navy as a backward looking organisation obsessed with the so-called lessons of Jutland.³² Another school, more attuned to Jon Sumida emphasises the pragmatic way in which the Navy adapted to financial and technological constraints by making radical changes to tactics and gunnery.³³ As a gunnery specialist in senior appointments, Forbes must have played some part in this. Unlike colleagues such as Admiral Dudley Pound, Forbes was neither a centraliser, nor an advocate of 'orthodox' tactics.

³⁰ Hough, *Bless Our Ship*, p.96.

³¹ 'Obituaries: Sir Charles M Forbes', *The Times*, Iss.54863, 30 August 1960, p.15.

³² Barnett, *Engage the Enemy*, p.44.

³³ J T Sumida, 'The Best Laid Plans', *The Development of British Battle-Fleet Tactics, 1919-1942*, *International History Review*, Nov.1992, pp.682-99.

The rise of Forbes owed something to his expertise in gunnery, a discipline that dominated other branches within the Admiralty. Franklin has stated that it has ‘become very fashionable’ to blame the predominance of gunnery officers in the 1930s for some tactical misdirection because of assumptions that U-boat attacks would only be made in shallow waters and A/S officers exaggerating the success of their Asdic anti-submarine detecting device. While acknowledging that Asdic failed partly as a result of the Navy’s failure to audit their systems properly, he believed that it was more a ‘freak application of a generally satisfactory [administrative] system’. Gunnery officers seemed to have not understood the problems because submariners tended to ‘have minimal interface with other branches’ and because of a natural ‘slight bias’ to their own interests. Franklin also acknowledged that other navies including that of Germany made the same mistake of over-emphasising the importance of big guns, yet there were certainly grounds for the primacy of gunnery in Britain bearing in mind she was falling behind other powers in this respect.³⁴

Like the majority of great naval battles before it and with the notable exception of Trafalgar, Jutland was characterised by the opposing fleets forming up into parallel lines against each other. As Sumida explained, there were mechanical weaknesses relating to British gunnery making the Grand Fleet of 1916 relatively ineffective at long range. Despite subsequent improvements to this equipment, financial and treaty constraints resulted in the Navy losing ground in the technological competition with other powers during the inter-war period. With the Japanese thought to be achieving proficiency at 30,000 yards, well beyond anything the British could achieve in 1934, experiments were conducted in the use of short-range actions of 10-15,000 yards.³⁵ By 1935, not long after Forbes’s term as Third Sea Lord and Controller in charge of *materiel* a memorandum was

³⁴ G D Franklin, ‘A breakdown in communication: Britain’s over-estimation of Asdic’s capabilities in the 1930s, *The Mariner’s Mirror*, Vol.84, No.2, May 1988, pp.202-14.

³⁵ TNA ADM 186/338 C.B 3001/36 – *Progress in Naval Gunnery– Part VII – Gunnery in Foreign Navies*, 1936 edn, p.96. This mentions the Japanese practicing at very long range. 28,000 metres were mentioned in this connection.

distributed advocating short- range actions reflecting the many successes obtained by this method in the past.³⁶ Other simulations also indicated the possibility of controlling the ranges at which combats would be fought utilizing smoke screens and night fighting. According to Sumida, night fighting became standard under the Mediterranean Fleet commanders of the 1930s, and this fleet was recognised as the Navy's 'premier and tactically most influential force'.³⁷ As Forbes commanded the destroyer flotillas of this fleet during 1930-31, and was vice-admiral in the Mediterranean commanding the first battle squadron, and second in command, Mediterranean Fleet 1934-38, his precise role in developing these tactics cannot be pinned down but they must have been significant.

Sumida also highlighted the moving away from the single-line-ahead, into divisional tactics, or in other words, the division of the line-ahead into components ranging from one to five ships. The Tactical School emphasised the importance of 'individual action' by divisional commanders in 1935, recognising that torpedoes launched from destroyers threatened the battle fleet.³⁸ It was also recognised that developments in carrier design and torpedo bombers also threatened the line of battle, which was seemingly proved in a 1937 exercise where torpedo bombing attacks on a seven-ship line resulted in heavy damage and disruption, whereas similar attacks against more agile two-ship battle-cruiser formations were ineffective. However, it ought to be stressed it was not being suggested that divisional tactics were a complete antidote to the effects of massed air attack, but in many circumstances they would 'greatly reduce the danger'.³⁹ None of this resembles the actions of a moribund and backward looking organisation, though it did represent the pragmatic response of a navy with very limited resources.

³⁶ A Raven and J Roberts, *British Battleships of World War II*, (London, 1976) pp.276-77 as quoted by Sumida, *International History Review*, p.688.

³⁷ Sumida, *Ibid*, p.689.

³⁸ *PT*, 1935, Oct 1935, pp.66-6 as quoted by Sumida, *Ibid*, p.690.

³⁹ G Till, *Air Power and the Royal Navy 1914-45*, (London, 1979) pp.144-45 as quoted by Sumida, *ibid*, p.691.

Post-war critics of the Royal Navy, focusing on the supposed obsession of the ‘fleet action’ may have taken their cue from Dowding’s wartime *Sunday Chronicle* article in which he claimed that it was the Admiralty’s fault the Navy had been supplied by the Air Ministry with inadequate aircraft. It was the Admiralty that insisted on a ‘plurality of roles’ and hybrid types ‘doomed to inefficiency before pencil was laid to drawing board’. He claimed ‘the role of naval aircraft was completely subordinated by this [fleet action] conception’. Dowding had been provoked by Admiral Richmond’s earlier newspaper criticism of the Air Ministry, but it was only natural that where the Air Ministry were holding the purse strings, the Admiralty could not have expected (or got) a series of different aircraft each designed for separate purposes.⁴⁰

Around 1942, Admiral Bacon explained the tactics being used by the Navy to the general public in surprising detail. Bacon affirmed the principle of division and subdivision, but interestingly put this within the context of divisions operating within the line-ahead for fighting. The advantage was in allowing each heavy gun to fire over an arc of 120 degrees. Other positions were considered less satisfactory because of obstructions from the ships superstructure. However, Bacon drew a distinction here between fighting and cruising, acknowledging that line-ahead was too vulnerable to torpedo attack. ‘The best cruising formation in wartime is with one or more divisions abreast of each other.’ Such a formation represented a far smaller target area on an attack from the beam, and was relatively easy to manoeuvre into ‘line ahead’ when enemy surface units are to be engaged.⁴¹ In another section by Admiral Brownrigg, the advantages of night fighting were espoused by stating that a ‘weaker or numerically inferior force well skilled in night fighting may well score a success over a stronger opponent less well skilled in night fighting’. The obliteration of two Italian cruisers in the Battle of Matapan in 1940 was

⁴⁰ LH1/245/32 Sir H Dowding, ‘The Great Lesson of this War: Sea-Air Power is the Key to Victory’, *Sunday Chronicle*, 29 Nov. 1942.

⁴¹ Bacon, ‘Fleet Battle Tactics’, in Bacon (ed), *Britain’s Glorious Navy*, p.252.

cited as an example of the success of these methods.⁴² This wartime book written by senior naval officers indicates that much of what was learned in the inter-war exercises was actually put into practice.

After the war, Forbes told Roskill that 'I think the Navy's ideas on the whole were fairly, in fact very sound'. He conceded that some tactical mistakes were made, for example, anticipating wrongly the Germans would employ torpedo-bombing attacks against warships. This meant that in the initial contact phases, destroyer screens protecting capital ships spread too far outwards weakening the barrage of protective fire. It also meant outlying ships were vulnerable to conventional bombing, but this was soon remedied by bringing the destroyers close in to the big ships.⁴³ The legacy of Forbes's Mediterranean experience and pragmatic approach was also apparent in his chairmanship of pre-war naval discussions on the relative merits of speed, armour and firepower, sensibly observing that warship design could only ever be a compromise between the three.⁴⁴

Levy has remarked that in true Nelsonian tradition, Forbes management style was to let his captains know what he wanted to achieve and let them work out the precise details of how it was to be done.⁴⁵ It is also easy to see the parallels in attitude with Nelson's actions at Trafalgar. Nelson's willingness to go against conventions and a literal interpretation of *The Fighting Instructions* can be seen by delegating authority to his Captains and abandoning the line-of-battle in favour of two columns of ships aimed at breaking the enemy line in order to place their ships in crossfire.

⁴² Adm. Sir S Brownrigg, 'Gunnery in the Royal Navy', *Ibid*, pp.221-22.

⁴³ ROSK 6/30 From Forbes to Roskill, 22 February, 1950. The German torpedo dropped from the air was fragile and made the bomber vulnerable to AA fire as a result of the slow approach speeds required, consequently they were almost exclusively used against merchant ships. Even so, the other Axis air forces successfully used torpedo-bombing as an effective technique against warships.

⁴⁴ Capt. E Altham, RN, 'A Discussion: Speed and Gun Power in Warships (Adm. Sir C Forbes in the Chair) on Wednesday 16 March 1938, *RUSI Journal of the United Service Institute for Defence Studies*, Vol.83, 1938, pp.271-90.

⁴⁵ Levy, *Mariner's Mirror*, p.188.

Ironically, *The Fighting Instructions* of 1939 had been co-written by Forbes and Pound before the war representing guidance, rather than 'orders'.⁴⁶ That Forbes was co-author might be seen as a reflection of his tactical expertise built up between the wars or more simply, that the co-authors happened to possess recent experience of senior command in the tactically important Mediterranean Fleet.

However, they cannot be represented as an important contribution to naval warfare. According to Marder, the feeling in the Navy was that they were 'all rubbish'.⁴⁷ There were perhaps two reasons for this. Firstly, the history of *The Fighting Instructions* does no great credit to the Navy, notwithstanding the need for some form of written guidance.⁴⁸ Secondly, the co-authors seem to have had fundamental disagreements. For example, Pound was said to have written them with a view to a fleet action against the Japanese and thus envisaged two parallel lines of capital ships slugging it out with heavy guns. As will be deduced from the above, this concept was inappropriate to the circumstances of 1939 as they appertained to home waters. The *Kriegsmarine* was too small for a large fleet action and saw no advantage in fighting one. Even in the Pacific, it was unlikely that the Royal Navy could ever have amassed enough ships to deal with the Japanese in this sort of fleet action while Germany and Italy represented major threats much closer to home. Marder has noted that Forbes opposed these ideas strongly.⁴⁹ With the blessings of hindsight, it may have been more useful to have written two sets of instructions for the radically

⁴⁶ TNA ADM 239/261 'Section L-Factors Affecting Naval Operations', *The Fighting Instructions 1939*.

⁴⁷ A J Marder, *From the Dardanelles to Oran: Studies of the Royal Navy in War and Peace 1915-1940*, (London) 1974, pp.53-4 as quoted by Sumida, *International History Review*, p.695.

Marder noted that he was relying on second-hand testimony and had not actually read the *Fighting Instructions* of 1939, which were not the same as the *Fleet Tactical Instructions*.

⁴⁸ Naval historians are aware that *The Fighting Instructions* were originally designed in the 17th Century as a code of conduct for the Navy and intended to place the responsibility for operations on the Commander of the Fleet. They laid down certain procedures the most important being the line-of battle. They became mandatory in the 18th Century and in 1744, Admiral Mathews was court-martialled and cashiered for ignoring them, while in 1756, Admiral Byng missed a chance to save the base at Minorca from the French because he wished to avoid Mathew's fate. Sadly, Minorca was lost and Byng was executed on his own quarterdeck. From this point, sanity gradually re-established itself and by Trafalgar, Nelson was able to keep to the spirit if not the letter of these instructions.

⁴⁹ TNA ADM 239/261 'The Battlefleet Action' *The Fighting Instructions*, Para 226, pp.49-50. Also see A J Marder, *From the Dardenelles to Oran*, pp.53-4 as quoted in Sumida, *The International History Review*, p.695.

different conditions in each theatre, but in the event, even the Pacific war did not run to the sort of fleet action envisaged by Pound. As Ranson has remarked, the problem of dealing with a triple threat from Germany, Italy and Japan with a single power fleet was one that ‘defied solution’.⁵⁰

With his experience of command in the influential Mediterranean Fleet, it would have been easy to put his differences with Pound down to contrasting experiences but Pound had been C-in-C there between 1935 and 1938 and must have drawn other conclusions from his tenure of command. Ironically, Pound’s *D.N.B* biographical entry made a point of emphasising that in this post he had trained ‘officers to use their initiative and not to wait for orders’.⁵¹ This stands in stark contrast to the reality of Pound’s micromanaging personality, a factor that would complicate the relationship of these men in the early stages of WWII. In the circumstances, it would be surprising if the *Fighting Instructions* of 1939 seemed at all coherent.

Nevertheless, they did allow for discretion on the part of commanders. When Pound wrote to him in August 1939, reserving the right to intervene in operations, Forbes responded ‘that it must be left to my discretion at the time whether or not I carry out these [Admiralty] orders, in the same way that Captains are given this discretion in Clauses 2 and 6 of *The Fighting Instructions*’.⁵² Examination of these instructions confirm that captains ‘without ‘specific directions’ or ‘faced with unforeseen circumstances ... must act as their judgment dictates’. Clause 6 stated that if orders from a Senior Officer would result in losing touch with the enemy, consideration must be given to the Senior Officer ‘not being in full possession of the facts’.⁵³ Accurately predicting what would later happen

⁵⁰ E Ranson, *British Defence Policy*, p.31.

⁵¹ R V Brockman, Dudley Pound, in L G Wickham Legg and E T Williams (eds), *Dictionary of National Biography 1941-1950*, Oxford University Press, pp.689-92.

⁵² BL 52565. The Cunningham Papers. Letter from Forbes to Pound, 22 August 1939.

⁵³ TNA ADM 239/261, *The Fighting Instructions 1939*. p.10.

around Norway, he argued that if he were maintaining radio silence at sea, then too much traffic (including inappropriately detailed orders) would give away his position to the enemy. His view was that the Admiralty should advise a course of action, leaving the decision to him as to whether the suggested action should be complied with. Forbes would later write 'never answered' on his file copy.

Intelligence and Interference in Norway

Perhaps the most serious obstacle to his reputation is the unfortunate 'Wrong-Way-Charlie' tag applied by some personnel. This was because of his inability to intercept German surface raiders at the beginning of hostilities and later, for failing to immediately grasp that an invasion of Norway was underway. Forbes was initially distracted by the need to stop German naval surface raiders from breaking out of the Baltic into the Atlantic and indeed the pre-war naval plans of both countries had been based on the assumption that this would be attempted by Germany at the first available opportunity. Yet the poor information received by him did not mean the Navy was backward in appreciating the value of good quality intelligence.

According to Ralph Bennett, a former producer of signals intelligence known as Ultra, 'the war at sea presents the sharpest possible contrast to the war in the air from the intelligence point of view' and was ahead of the other services in this respect.⁵⁴ Ultra played little part in Fighter Command's campaign and there is still doubt over whether Dowding was on the list of persons approved to see the decrypts. Bomber Command, according to Bennett, showed little interest throughout the war because it did nothing to confirm the validity of Arthur Harris's strategic bombing theories. During 1914-18, signals intelligence had developed to a high standard but atrophied between the wars. While this

⁵⁴ R Bennett, *Behind the Battle: Intelligence in the War with Germany 1939-45*, Pimlico, 1999 edn, p.176

all forms part of the wider problem of insufficient long-term funding for the services, Bennett was right to complain that complex organisations cannot be quickly resurrected at full efficiency simply by sudden injections of large cash amounts. The problems manifested themselves mainly in an inability to understand the significance of the decrypts. Consequently signals intelligence, including Ultra, was of little help to the Allies at this stage of the war, but there is no indication that this was simply down to 'Admiralty complacency' as suggested by Barnett.⁵⁵

Undoubtedly needed by the situation and probably aware that the lower decks were frustrated at his inability to find the German ships, Forbes complained to the Admiralty in January 1940 about the contradictions in OIC intelligence and demanded an improvement. He complained that the reports of 4 January, 1940 confirming the *Deutschland*, was under repair at Kiel on 20/21 December had not been received by him until his return from sea on 10 January. His message also claimed that reports could be anything up to fourteen days old when posted to the base. Furthermore, if the reports were correct, then which pocket battleship was it that came through the Great Belt early on 21 December bearing in mind one report said that *Gneisenau* and *Scharnhorst* were at Wilhelmshaven on 18 and 21 December? From these contradictory reports he concluded wrongly that the *Deutschland* and a cruiser must have been responsible for the much publicised sinking of the *Rawalpindi* and secondly, 'the *Admiral Scheer* and a cruiser are not abroad'. In conclusion he urged that signals should be sent to him on a daily basis giving the last known location of enemy battle cruisers, pocket battleships and cruisers with copies to other commanders.⁵⁶

⁵⁵ Barnett, *Engage the Enemy More Closely*, p.135.

⁵⁶ ADM 1/10715 From Forbes to Admiralty 'Intelligence on Whereabouts of Main German Forces. (Home Fleet Submission No.49/H.F.991390 of 12 January 1940)', 12 January 1940.

Not having the reports that Forbes referred to at hand for an independent analysis, one cannot say whether he was fully justified in drawing the wrong conclusion about which ship had sunk the *Rawalpindi*, but the complaint about delays resulting from having the reports posted to his base is a reasonable one. Unfortunately, as will be seen, increases in signals traffic would further assist the Germans in their own intelligence gathering. It was, in fact, the *Scharnhorst* that sank the *Rawalpindi* on the 23 November between the Faeroes and Iceland. Forbes's report does not it make clear that he had also received a report direct from the *Rawalpindi* correctly identifying the battle cruiser, *Scharnhorst*. Within minutes of receiving this, a contradictory report from the *Rawalpindi* claimed it was the *Deutschland*. It must be noted here that Roskill has remarked on the difficulties of distinguishing pocket battleships and battle cruisers because of similarities in construction and the poor visibility in northern waters. Forbes accepted the second report because it was already known the *Deutschland* was abroad and while she was back at Kiel on 15 December, the Admiralty did not discover this until later. Forbes confessed to being 'a bit muddled' about the *Deutschland's* whereabouts by 27 December but an OIC report dated 29 December told him that a neutral ship had seen her badly damaged and approaching Kiel on 21 December. Even this contains an anomaly with the date recorded by the official historian. As Roskill has concluded, the mistake in identifying the *Rawalpindi's* assailant confused Admiralty intelligence on enemy dispositions for a significant time.⁵⁷ In the circumstances, it is hard to blame anyone for the confusion. Interceptions problems were compounded by the speed advantage of most German heavy ships and the temporary loss of Scapa Flow as a base while her anti-submarine and anti-aircraft defences were being overhauled. His heavy ships were now positioned on the Clyde, further south and on the wrong side for operations in the North Sea. During March, however, the Home Fleet returned to Scapa Flow.

⁵⁷ Roskill, *The War At Sea*, pp.82-3. As an armed merchant cruiser, the *Rawalpindi* stood no chance against the *Scharnhorst* but fought for fourteen minutes scoring only one hit on the German battle cruiser. It is worth noting that *Scharnhorst* was a battlecruiser armed with 9x11 inch guns while the *Deutschland* was a pocket battleship with 6x11 inch guns but was nevertheless generally classified as a battlecruiser.

There can be no doubt that Forbes and the Navy were let down by poor intelligence at this early stage of the war as there were a number of indications that a full-scale invasion of Norway was under-way in April. A signal intercepted in early April 1940 revealed that all ships heading for Bergen were told to regularly report to OKW in Berlin. The cryptographer, Christopher Morris, was told that the signal must have been incorrectly decrypted because ships would not report to the Army. Morris later wrote 'The ships were of course troopships, and the signals would have given advance warning of the invasion of Norway'. Other indications supporting the signal included Coastal Command sightings and a report on unusual German naval wireless activity during 6/7 April within the Baltic. As these reports went to different departments in Whitehall, they were not appropriately collated.⁵⁸ Bennett also advised that there was no such thing as a German naval Ultra in home waters until August 1941, although a certain amount could be learned of enemy shipping movements in the Channel and the Atlantic using RDF and the decryption of low-grade keys.

This meant that German troops were able to land in mainly undefended Norwegian ports and gain a significant foothold before Allied naval and land units arrived on the scene. It was an extremely bold and daring plan. Using the *Luftwaffe* to offset their naval inferiority, the Germans would eventually take the country by force. Not only could they secure the supply of essential iron-ore from Sweden but also the opening of several hundred miles of coastline to German shipping undermined the Allied blockade and allowed more bases for German warships and aircraft to operate from. However, once he had figured out the German intentions, Forbes ordered his destroyers to attack the German disembarkation at the port of Narvik and prepared to bombard troop landings at Bergen.

⁵⁸ Bennett, *Behind the Battle*, pp.39-40. Unfortunately this book is badly referenced in that footnote numbers do not appear within the text despite the existence of a footnote section in the back. It has not been possible to say exactly where Bennett got this from.

Sadly, Churchill and Pound cancelled the Bergen plan at the last moment though according to Levy, this was the last realistic chance to check the German advance in central Norway.⁵⁹ Although the land fighting resulted in a humiliating debacle for the Allies, it must be remembered that the naval balance sheet at the end of the fighting favoured the British, who had sustained heavy but manageable losses. German losses were four cruisers, three U-boats, one torpedo boat and ten destroyers, representing around 50% unit losses. British losses were two cruisers, nine destroyers, six submarines and an aircraft carrier. Bombing was the main single cause of the British losses, although these amounted to less than one third of the total ⁶⁰ Admiral Raeder would later write in his memoirs, 'the losses it [the *Kriegsmarine*] suffered in doing its part weighed heavily upon us for the rest of the war.'⁶¹

In the circumstances a heavy dependence needed to be placed on air reconnaissance provided by the RAF. Sadly, the Norway campaign tended to show up its shortcomings. A frustrated Forbes signalled the Admiralty on 15 June 1940:

'The quite unexpected appearance of enemy forces ... in the far north on 8th June which led to the sinking of the *Glorious* two destroyers and a liner ... shows that our scheme of air reconnaissance should be overhauled ... The enemy reconnoitre Scapa daily if they consider it necessary. Our reconnaissance of the enemy's bases are few and far between.'⁶²

This begs the question as to whether Forbes was trying to scapegoat the RAF for these disasters? Roskill believed there was an atmosphere of obsessive secrecy covering the final phase of the campaign responsible for the failure to make Coastal Command sweeps for enemy ships and criticism of the Admiralty reported in *The Times* on this very

⁵⁹ Levy, *The Mariner's Mirror*, p.191. The two naval battles at Narvik were notable successes for the Royal Navy. Despite heavy opposition, Captain Warburton-Lee's destroyers sank two German destroyers and damaged 'fairly severely' another five on 10 April. Approximately six German controlled merchant ships were also sunk. A second attack on 12 April by Admiral Whitworth resulted in the loss of eight large German destroyers and one U-boat. See Roskill, *The War At Sea*, p.175 & pp.177-78.

⁶⁰ Churchill, *Second World War*, 1, Appendix R.

⁶¹ Raeder, *My Life*, p.311.

⁶² Letter from Forbes to Admiralty, 15 June 1940 as quoted by Roskill, *The War At Sea*, p.198.

point in November 1940 tends to confirm the woeful state of internal communications within the Admiralty at this time.⁶³ Roskill, who then worked in the Admiralty, maintained the Air Officer C-in-C had been told unofficially about the evacuation from Norway, but the information did not filter down to a lower level.⁶⁴

Unfortunately, with only some 170 largely obsolescent operational aircraft in home waters on its strength, Coastal Command may well have failed to locate the *Scharnhorst* anyway. Why the *Glorious* (an aircraft carrier) did not carry out its own reconnaissance missions is strange but may have had something to do with a lack of operating deck space for its own aircraft after receiving several RAF fighters withdrawn from the fighting the previous day.⁶⁵ The real reason may never be known, but the fact that RAF reconnaissance was inadequate at these longer ranges can hardly be doubted. Even in 1941, Admiralty papers revealed little confidence in Air Ministry intelligence.⁶⁶

While the sinking of the *Glorious* had something to do with a lucky-break on the part of the Germans, Forbes was unfortunate in having to operate in a *milieu* where German naval intelligence was having remarkable success at this stage of the war. Writing to Captain Roskill after the war, Forbes wrote:

‘One of the most dreadful things that has come to light since we captured all the German documents is the way they had “broken the ciphers” so early in the war, whereas we were still a long way from that goal and when one comes to think of the mass of stuff that went out, over the air from our War lords at the Admiralty, just giving away our dispositions at the slightest provocation.’⁶⁷

⁶³ ‘Admiralty Reply’, *The Times*, 8 Nov. 1940, p.9. Aircraft statistics from Levy, *Mariner’s Mirror*, p.190.

⁶⁴ Roskill, *The War At Sea*, p.198.

⁶⁵ Roskill, *Ibid*, p.195.

⁶⁶ TNA ADM 1/113 Appreciation from Director of Plans to First Sea Lord, 13 January 1941.

⁶⁷ ROSK 6/30 Letter from Forbes to Roskill, 28 January 1950.

The irony of this complaint is in Forbes's earlier demands that signals regarding the location of enemy ships be widely disseminated among commands. Another irony was contained within Foreign Office advice to correspondents that a warship has 'to keep its radio silent, unless it wants to reveal its whereabouts to the enemy'.⁶⁸ It was not until August 1940 that the Admiralty suspected the Germans were reading the naval codes and changed them, thus depriving the enemy of an important intelligence advantage during the period a cross-Channel invasion was most likely to have been made. Unfortunately, German expertise at reading the strength and direction of British naval traffic meant the problem was not entirely removed. By contrast with its British counterpart, during the period 1940-41, the reputation of *B-Dienst* (German Naval Intelligence) was high.

Given the Admiralty's relative enthusiasm for intelligence activity and the post-war publicity regarding Ultra, it seems hard to comprehend that *B-Dienst* was so successful. Kapitan Bonatz, former head of *B-Dienst* attributed the German success to 'long years of effort' rather than any technological breakthrough. Peacetime Royal Navy codes such as GTC and AC gave them few difficulties, as they were not re-ciphered on a regular basis. Familiarity developed with British routines and the phrases used within wireless transmissions. The adoption of Secret Cypher and Secret Code increased the complexity. However, Bonatz also claimed that German expertise in analysing the broad range of wireless traffic soon re-established the initiative. Traffic analysis in this sense includes all of the material that can be gathered through a W/T receiver that is susceptible to analysis, including changes of frequency band, monitoring the appearance of ships maintaining W/T watch; 'corrections; calling-up procedure; acknowledgments; the interpretation of numerous call-up signs and delivery groups'. This sort of analysis did not require cryptanalysis but Bonatz claimed it later enabled a cryptanalysis breakthrough based largely on accurate assumptions regarding message contents, whether or not the message

⁶⁸ W M Stoneman, 'Oslo Falls to Germans: Sea, Air Battles Raging', *New York Post*, 9 April 1940, p.1.

was routine and the experience gained regarding the character and vocabulary employed in British signals.⁶⁹

In this situation, any unnecessary W/T traffic was likely to have deleterious consequences. Forbes undoubtedly considered that too much information was being sent over the air and the next aspect to consider is whether Churchill and the Admiralty (in effect Churchill and Pound) interfered too much in matters that ought to have been left to the C-in-C. Unfortunately, Churchill had undermined Forbes in the Norwegian campaign by dividing his ships between the C-in-C and another officer. This was the elderly Admiral of the Fleet 'Ginger' Boyle, Lord Cork and Orrey appointed as Flag Officer, Narvik and finally supreme commander of the operations around Narvik. Thus, for reasons that are not completely clear, but probably connected with the First Lord's desire to 'divide and rule', Narvik was treated as a separate operational area from the rest of Norway. Yet, it was not completely unrealistic to have one commander to focus on attempting to cut the enemy supply lines at sea, while another commander concentrated on amphibious landings around the crucial Narvik area, notwithstanding the obvious failure to impose a higher degree of coordination. Forbes may have felt resentment about this treatment but he did not seem to let this interfere with the job in hand. Roskill suggests there were difficulties arising from Lord Cork's dependence on Forbes for support, as the commanders could not properly appreciate what the other was doing in their respective spheres. However, a letter to Forbes from Rear-Admiral L H 'Turtle' Hamilton conveys Lord Cork's wish for Hamilton to emphasise 'how grateful he was to you for the A/A cruisers and escort vessels, which have undoubtedly saved the situation'. Not too much can be read into this but it is at least an indication that the naval commanders ended the campaign on cordial terms.⁷⁰

⁶⁹ ROSK 4/42 Letter from Kapitan Bonatz to Roskill, 12 February 1975.

⁷⁰ ROSK 4/49 Letter from Hamilton on *HMS Aurora* to Forbes, 27 May 1940.

The allegation that Churchill had interfered in the Norway operation probably originated in Roskill's official history drafts in which he suggested the First Lord's tendency at certain times 'to spend long hours in the Operational Intelligence Centre' encouraged 'him to assume direct control therefrom' and 'sometimes confused the conduct of operations'.⁷¹ This clearly needled Churchill as he had already written about the operations around Bergen, 'Looking back ... I consider that the Admiralty kept too close a control upon the Commander-in-Chief'.⁷² So sensitive did the matter become that Roskill's accusations spawned an internal government investigation which concluded that the Admiralty had tended to interfere 'too freely' but not as a result of Churchill's interference.⁷³ His exoneration was perhaps unsurprising in view of the reverence in which Churchill's name was then held. Temperamentally, Churchill could not help himself but his insistence on pressing dubious strategies on the military professionals drove even loyal colleagues to distraction.⁷⁴ Roosevelt's envoy Harry Hopkins held the impression that Churchill ran the British war effort from strategy down to the details. A man of considerable paradox, Churchill found the whole business of war exciting, envied the younger men their direct involvement and yet still found room to empathise with the human suffering that war entailed.

Yet if Churchill had a tendency to meddle rather too much in the conduct of operations, then his First Sea Lord was no less guilty. There is abundant evidence to show that Dudley Pound's instincts and actions were to centralise and control to an extreme degree although Forbes's predecessor, Sir Roger Backhouse also had that reputation. Yet Pound was probably one of the most extreme centralisers. At an academic level, Pound

⁷¹ Roskill, *The War At Sea*, p.202.

⁷² Churchill, *Second World War I*, p.339.

⁷³ ROSK 4/75 From Mr E A Seal, Ministry of Works to Vice Admiral Sir Ralph Edwards, 'Draft minute to the Prime Minister.'

⁷⁴ Alanbrooke, *War Diaries*, p.318, p.401, p.409-10, pp.444-46, pp.450-51, p.456, pp.458-59, p.472, p.483, p.515, p.528, p.532 and p.568. Churchill's C-in-C Home Forces and later CIGS made many scathing references to Churchill's inability to grasp details; to relate one front to another or to think in the strategic long-term.

was sometimes prepared to acknowledge the right of a C-in-C to run his own show, but in practice he found it difficult to 'let go'. The culture of excessive secrecy within the Admiralty over which he presided is a further indication of a micromanaging personality. As the Admiralty was an operational centre as well as a department of state, Pound had a technical right to intervene. General Hastings Ismay, in charge of the Military Wing of the War Cabinet Secretariat during 1940, has commented on how this function differentiated between the Chief of Naval Staff and the Chief of the Imperial General Staff and Chief of Air Staff who did not issue executive orders to their organisations. But it was obviously a matter of degree.⁷⁵

According to a former DOD (H), Captain (later Admiral) Ralph Edwards, Pound was the 'arch-meddler'. Edwards expressed amazement to Roskill at the degree to which Pound intervened in operations at sea and claimed he (Edwards) was repeatedly ordered to signal detailed instructions to fleets and ships regarding where their destroyer screens were to be placed. Edwards, who was involved in the investigation exonerating Churchill from interfering, claimed 'his interference was negligible compared with Dudley Pound'.⁷⁶

Admiral John Tovey, Forbes's successor as C-in-C Home Fleet, complained to Roskill that Pound fancied himself as a great tactician and strategist who was in turn adversely affected by a man who was inexperienced, 'narrow-minded, very self-opinionated and even more obstinate and pig-headed than you accuse me of being', VCNS Tom Phillips.⁷⁷

⁷⁵ H Ismay, *The Memoirs of Lord Ismay*, Heinemann, 1960, p.218.

⁷⁶ ROSK 5/124 Letter from Controller of the Navy, Ralph Edwards to Roskill, 28 July 1954. Also see 'Admiralty Reply', *The Times*, 8 Nov.1940, p.9. Edwards may have been among the group of younger naval officers on the operations staff said to have approached Commander Bower MP about the conditions of excessive secrecy surrounding the evacuation of Norway and expressing 'grave disquiet' regarding the 'whole conduct of naval operations' by senior officers.

⁷⁷ ROSK 4/17 Letter from Sir John Tovey to Roskill commenting on draft chapter, dated 1 January 1962. Phillips commanded the naval task force comprising the *Prince of Wales* and *Repulse* sent to the Far East in 1941. Japanese land based aircraft sank both ships and Phillips, who went down with the ship, has often been castigated for stubbornly pressing on without an air umbrella.

Pound was also a worrier. At the conclusion of the *Altmark* affair, Pound wrote a lengthy letter to Captain Philip Vian, commander of the *Cossack* who boarded the German supply-ship in Norwegian waters to successfully rescue prisoners taken by the *Graf Spee*. After a brief sentence offering Vian ‘hearty congratulations’, Pound scolded Vian at length for not updating him with situation reports and complaining how Churchill and himself had spent ‘many anxious hours’ at the OIC, waiting for news. Forbes, who had reason to feel aggrieved about the way the Admiralty had given orders to Vian directly over his own head, also received a letter from Pound stating that ‘no doubt you also spent a good many unnecessarily anxious hours’. In the margin Forbes scribbled, ‘No, I went to bed. I know Vian’. ⁷⁸

Forbes and the Invasion Crisis

The C-in-C’s views on invasion were clearly laid out for the Admiralty in a memorandum dated 4 June 1940. He complained of the difficulty in making an appreciation having been ‘kept in ignorance of the size and disposition of the Royal Air Force and Army’ asserting ‘the repelling of invasion is a matter for all three forces working in the closest co-operation ... history’, he argued, ‘has proved beyond all shadow of doubt that invasion is to all intents impossible without local control of the sea’. In this he emphasised the importance of airpower and how local control of the sea during the Norwegian campaign and minimal Norwegian resistance still cost the Germans 10,000 men. He also went on to stress the irrelevance of German naval power in influencing the Polish campaign and in the Dunkirk operation; also how the air situation had greatly influenced the recent fighting in Europe. If an invasion was launched, he argued, ‘it would be a great opportunity’. He did not see why the Army could not fulfil its traditional

⁷⁸ BL 525565. Letter from Pound to Forbes enclosing letter from Pound to Vian.

function of holding up the enemy until the Navy could cut their supply lines. It was not worth diverting too many naval resources for this purpose and since the Norwegian campaign he had increasingly thought that Germany would go all out to sever British communications by air and submarine, as there was no way of achieving this with 'surface forces'. Consequently 'no first line troops should be kept in England if required elsewhere' he continued. Forbes was also concerned that British ports might be prematurely sabotaged to prevent their use by German forces. The immediate problem, as far as he could see, was to protect the 'sea communications of London (including its docks) against mines, both magnetic and contact ... and against air attack'. He suggested increasing the strength of defensive mine barriers and dared to propose that 'all small craft now allocated to inshore squadrons for invasion be diverted to sweeping'.⁷⁹

The opinions expressed were sensible and vindicated by events. That the Germans now had even greater access to the Atlantic since the fall of France and were also in control of the gate between Denmark and Norway could only increase the potential for imposing economic blockade upon Britain. He also knew that if destroyers, cruisers and submarines attached to the bases at the Nore (Sheerness and Harwich), Portsmouth and Plymouth failed to prevent a landing, then he could be in the Channel from Scapa Flow within thirty hours with the heavy ships of the Home Fleet. It must also be said that having been aboard *HMS Rodney* while under air attack at Norway and having his operations constrained by the German air superiority there, he was clearly irritated by ill-informed criticisms about lack of naval aggression. He was also annoyed that his destroyers and most of his light cruisers had been taken away and placed under the control of base commanders responsible for flotilla defence. Scattering ships around the Channel bases would only bring them within *Luftwaffe* bombing range, and while these were not sitting

⁷⁹ TNA ADM 1/10556 From Forbes to Admiralty, 4 June 1940.

ducks, there was no point in exposing them to the risk of air bombardment without strategic gain.

Forbes's memorandum dismayed the Admiralty. The DOD (H) described the arguments as 'unconvincing' and quoted a Joint Intelligence Committee conclusion that the enemy had enough resources for an invasion despite his 'other commitment'.⁸⁰ While it was generally acknowledged that Forbes may only have been thinking in terms of a mass invasion, it was also felt the possibility of a raid was being ignored despite the fact that successes in France, Belgium and Holland allowed the enemy greater scope for amphibious operations. This internal correspondence shows the Admiralty concern about raids disrupting internal communications and making life unbearable for the civil population.⁸¹

No doubt recalling the naval theories of Sir Julian Corbett, these officers were worried the launching of small raids at different points would cause British defenders to exhaust themselves attempting to defend the whole coastline. After all, this was part of Liddell Hart's 'British Way in Warfare' that had apparently been used with such success in Britain's 18th century wars. However, these officers apparently overlooked the fact that for such a method to succeed, naval superiority was required for the attacker in order to utilise the mobility that such a condition might confer.⁸² The German conquests did of course open up the possibility of raids over short distances from a greater number of foreign harbours than had ever hitherto been the case. But even a raid in the circumstances of 1940 would have been a hazardous undertaking with ambiguous results. A raid, however successful in military terms, ultimately involves the withdrawal of troops and equipment

⁸⁰ TNA ADM 1/10556 Minute from DOD(H), June 1940.

⁸¹ TNA ADM 1/10556 Minute from ARNS (H). 4 June 1940; Minute of D of P, 15 June 1940; DOD (H), June 1940 and D of P, 17 June 1940.

⁸² G Till, 'Naval Power', in R Holmes (ed.), *The Oxford Companion to Military History*, Oxford University Press, 2001, p.633 Raiding hardly represented a policy of unqualified success. The Walcheren raid of 1809 was one of the worst disasters in British military history with the loss of 23,000 men to disease. The Dieppe raid of 1942 cost of 3,367 casualties, 106 aircraft, several landing craft and a destroyer for no tangible result.

plus the abandonment of fallen comrades and this would have been represented as the foiling of a mass invasion. After the war, Churchill admitted that no steps were taken to contradict the persistent rumours that arose in 1940 concerning an invasion attempt that had been foiled as a result of forty German bodies being washed up along the south coast. In the event, no German amphibious landings, other than the unopposed Channel Island occupations were ever attempted on British territory.⁸³

Forbes's arguments were not entirely disregarded as a meeting called in Pound's office on 7 June resulted in the battlecruisers *Hood* and *Renown*, plus one destroyer flotilla being based at Scapa rather than Rosyth in order to deter a German northward breakout.⁸⁴ The argument between the C-in-C and the Admiralty raged over the next few weeks with the latter trying to convince Forbes that an East Coast raid was likely, despite his arguments to the contrary. Trondheim had now become the main *Kriegsmarine* base for heavy ships, meaning that the main surface threat now came to the Northern Patrol or even to Ireland. By the end of June Forbes was being told with increasing force to consider an invasion likely.⁸⁵

A desire to bring home to Churchill the potential effects of attacks from the air upon warships may well account for a curious episode related by General Ismay. An early invasion conference attended by Forbes and Churchill discussed the part to be played by the Home Fleet. The C-in-C shocked the conference by immediately making it clear that his heavy ships would not operate south of The Wash 'under any circumstances'. Instead of erupting into rage, the Prime Minister merely remarked mildly that 'he never took much

⁸³ Churchill, *Second World War, II*, p.275. The bodies are generally believed to have been the result of a disastrous German embarkation exercise where the landing craft capsized as a result of bad weather.

⁸⁴ TNA ADM 1/10566 'Notes of Conference held in First Sea Lord's Room at 15.30, Friday 7 June 1940.'

⁸⁵ TNA ADM 1/10556 Minute of ACNS(H), 18 June 1940; messages to C-in-C Home Fleet from First Sea Lord, 23 and 24 June 1940 and minute from S H Phillips, 26 June 1940.

notice of what the Royal Navy said they would or would not do in advance of an event'. Smiling indulgently, he said 'since they invariably undertook the apparently impossible whenever the situation so demanded ... he had not a shadow of doubt ... we should see every available battleship storming through the Straits of Dover'.⁸⁶

Why did Churchill react in this uncharacteristic manner? Forbes had already shown himself quite capable of resisting the Prime Minister's bullying and he knew well enough that if matters came to the crunch, then he had no choice but to run the gauntlet in the Channel. There is also reason to think that Churchill secretly agreed with at least some of Forbes's strategic ideas. Churchill must have realised he had underestimated the potential of air attack upon shipping during the Norway campaign and knew that taking away Forbes's destroyers to serve in the Channel meant the heavy ships lacked adequate protective destroyer screens. The Prime Minister had never been entirely consistent on the ability of Germany to launch an invasion anyway. Erskine Childers *Riddle of the Sands*, a novel in which Germany planned a surprise invasion using boats hidden in the Frisian Islands caught Churchill's imagination in 1903.⁸⁷ So seriously did he take this idea that when First Lord, he was said to have made it required reading for naval officers prior to 1914. Later, Churchill's speeches of 4 and 17 June 1940 were widely reported and raised invasion fears.⁸⁸ However on 18 June, he was saying that 'the Navy makes a mass invasion impossible, but that "the Navy" have never pretended to prevent raids by 5,000 to 10,000 men thrown ashore ... some dark night'.⁸⁹

The somewhat alarmist Pound told Churchill on 12 July: 'It appears probable that a total of some hundred thousand men might reach these shores without being intercepted by

⁸⁶ R McLeod & D Kelly (eds) *The Ironside Diaries 1937-40*, Constable, 1962, pp.188-89.

⁸⁷ Erskine Childers, *The Riddle of the Sands*, Dent, 1979 edn, (first published 1903).

⁸⁸ 'We Never Surrender', *Daily Mirror*, 5 June, 1940, p.1 and 'We Shall Fight On Unconquerable', *Daily Sketch*, 18 June, 1940, p.1.

⁸⁹ 'Leadership Give Us Leadership', *Daily Mirror*, 18 June 1940, p.1.

naval forces ...' yet, if he was to be believed, Churchill remained confident that such a force was 'well within the capacity of our rapidly-improving Army'. It is easy to criticise Pound for being unduly pessimistic, though he later revised this figure to 200,000.⁹⁰ According to John Colville, Churchill's private secretary, the Prime Minister said he did not believe the Germans could bring troops over from Norway in fishing boats; that he doubted if an invasion was a 'serious menace' but thought it useful in terms of keeping everyone 'tuned to a high pitch of readiness'. He did not want the invasion scare to abate yet and was going to continue giving the impression of imminent danger by talking about 'long and dangerous vigils' in his forthcoming broadcast.⁹¹

Pound's biographer has suggested that, the First Sea Lord and VCNS Tom Phillips were persuaded by an idea emanating from Military Intelligence in the War Office (who had obviously read Erskine Childers) suggesting the Germans might commandeer a flotilla of fast motor-boats each carrying a tank. Admiral Godfrey, Director of Naval Intelligence was one who did not accept this scenario and it must have been galling for his opinion to have been rejected in preference to that of other service colleagues.⁹²

Nevertheless, Pound had the support of base commanders such as Admiral Drax at the Nore who naturally wanted maximum resources under their control, bearing in mind the responsibility for preventing an enemy landing impinged more directly upon them than Forbes. Furthermore as a member of the Chiefs of Staff, Pound must also have been adversely affected by the attitudes of the Army, who did not relish the prospect of getting to grips with the potentially immense power of German land forces.⁹³ A considerable

⁹⁰ Churchill, *The Second World War, II*, p.255. Minute from Fuehrer's Headquarters, 16 August, 1940, *Fuehrer Conferences*, p.128 suggests that 10,000 troops were to be landed the first day of the invasion. Perhaps 10,000 airborne troops could be added to this. Making up to 20,000 troops landing on the first day.

⁹¹ Entry for 12 July 1940. J Colville, *The Fringes of Power: Downing Street Diaries 1939-45*, Hodder and Stoughton, 1985, p.192.

⁹² R Brodhurst, *Churchill's Anchor*, Leo Cooper, p.167.

⁹³ Alanbrooke, *War Diaries*, p.108. The entry of the C-in-C Home Forces for 15 September 1940 does not show much confidence in the Army's ability to defeat an invasion even though Brooke later denied this was a

amount of equipment was lost at Dunkirk and a humiliating defeat inflicted on the BEF. In his relations with the other services, Roskill has described Pound as having a philosophy of 'compromises must be found' an attitude that even the sometimes critical official historian found himself in broad agreement with.⁹⁴

Two days earlier Churchill had written to General Ironside, C-in-C Home Forces, on the lines that Germany would face great difficulties launching an invasion and was arguing for more troops to be moved from a defensive role in the UK to offensive operations abroad, thus suggesting he had taken Forbes's comments on board about not keeping 'first line troops in England if required elsewhere'.⁹⁵ He also quoted Forbes's reply to a War Cabinet question concerning the possibility of German heavy ships covering an invasion. This was that only heavy ships not under repair are based at Trondheim and superior British naval forces guarded this base. It is not too much to say that Forbes had indirectly made possible Wavell and O'Connor's spectacular offensive in Egypt and Libya against the Italians later in the year.

It is also hard to imagine that Churchill's aggressive temperament would have left him sympathetic to the passive defence policy advocated by the Admiralty. Neither was he oblivious to what was happening in the Atlantic while so many potential escort vessels were tied up in the Channel. As early as November 1939 he wrote to Pound expressing serious concern over the 'immense slowing down of trade ... during the first ten weeks of the war'.⁹⁶ But by 7 July 1940, his concern over 'rifle convoys' from the USA was being

true representation of what he really thought at the time. Also see T Ben-Moshe, *Churchill, Strategy and History*, Harvester-Wheatsheaf, 1992, p.274. In fact the history of the later D-Day planning suggests the British were extremely wary of another large-scale confrontation with the *Wehrmacht* even in 1943. Ben - Moshe has claimed that if it had been left to the British, there would never have been a D-Day in 1944.

⁹⁴ Roskill, *The War at Sea*, p.17.

⁹⁵ TNA CAB 120/438 From Churchill to General Ironside and others, 10 July 1940.

⁹⁶ From Churchill to Pound and others, 9 November 1939 as quoted by Churchill in *Second World War, I*, App.II, p.589.

strongly expressed in a minute to the Secretary of State for War.⁹⁷ On 4 August 1940, the Prime Minister sent Pound a haranguing minute about 'repeated severe losses in the North-western Approaches' and speculating that 'this is largely due to the shortage of destroyers through invasion precautions'. He then went on to demand information on the numbers of 'destroyers, corvettes, and Asdic trawlers, together with aircraft' tied down in these duties. 'Anyhow, we cannot go on like this' he continued.⁹⁸ Churchill's own tables show that total British, Allied and Neutral shipping losses surged from 273,219 gross tons in May 1940, to 571,496 gross tons in June and would not fall back to the May figure during 1940.⁹⁹ Had the *Kriegsmarine* not been plagued with unreliable torpedoes, these figures would have been much worse.

Nevertheless, there were limits to Churchill's power and the country did 'go on like this' for several weeks. When his military commanders occasionally united against blustering attempts to press ill-conceived strategies upon them, the Prime Minister invariably backed down. This had been demonstrated during the Norway campaign when he urged the attack upon Trondheim. Concerned about being hemmed into a narrow thirty-mile long fjord by mines dropped in his rear, Forbes forcefully argued against the order to attack. Churchill was furious but after a long and heated argument he eventually retreated when the advisors surrounding him backed Forbes's judgment.¹⁰⁰ The Chiefs of Staff would become more adept at this as the war progressed.

As none of the services were prepared to accept the burden of risk-taking it suited all of the senior figures involved to use the Navy as a visible deterrent to German amphibious landings by encouraging the spread of destroyers and light cruisers around the

⁹⁷ Minute from Churchill to S of S for War, 7 July 1940. Further concern is noted in a minute to Pound, 27 July 1940, *Ibid*, p.237-38.

⁹⁸ Minute from Churchill to Pound, dated 4 August 1940, *Ibid*, p.531.

⁹⁹ Churchill, *Ibid*, p.639.

¹⁰⁰ Churchill, *The Second World War*, I p.489. As indicated in a previous chapter, the radar installed in the heavy ships for the purpose of giving early warning against air attack was ineffective in the fjords making AA defence even less effective than usual.

east and south coasts. The general lack of faith in the ability of the RAF to provide early warning also contributed to this over-cautious attitude, although it was far easier to watch the Channel coast from the air than it had been to patrol Norwegian waters at extreme ranges. There was no German naval Enigma yet and as most of the *Luftwaffe's* communications were being made via landlines not enough information could be divined from intelligence sources to ascertain precise German intentions. Consequently, a large flotilla of small craft mainly commandeered from the fishing fleet was being misemployed on sentry duty outside foreign ports instead of being utilised for anti-submarine work. As Forbes could see no reason why the other services should not be engaged in the initial stages of the invasion it is unsurprising that colleagues treated his views with alarm. Churchill probably saw advantages in these dispositions in terms of maintaining a state of visible readiness that would impress US journalists and being unable to shake the attitudes of those around him, one can only conclude that Churchill was being indecisive.

By September, when the likelihood of invasion was at its height, Forbes's views had not fundamentally changed and he was still arguing the Navy 'should not be tied down to provide passive defence to our country which has now become a fortress'.¹⁰¹ However, on 4 September, the Chief of Naval Staff scared his service colleagues by warning that if the Germans captured the coastal batteries at Dover, they could control both sides of the Straits and deny it to British naval forces. During a meeting of the War Cabinet Defence Committee on 31 October, when autumn should have virtually ruled the threat of invasion out for 1940 anyway, Churchill asked for Forbes's opinion. 'While we are predominant at sea and until Germany has defeated our fighter forces invasion by sea is not a practical operation of war' he replied.¹⁰² Only at this point and with overwhelming evidence from other sources did the Defence Committee agree that Forbes could have his ships back. Churchill had been present when Group Captain Winterbotham of the Secret Intelligence

¹⁰¹ Roskill *The War at Sea*, p.257.

¹⁰² TNA CAB 69/1 (39)40 and Roskill, *The War at Sea*, p.257.

Service had passed on a decrypt during September to the effect that air-loading equipment at *Luftwaffe* airfields in Holland was being dismantled. The Chief of Air Staff then announced it marked the end of the invasion threat for 1940.¹⁰³ In the circumstances, the Prime Minister could not have been in any doubt about the issue and must have been using Forbes purely for the benefit of convincing the War Cabinet.

Sadly, the reward for his record of sound advice was the sack. Replaced by Sir John Tovey in December 1940, Forbes later served as commander of the naval base at Plymouth between May 1941 and August 1943. As this establishment had already declined in importance with the transfer of the headquarters of Western Approaches Command to Liverpool in February 1941, it was hardly an expression of continuing confidence. No official reason for his dismissal remains. However, Pound wrote to Admiral Cunningham on 20 September suggesting there 'seems some chance C.M.F. will be relieved in the near future; not because he has not done well but because there is a growing demand for younger people'.¹⁰⁴

It was undeniably true that the press was constantly demanding the promotion of younger officers at this time and at sixty, Forbes was one of the older field commanders. Yet he was younger than Pound and out lived him by a further seventeen years. The real reasons, according to Levy were 'his independent outlook, unsolicited opinions and fearless critiques of the Pound/Churchill regime'.¹⁰⁵ This analysis is broadly correct but Levy's thesis also surmised that Churchill wished to pursue an 'aggressive policy in the Mediterranean, while hedging his bets with a more defensive posture at home' and this was why Forbes was continually ignored.'¹⁰⁶ This latter point is not entirely convincing. Whilst

¹⁰³ F W Winterbotham, *The Ultra Secret*, Weidenfeld & Nicolson, 1974, p.59.

¹⁰⁴ BL 52565 Letter from Pound to Cunningham, 20 September 1940.

¹⁰⁵ Levy, *Mariner's Mirror*, p.193.

¹⁰⁶ Ph.D thesis. J Levy, *Holding the Line. The Royal Navy's Home Fleet in the Second World War*, 2001, University of Swansea, pp.118-25.

Cunningham later told Roskill that Churchill and Minister of Information, Brendan Bracken, both disliked Forbes; his advice was useful to the Prime Minister in helping him pursue initiatives in the Mediterranean even if he may sometimes have resented the outspoken way in which it was being given.

Longstanding tensions between Forbes and destroyer captain Lord Louis Mountbatten centring on the latter's reckless handling of *HMS Kelly* cannot have helped. Having only been 'mentioned in despatches' instead of winning a DSO for bringing his shattered ship back from an engagement in the North Sea, Mountbatten was convinced that Forbes was plotting against him. Mountbatten was the King's cousin and clearly a bad enemy to make. He was also a friend of Churchill's, and according to the mischief-making Lord Beaverbrook was sent this message: 'Tell Dickie that Winston warned me that Forbes means to break him'. Forbes probably disapproved of Mountbatten's playboy lifestyle, but Hough believed that Forbes was 'much too big a man' to let that interfere with his professional judgement.¹⁰⁷ The poison Mountbatten dripped into the ears of Bracken, Beaverbrook and Churchill may never be known and whether the latter could separate personal feelings from professional judgment is perhaps another matter.

Despite this it was perhaps Pound who represented the main driving force for replacing the C-in-C. Undoubtedly aware that pressure was growing for even the apparently heroic figure of Dowding to be dismissed, he must have calculated that the time had come to replace his own 'difficult' subordinate with an ostensibly more suitable but, in reality, a more pliable and easier to control C-in-C. Having picked up on some of the frustration within the fleet, including perhaps Mountbatten's sense of injury, he must have represented these feelings to Churchill as lack of confidence in the C-in-C.

¹⁰⁷ Hough, *Bless Our Ship*, p.104.

It also needs to be stated that Churchill did not criticise Forbes in his memoirs and even made a point of expressing confidence in him.¹⁰⁸ Forbes later wrote to Godfrey Style that he met a slightly inebriated Churchill at a Navy Club function and was assured privately that he never thought the Germans would invade in 1940. They had now 'made it up'.¹⁰⁹ There were no witnesses to this conversation but much of what Churchill said and wrote from 1940 is consistent with this. His successor as C-in-C Home Fleet later responded to Roskill's comment that in 1939 there was no suitable alternative to Pound for the post of First Sea Lord, stating that: 'Charles Forbes was both and in every way better equipped'. Tovey said that Pound's report that 'Forbes lacked the confidence of the fleet, was, I consider most unfair' except he had an 'idea' that he did not inspect his ships enough but 'confidence in his ability and courage was unquestioned'.¹¹⁰

First Lord A V Alexander found himself defending Forbes at an English-Speaking Union luncheon in October 1940 where he 'deprecatd ...the general assumption that whenever there was a new appointment ... reflection was thereby implied on the officer who was relieved'. Forbes was then allowed some positive praise but it was also stated that the Navy's leadership needed to be in the hands of those who were 'equipped technically and scientifically to meet and defeat new threats'. The statement belied Forbes's considerable technical expertise but it was probably meant to reinforce the idea he was 'too old' and the fact Alexander was mentioning this at a public function suggests some morale-damaging gossip was going around.¹¹¹ A later report in *The Times* concerning parliamentary attacks on the Admiralty also indicated that Forbes had gone as a result of criticism.¹¹² No doubt Alexander also felt the need to impress the Americans present that the Navy would be more effective in the future.

¹⁰⁸ Churchill, *Second World War, I*, p.339.

¹⁰⁹ ROSK 4/49 Letter from Forbes to Godfrey Style, 6 Feb. 1947.

¹¹⁰ ROSK 4/17 Tovey to Roskill, dated 1 January 1962.

¹¹¹ 'The Navy's Task Greatest Ever Faced: Help for Greece', *The Times*, Iss.48760, 30 Oct.1940, p.2.

¹¹² 'Admiralty Reply to Criticism', *The Times*, Iss.4876, 8 Nov.1940, p.9.

Why Was the Contribution of Forbes and the Navy Diminished?

Despite their obvious clash of temperaments, Churchill might have defended Forbes had the latter been in a position to secure a tangible victory for American opinion. While the Norway campaign can now be seen as a naval victory, that country still fell to the *Wehrmacht* and the whole affair had only provoked embarrassing questions in the US press about Britain's ability to wage war.¹¹³ While it was true that Forbes had failed to divine German intentions in time to avert the invasion there, he was severely handicapped with the intelligence initiative in enemy hands. His later conduct of the campaign was also prejudiced by the undue interference of Churchill and Pound. The abject failure of the Navy to intercept German surface raiders further embellished the picture of British incompetence, yet Admiral Tovey proved no more successful at this until the quality of British Naval Intelligence improved.¹¹⁴ Forbes had also been wrong about the whereabouts of German surface units in the *Rawalpindi* affair but there is no reason to think anyone else would have achieved more in the circumstances. On the credit side, he helped build a Navy that was much more forward-looking and resourceful than writers such as Barnett have allowed. Insufficiently emphasised in most accounts is the crippling damage to the *Kriegsmarine's* surface fleet by units under his overall command that would soon have prejudicial consequences to *Operation Sealion*.

His strategic advice was sound and might well have reduced the impact of the U-boat's 'happy time'. Forbes was also unfortunate in having to command the Home Fleet at

¹¹³ 'Leland Stowe, 'Britain Sent 1,500 Raw Troops Without Artillery or Planes to Norway ... and Slaughter', *New York Post*, 25 April 1940, p.1.

¹¹⁴ Bennett, *Behind the Battle*, pp.67-9. Bennett suggests that the *Bismark* was sunk in May 1941 because a variety of intelligence sources came together, including 'the newest source of all, high-grade Sigint, came to the rescue in the nick of time'.

an initial stage of the war when there was no recent experience of commanding the fleet in wartime conditions. Circumstances had changed radically since 1918 and misjudgements were inevitable until the necessary practical experience had been acquired. Yet it could only have been succeeding generations of wartime officers able to benefit from this. While he may have needlessly antagonised Churchill and Pound by his outspoken tendencies and some naval officers disagreed with his views, Admirals Whitworth, Tovey and Cunningham acknowledged his wisdom and held him in high regard. This contrasts with Dowding who antagonised most of his colleagues and with less justification. Neither officer sought publicity but Dowding gained sympathy from the public, politicians and press because he had ostensibly delivered a decisive victory that was being sold to US opinion. Forbes was indeed a fine admiral and the more able and deserving of the two figures. But with no tangible victories to point towards and lacking the flair for flamboyant publicity that might have engaged the journalistic instincts of Churchill, Beaverbrook and Bracken, there was little incentive to protect him. Sadly, he had nothing to offer the crucial campaign for winning over the USA and it is this campaign that will be studied in the next chapter.

Chapter 7

Why We Fight? The Battle of Britain

‘The story is told in vivid scenes, but facts and figures are carefully and accurately recorded, and it will surprise many people who have lived through these tremendous years to see, for the first time, laid out in order, what happened and why ... Things have been said about what we have done and how we behaved, which we could never have said about ourselves.’¹

(W S Churchill)

The previous chapter suggested that the positive contributions of the Royal Navy and Admiral Forbes towards invasion did not achieve full recognition because of their relatively passive role in the summer of 1940. Their activities simply could not compete with newspaper headlines showing enormous (though over inflated) tallies of downed German aircraft by the RAF and the relative values of the maritime and air dimensions in the theme of propaganda will be examined in this crucial chapter. The Battle of Britain would largely become an Anglo-American construct but the factors shaping this and the role of politicians, media figures and other organisations have not been fully examined by others. This chapter will show how they interacted from the time the press reported Churchill’s declaration to the Commons. ‘The battle of France is over. I expect that the battle of Britain is about to begin.’²

It is generally accepted that from the moment he became Prime Minister, Winston Churchill’s actions were geared towards bringing to bear the enormous industrial potential of the United States of America in the cause of the Allies.³ When France sought an

¹ Press Release from Ministry of Information Films Division in Imperial War Museum, as quoted by A Calder, *The Myth of the Blitz*, Pimlico, 1997, p.248.

² ‘Leadership, Give Us Leadership’, *Daily Mirror*, 19 June 1940, p.1.

³ T Ben-Moshe, *Churchill, Strategy and History*, Harvester Wheatsheaf, 1992, p. 125. Ben-Moshe described this as ‘a supreme strategic objective’. He also pointed out that it was Roosevelt who had made the approach to Chamberlain, Halifax and Churchill in 1939, but the only Briton to show real interest in ‘institutionalising

armistice a few weeks later, the only realistic prospect of Britain continuing the struggle lay with the willingness of the USA to increase the flow of essential war supplies. In the longer term, the only chance of winning the war must have seemed to lay with the USA sending an army as they had in 1918. But with American opinion set firmly against direct involvement this could not be anticipated within the foreseeable future and perhaps would never happen. Churchill's considerable oratory powers using highly charged emotional appeals were unlikely to cut any ice with the Cabinet unless he could hold out the prospect of continuing and increased tangible material assistance from this quarter. It is known that some government members such as Lord Halifax were initially in favour of negotiating with Germany. Reynolds notes that it was not without insisting 'he would fight to the end if Britain's integrity and independence were endangered, for instance if Hitler demanded the fleet or the RAF'.⁴

Unfortunately, Churchill had been given little or no encouragement from the USA since he had taken over as Premier and even the re-election of Roosevelt in November held out no prospect of significantly greater participation until 1942. At the end of 1940, Sir Walter Layton of the Ministry of Supply reportedly warned his superiors that US industry had still not fully mobilised because they lacked full appreciation of the effort required. Consequently, American aid would not peak until 1942, hardly an edifying prospect for

such personal contact was Churchill, who had always attached importance to US involvement in Europe and to Anglo-American cooperation'.

⁴ TNA CAB 65/13, confidential annexes, WM (40) 139/1, 140, 141/1, 142, 145/1 as quoted by D Reynolds, *In Command of History: Churchill Fighting and Writing the Second World War*, Allen lane, 2004, p.169. Churchill, *Second World War, II*, p.157. He claimed that the question of fighting-on was never 'on the War Cabinet agenda' and said they were 'too busy to waste time upon such unreal academic issues'.

C Ponting, *1940 Myth & Reality*, Hamish Hamilton Ltd., 1990, pp.103 –18. Ponting deals cynically with Churchill's version of events and uses Chamberlain's diary entry of 26 May 1940, as evidence that Churchill was prepared to make peace by sacrificing Malta, Gibraltar and some African colonies if we could 'get out of this jam'. Churchill vetoed what appeared to be peace initiative made by Lord Halifax and RAB Butler behind his back at a Cabinet meeting on 19 June 1940. Churchill dominated the Cabinet from the time of the attack on the French Fleet at Oran on 2 July 1940 and later that month he quashed peace feelers put out by ambassador to the USA, Lord Lothian.

J Charmley, *Churchill: The End of Glory*, Hodder & Stoughton, 1993, p.405. Charmley points out that having to consider the idea of a negotiated peace did not make Churchill less resolute but in order to keep the important figure of Lord Halifax in the Cabinet he needed to indicate he would allow a compromise peace if the circumstances were right.

Churchill who needed to hold out the prospect of heavy aid sooner rather than later.⁵

Unfortunately, Churchill was not ideal for the task of persuading the USA.

Most Americans preferred Britain to Nazi Germany but the British Empire roused ambivalent feelings in those moulded by the beliefs espoused in the tumultuous events of 1776 and Churchill was the arch imperialist. Churchill and Roosevelt had met once during World War I but Churchill's manner had upset the US Secretary for the Navy.⁶ As First Lord of the Admiralty at the time of the sinking of the *Lusitania*, Churchill was held by American isolationists to have engineered the incident to inveigle the USA into WWI. Unfair as this was, it could only mean that Americans could only view his words and actions with varying degrees of suspicion. Nevertheless, he had taken up President Roosevelt's offer to correspond on matters of mutual concern when at the Admiralty and saw the possibility of manipulating American fears of German expansion into US spheres of control. As an enthusiast of all things maritime and dedicated disciple of A T Mahan, the President had earlier suggested sending Captain Ingersoll of the US Navy to London to set up contingency plans for staff talks in 1937.⁷ These spluttered out in an atmosphere of mutual distrust before hostilities commenced, but the signing of the *Anglo American Trade Agreement*, 1938 following the *Munich Agreement* also demonstrated that both countries recognised the need for some broad display of Anglo American solidarity.⁸ Roosevelt was certainly broadly sympathetic to the British cause and arguably was even more concerned than British politicians about Nazi intentions during the late 1930s. But he was by no

⁵ R P Post, 'Britain Told Not to Count On Heavy US Aid Till 1942', *The Washington Post*, 27 Dec. 1942, p.2.

⁶ J P Kennedy, unpublished diplomatic memoir, quoted in Michael Beschloss, *Kennedy and Roosevelt: The Uneasy Alliance*, New York, 1980, pp.198-200 as quoted in D Stafford, *Roosevelt & Churchill: Men of Secrets*, Abacus, 1999, pp.xvi-xvii.

⁷ J G Utley, 'Franklin Roosevelt and Naval Strategy, 1933-41' as quoted by E J Marolda, *FDR and the American Navy*, Macmillan Press, 1998, p.51. Utley described FDR as a man who believed that 'American prosperity and security depended on access to the raw materials and markets of the world.' p.49. J R Leutze, *Bargaining for Supremacy: Anglo American Naval Collaboration 1937-41*, p.7. Leutze believes that FDR's desire for collaboration on naval issues was rooted in Japanese renunciation of all naval treaty limits in 1936.

⁸ C Whitham, 'Seeing the Wood for the Trees: The British Foreign Office and the Anglo American Trade Agreement of 1938, University of West of England', <http://tcbh.oupjournals.org/cgi/content/abstract/16/1/29>, accessed 25 April, 2005.

means uncritical of British motives where the Empire was concerned and authors such as Leutze, point out he was also looking to the 'main chance'.⁹

In an American presidential election year, public opinion counted for a great deal. A vast number of American newspapers might be studied for insights into 'public opinion' including several written for ethnic communities in languages other than English. The question as to whether newspapers reflect or create 'opinion' is probably irresolvable. According to Hobson, a former financial journalist, the traditional argument is that the post-Murdoch era has been about 'giving people what they want, rather than what they ought to want'. The new corporate masters are interested in 'profit as well as power' and the primary purpose is to boost circulation and advertisement revenue. When most newspapers were family run concerns, the Fleet Street of Beaverbrook and Northcliffe was dedicated to propaganda rather than financial gain.¹⁰

Unlike Britain, the USA has never had a national press and even if it could be accepted without reservation that newspapers reflect rather than shape opinions, no single newspaper could encapsulate the full diversity of American opinion. With a long and poorly protected western seaboard containing sizeable Asian minorities, Americans in California shared concerns over German intentions with Washington, but balanced these with equally substantial worries over Japan.¹¹ These reservations aside, some broad idea can be gleaned from the pages of the *Washington Post* covering some of the crucial weeks of 1940. It was (and continues) to be regarded as an influential newspaper circulated in the US capital but with a national readership. Furthermore, it included syndicated columns read in other American newspapers and as far as war news was concerned, all American

⁹ Leutze, *Bargaining for Supremacy*, p.5.

¹⁰ D Hobson, *The National Wealth: Who Gets What in Britain*. Harper Collins, 1999, pp.842-44 and p.869.

¹¹ An admittedly impressionistic survey of the *San Francisco Chronicle* at the National Newspaper Library, microfilm reference MA191, during December 1940 seems to confirm this. Even a year before Pearl Harbor, the comic strip 'Tracey and the Pirates' showed Japanese soldiers as the villains of their stories.

papers were forced to lean heavily on the same pools of correspondents that in turn heavily depended on British official sources.

Rescued from bankruptcy in 1933 by financier Eugene Meyer, the *Washington Post* espoused high-minded principles including objectivity, independence and being 'fair and free and wholesome in its outlook on public affairs and public men'. This probably explains its limited circulation figures - 54,000 in 1933 to 162,000 in 1943 and the fact it was continuing to lose money.¹² For all its sentiments of independence and non-alignment, the tone of writing was pro-Roosevelt and it is probably no coincidence that President Truman appointed Meyer the first president of the International Bank for Reconstruction and Development in 1946. This newspaper usefully recorded Gallup polls relating to US feeling throughout the country relating to aid to Britain and were likely to have been published in all major US newspapers. Articles indicated how the newspaper felt about the international situation and how it was being influenced by the Battle of Britain.

The attitudes of American war correspondents covering the Battle of Britain with various sources including the American journalist, Eric Severeid will also be examined. Severeid is particularly interesting as he came from the isolationist Mid-West. As a controversial WWI Minister of Information and media magnate with interests in British and North American publishing concerns, it is unsurprising that Max Aitken (Lord Beaverbrook) became Minister of Aircraft Supply during 1940. Churchill's private secretary suggested 'many people thought he was evil'.¹³ But this petulant Canadian entrepreneur with a reputation for dubious dealing was a successful press lord. Beaverbrook confessed to preferring power to profit and ran his newspapers to that end. 'What I want is power' Beaverbrook is alleged to have said. In 1948, he told the Press

¹² *The Washington Post Company*, www.washpostco.com/history-history-history-1925.htm, accessed 8 June 2005.

¹³ J Colville, *The Fringes of Power: Downing Street Diaries 1939-45*, Hodder & Stoughton, 1985, p.732.

Commission 'I run the paper for the purpose of making propaganda and with no other purpose'.¹⁴ If only for these reasons, his value to Churchill clearly transcended his aviation duties and his propagandist activities are examined here rather than his better-known role in aircraft production.

Having appointed Beaverbrook protégé, Brendan Bracken (1901-58), who was also Churchill's former Personal Private Secretary from the Admiralty as Minister of Information,¹⁵ the Prime Minister had a wealth of journalistic expertise within his inner circle to add to his own. It is however, Beaverbrook's personal papers that have been scrutinised for insights into the campaign to secure American aid and these appear throughout this chapter placing other sources in context. These reveal an interest in filmmaking as a method of putting the British case to the American public. Later on, it may have been Beaverbrook and Bracken who helped persuade Churchill to allow American film director Frank Capra to film him introducing the propaganda series *Why We Fight?* Churchill's short introduction urged audiences to accept the series as a factual interpretation of the events up to the current stage of the war.

Film number 4 in this series entitled *The Battle of Britain* was shown to US servicemen and distributed in British cinemas in late 1942 after the US had entered the conflict. As Calder has noted, 'no film about the events of 1940-41 in Britain reached such a vast audience'.¹⁶ As this was a time when the legend was being formulated, a copy has been obtained from the film archives of the Imperial War Museum. With the help of

¹⁴ Hobson, *The National Wealth*, p.842 & p.844.

¹⁵ A former director of publishers Eyre & Spottiswoode, Bracken ran many newspapers and was editor of the *Banker*. His biographer declared it difficult to estimate the value of his influence but acknowledged his role in the prompting of appointments and patronage. It was also claimed 'he was in his element at the centre of power ... one of the two or three men closest to Churchill'. An interest in naval affairs is implied by his appointment as First Lord of the Admiralty towards the end of the war. D Woodruff in 'Bracken, Brendan Rendall Viscount Bracken (1901-1958)', E T Williams & H M Palmer (eds), *Dictionary of National Biography 1951-60*, Oxford University Press, 1971, pp.135-37.

¹⁶ Calder, *The Myth of the Blitz*, p.247.

Capra's autobiography, it is analysed here with a view to discovering exactly what the Americans had said the Battle of Britain had been about after the event.

The Battle of Britain and *The Washington Post*

There is no doubt that US sympathy was on the side of the British. A letter to the editor of *The Washington Post* in July described a newsreel shown in a Washington cinema portraying a German aircraft being shot down in flames by the guns of an aircraft carrier. To the embarrassment of the correspondent, the incident was 'occasion for loud applause from almost the entire theater'.¹⁷ However, turning sympathy into positive action was another matter entirely.

Although a significant amount of space in the *Washington Post* was devoted to stories of the air war, and concern was expressed that the British might not hold out, there is little indication the air war was considered fundamental to this during July. An end of year summary article charting the rise of aid-to-Britain sentiment written by Dr George Gallup, Director of the American Institute of Public Opinion based on polling data, does not use the term 'Battle of Britain' as such but he did indicate a 2% rise in sentiment from 15% favouring the US entering the war between 19 July – 'following re-organisation of British strength in England' to 17% for October 'aerial blitzkrieg on Britain'. The high point of intervention sentiment was shown as being 19% on 14 June 'following Italy's entrance' which was greater than the 14% recorded on 6 July 'following collapse of France' and much more than the measly 5% polled in October 1939. The greatest fall in sentiment occurred in December 1940, apparently as a result of the successful British

¹⁷ D C Stephenson, 'Excerpts From Our Letters: Unfair Applause', *The Washington Post*, 28 July 1940, p.6.

offensive in North Africa and despite the continuing virtually unopposed night bombing of London and other cities.

The only tentative conclusions to draw from these figures is that irrespective of the fluctuations, only a small minority of those polled favoured entering the war and British 'successes' did not necessarily encourage US war entry. In fact, as Gallup stated, 'because of recent British successes, and because many think that our increased material assistance will turn the tide' those favouring entry are now less than at the 'height of the blitzkrieg last fall [the night blitz]'. The interpretation of Dr Gallup in terms of relating the question of immediate war to the 50,000,000 Americans who voted in the November Presidential elections meant that if a war vote were taken in December 1940, only 6,000,000 would be in favour.¹⁸ Schneider has remarked that even after a further year of Axis triumph, a Gallup poll of 22 Nov. 1941 revealed that only 26% surveyed were in favour of immediately declaring war.¹⁹ This suggests that even Pearl Harbor would not have been enough to tempt American into the fight without Hitler's declaration of war on the USA in December 1941.

Possibly, victory in a 'colonial war' was not the sort of success that Americans could wholeheartedly approve and while success in standing up to bombing evoked considerable sympathy and admiration, it was still something of a negative achievement. Cull has confirmed the 'Britain-Can-Take-It' line employed by propagandists had limitations quoting American correspondent Larry Lesueur that it could not be used forever and he had never seen a boxer win a match simply because he could 'take it'.²⁰ Some shift in American opinion can be noted but it is clear that direct American intervention could

¹⁸ Dr G Gallup, 'The Gallup Poll: 60% Favour Greater Aid to England', *The Washington Post*, 29 Dec. 1940, p.11.

¹⁹ J C Schneider, *Should America Go To War?* University of North Carolina Press, 1989, p.xviii,

²⁰ Interview Lesueur; BBC WAC R34/472/1, Stewart (MoI) to Controllers of Programmes and Home Service, BBC, 2 Jan. 1941, as quoted by Cull, *Selling War*, p.114. The MoI decided at the end of 1940 that the line had outlived its usefulness and asked the BBC to discourage its use in broadcasts.

never have been on the cards during 1940. Realistically, the British could only hope that an increasing number of Americans would favour more aid to Britain. In fact, the overwhelming numbers of Americans, approximately 88% in July 1940 were in favour and by November this had slightly increased to 90%.²¹

A trickier question was whether 'it was more important to keep out of war ourselves, or to help England win even at the risk of war?' Undoubtedly, the British were pleased to see this climb steeply in favour of helping Britain and risking war from a modest 35% in May 1940 to 60% in November 1940. Support on this question had briefly stalled in the period immediately before the American Presidential campaign when both candidates had tended to emphasise peace for the United States.²² This had risen significantly through the period of the air campaigns but it seems likely the respondents were also weighing the risks to US shipping and recalling the role that U-boat campaigns had allegedly played in US entry to World War I. Not that it should be assumed there was a universal acceptance that naval matters had played the dominant role in this. The causes of US entry had been hotly debated in the 1930s with *The Senate Investigation of the Munitions Industries 1934-36* blaming industrialists and munitions makers for dragging America into war.²³

It was also often asserted in the *Washington Post* that US rearmament was failing to meet requirements, meaning that Americans always had to bear in mind British prospects of survival in deciding whether it was better to help Britain or keep the fruits of existing war production for the use of US forces.²⁴ A letter from Lord Rothermere in North America to Beaverbrook in July 1940 stated the 'pressure to rearm is terrific' and stressed

²¹ 'Rise of Aid-to-Britain Sentiment', *The Washington Post*, 29 Dec.1940, p.11. This graph is imprecisely drawn but a figure of 88% seems reasonable.

²² Gallup, 'The Gallup Poll', *The Washington Post*, 29.Dec 1940, p.11.

²³ <http://us.history.wisc.edu/hist102/lectures/lecture20.html>, University of Wisconsin, accessed 1 May 2002.

²⁴ R P Post, 'Britain Told Not to Count On Heavy US Aid Till 1942', *The Washington Post*, 27 Dec. 1940, p.2.

the anxiety of people in government. Rothermere then accurately predicted the difficulty in getting 'really big assistance from them'. Only when the Americans 'have appreciated what this war means for them and when they fully understand this I think you will get a move for closer co-operation'.²⁵

Another article gave useful information on the geographical diversity of attitudes relating to the US entering the war. 'Southern States' were most in favour of going in at 17% with the 'West Central States', perhaps because of their German communities and traditional conservatism, less enthusiastic at 9%. On the question of helping England, but at risk of war – it was again the Southern States most in favour at 75% and again the West Central States less favourable at 54%.²⁶ Nevertheless, it was significant that even in the cautious Mid-West, there was still a majority in favour. It was certainly the feelings of the Mid-West giving the most concern to the Inter-Allied Information Committee (New York) in June 1940. Their representatives, Mr Hall and Mr Powell had toured this area and found 'sympathy with the Allied cause is extremely unsatisfactory'. The people had been influenced by pro-German sources that were 'extremely successful in promoting a feeling which is anything but favourable to the Allied cause'.²⁷

The extent to which these figures reflected a 'black vote' is unknown. It would be wrong to assume that black Americans automatically wished to support a fight against a radical racist state such as Nazi Germany. One newspaper focussing on 'black interests' tended to view the conflict as 'just another clash among rival groups of white exploiters' but how typical this attitude was among black people is impossible to say. The racial problems of the South were severe and it cannot be assumed that black people were

²⁵ PA BBK/D/496 From Rothermere to Beaverbrook, 16 July, 1940.

²⁶ 'Sectional Vote on US Entering War, Giving Greater Aid to Britain', *The Washington Post*, 29 Dec.1940, p.11.

²⁷ TNA INF1/435. 'Annex 1 To the Minutes of the 20th Meeting of the Inter-Allied Information Committee, June 3rd - Modifications in the Inter-Allied Information Service.'

permitted to participate in polling while 'Jim Crow' was still in the driving seat. This aside, they would have been underrepresented because of low education opportunities.

According to Schneider, 'pollsters did not ask the "right" questions, specify the characteristics of the respondents as precisely as one might wish, or repeat questions over time at suitable intervals.'²⁸ None of this completely invalidates the results but scientific polling was still in its infancy and whatever the limitations, Roosevelt needed to take these into account with an upcoming election.

Another Gallup article published as the air battle neared a climax suggested that an intensification of the crisis in Europe would aid Roosevelt's election campaign. 'If England is defeated between now and election time and it looks as though the United States might have to fight Germany, which candidate would you prefer for President – Wilkie or Roosevelt?' went Gallup's ponderous question. If the election were held now, while Britain was still undefeated 51% would vote for Roosevelt, but otherwise the result was 58%, a contrast showing a 'substantial increase in Roosevelt's popular strength in case war seems imminent'.²⁹

An edition of the *Washington Post* on 20 December raised a concern that recent British successes, far from keeping Britain in the war, may ultimately have the reverse effect. Noting that some Englishmen in favour of a negotiated peace remained within the British government and these were the 'propertied and hitherto privileged classes who fear social revolution in England that war threatens to cause, even if Great Britain wins decisively'. Arguing that Britain has stood up to air attacks, frustrated invasion and beaten the Italians in the Mediterranean, it was claimed British prestige had risen. As Hitler had put out peace feelers thus revealing his own lack of confidence in ultimate victory, then a

²⁸L Harper, *Chicago Defender* 1940 as quoted by Schneider, *Should America Go*, p.xvii. and p.44.

²⁹ Gallup, 'The Gallup Poll: Voters prefer Roosevelt if British Lose', *The Washington Post*, 4 September 1940, p.1.

favourable peace to Britain was obviously attainable. The alternatives would be more destruction, living like 'wild animals', loss of financial empire to the USA and the possibility of social revolution at home. The source of this information was claimed to be diplomatic reports indicating 'certain groups' were increasingly expressing such sentiments and the columnist suggested these sorts of views might have influenced Ambassador Joe Kennedy's pessimistic reports about Britain continuing the war.³⁰

This represented a convincing scenario and the 'diplomatic reports' might provide some explanation for Roosevelt's favourable response to the British government's cash crisis at the end of 1940. It also provides considerable justification for the speculation surrounding the later flight of Rudolf Hess to Great Britain where it has often been asserted that Hitler was trying to contact the 'Peace Party' within the British establishment.³¹ None of this appears in Churchill's lengthy review of Britain's position and appeal for financial aid to Roosevelt dated 8 December 1940 as he had learned the importance of not stepping too hard on American sensibilities.³² His earlier attempts in May 1940 to 'blackmail' the US for aid by using the possible fate of the British fleet in the hands of 'appeasers, bargaining amid the ruins' had not been successful and led to serious US discussion of seizing British and other European possessions in the Western Hemisphere.³³

Enough of this debate had seeped into the public domain by July 1940 for Gallup to poll the US public on the question of seizing European possessions near the Panama Canal. This was conducted against the background of a US sponsored conference at Havana with the twenty-one American Republics debating the fate of these territories. The poll showed a heavy majority – 87% - in favour of the US taking over these areas in the event of a

³⁰ E K Lindley, 'Our Best Defence: Bolstering of British Morale', *The Washington Post*, 20 Dec. 1940, p.17.

³¹ J Harris and M J Trow, *Hess: The British Conspiracy*, Andre Deutsche Ltd., 1999. This is a central premise of conspiracy thrillers.

³² Churchill to Roosevelt, dated 8, Dec.1940 as quoted by Churchill, *The Second World War, II*, pp.494-501.

³³ Churchill to Roosevelt, 20 May 1940, *Ibid*, pp.50-1. S Conn and B Fairchild, *The Framework of Hemisphere Defence*, pp.34-5 as quoted in J Leutze, *Bargaining for Supremacy: Anglo-American Naval Collaboration 1937-1941*, The University of North Carolina Press, 1977, p.75.

German victory over England. A similar number – 84% - were prepared to fight to keep the Germans out of these areas. Again a large majority, 81% were prepared for the USA and the American Republics to buy these possessions should Britain require more money for the war.³⁴ These figures represented a mandate for action on the flimsiest of pretexts and it is not difficult to see how these results might have encouraged the significant Destroyers-for-Bases deal agreed in September. On the day the poll results were published the text of *The Act of Havana* was also announced. This revealed an agreement whereby, in any emergency, any country ‘shall have the right to act in a manner required for its defence or the defence of the continent’.³⁵

As Leutze remarks, in the circumstances of this forthcoming conference, Lord Lothian had already determined that offering these Caribbean bases to Washington ‘spontaneously’ and generously might counter uncompromising American demands for rights in British possessions and gain something in return.³⁶ Lothian was right about the Americans being prepared to demand these bases but Leutze also notes that important British figures including Lord Lloyd, the Colonial Secretary, were heavily opposed to making a deal as they saw the only way to involve America in war was to maintain fears about security.³⁷

Another article linked the Battle of Britain with Havana. Columnist Walter Lippman (1889-1974) was an influential political columnist with his *Today and Tomorrow* column syndicated nationally. As assistant to Woodrow Wilson’s Secretary of War in 1917, Lippman helped draft the *Fourteen Points Peace Programme*. It is indicative of his standing that Lippman was a delegate to the Paris Peace conference of 1919 and helped

³⁴ Dr G Gallup, ‘US Public Favours occupation of Islands in Caribbean if Hitler Wins, Poll Shows’: 87% Would Take Over Foreign Holdings Near Canal’, *The Washington Post*, 21 July 1940, p.2.

³⁵ ‘Act of Havana Text’: How Americas Will Act In Emergency’, *The Washington Post*, 30 July 1940, p.7.

³⁶ Memorandum of conversation between Cordell Hull and Lord Lothian, 24 June 1940, Box 7, Roosevelt Papers as quoted by Leutze, *Bargaining for Supremacy*, p.104.

³⁷ TNA FO. A 3297/2961/45. Letter from Poynton to Balfour, 14 July 1940, as quoted by Leutze, *Bargaining for Supremacy*, p.105.

draft the Covenant of the League of Nations.³⁸ His German-Jewish ancestry and the socialism of his youth obviously pre-disposed him against the Nazi regime.

Lippman saw the measures agreed at Havana as deriving 'their whole significance from the struggle between Great Britain and the Nazi domination of continental Europe'. If it were not for the possibility of breaking the blockade, and the Axis achieving 'something like naval supremacy in the Atlantic Ocean' and adding the British assets of 'industry, shipbuilding, foreign investments and finance into the totalitarian system, the problems discussed at Havana would not exist'. The rest of the article dealt at length with how British naval power was protecting the USA from the problems of competing on equal terms with a 'totalitarian monopoly'. The fall of Britain would mean the disappearance of 'the last free market outside the Americas'. Axis naval supremacy, including control of the massive British merchant fleet would mean the South American states, 'especially of the temperate zone' would then allegedly have to carry on three-quarters of their trade with the European monopoly. The crucial importance of sea power was asserted in the 'battles around Great Britain and Gibraltar'. This was stressed heavily as they would 'decide whether the independence of the nations of this hemisphere can be defended in the future as it has been in the past'. There were also references to the west coast of Africa, the Cape Verde Islands, the Azores and Greenland all being used as 'stepping stones to domination of any part of this hemisphere'. Economic dependence would also mean 'fifth column' uprisings in South America, all of which would be further prejudicial to American security.

Lippman went on to claim that 'the Battle of Britain will therefore, decide whether the United States must maintain permanently a very large army, and whether American industry must be regimented permanently on military lines'. In the circumstances of a British defeat, very little prospect was seen of the USA achieving 'even parity, much less

³⁸ 'Walter Lippman', *Spartacus*, www.spartacus.schoolnet.co.uk/USALippmann.htm, accessed 8 June 2005.

mastery in the Atlantic Ocean'. Consequently, the USA would be driven to maintaining a large army, introducing conscription and changing its way of doing business.³⁹

The precise impact of this article cannot be gauged but it did home in on traditional US insecurities. It also showed signs of being influenced by Lord Lothian's speech to Yale University Alumni on 19 June 1940, where very great play was made of the historical importance to the United States of the Royal Navy.⁴⁰ Lippman's emphasis was very much on how a British defeat would impact on US economic interests and the American way of life. As the worst deprivations of the Depression were only a recent memory, sensitivity of threats to American recovery were particularly delicate. In any case, the shibboleth of 'free trade'⁴¹ has always been central to any discussion of American foreign policy and concepts of regimenting economic life are even more alien to the 'American way' than the British. Conscription is controversial in most liberal democracies but the prospect of maintaining a large standing army in 'peacetime' was clearly as awkward for 1940s Americans as earlier generations of Britons. As many Americans were descendants of British colonists, they retained some shared cultural memories with the British in that unlike navies, large standing armies might be instruments for powerful minorities to inflict their tyrannical will upon the majority.

Furthermore, compulsory military service concepts inevitably impinge on individual freedoms raising tricky constitutional issues. Roosevelt had undermined this during the 1930s by forcing a quarter of a million young males into the Civilian

³⁹ W Lippmann, 'Today and Tomorrow: Havana and the Battle of Britain', *The Washington Post*, 30 July 1940, p.7. It is of interest to note that Lippman was considered to be a 'darling' of the 'liberal intelligentsia' and a critic of the British Empire. See Stafford, *Roosevelt and Churchill*, p.147 and p.180.

⁴⁰ TNA FO 371 'Address by The British Ambassador to the United States, The Most Hon, The Marquess of Lothian CH at Yale University Alumni Luncheon on Wednesday, June 19th, 1940.'

⁴¹ H Brogan, *The Penguin History*, Penguin Books, 1990 edn, p.571. Roosevelt's secretary of state, Cordell Hull was particularly known for his inclination to lecture 'unreceptive ears...on the glories of free trade'.

Conservation Corps under semi-military conditions⁴² and his alleged dictatorial tendencies had already been spotlighted in his infamous clash with the US Supreme Court over abuses of presidential power. The power of these fears of fifth column activity in South America help to explain their successful manipulation by British Intelligence in order to gain an easing of the *Neutrality Act* later in the war. Stafford believes Roosevelt was happy for this disinformation to be circulated in 1940-41 and turned a 'blind-eye'.⁴³

Also reacting to Havana and American press attitudes towards these US fears, Herman Goering gave an interview to one of the few pro-German American journalists Karl von Wiegand. Goering stressed that although 'German air power is supreme in Europe' the USA is isolated by 'ponds' more than '3, 000 miles wide and another 5,000 miles on the other, [the USA] cannot possibly be invaded either from the sea or air'. Scorning the idea that Greenland could be used as an air base, he pointed out that it was so unsuitable it was given up as a base by commercial firms running the transatlantic air route. Showing an awareness of US industrial potential he stated that America 'will be a match for any Power or combination of Powers'. Characteristically, Goering also boasted about German air power dominating the Atlantic but conceded that airpower was very young and 'has certain limits'.⁴⁴ The article made valid points but Greenland was not the only potential 'stepping stone' and it seems to have made little impact on American thinking.

⁴² J G Norris, 'Bill Now goes to Conference; Would Register 24,000,000 Men, Delay Service Pending Drive to Recruit Army', *The Washington Post*, 7 Sept.1940, p.1. The *Burke-Wadsworth Bill* went before Congress in September calling for the immediate registration of 24,000,000 men between 21 and 44 band. This article suggests a degree of caution insofar as it allowed a 60-day trial of voluntary enlistment for 400,000 volunteers. Only if this failed would the President draft enough men to make up the difference. Critics claimed the figure was unattainable and the trial was a ploy to delay the draft issue until after the November election. Also see Brogan, *The Penguin History*, p.540.

⁴³ Stafford, *Roosevelt and Churchill*, p.75.

⁴⁴ 'Goering Speaks to America: Honeyed Words and Boasts', *The Times*, Iss.48682, 31 July 1940,p.3. Karl H von Wiegand was one of William Randolph Hearst's best-known correspondents. According to handouts Wiegand was the 'personal acquaintance of Chancellor Adolf Hitler for more than 17 years [who] has had more interviews with the German Chancellor than any other American...' 'Report from Madrid', *Time Archive*, www.time.com/time/archive/preview/0,10987,792053,00.html, viewed 28 July 2005.

At the time these articles were written, the air campaign over England was in an early phase, but this initial American view of the Battle of Britain was far more wide-ranging and naval determinist in nature. Airpower was not prominent in any context whatsoever. For Americans, this naval dimension was at the very core of their concerns. In retrospect, some of these seem exaggerated and underrate the nation's vast industrial potential to out-build any enemy fleet combination. Numbers alone could not properly evaluate the potential superiority of a combined European fleet and the difficulties of welding together a massive fleet of disparate nationalities and equipment, mostly with questionable loyalty to Germany would have been significant factors. Even so, these factors presented to an audience lacking a detailed knowledge of such matters were highly inflammatory.

American fears about the future use of the British fleet were calmed with the announcement of the 'Destroyers-for- Bases' deal reported in *The Washington Post* on 4 September 1940. The British were reported as 'rejoicing' over the deal and American Congressional opinion was cautiously quoted as 'evoking commendation' though isolationist leaders expressed anger. According to Democrat Senator Clark of Idaho, 'Transfer of the destroyers amounts substantially to an act of war.' The only adverse aspect of the deal that Roosevelt's presidential opponent, Wendell L Wilkie seized upon was the secrecy surrounding the deal. Given that his policy was also for 'helping the British', it was perhaps his only opening for exploiting Roosevelt's weakness of perceived dictatorial tendencies. Secrecy was inevitable given the fact that negotiations had been protracted and marked by mutual distrust. The British Foreign Office, clearly worried about the effect in Britain of being seen to conclude a poor deal described the pledge never to sink or surrender the fleet if UK waters became 'untenable' as a 'parallel development' but it seems doubtful if anyone was fooled.

Roosevelt had already prepared for internal criticism by submitting the report of Attorney General Jackson supporting the deal. Apart from allowing some temporary encouragement to the British public in terms of allowing a sense of trans-Atlantic solidarity, it is hard to divine much tangible long term political or practical advantage to Britain from this deal, given the appalling state of the destroyers and Jackson's opinion that 'the acquisition from Britain implies no future promise from the United States. It is not necessary for the Senate to *ratify* an opportunity that entails no obligation'.⁴⁵ Roosevelt was emboldened by the deal's 'success' to propose subsequent aid packages such as Lend-Lease while continuing to press for the liquidation of British overseas assets but the extent to which this agreement paved the way for such initiatives is impossible to ascertain.

As Leutze has remarked, 'the fleet guarantee was exceedingly important to Americans' and Churchill was thinking 'in terms that allowed him to consider the exchange as a down payment on further aid'.⁴⁶ Nevertheless, the 'intangible factors' argument is not an entirely convincing one even if staff talks between the nations intensified from then on. The deal did not mean that Americans were necessarily confident that the worst was over and Britain would win. It might easily be viewed as a determination to extract as much useful military information as possible before British capitulation. An end-of-year article focussing on Churchill's revival of British spirit remarked that 'Britain has just about weathered 1940, but 1941 promised to bring an even greater ordeal' and mentioned that most military writers expected an invasion attempt the following year. Much of the article praised German military achievements and noted that Hitler's detractors were still waiting for him to make a mistake.⁴⁷

⁴⁵ 'US Acts Swiftly to Start Bases; Britons Hail America as Ally; Leaders of Congress Favour Deal', 'British Pledge Never to Sink or Surrender Fleet', *The Washington Post*, 4 Sept.1940, p.1 and p.4.

⁴⁶ Leutze, *Bargaining for Supremacy*, pp.126-27.

⁴⁷ E T Folliard, 'Churchill Put Spirit In Britain', *The Washington Post*, 2 Dec.1940, p.7.

The Aerial Blitzkrieg and *The Washington Post*

While the above articles viewed the Battle of Britain in naval terms, *The Washington Post* was not always consistent about this, especially as fears of Axis naval power began to decline. Reviewing the conflict on 1 September 1940, another article asserted that the 'great air battle is not a prelude, a preliminary round in the Battle of Britain. It is the main bout'. It was claimed that if the 'British can take it' and the 'Royal Air Force can continue to dispute the skies with them until the bad weather sets in, Adolf Hitler may rue the day that he drew his sword and marched into Poland'. It was further suggested that time was on Britain's side as warplanes and aircrew were now increasingly being provided in the USA and countries of the British Empire, though few aircraft came to the RAF from America in 1940.⁴⁸ It was true that September was the month most likely to see an invasion and the air conflict was now moving towards its climax. On 1 September though, Hitler was still holding back the *Luftwaffe* from all-out terror bombing on London and other cities but as the RAF was already attempting this over Germany, retaliation must have been expected soon.

As shown in previous chapters, the air campaign was going badly for the RAF at this time but censorship in Britain and the American desire to provide up-beat pro-British coverage was clearly having a subtle and cumulative effect on writing. This was understandable as it was much easier for reporters to cover the air war. Typical of the coverage derived from American war correspondents was an article dated 3 September by 'an International News Correspondent' its front page headlines stating 'Pilots Have What It Takes: RAF Oblivious to Odds, Small Force Takes on 200 Nazis'. Here the correspondent described his witnessing of a fearless attack by a 'small force of Spitfires and Hurricanes' against '200 roaring German bombers and fighters and beat them'. A captured German

⁴⁸ 'Europe's War in Review: A Year of Triumph for Adolf Hitler: Can the British Take All the Germans Have to Give?' *The Washington Post*, 1 September 1940, p.1 and p.3.

fighter pilot was dubiously quoted: 'These Spitfires are really terrible. They're much too good for us.'⁴⁹

The previous day, *The Washington Post* gave front page coverage to Churchill's message to Bomber Command that 'the command of the air is being gradually and painfully, but nonetheless remorselessly wrested from the Nazi criminals'. This was ostensibly meant to express Cabinet satisfaction 'that so many important military objectives in Germany and Italy have been so sharply smitten'. The article also claimed that Messerschmidt 'was once a word to conjure with in England 'however, it 'has lost much of its luster today'. On the other hand, this piece did allow a sharp decrease in the ratio of German to British losses – now less than 2 to 1 as opposed to earlier battles of '3,4 or even 5 to 1' and noted an improvement in the German technique of increased fighter protection.⁵⁰

An article reinforcing American perceptions of heroic if eccentric British stereotypes, told of a Hurricane pilot who left his cockpit to accept the Commanding Officer's offer of a cup of tea. Within a few minutes German bombs had destroyed his plane on the tarmac, implying the quaint British tea-drinking habit had saved his life. This pilot later allegedly told the war correspondent he had just scored his twenty-second victory. The pilot was recently told by a prisoner that his bombing missions were personally motivated by a desire for revenge over the British bombing of Cologne, his home city.⁵¹ This piece could only promote the idea that German participants were acting out of base revenge motives, and despite the irony, highlight evidence that RAF bombers were striking back.

⁴⁹ An International News Service Correspondent, 'Pilots Have What It Takes: RAF Oblivious to Odds, Small Force Takes on 200 Nazis', *The Washington Post*, 3 Sept. 1940, pp.1-2.

⁵⁰ 'British Say They're Winning Control of the Air From Nazis', *The Washington Post*, 2 September 1940, p.1 & p.5.

⁵¹ F R Kelly, 'Cup of Tea Saves RAF Pilot As Nazis Attack for Revenge', *The Washington Post*, 2 Sept. 1940, p.5.

With grossly exaggerated scores reported in British and foreign papers climaxing to between 175⁵² and 185 German aircraft destroyed on 15 September, when the actual figure was closer to sixty, 'the few' must have seemed like superheroes to the newspaper readers of Britain and America. Indeed, an end-of-year article reviewing the conflict stated 'England could not be defeated until Germany could control the air over the islands, and the "tough guys" in the air force went aloft daily and drove the invader away'. It continued, 'some observers felt the British fighting planes were superior to the German. Others did not. But all agreed the English airmen were superior to the Nazis'.⁵³ No wonder that Sir John Slessor had written from Washington about the 'intense interest' of the American press about the exploits of the RAF in December 1940.⁵⁴

While these stories tended to put British pilots in a very positive light, it would still not have been obvious to more reflective readers that the RAF was going to survive – indeed the reality of the situation in early September was that Fighter Command was losing the battle over Kent and Sussex. An Air Ministry claim that the *Luftwaffe* had lost nearly 2,000 warplanes over Britain in the first year of war was recorded on page five of the 3 September edition. Most of these were claimed within the previous two and a half months. No mention was made of the pilot crisis but British losses were acknowledged as 'considerable' even if the 'ratio was in Britain's favour' and 'many British pilots are saved even when their machines are lost'. However, the newspaper balanced the British claim with German counter claims that nearly 1,200 British planes had been destroyed in August

⁵² 'British Down 175 Raiders', *Daily Mirror*, (New York) 16 Sept.1940, p.1.

⁵³ J G Norris, 'New Weapons, Tactics Marked Warfare in 1940', *The Washington Post*, 29 December 1940, p..6.

⁵⁴ TNA AIR 75/63 From Morris Wilson to Ministry of Aircraft Production, BRINY 1763, 4 Dec.1940. Text includes message from Sir John Slessor to CAS dated, 2 Dec.1940.

alone. Success was claimed in the 'steady night bombing of Germany'⁵⁵ and it was here that the American public was probably most misled.

Notwithstanding the role raids on Berlin allegedly played in changing the focus of *Luftwaffe* attacks to London, it is now generally accepted that British efforts to bomb Germany at this stage of the war were generally ineffectual. This was because of problems relating to lack of fighter escort, small bomb loads, poor defensive gunnery, navigation and bomb aiming. Air Chief Marshal Sir Richard Pierce concluded in late 1940 that 'on the longer-range targets only one out of every five aircraft which he despatched actually found the target'.⁵⁶ A *Washington Post* report on 31 August claimed that 'Berlin shook this morning and late last night under the most intensive Royal Air Force bombing raids since the war began'. The raids were described as 'one phase of a tireless mass offensive'. Numerous military targets were claimed as hit.⁵⁷ A report on later raids stating that hidden armaments factories and munitions stores were hit in dense woodlands on the outskirts of Berlin, suggest a positive spin was being put on RAF bombs exploding harmlessly into rural areas outside of Berlin.⁵⁸ It was naturally very important that the British were not seen merely as passive victims of German attacks. Being seen to simply soak up punishment could not maintain a favourable impression indefinitely. Yet the bombing offensives of the two combatant nations were not yet remotely comparable in terms of actual efficiency and coverage of the RAF bombing offensive did not reflect the limited damage caused.

⁵⁵ The Associated Press, 'British Claim Toll of 1,967 Nazi Raiders: Review of War's First year Says RAF Has Proved Superiority', *The Washington Post*, 3 September 1940, p.5.

⁵⁶ C Webster & N Frankland, *The Strategic Air Offensive Against Germany 1939-45*, HMSO, 1961.

⁵⁷ J MacDonald, 'Berlin Shakes Under Terrific RAF Blasting', *The Washington Post*, 1. September 1940, p.2.

⁵⁸ 'German Forests Blasted', *The Washington Post*, 5 September 1940

Another story on page 1 of the same edition mentioned a British claim that the Germans were using 'four-motored flying barns' on the assault on London.⁵⁹ In fact, there were no *Luftwaffe* aircraft in 1940 that could be described as such. In all probability, this was a British attempt to scare the more 'jittery' members of east coast communities into thinking the *Luftwaffe* had large long-range aircraft capable of raining bombs on cities such as New York and Boston. The prospect of new *Luftwaffe* bases in Britain and Ireland could only increase this possibility. A letter from Beaverbrook's fellow press baron and former wartime Cabinet colleague, Lord Rothermere in July suggests this rumour may have been in circulation for some time. 'I have spoken to Americans who talk about moving 100 and 200 miles away from the coast. To me these fears are whimsical'.⁶⁰

Despite the above, Americans would surely have been reassured by Secretary of the Navy (and publisher of *The Chicago Daily News*) Frank Knox's statement in Honolulu dated 7 September that 'Britain has a better than even chance now of withstanding the blitzkrieg'. He reportedly stated 'he would not have said this 30 days ago'. Significantly, he attributed his confidence to 'Britain's superior navy'. He also said that Germany would not 'gain complete mastery of the air to launch an invasion' a remark failing to convey the damage already done to Fighter Command's infrastructure mentioned in the previous chapter.⁶¹ While he was at Honolulu, Knox told Admiral J O Richardson, C-in-C, US Pacific fleet that he thought the US would be at war by the following spring which, suggests he was genuinely up- beat about British survival prospects and was assuming Roosevelt's re-election would soon lead to direct US participation.⁶²

⁵⁹ 'Four-Motored Nazi Planes Blast London', *The Washington Post*, 3 September 1940, p.5.

⁶⁰ PA Beaverbrook Papers, BBK/D/496 From Rothermere to Beaverbrook, 19 July 1940.

⁶¹ International News Service, 'Knox Sees Britain Surviving Attack', *The Washington Post*, 8 Sept.1940, p.8.

⁶² Notes given by Admiral Richardson to Secretary Knox, 12 September 1940, as quoted by Leutze, *Bargaining for Supremacy*, p.181.

As the year drew to a close, the more upbeat predictions of British survival seemed to have been vindicated not so much by events but by non-events. The Germans had not invaded and the British did not seem about to drop out of the war as a result of the bombing. Further reassurance was given by General Chaney of the US Air Corps on his return from England in December. By now, Chaney was the latest of a long list of US civilian and military advisors sent to assess British prospects of survival and to obtain technical information useful to the American rearmament programme. It was obviously essential for Roosevelt to show the public tangible benefits for the support he was giving the Churchill regime and Chaney would not have disappointed him. Great play was made of the ‘information that will aid us in our own rearmament efforts ... things that might be worth hundreds and millions of dollars to us’. Speaking in some detail of the ‘aerial blitzkrieg’ he said that the early phases were ‘decisively won by the ‘speedy fighters of the RAF’ but ‘a large measure of the success... was attributed to the plane detecting system employed’. Without mentioning any of the RDF/command and control shortcomings detailed in an earlier chapter, Chaney described a ‘thorough and able’ system for aircraft detection that allowed fighters to remain in position until they knew details of the enemy height, speed and direction. The current phase of night bombing and daylight fighter-bombing attack was described as causing ‘much material damage but could never win a war’. He also believed the current loss ratio was ‘1.9 German craft for 1 British plane. This would only have been a small exaggeration had he meant the whole period but Chaney was wide of the mark for the current fighter-bomber/ night bomber phase in which German losses were much reduced. A valuable lesson drawn from the conflict was that American fighters and bombers all needed more guns.’⁶³

Mostly this statement was accurate even if the statement that any phase was ‘decisively won’ was distinctly questionable. Much valuable information was being given

⁶³ ‘Britain Will Not Lose War, US Air Corps Observer Asserts After Return’, *The Washington Post*, 4 Dec.1940, p.1.

away for very little tangible benefit. He was right about the current German bombing tactics not winning the war on its own, although it was rather early for Chaney to draw this authoritative conclusion. British RDF research was ahead of the Americans at this time but the claims for the efficiency of the command and control system that originated from Watson-Watt and Dowding were clearly being taken at the same face value as the inflated scores of downed aircraft. The extent to which not only British expertise but also more tangible assets were being surrendered was the subject of a letter from Beaverbrook to Churchill a few weeks after Chaney's departure.

Beaverbrook's immediate concern was articulated over an American demand for 'our South African gold' and the proposal 'to collect and carry it away'. In no uncertain terms he stated, 'That is a decision which I would resist very strongly and seek to destroy by every means in my power'. The Americans 'have conceded nothing ...they have extracted payment to the uttermost' and Beaverbrook further complained ' they have taken our bases without valuable compensation'. He also fulminated over the delays in the American armament programmes resulting in 'negligible' deliveries but at the same time 'we find ourselves, having provided the necessary money for munitions and aircraft, with deliveries delayed but no suggestion of any return of moneys advanced on the basis of performance of contract'. A series of examples were then provided including the surrender of machine tools for the manufacture of 700 Hispano Suiza 200 mm [20mm?] guns a month. Some 650 were to be manufactured for Britain but the administration later refused to supply these on the grounds these were needed for US forces. 'So we lost our machine tools and we lost our guns too.'

Reference was also made to the Tizard mission 'and all the secrets transferred to the Americans'. Beaverbrook was also scathing about the supposed 'benefits' of the Purvis Mission, the British purchasing mission in Washington led by Arthur Purvis, who 'has

nothing to his credit except a kindly position on the part of Mr Morgenthau, and that is easily bought at such a price'. His suggested solution was typical of his impatient temperament and lack of faith in the ability of bureaucratic agencies to handle crucial matters. He wanted an independent mission unconnected with government to appeal to the American people directly through their press. This would advocate a fairer deal for Britain and put pressure on the Roosevelt administration 'to carry out some of the pledges and promises so freely given'.⁶⁴

Beaverbrook's files also include a document apparently prepared by Churchill's secretary back in June. This asked for advice on the question of a 'policy of full and frank exchange with the U.S.A.'. It indicates that the prime influences on Churchill to agree to this came from the political heads of the Navy and RAF, Mr A V Alexander and Sir Archibald Sinclair. Their argument was summed up as a need to overcome an American feeling about 'our "stickiness" about our secrets' and the fact that the enemy now knew many of these anyway. The benefits of cooperation would be having essential RDF parts made in the USA as 'insurance' (presumably against bombing); and the British might get information on ultra-short-wave technology should the Americans actually know more about this. Finally, as the Americans wanted to know about British gun-turret technology, 'If we could tell them, they could fit [the technology] into machines to be delivered to us'.⁶⁵

This correspondence reflects Beaverbrook's understandable discontent with the one-sided treatment that Britain was receiving from the Roosevelt administration. Beaverbrook's own advice to Churchill back in June is unclear but his continued possession of the *Précis for Prime Minister* suggests he was holding it as ammunition against Sinclair

⁶⁴ PA BBK/D/414 Minute from Beaverbrook to the Prime Minister, 26 December 1940.

Churchill described Purvis as 'highly competent and devoted' in Churchill, *The Second World War II*, p.23.

⁶⁵ PA BBK/D/414 'Precis for Prime Minister', 27 June 1940.

and Alexander in case - as seemed likely - the policy backfired at a later date. The arguments articulated by this second document are vague and not altogether convincing but only Alexander and Sinclair could have said whether they had been accurately quoted. Of course, the ultimate responsibility was Churchill's and it is known he also had reservations and tried to hold a *quid pro quo* bargaining position that could not be sustained.⁶⁶ It meant the 'kindly position on the part of Mr Morgenthau', Secretary of the Treasury, was essential even if he was probably already scheming to replace the pound with the dollar as the prime international currency for trade. *The Washington Post* reported that Morgenthau had testified to the House Appropriations Subcommittee in Washington on 17 December 1940 that Great Britain would be unable to place further orders for war materials without financial assistance.⁶⁷ Despite the alleviation of US naval fears in the summer, a *Times* report inferred there was still enough mileage in these insecurities to ease the passage of Lend-Lease through the American government machine. In January 1941, and probably at Morgenthau's instigation, Knox was supporting this in front of the Foreign Affairs Committee by stating that the USA 'would be heavily outnumbered by the fleets of the Axis, if British sea-power should be destroyed'.⁶⁸ Whatever his true motivation, Morgenthau needed to make great efforts to convince his sceptical countrymen as an earlier message from the British Ambassador in Washington confirmed. In defending himself against criticism for revealing the British cash crisis to American reporters, Lord Lothian claimed that American public opinion 'is saturated with illusions to the effect we have vast resources available which we have not yet disclosed'. He also recounted a third party conversation with Roosevelt whereby the President 'believed we could go on paying to July 1943'.⁶⁹

⁶⁶ Leutze, *Bargaining for Supremacy*, p.79.

⁶⁷ R C Albright, 'British Need Cash, Morgenthau Says', *The Washington Post*, 18 Dec.1940, p.2.

⁶⁸ From Our Own Correspondent, 'Help From America: Colonel Knox's Warning: US and Axis Navies Compared', *The Times*, Iss.48827, 18 Jan.1941. p.4.

⁶⁹ TNA FO 954/29A Telegram from Lothian to Churchill, 29 Nov.1940.

The same edition of the *Washington Post* contained Roosevelt's announcement on his proposed scheme to lease the British war equipment using the parable of the fire-hose, but it would be March 1941 before the *Lend-Lease Bill* gained Senate approval.⁷⁰ In the circumstances of late 1940, Churchill was in no position to resist US demands for anything.

The Influence of American War Correspondents

The emphasis on personal testimony from American military and political leaders such as Knox, Chaney and Morgenthau about British prospects (and value) was likely to have had much more impact upon the American public than official press releases from Britain's Ministry of Information that could easily be dismissed as propaganda. Yet it was the work of the neutral war correspondent most likely to sway opinions. After the air campaigns had subsided, the Council of the Newspaper Proprietors' Association entertained many of these at the Savoy Hotel with Quentin Reynolds and Harry Hopkins on the guest list. Lord Rothermere, then chairman of the council, expressed his admiration for the way American correspondents had worked through the dangers of the blitz 'to see things for themselves'. They had been 'the best propagandists of Britain in America'. Mr Winant, the American Ambassador concurred, pointing out that the London correspondents 'more than any other group ...taught America to be forewarned and forearmed'. Alluding to the problems of official censorship, another American speaker demanded 'news when it was news and not some time after the Germans had had a chance to put their coloured interpretations before the public'.⁷¹

⁷⁰ 'Roosevelt Proposes To Lease US Arms', *The Washington Post*, 18 Dec.1940, pp.1-2.

⁷¹ 'Propagandists for Britain: Tributes to USA Correspondents,' *The Times*, Iss.48985, 23 July 1941, p.2.

The elements of flattery aside, it was clear that representatives of the British and American press were using the occasion to take a public swipe at the Ministry of Information and the official procedures for controlling the flow of news. Substance was given to some of these complaints by correspondence with the chairman of the BBC. Back in April 1940, Mr W Will, Chairman of the Newspaper & Periodical Emergency Council had complained to Sir John Reith criticising the chaotic censorship system, the preference given by the Air Ministry to the BBC over newspapers and unnecessary delays with Admiralty censorship. Some censorship reorganisation subsequently took place but it was still not enough for American correspondents.⁷²

Mr Vaughan of the MoI General Productions Division had forwarded this criticism in July to the Policy Committee. He stated there was a 'considerable demand, particularly from the USA, for stories from RAF pilots or the Navy of exploits'. Unfortunately, the RAF was said to have delayed these for up to a month and the even then sometimes produced unsuitable material. The Admiralty was slightly better but could still take a fortnight.⁷³ In November, Drew Middleton of the Associated Press of America had published a long list of complaints in American newspapers, citing rigorous censorship and 'British capacity for under-statement working overtime'. The London based *Times* however, did not think the censorship was as severe as the Americans described; journalists were allowed to be direct in military matters and American correspondents often failed to balance bad news with British successes abroad.⁷⁴ British successes in the Mediterranean did not seem to be as newsworthy to American correspondents as a 'review of the dark days at home'. Despite these British claims there was some justification for American complaints even if it was the job of the MoI to 'present the national case to the public at home and abroad'. It was responsible for 'the preparation and issue of National

⁷² TNA PREM1/439 Letter from W Will to Sir J Reith, 1 April 1940.

⁷³ TNA INF1/849 MoI Policy Committee Minutes, 31 July 1940.

⁷⁴ From Our Diplomatic Correspondent, 'American Complaints of the Censorship: Grievances of Correspondents in London', *The Times*, Iss.48785, 28 November 1940, p5.

Propaganda' together with the issue of 'news' and to control information in accordance with the requirements of security.⁷⁵ Part of the problem appeared to be the lack of interest in propaganda shown by Churchill, from whom one Minister of Information claimed, 'no interest was ever shown in the subject'.⁷⁶ This is hard to believe given the need to convince the USA of Britain's cause but in reality it probably amounted to a lack of faith in the instrument of bureaucracy to handle the task.

As Philip Knightley reveals, the Royal Navy did not allow war correspondents aboard their ships and 'throughout the war naval censorship remained the toughest'.⁷⁷ At first, the RAF did not allow them at their airfields but in any case the fighting was clearly visible from most parts of southeast England. In general, soldiers and politicians have usually been wary about civilian reporters being close to the fighting because of the potential security threat they represent, not to mention the unwelcome criticism from these quarters. On the other hand, civilian reporters had become a 'necessary evil' as a well-founded public cynicism over the accuracy of official pronouncements required some third party validation.⁷⁸ Much of Knightley's work explains the pressures put upon correspondents to 'toe the official line' and why such pressures are often effective. Unsurprisingly, correspondents from neutral countries proved more difficult to handle and those from the USA were much less willing to accept censorship than their British counterparts because of their aggressive reporting culture. Minutes of the MoI Policy

⁷⁵ A Aldgate and J Richards, *Britain Can Take It*, Basil Blackwell, 1986, p.4. Nevertheless, the official situation was confusing. At one point the MoI was held to have no responsibility for the 'communication of news to the press or for press censorship'. Probably as a result of a complaint from the Newspaper & Periodical Emergency Council in April 1940 deploring the censorship chaos, this was strengthened to improve departmental liaison with Service Departments dealing with specific censorship decisions and more general questions affecting censorship to the MoI..

⁷⁶ M Balfour, *Propaganda and War*, Routledge & Kegan Paul, p.64. The remark is attributed to Alfred Duff Cooper.

⁷⁷ P Knightley, *The First Casualty is Truth: The War Correspondent as Hero and Myth-Maker from the Crimea to Kosovo*, Prion Books, 2001 edn, p.244.

⁷⁸ 'The Country Is Against Stricter Press Control', *News Chronicle*, 26 Aug.1940, p.1. This article reflected underlying cynicism about 'official' news. One unidentified British newspaper was said here to have published Gallup evidence on public opinion to back up their argument that the public distrusted official control over the news. The question posed was 'Do you think that stricter control and censorship of the Press by the Government would be wise?' The results were held to be '18% said...Wise, 88% said ... Unwise, 13% said...Don't know'.

Committee show that US correspondents wanted 'as many facilities as they could get' and they wanted to be able to broadcast their own personal verification of people's suffering. However, some disquiet was raised about a possible public 'revolt against making an exhibition of our sufferings from air raids'. It was finally agreed that more facilities be granted to the Americans but not without expressing concern over the potential loosening of control over the British press.⁷⁹ These documents convey the difficulty of trying to manage the information flow to countries with significantly different reporting cultures.

Fortunately, since the Anschluss Crisis, the Foreign Office recognised that 'a large part of the [American] press is very sensible and there is widespread genuine friendliness towards us, and genuine dislike of the totalitarian systems'.⁸⁰ Knightley has pointed out that 'by far the biggest volume of reporting came from American war correspondents' and has drawn attention to the fact that they were pro-British 'to a man'. This sentiment 'naturally coloured American reporting and it prevented most correspondents from giving their readers a balanced view'.⁸¹ From what has already been said together with a perusal of the memoirs of a correspondent from the 'isolationist heart of the United States' this seems largely correct. Eric Sevareid clearly disapproved of many aspects of 1930s British life, writing at length about the iniquities of the 'English class system' but none of that stopped him from describing approvingly the 'hysterical adulation' showered on the 'average Londoner' from the United States. Neither did it prevent him from describing the pilots as 'a small group of semi-professional, the elite who seemed to us like shining knights-the-airman who could come to grips with the enemy'. The others, he said 'could only take it and resist with their hearts and minds, not their hands'.⁸² Edward R Murrow had originally hired Sevareid to make radio broadcasts from London to New York in 1939, and it is Murrow that he credits with best representing the British cause to America,

⁷⁹ TNA INF 1/849 Minutes of Mol Policy Committee, 22 July 1940.

⁸⁰ TNA FO 954/29A. Letter from R C Lindsay, Washington to Anthony Eden, 7 February 1938.

⁸¹ Knightley, *The First Casualty*, p.244.

⁸² E Sevareid, *Not So Wild A Dream*, Atheneum, 1978 edn, p.165-9.

claiming he was not only more influential than the American ambassador in London, but he was the ambassador. For Severeid, it was the Columbia Radio Network (for which Murrow was the London chief) that first recognised the 'rigid traditional formulae of news writing' had to be discarded and replaced with 'a new kind of pertinent contemporary essay [that] became the standard form'.⁸³

Severeid comes over as a hopeless romantic for his view of an air war that had little in common with notions of chivalry. But in all probability, the slightly effusive claims made on behalf of Murrow had some basis. Apart from his undoubted innovative skill in the presentation of news reports to the American public, Murrow was influential not only as an associate of the President's envoys to Churchill, Harry Hopkins and 'Wild Bill' Donovan, but also of Roosevelt himself.⁸⁴ In fact, it was probably one of Murrow's broadcasts in October 1940 that made it easier for Americans to sympathise with the British cause. Here he suggested the old Britain, for which Americans still had ambivalent feelings was now dying as a result of the social pressures brought on by the blitz. Ordinary people were now questioning authority and demanding answers to questions like: 'Why must there be 800,000 unemployed when we need shelters?' Knightley believed it was broadcasts like this that proved American correspondents had more freedom than their British equivalents in getting information past the censor.⁸⁵

A further contender to Severeid's nomination of Murrow for the title of unofficial ambassador to the UK would have been Quentin (Quent) Reynolds, 1902-65, associate editor and war correspondent to *Collier's Weekly*. He was sufficiently important to merit a *Times* obituary on the occasion of his death in 1965. Reynolds became popular with the British public through the BBC's *Postscript - Shickelgruber* Broadcast. The article claimed

⁸³ Severeid, *Ibid.* pp.177-78.

⁸⁴ Stafford, *Churchill & Roosevelt*, p.49 and p.123.

⁸⁵ CBS Broadcast, 1 Oct.1940 as quoted by Knightley, *The First Casualty*, p.263.

Reynolds 'identified himself wholeheartedly with the British war effort' but seems to contradict Knightley by stating that 'not all American journalists were seen to be sympathetic to the British cause'.⁸⁶ Strangely missing from the obituary is Reynolds's narration of the eight-minute film documentary *Britain Can Take It!* (1940). This graphic depiction of London during the blitz was widely credited with helping Roosevelt gain public support for helping the British and according to Beaverbrook 'The finest piece of propaganda that I have ever looked upon so here are my congratulations' in a congratulatory letter.⁸⁷ He later used his fame to make an introductory tribute to the feature film *Eagle Squadron* (1942) about American flyers in the Battle of Britain and with a theme of Anglo-American cooperation. Although some Americans fought in the RAF during 1940, in reality, the Eagle Squadron was not operational until 1941 and attempts to use the real pilots as actors were frustrated by the real deaths in combat of all those selected to play the leads. Though viewed as a propaganda success Cull noted the Hollywood treatment offended the real members of the Eagle Squadron.⁸⁸

Reynolds's personal involvement in *Eagle Squadron* suggests the theme may have developed from the circumstances surrounding a telegram to Walter Winchell, a well-known columnist of the *New York Daily Mirror* during August 1940. It illustrates the enthusiastic nature of his personality and indicates that a 'certain number of American newspaper men here who as individuals are extremely well aware that Britain is fighting our battle'. The document reveals Reynolds and Lord Beaverbrook's collusion in an illegal fund-raising scheme for newsmen to buy a Spitfire out of their own pockets. \$800 had been raised from them so far and a Spitfire was thought to cost \$20,000. Reynolds credits Beaverbrook, who had only joined the War Cabinet on 2 August, with the idea for it to be flown by one of the twenty-six Americans in the RAF and have it 'christened' by the King.

⁸⁶ 'Mr Quentin Reynolds', *The Times*, Iss.56273, 18 March 1965, p.14.

⁸⁷ PA BBK/D/404. Letter from Beaverbrook to Reynolds, 10 Nov. 1940.

⁸⁸ Cull, *Selling War*, p.182.

In a typical Beaverbrook flourish, he suggested naming it after the 'great newspaper man Heywood Broun' [1888-1939]. It was also emphasised that the fund raising had nothing to do with the Association of American Correspondents, London. The telegram acknowledged it was 'contrary to outdated neutrality laws but this [is] not [the] time [to] split hairs'.⁸⁹

What became of this scheme is not known and it seems likely either the legal problems hinted at by Reynolds may have proved insurmountable or the monetary sum proved too great a strain on the pockets of a few individuals but it illustrates his commitment to the British cause. Winchell was also influential in media circles and corresponded regularly with the director of the FBI. More significantly Cull links Winchell to William Stephenson, who led British Secret Intelligence Service Operations in the Western Hemisphere and also to the White House.⁹⁰ For all the potential snags, including the blow to morale if (or more likely, when) the 'Heywood Broun' aircraft was shot down it was still a clever idea with the potential for strengthening Anglo American ties bearing in mind Heywood Broun's father was an English immigrant to the USA.⁹¹

Official agencies were working in the same direction at this time. As Cull notes, RAF heroism seemed Britain's 'greatest propaganda asset' by late August. The Foreign Office wrote to Sir Maurice Peterson of the MoI on 17 August mentioning a BBC broadcast by an American pilot. The memo stated 'publicity of exploits of individual American pilots in our service, even if exaggerated, would have an excellent effect, and would give the hero-worshipping public of the United States a feeling of identity with the

⁸⁹ PA BBK/D/404 Telegram from Reynolds to Winchell, 9 Aug.1940. Also see *BBC*, www.bbc.co.uk/dna/getwriting/A2387342 accessed 8 June, 2005. Winchell was a controversial figure credited with inventing the gossip column. Despite dying in disgrace, Winchell was once a popular figure in America with a syndicated column appearing in more than 2000 daily newspapers and a weekly radio show. Winchell's career went into decline with the rise of television and his public support for Senator McCarthy's communist witch-hunt in the 1950s.

⁹⁰ N Cull, *Selling War*, p.80 and p.132 Cull says that Winchell was one of several American reporters fed rumours by British intelligence agencies regarding Nazi oppression in occupied countries.

⁹¹ 'Heywood Broun', *Spartacus*, www.spartacus.schoolnet.co.uk/USAbroun11.htm, accessed 8 June 2005.

conflict'.⁹² The plan was to build up the image of Pilot Officer William Fiske III of New York. Unfortunately, the death of Fiske the very day of this memo as a consequence of an earlier encounter with supposedly vulnerable Ju.87 Stukas restricted the propaganda opportunities considerably.⁹³ Perhaps wisely, with the heavy attrition rate for airmen, the British made no attempt to find a propaganda substitute for Fiske. Given the 'hero-worship' paid to the American aviator Charles A Lindbergh by the American press and public, the idea for promoting an American air ace in the British cause was understandable given that the pro-Nazi Lindbergh was using his fame to speak against American aid to Britain in 1940.⁹⁴

The advantage of the air battle as Cull points out, was the ability to clarify the 'British predicament in the United States' and express British prospects 'in a simple statistic: the ratio of the losses of the Luftwaffe to the losses of the RAF'. Lord Halifax at the Foreign Office wrote to the Air Ministry, 'Whatever you can do to give the American correspondents an inside view of your organisation and personnel, may, I firmly believe, have the most important influence on the help we get from the United States in the near future.'⁹⁵ Some of the pro-British correspondents were sceptical of Air Ministry claims. Gottfried Keller, president of the Foreign Press Association in London once demanded to check the British score of twenty-six by seeing and counting the German wrecks. Having been told to cooperate fully with neutral correspondents, Barry Cornwell, south-eastern regional press and liaison officer of the Mol, drove Keller around the countryside. After fourteen wrecks, Keller was exhausted by fence climbing and scrambling around fields and

⁹² TNA FO 371/24231, A3961/26/45, Hopkinson to Mol, 17 August 1940, as quoted by Cull, *Selling War*, p.89.

⁹³ Cull, *Selling War*, p.90.

⁹⁴ 'Lindbergh', *UK History*, broadcast 14 June 2005. This documentary charted Lindbergh's life and noted that by 1941, his pro-Nazi views became so extreme he antagonised the American public. Even so, after his wartime service in the American Air Force ended, he returned home to a heroes welcome. Such is the American need for hero figures!

⁹⁵ TNA FO 371/24321, A3799/26/45. Halifax to Sinclair, 19 Aug. 1940, as quoted by Cull, *Selling War*, p.90.

conceded defeat.⁹⁶ This indicates, there was simply no viable way to validate either *Luftwaffe* or RAF claims and correspondents were content to swallow reservations and publish British figures without qualification. No wonder then, that following the 'urging' of the Foreign Office, Churchill made his now famous tribute to 'the few' in his House of Commons speech on 20 August 1940.

The Importance of Film in Anglo American Perceptions

Much of the support given to Britain from the USA in 1940 came from individuals acting either on their own initiative or willingly complying with the activities of British agencies. Reynolds role in *Britain Can Take It* was partly to conceal the Ministry of Information's Crown Film Unit authorship. He had originally been recruited by the film entrepreneur, Sidney Bernstein through his contacts with the American press corps in London. This was said to mark the climax of MoI efforts to secure cooperation with the Americans.⁹⁷ It must not be supposed that films covering aspects of the 'aerial blitzkrieg' made up the entire cinematic propaganda output. Lord Louis Mountbatten had a lifelong interest in film and founded the Royal Naval Film Corporation. It was his adventures portrayed by Noel Coward in the feature film *In Which We Serve* (1941) that went some way to restoring the Navy's reputation with the British public after the 'failures' of 1940.⁹⁸ *The Sea Hawk* was premiered in London on 1 August 1940, shortly before the *Luftwaffe* intensified its campaign over England. This adventure starring Errol Flynn showed how Elizabethan England had raised its fleet specifically to counter Imperial Spain's ambitions

⁹⁶ Interview with Barry Cornwell, as quoted by P Knightley, *The First Casualty*, p.258.

⁹⁷ Cull, *Selling War*, p.47.

⁹⁸ Hough, *Bless Our Ship*, p.31 & p.188

for world domination. The parallels were obvious as the *New York Times* noted: 'Count on Warners to inject a note of contemporary significance.'⁹⁹

Warner Brothers were an American company and Beaverbrook's letter of invitation to the premiere asserted the company was 'whole-heartedly devoted to the British cause'. Attempting to 'arouse the world to the active and ever-expanding menace of Nazism in every country from within' *Confessions of a Nazi Spy* presented a semi-documentary account of 'actual facts of German operations in America' even before the war had started. It was emphasised that Warner Bros did not make it for financial rewards and where German coercion had caused some countries to ban the film; Harry M Warner had tried to undermine the pressure by offering to give the box-office takings to the Red Cross. *The Sea Hawk*, was a recognition that 'more than 350 years ago, England faced conditions similar to to-day's: King Phillip of Spain set out to conquer the world, and only England stood in his way'. England then created 'the foundation of today's navy'. The film was made in the USA but it was stressed that 'its setting, its spirit, and most of the principal players are British.'¹⁰⁰

The text of 'Queen Elizabeth's climactic final speech has been reproduced in Appendix 7 as an example of 'classic' propaganda' designed to resonate with 'high-minded' Americans. The motivations for making the *Sea Hawk* were clearly altruistic in part. Harry M Warner's anti-Nazi feelings undoubtedly stemmed from his Jewish background, though as Cull explained, Jewish producers were initially cautious because of fears of an anti-Semitic backlash.¹⁰¹ The theme of Jewish film producers turning America against Germany was one frequently asserted by isolationists such as Lindbergh.¹⁰² It could also be maintained that the 'topicality' of the film was likely to make it an international

⁹⁹ Cull, *Ibid*, p.113.

¹⁰⁰ PA BBK/H/298 Letter from M Milder of Warner Bros, London to Beaverbrook, 29 July 1940.

¹⁰¹ Cull, *Selling War*, p.90.

¹⁰² 'Lindbergh', *UK History*, broadcast 14 June 2005.

success. The British connections were obviously stressed in the hope that Beaverbrook, as a well-known figure on both sides of the Atlantic might give the takings a boost by publicly endorsing it. The slightly desperate tone of the letter also reflects the resistance put up by the MoI against Warner's overtures owing to the fear of alienating his competitors.¹⁰³ It also amounts to recognition that Beaverbrook remained a powerful figure in media affairs with the British government because of his friendship with Churchill. *The Sea Hawk* was in a similar genre to the later *The Young Mr Pitt*, (1942) made in Britain where comparisons between Pitt and the Napoleonic Wars and Churchill and the Battle of Britain were also made plain. These films effectively put out ideas to Americans with reflective temperaments and an interest in historical precedent but may not have connected with the rest of the population.

Why We Fight – The Making of the Legend

One novel feature of the *Why We Fight* series was Churchill's personal filmed appearance commending the films as an authoritative version of events. A clear break with precedent was now being seen. Unlike the media consciousness public figures of the late 20th century, newsreel appearances by politicians were something most of them wanted to avoid, not least because the British media had not demanded this from them. A letter to Beaverbrook in June 1941, from Commander A W Jarratt, Deputy Chairman of the Royal Naval Film Corporation complained bitterly of the 'luke-warm support given by the Ministers of His Majesty's Government to the efforts of the British Film Industry for propaganda films to be sent to the United States'. Jarratt claimed the MoI had been told that Americans needed to see the ministers speak in newsreels occasionally but also, 'not

¹⁰³ Cull, *Ibid*, p.51.

only did the Ministers refuse to be photographed but the Prime Minister was not favourable to the idea'. Harry Warner was quoted as being particularly concerned that Foreign Secretary Anthony Eden had refused to appear. Fortunately, Jarratt managed to see Brendan Bracken who persuaded the Prime Minister to speak from the screens of America. He warned that unless politicians changed their attitude 'Americans will lose all their enthusiasm with the screens of America and we shall find ourselves shortly in the position of making films and not having them shown'. A further grumble lay in the lack of coordination in distributing film propaganda with all Departments having their own film propaganda.¹⁰⁴

The letter confirms an Anglo American culture clash in terms of a British failure to project personality and emotion on film, together with the existence of a celebrity culture more strongly established in the USA than the UK. Deference was still a defining characteristic of British society and public school educated politicians more inclined to make a virtue of hiding their feelings may have found the American media culture intrusive.

Perhaps more than any other individual, the American film director Frank Capra was most responsible for cementing the concept of the Battle of Britain as an exclusive air campaign to prevent invasion. The reasons why Capra had made the *Why We Fight* series are clear and some appear within his autobiography *The Name Above the Title*. A well-known director of feature films during the 1930s, Capra had been charged with General George S Marshall, US Chief of Staff, to make documentary films for the purpose of showing *why* we are fighting and to explain the principles.¹⁰⁵ Without prior experience of documentary film, Capra viewed Leni Riefenstahl's Nazi propaganda classic, *Triumph of the Will*, together with other enemy newsreels and borrowed from them the exciting

¹⁰⁴ PA BBK/H/298 Letter from Jarratt to Beaverbrook, 23 June 1941.

¹⁰⁵ F Capra, *The Name Above the Title*, W H Allen, 1972, p.326.

techniques of German filmmaking in war. The *Why We Fight* series was aimed at recruits to the US Army but was also used by the other services in America, Britain and the British Empire and Churchill was credited with the order for it to be shown in British cinemas.

Capra claimed the series became the definitive answer to: 'What was government policy during the dire decade 1931-41?' Marshall's advice had been that if Capra was unable to get a clear official answer to what policy was on any aspect during this time, 'and this was often' he was to 'make your own best estimate, and see if they don't agree with you later' inferring considerable latitude in film content. Capra later remarked, 'by extrapolation the film series was also accepted as the official policy of our allies'.¹⁰⁶ Capra also suggested it was Churchill, whom he had met through Sidney Bernstein, then head of the MoI Crown Film Unit who put forward the idea to personally present a foreword 'to introduce your great films to a grateful British public'.¹⁰⁷

The *Battle of Britain* opened to a 'Disney style' animated map followed by newsreels showing the inexorable march of German troops progressing to Paris, Dunkirk and Calais. Over this came an American voice stating the British nation was, 'the one obstacle that stood between him [Hitler] and world conquest'. In case the point had not been made sufficiently it was reiterated that Hitler had to 'crush the island' as this would be 'the way open for world conquest'. Yet Hitler had to be careful as 'a slip now might ruin the timetable for world conquest'. Once Britain was defeated, the combined fleets of Germany, Britain, Italy and Japan would 'hem us in'. As the film progressed the narrator described an invasion fleet of 'high-speed barges' and over a 'Disney' map of the Channel showing animated warships, the same voice stated 'the British knew it would be suicide to use the fleet in the English Channel without control of the air'. The climax of the day fighting over London on 15 September 1940 was shown with images of swooping fighters

¹⁰⁶ Capra, *Ibid*, 329-36.

¹⁰⁷ Capra, *Ibid*, 353-56

accompanied by a statement that 185 enemy aircraft had been shot down forcing the Germans to adopt night attacks from 6 October. The contribution of RDF was ignored with the early warning system depicted solely by ground observers using visual and audio sound detection equipment. While bombs fell at night, 'the RAF wasn't much help – just German bombs against British guts'. Bombs were said to 'fall alike on the East End and Mayfair rich'. The *Luftwaffe* levelling of Coventry was portrayed as vindictive revenge for a successful RAF raid on the legitimate military target of Bremen's submarine yards.

Towards the end of the film statements were made to clarify the idea this was a clash of democracy versus totalitarianism. 'In a democracy it is not the government that makes war, it is the people'. Also, 'they knew it was the People's War ... a regimented people met a free people in a new kind of war ... they won for the people of the world'.¹⁰⁸ The use of Walt Disney's animation techniques and action shots of air combat from newsreels made for viewing that is every bit as dramatic and compulsive today as it must have been in 1942.

There was enough truth in this account to make it seem convincing though whether American audiences preferred to believe it was the Battle of Britain that saved the world rather than US entry in the wake of Pearl Harbor may be doubted. For Churchill who had consistently refused to state specific war aims except for a terse 'victory' the film, indeed the whole series, obviously helped fill a vacuum he was unable to cover as leader of a political coalition.¹⁰⁹ A fight for 'freedom' was suitably vague and could mean whatever one wanted it to mean. With its heavy focus on the air campaigns and an unintended diminution of the Navy, the 'aerial blitzkrieg' of the 1940 American press was no longer

¹⁰⁸ Imperial War Museum: Film and Video Archive, ADM 10 *The Battle of Britain*.

¹⁰⁹ T Ben-Moshe, *Churchill, Strategy and History*, Harvester-Wheatsheaf, 1992, p.308. Ben-Moshe suggests other reasons for failing to produce war aims. Firstly he mentions the 'memories of the misunderstandings supposedly produced by Wilson's Fourteen Points' always being on the minds of Churchill and Roosevelt. Secondly the joint formulation of war aims would have been time consuming and had the potential to damage Anglo-American relations.

part of the Battle of Britain. Now merged with the daylight battles it *was* the Battle of Britain. Although Capra did not mention it, the MoI would almost certainly have given him the best-selling official HMSO pamphlet *Battle of Britain* which was officially described as how ‘a thousand anonymous young men had fought one of the decisive battles of the world’. ¹¹⁰ The conspicuous absence of RDF from the film, also missing from the HMSO pamphlet suggests that Capra may have been heavily reliant on this publication.¹¹¹ He would also have been influenced by accounts read in the American press.

The idea that Hitler has a ‘timetable for world conquest’ has already been challenged in an earlier chapter, as has the idea that the fleet could not survive in the Channel without air cover. It has also been shown that far from being made up of high-speed barges, the invasion fleet was one principally of towed barges. Furthermore, the exaggerated scores of 15 September 1940 and hence the importance of Fighter Command were flawed ideas again rammed home in this film. The undeniable failure of Fighter Command in the blitz was given a positive spin by creating an opportunity for the British to show an admirable stoic heroism in the face of adversity. Naturally, a propaganda film such as this was hardly going to point out the British had not been stoic all of the time, that it was the RAF that had begun the indiscriminate war on a civilian population and that the German decision to do the same only came later. Neither was it mentioned that the London East End had suffered disproportionately in the early stages of the blitz. However, a strict adherence to the actual facts is not part of the propagandist’s job. That the British believed these to be the actual facts was because the Prime Minister had personally assured them that facts had been accurately recorded and the American narration had paid them generous

¹¹⁰TNA STAT 14/226 From J M Parrish, MOI to C Plumbley HMSO, 28 March 1941.

H St.G Saunders, *The Battle of Britain: August – October 1940*, HMSO, 1941, p.7. The pamphlet attempted to describe in detail ‘the method of defence’ but apologetically stated it was ‘not easy to do this without giving away ‘state secrets’. There was no mention of RDF and it merely remarked: ‘Information regarding the approach of the enemy is obtained by a variety of methods’. Bearing in mind the Germans had a fairly detailed knowledge of RDF even before the war and in 1941 had their own very effective radar chain in operation, the security aspects seem somewhat exaggerated but probably reflects an over-cautious secrecy culture relating to a fundamental British distrust of the perceived inability of Americans to keep secrets.

compliments. From this point onwards Capra's view of the conflict set the legend into stone and for this reason the film was undoubtedly more important to the British public than for the American servicemen for whom it was originally made.

The Importance of the Battle of Britain to the USA

That the Battle of Britain became an Anglo-American media construct is clear but it was less Anglo than American. An aggressive American press culture ensured US correspondents hunted for a wider variety of news angles than the lines fed to them by official sources and the dearth of quality news forced them to be more innovative in their methods. This culture was characterised by loud and assertive complaints when demands went unmet, something alien to British correspondents in the 1940s.¹¹² Neither the British nor the American press held implicit faith in the veracity of the controlled information doled out by a necessarily cautious bureaucracy, but desperate political needs ensured that American newsmen received more active cooperation and less official obstructionism when out-and-about pursuing stories. Hero-worship was the American susceptibility that all wished to exploit and the British were dragged along in the wake of the American press's inspired efforts to meet it. This imbalance was less noticeable in the area of film but it was an American film based on an HMSO publication, publicly commended by the Prime Minister that was to have the greatest impact on the legend's formulation. With former journalists at the centre of British political power there were no precise divisions within the construction. Ultimately it was a fusion of effort by artists, politicians, press figures,

¹¹² TNA INF 1/849' Report of Planning Committee on a Home Moral Campaign', 21 June 1940. Not that it should be assumed the British press was cowed by official control. The effect of 'approved' articles such as the failure of Napoleon to invade England in the *Evening Standard*, 19 Jun. 1940, were said to have been 'offset by articles from precisely the wrong point of view (e.g. recent leading articles in the *Daily Mail*), or by an alarmist presentation of the news (e.g. air raids). No directive, however full, can prevent this'.

academics and civil servants of both nations all acting within hazy parameters and without a coherent overarching plan for maximising US involvement.

Analysis of the newspaper articles suggests that for the American press the term 'Battle of Britain' was a flexible one. It was largely a generic term but for several weeks simply meant the battle for the British fleet to remain 'in being' as an obstacle for Axis expansion into American spheres of interest. Initially it had no air dimension whatsoever and as air activity increased during August the common American press term for the air campaigns was 'aerial blitzkrieg'. Fears subsided following the mandate for seizing British, French and Dutch possessions in the Caribbean and Central America agreed at Havana in late July. These fell further with the fleet guarantees given in early September and Americans could now concentrate on the aerial blitzkrieg that only entered intensive phases during August. Along with the defensive war waged by Fighter Command covered by sympathetic American correspondents, there was substantial coverage of Bomber Command's parallel efforts to destroy targets in Europe suggesting that in 1940 this was also a perceived part of the Battle of Britain.

With summer passing and the likelihood for invasion receding until 1941, attention naturally focussed more on whether the British would give way under unprecedented air bombardment and negotiate peace with Germany. Some writers were therefore beginning to see the 'aerial blitzkrieg' of London as the real Battle of Britain. Cinemagoers were also subjected to a series of historical feature films drawing parallels between the naval battles of previous centuries with the Battle of Britain in 1940. For most Americans, including those who did not closely follow current affairs in their newspapers, Frank Capra and Winston Churchill conveniently explained everything in 1942. With America now in the war, everyone needed to fight in order to ensure the success of the 'free' over the 'regimented'. That the struggle had continued was only because the RAF and the British

people prevailed in the air campaigns known as the Battle of Britain allowing the USA time to rearm. This version has proved so attractive to the British public it seems unlikely to be relinquished whatever holes academics might shoot through it.

For all the various stratagems adopted, the propaganda failed to bring the USA into the war in 1940. On the contrary, the opinion poll evidence suggests US public complacency in view of British 'success' at the close of 1940. British naval power was the main bargaining chip Churchill had to play with in the first weeks of his premiership but he did not play it with conspicuous skill. As the Americans gradually curbed their naval fears through British concessions, 'technical expertise' and 'sympathy' became the only political cards left to play. The Foreign Office and the MoI aided by friendly correspondents fought for US sympathy by manipulating American hero-worshipping tendencies. Unfortunately, neither Sir Charles Forbes nor Sir Hugh Dowding had media-friendly personalities compatible with American culture, and both suffered as a result.

In the event, most Americans managed to place their sympathy and their interventionist inclinations into separate watertight compartments. At least helping Britain with aid meant jobs and profits accruing to American industry, together with the continuing cheap research and development information essential for speedy rearmament. It may also have eased any pangs of guilt. For Roosevelt, it was also an opportunity to strengthen US power abroad at British expense in line with his navalist beliefs and his cards were played with considerable skill. The British experiences of having to fight the 'aerial blitzkrieg' assisted the American rearmament programme but in the short-term British gains were ephemeral and mainly limited to the boosting of self-esteem that Richard Overy has referred to.¹¹³ Immediately prior to 7 December 1941, Roosevelt seemed no nearer to direct intervention - only Hitler's declaration of war following Pearl

¹¹³ R Overy, 'The Few Versus the Very Few', BBC History Magazine, Vol.1, No.2, June 2000, p.18.

Harbor achieved this. Where it had succeeded was in allowing Roosevelt to propose a series of initiatives to circumvent neutrality laws preventing credit for purchasing war supplies. Not that this resulted in much material help yet but the drive for 'Lend-Lease' had begun, enabling the fight to continue during 1941.

Chapter 8

Conclusion

‘Give me the facts, and I will twist them the way I want to suit my argument.’¹

(W S Churchill)

By the end of World War II, Churchill, Dowding and the Royal Air Force had become firmly established in the minds of the British public with preventing German invasion and saving the world from tyranny. The legend of 1940 has also allowed acknowledgment to the public for their fortitude in enduring bombing and privation, all of which has been reinforced by a powerful Anglo-American media construction.

As with most legends, there is a basis of fact and it has not been the intention of this work to denigrate the heroic sacrifices of ‘the few’ or the civilian suffering in the blitz. Western Europe was finally liberated from Nazi control and this happy event was clearly rooted in the decision to fight-on in 1940. However, the campaigns to make the public understand the ‘true significance’ of the Battle of Britain often miss an important point. Sacrifices were also expected from other service organisations and the Merchant Navy incurred some 24,000 deaths keeping the all-important trans-Atlantic supply lines open in 1939-45. Approximately 353 seamen died each month on average during the war.² By contrast, Dowding lost approximately 537 men between 10 July and 31 October showing a wide differential in casualties. Only by including the total for all RAF Commands (1,494) can equilibrium be arrived at but the legend does not usually allow for the participation of other aircrew. This represents a strong argument for a Battle of Britain memorial encompassing a wider range of participants.

¹ R Holmes, ‘The Man Who Made his Own History’, *BBC History*, Vol.6, No.4, April 2005, pp.36-40.

² S Stratford www.stephen-stratford.co.uk/merchant_navy.htm, viewed 24 September 2005. This states that the names of 24,000 merchant seamen are inscribed on the WWII section of the Merchant and Fishing Fleets Memorial at Tower Hill, London. An admittedly crude calculation dividing this figure by 68 months of European war gives a monthly average of 353 deaths, suggesting at least 1200 deaths at sea during the Battle of Britain. This is likely to be a conservative figure given that the U-boat’s first ‘happy time’ occurred during this period.

It also needs to be seen if there was a Battle of Britain – at least at any time prior to 31 October 1940 - the date the battle was supposed to have ended. German wartime ‘opinion’ in accounts by former *Kriegsmarine* admirals related to a ‘failure to invade’ as opposed to the failure to win control of the air. Having made the crucial decision to invade contingent upon a nebulous concept of control of the air, Hitler and the German Naval Staff were not predisposed to accept they had achieved the degree of superiority required for a landing despite optimistic *Luftwaffe* intelligence reports. Hitler was made to appreciate the exceptional risks inherent in launching *Operation Sealion* and there was nothing in his personality or stated beliefs likely to overcome this attitude. Hitler lacked the necessary ideological motivation to fortify himself for such a task. German witnesses indicate his admiration for Britain and the Empire together with a genuine desire to reach an understanding long predating the invasion problem.

The evidence strongly shows the German planners did not wish for a confrontation with the Royal Navy, as it was numerically immensely superior to the *Kriegsmarine*. Despite some *Luftwaffe* success around Norway, German warplanes had not proved they were capable of offsetting British naval superiority. The evidence indicates - if only on the balance of probability - the *Luftwaffe* lacked equipment, training and ‘spirit’ for this particular task. By contrast, the morale of the Royal Navy was high, and despite the limitations of the AA defence, naval warships had substantial passive defence characteristics allowing the Channel flotillas and the Home Fleet to exist as an effective ‘fleet-in-being’. All of this points to a stronger British defensive position than usually allowed.

Irrespective of the role that Fighter Command is said to have played in frustrating an invasion, the evidence indicates that despite the advantages of RDF and fighting over

home territory, Fighter Command was an ineffective instrument for frustrating *Wehrmacht* intentions. While the assertions of Wing Commander Allen helped inspire this study, the evidence shows he was prone to exaggeration. Allen showed scant empathy for the dilemmas facing those in authority between the wars and failed to recognise the RAF was technically better equipped than all of its Continental neighbours apart from Germany. As a Spitfire pilot he must also have known the detrimental effect of fitting much heavier 0.5 guns that would have inhibited performance for no commensurate advantage in fighter-versus-fighter combats. This was an unnecessarily disingenuous suggestion as he could have made the point adequately with reference to the Hurricane. While the RAF was slow to absorb the tactical lessons of the Spanish Civil War, neither was it reasonable to expect it to have derived the same degree of benefit the *Luftwaffe* gained from having been a direct participant. Even so, the study supports the general thrust of Allen's criticism especially with regard to organisational inflexibility and the leadership shortcomings. The RAF lacked enough competent fighter pilots though Fighter Command had many more single seat fighter pilots than the *Luftwaffe*.³ But it shared similar problems with other services in that the rapid expansion of the 1930s did not allow enough time for the systematic and orderly implementation of policies essential to organisational efficiency, especially training. This was rarely the fault of individuals, but battles for very limited resources inevitably lead to compromise and inefficiencies.

The British committee system was the time-honoured method of managing operational development but in the short and medium term it proved a poor agent of rapid change. Undoubtedly this hindered Dowding who was competent and possessed great technical vision, but he did not demonstrate the aggressive characteristics that mark out a

³ 'Single-engined Fighter Pilot Strength, RAF and German Air Force: Tables 1 & 2', in R Overy, *The Battle*, Penguin, 2000, p.162. For example on 1 August 1940, the Germans had 869 and on 17 August 1940 the RAF had 1,379 operational pilots. Even on 1 September the Germans had only 735 as against the RAF's 1,492 for 31 August 1940, but as mentioned in the text of the thesis, the quality of the British was considerably less than the German.

great commander. Though deserving considerable credit for introducing technical changes including RDF, Dowding clung too doggedly to a reactive defence relying heavily on untried, unreliable new technology - a sort of 'air fleet-in-being' - without attempting more proactive options. Dowding also communicated poorly with others, a significant flaw in a system that demanded close teamwork with service colleagues, civil servants, and politicians. Dismissed for reasons that owed much to his own shortcomings, Dowding won the subsequent battle for public sympathy by exaggerating the virtues of the RDF Chain and befriending a prominent historian. His biographer's portrayal as 'victim' also aroused British sympathies for the underdog.

Although Admiral Forbes was not called upon to fight his way through the Dover Straits, the Home Fleet maintained pressure upon the Germans by bombarding invasion harbours while struggling to maintain some protection for the hard-pressed merchant fleet. Forbes had worked his way up through the Navy during the 'Locust-Years' – a period when the Navy had to make pragmatic and successful tactical revisions to offset the technical advances of foreign navies. Though his ships had badly mauled the *Kriegsmarine* during the Norway campaign, he also failed to read German intentions in time to avert the invasion of that country and he failed to correctly identify the assailant of the *Rawalpindi*. While these errors make it impossible for him to receive the mantle of tactical genius, it must be remembered that even Nelson did not always divine enemy intentions accurately and Forbes was badly let down by the failures of the British intelligence system. Even the Admiralty was not exempt from organisational failures and evidence has been examined that indicates their internal failures of communication led to unnecessary losses. However, the Navy was not a backward and reactionary organisation and knew the value of good intelligence.

While both Forbes and Dowding endured interference from superiors during their tenures of command, sympathy has been reserved for Forbes. With a Prime Minister who virtually 'hobby-managed' the war effort aided by a 'meddler' of questionable competence as First Sea Lord, Forbes had more to endure. Furthermore, the naval structures ensured that a C-in-C's freedom of action would be curtailed whenever Admiralty superiors thought this desirable. By contrast, Dowding had the advantage of having built a complex system with innovative features that few really understood and his special expertise enabled him to resist 'interference' until the air situation became intolerable. Dowding's narrow outlook limited his strategic vision but the same could not be said for Forbes, in fact he was perhaps the only senior military figure to accurately read German intentions with regard to Britain in 1940. Unfortunately, he failed to impress his superiors but there is some evidence that Churchill was more convinced than he was prepared to publicly admit.

Forbes fell victim to a purge of senior officers in late 1940 and did not receive the recognition he deserved. Arguments with the Admiralty over ship dispositions, a tendency to be outspoken, his criticisms of Lord Mountbatten and a failure to attend to his own PR ensured his downfall. However, the people that mattered to Churchill and the clique of journalists at the centre of power were those who could project heroic images, essential for gaining the support of the USA. Dowding was also incapable of this but as the acclaimed victor of the daylight air battles, Churchill gave him the chance to shine as part of a technical mission to the USA. Unfortunately, he was not a success.

The problem for many British figures was their unfamiliarity with the demands of an American media-friendly culture and a fear that focussing on individuals might detract from the efforts of the many. Strong and silent stoics of yesteryear such as Admirals Anson and Hawke were excellent role models for many Britons but for Americans, association with Empire tainted these figures. More attractive to American war correspondents imbued

with virtues of Yankee dynamism and individualism were the young men of Fighter Command, not least because some were American volunteers.

While the British were astute in recognising the weakness of the American press for 'heroes', US columnists still saw the Battle of Britain as a naval conflict. Understandably, the primary American concern was their own national security and the importance of the Royal Navy as America's traditional shield against foreign interference was recognised and strongly asserted. Only as the threat of the British transferring naval assets to the Axis diminished did some begin to see the 'aerial blitzkrieg' as the 'real' Battle of Britain. While Americans (with British help) temporarily panicked themselves into considerably over-estimating the Axis threat to their existence, their initial perspective of the Battle of Britain as a naval affair was the most accurate assessment of the situation to have emerged in 1940. Unfortunately, this also hindered the British cause as Churchill raised the prospect of a 'Vichy style' British government handing over the fleet to Germany. His over-optimistic hopes of early American intervention were ultimately dashed by Roosevelt's iron determination (aided by published opinion polls) to avoid direct involvement in the fighting. But the press evidence also indicates that an exaggerated fear of German naval supremacy could still be deployed in US government circles into 1941 as a means of securing Lend-Lease for Britain. This meant that the trickle of essential war materials to Britain would be maintained and increased in subsequent years.

Flattering wartime media portrayals, especially those of American origin simplified the narrative and with Churchill's direct assistance skewed British perceptions giving undue emphasis to the air dimensions of 1940. These continue to survive as part of the

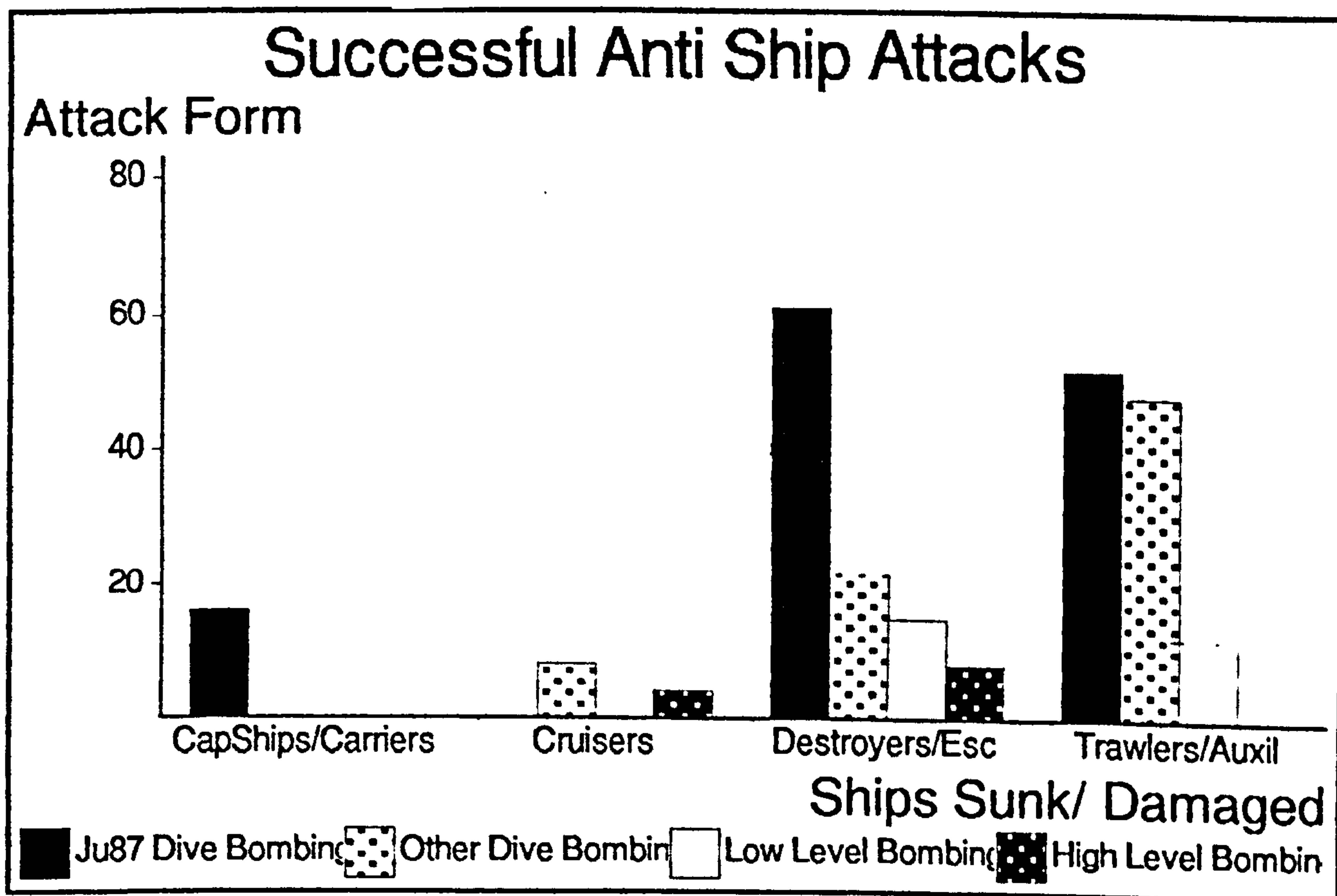
continuing public debate over British membership of the European Union.⁴ Churchill reinforced these ideas by utilising his post-war sojourn out of office to write his own 'case' with the assistance of an academic team left in no doubt that matters of historical interpretation were to be left solely to him. Significantly, his team included Albert Goodwin, the original researcher for the Air Ministry pamphlet *The Battle of Britain*.⁵ At least Churchill's memoirs acknowledged his greater wartime concern over the 'Battle of the Atlantic' than he ever had been about the air campaigns of the Battle of Britain. As Dowding correctly recognised in a 1942 newspaper article, air power had become an essential adjunct of seapower.⁶ But in 1940 it was closer to the truth to state that seapower had prevented invasion.

⁴ '1588 we saw off the Spanish - 1805 we saw off the French - 1940 we saw off the Germans - 2003 Blair surrenders Britain to Europe', *The Sun*, 1 Nov.2003, p.1, pp.6-8. Also R D England, 'Letters: Did our Battle of Britain heroes die for nothing?' *Western Morning News*, 7 October 2003, p.4.

⁵ Reynolds, *In Command*, p.186.

⁶ LH1/245/32 Sir H Dowding, 'The Great Lesson of this War: Sea - Air Power is the Key to Victory', *Sunday Chronicle*, 29 Nov.1942.

Appendix 1



Reservations and Qualifications

The percentage of success to which the above chart refers is drawn from data in the above Admiralty report and defines 'success' as the percentage of ships sunk or seriously damaged. 'Damaged' is defined as 'having a marked effect in fighting efficiency...extensive dockyard repairs over a period of weeks or months are taken as necessary'. So called 'near-miss' effects are particularly damaging to smaller ships because of the relative lightness of their construction and the brittleness of the cast-iron fittings in the machinery. There is also a vulnerability to sea inlet valves from the shock effect of the bomb burst. Only three of the heavier warships had ever received serious damage from near-misses. Near-miss effects cause more losses to merchant ships than direct hits.

Not all attacks are included. Those reports with insufficient details for analysis have been left out. Ships damaged at anchorage by bombing have been left out since the attack objectives were unclear, presumably bombers may have been aiming for the dockyard facilities, or the ships were not operational because of refitting. Results are not to be taken as totally quantitative but can be taken as 'typically representative' for the form of attack and class of ship.

High Level Bombing

During this period no capital ships and carriers were sunk or damaged from high level bombing attacks numbering 15 which were made between 6,000 and 17,000 feet. 69 cruisers were attacked, of which 3 were successful in terms of cruisers sunk/damaged from heights of between 6,000 to 19,000 feet.

Low Level Bombing

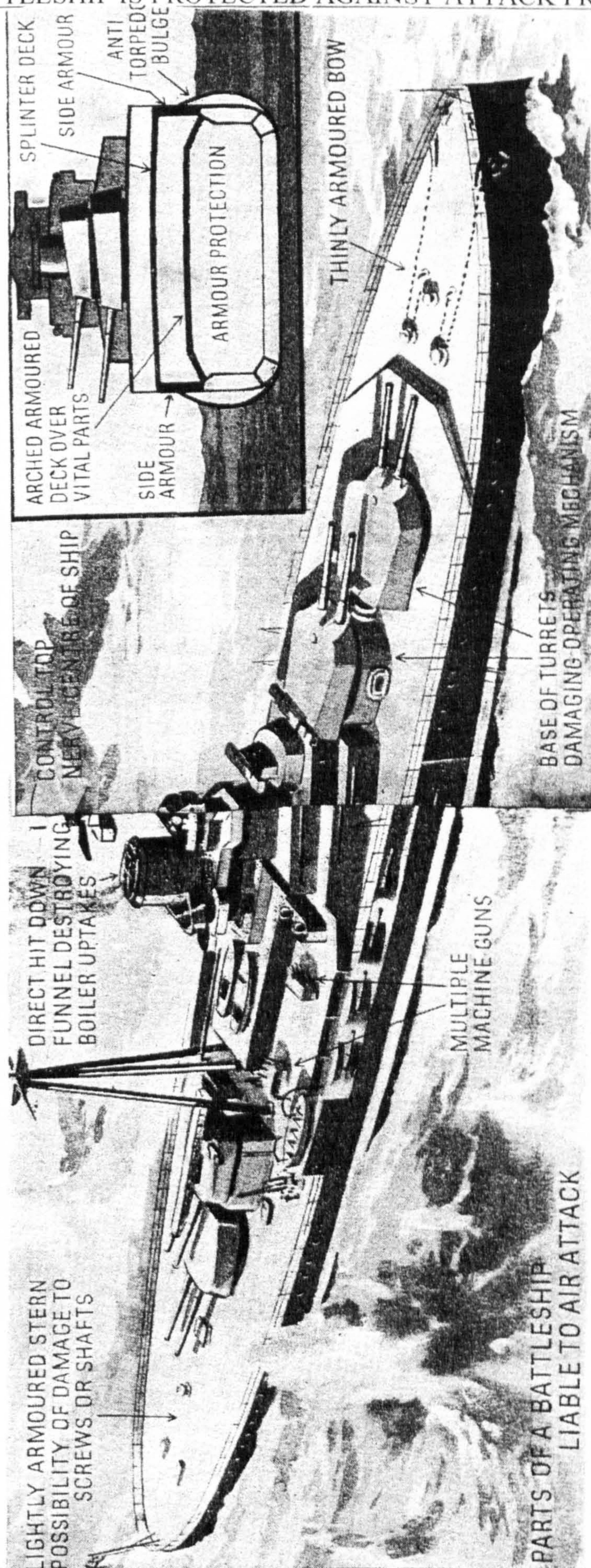
The only classes of vessel sustaining sinking/damage were the Destroyer/Escort class and the Trawler/Auxiliary class. Destroyer/Escorts sustained 4 damaged out of 30 attacks but Trawler/Auxiliary suffered 112 attacks losing 11 sinking/damaged. All attacks against these classes were in the region of 1,000 feet.

Admiralty Conclusions

In this analysis, the Admiralty concluded that the *Luftwaffe's* most effective ship-destroyer was the Ju.87 Stuka. It noted the vulnerability of the Destroyer and Escort Vessel class to dive-bombing from this aircraft and concluded the 'very high degree of success obtained' was down to three factors. Firstly, the 'low scale of AA defence in these vessels, secondly the concentration of aircraft on single ships and thirdly that even a 'near miss' was likely to severely damage these smaller vessels. Other dive-bombing attacks, usually by twin-engined Ju.88 bombers against the Anti-submarine and Minesweeping Trawler and Auxiliary class were seen as successful for the same reasons.

TNA ADM 199/1189 ANAD326/41 'Tactical Summary of Bombing Attacks by German Aircraft on HM Ships and Shipping from September 1939 to February 1941.' Also Tables I & II

HOW A BATTLESHIP IS PROTECTED AGAINST ATTACK FROM THE AIR



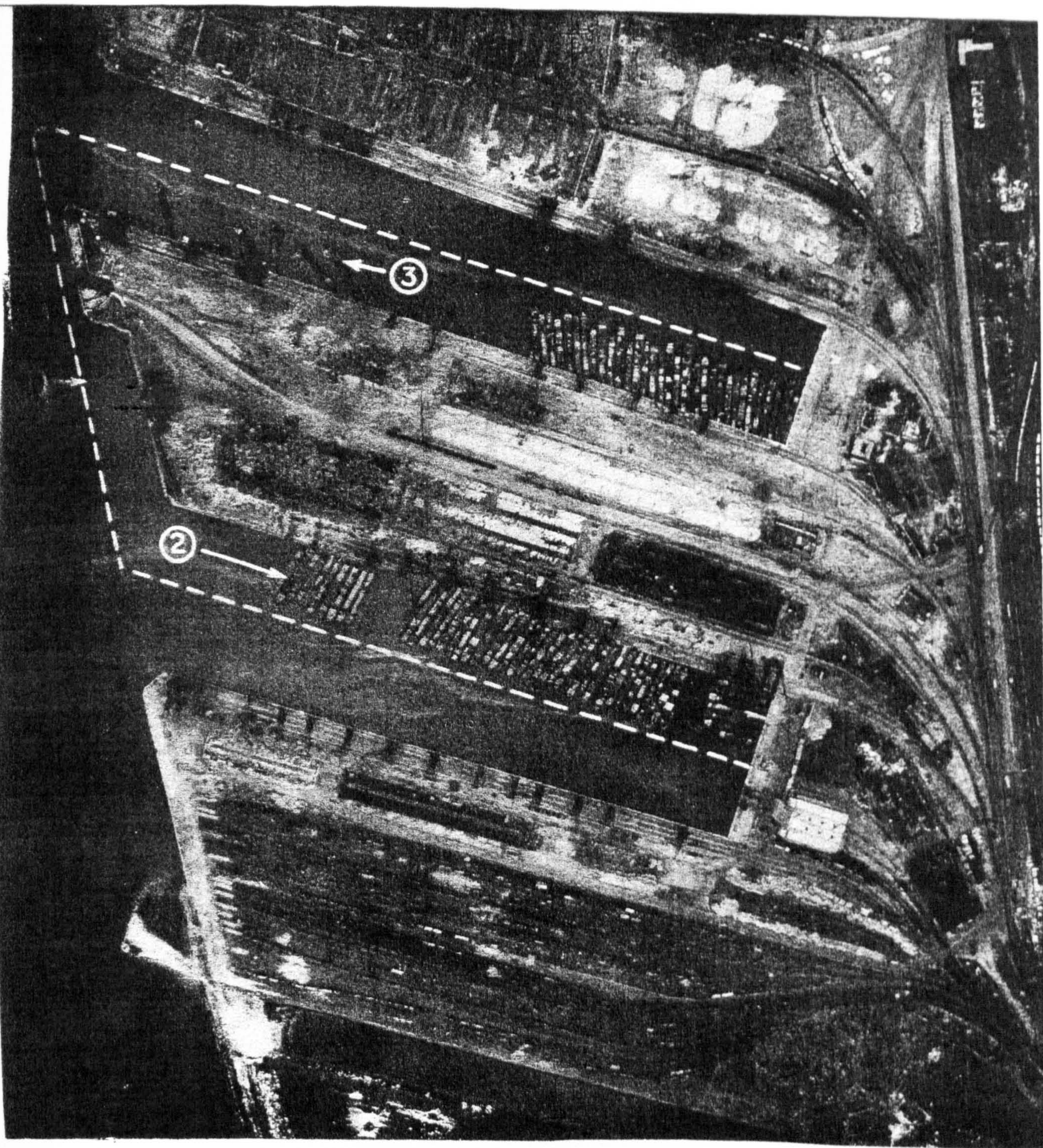
HOW A BATTLESHIP IS PROTECTED
 Damage to the lightly armoured stern might render a ship immobile, so making her an easier target. The midships section, containing the funnels and control tower, is heavily armoured

AGAINST ATTACK FROM THE AIR

Damage to the lightly armoured stern might render a ship immobile, so making her an easier target. The midships section, containing the funnels and control tower, is heavily armoured

Appendix 3

RAF Photograph of Dunkirk Harbour, September 1940.



Aerial photograph of Dunkirk in 'Why the Invasion Armada Never Sailed', in Bomber Command: The Air Ministry Account of Bomber Command's Offensive Against the Axis September, 1939 – July 1941, HMSO, 1941, p.67.

Appendix 4

Colt v Browning Comparison

1	2	3	4	5	6	7
Calibre (inches)	Bullet weight (grains)	Muzzle velocity (feet per second)	Number of guns per aircraft	Maximum rate of fire per gun per minute	Energy delivered in 1 minute for number of weapons in column 4 (foot pounds)	Relative range (approx)
0.50 (Mk.2)	710	2,900	4	850	45,316,384	2
0.303 (Mk.VII)	174	2,240	8	1,350	21,047,040	1

Energy Advantage of Four Colt Mk.2 over Eight 0.303 Mk.VII Browning 24,269,344 foot pounds = 10,835 ft-tons (in one minute).

Table in H R Allen, *Who Won the Battle of Britain?* Panther Books Ltd, 1976, edn. p.80.

Appendix 5

Aircraft Destroyed

Richards		
Luftwaffe	Fighter Command	Bomber / Coastal Commands
1,733	915	N/A
Wood & Dempster		
Luftwaffe	Fighter Command	Bomber/ Coastal Commands
1,679	938	N/A
Terraine		
Luftwaffe	Fighter Command	Bomber / Coastal Commands
1,882	1,017	248 (approx)
Average loss = 1,765	Average loss = 957	Ratio = 1.84 to 1
With Bomber / Coastal Commands = 1.46 to 1		

Personnel Losses

Luftwaffe	Fighter Command	Ratio
2,662 (approx)	537	4.96 to 1
	All Commands	
2, 662 (approx)	1,494 (approx)	1.78 to 1

Data from various sources quoted by Terraine, *The Right of the Line*, pp.219-20 and amalgamated in the above table by A J Cumming. These included D Richards and H Saunders, *The Royal Air Force 1939-1945*, (1) HMSO, 1974 edn, and D Wood and D Dempster, *The Narrow Margin*, Arrow, 1969.

Appendix 6

Extract From Dowding's Letter to the War Cabinet, 8 October 1940

‘ I asked that my protest might be placed on record and it appears thus in the proceedings: -

“The C-in-C. asked that it should be placed on record that, in his view, the proposal to transfer filtering to Groups would not improve the efficiency of night interception. Interceptions over the sea were already affected by the Sectors obtaining their information from the R.D.F stations direct. As regards interceptions over the land, information already came to Fighter Command via the Groups. The result of the proposed delegation would be a very small saving of the time which would be counter-balanced by a corresponding delay in the transmission of information to Fighter Command, with resultant further delay in the issue of air raid warnings. Finally, the proposal would involve a considerable expenditure of money and effort which, in his opinion, was not justified.”

11. There were a few other points in the recommendations and the Air Ministry decisions with which I was not in entire agreement, but they were of a minor nature and are not worthy of specific mention here.’

TNA AIR 19/476

Appendix 7

Speech of Flora Robson as Queen Elizabeth I in *The Sea Hawk* (1940)

‘And now, my loyal subjects. A grave duty confronts us all. To prepare our nation for a war none of us wants – least of all your Queen. We have tried by all means in our power to avert this war. We have no quarrel with the people of Spain. But when the ruthless ambitions of a man threatens to engulf the world, it becomes the solemn obligation of all free men to affirm that the earth belongs not to any one man but to all men and that freedom is the deed and title to the soil on which we exist. Firm in this faith, we shall now make ready to meet the great armada that Philip sends against us. To this end, I pledge you ships – ships worthy of our seamen. A mighty fleet hewn out of the forests of England. A Navy foremost in the world, not only in our time, but for generations to come.’

As quoted by P M Taylor, ‘Propaganda in International Politics, 1919-1939’ in KRM Short (ed), *Film & Radio Propaganda in World War II*, Croon Helm, 1983, p.35.

INTERVIEW BY A J CUMMING WITH RON BABB AT HUNTLEY OFFICER'S COUNTRY RESIDENCE, FORDER LANE, BISHOPSTEIGNTON, DEVON (01626 7789800) ON 7 APRIL, 2004.

The following is an edited version of a taped conversation. Ron Babb served on *HMS Rodney* between 1935-41.

AC So, during 1940 you were an Engine Room Artificer?.

RB That's right, I'd been an ex-naval apprentice and we were trained specifically for that job, whereas the people that came in from outside didn't know the first thing about the Navy, systems or how the machinery worked. My class when we joined, there were only 54 of us. Around 1936-37 they suddenly realised there was going to be a war on so the next class below mine which was Anson was Rodney and they were 95. Another class - there were 170 of them. Someone realised there would have to be more engineers to keep all these new ships going.

AC Did you feel your training was of a high standard?

RB Indeed it was, it still is today. I was promoted, became an officer. My qualifications are now Chartered engineer and Member of the Institute of Marine Engineers.

AC It gave you a good grounding

RB It gave us a good grounding to move forward. That's why in the field of our trade association it still exists today because at one time there was only engine-room, electrical or gunnery. Now they have spread to air electricians, and other technical areas, so the Navy is an exceptionally tough outfit these days.

AC Talking of gunnery, I get the impression that this was a favoured way of advancement. I notice that many senior officers like Forbes had that gunnery background.

RB Yes well, as far as the Navy is concerned the technical professions still got their admirals but the senior admirals either came from the gunnery or navigational side.

AC Was that reasonable?

RB Well yes because they are up top on the bridge. The other gentlemen would very rarely go to sea except to test the machinery.

AC About Admiral Forbes. You were telling me earlier you felt he was underrated?

RB This is only going back in my mind but it was always thought that he wasn't doing enough to push the war effort forward. That was a general impression but not a true lower deck one. We technical people lived in our own mess - a private mess where we had stokers as servants to a degree but we were still not officers. But Admiral Forbes, as far as I can remember, and I was thinking about that since you talked to me, he never put something forward as a striking force but what you have to remember is that he had just entered a battlefield and he was testing out his equipment before he threw it at somebody. This didn't go down very well as he was a little more cautious than people thought he should be. They were looking for someone to say 'lets go out and bang em.'

AC Were you present during the Norway operations?

RB Yes, I can't tell you much about that because we were down below concentrating on gauges, machinery, alterations in speed, steering gear working correctly, hydraulic pressure on the gun turrets OK

AC Even so, you would know what people were saying about the way ships were being

handled and how well things were being dealt with?

RB Oh yes, in a general way.

AC Did the seaman below decks have confidence in Forbes?

RB To the best of my knowledge, I never heard anyone knock him on the lower deck. Occasionally people would grumble about not getting leave when we were sitting around doing nothing in Scapa Flow but every day we were at practice of some form or another. Working the ship, shutting her down so she was fully protected that the communications were working correctly and making sure she was ready for a real engagement which Forbes, I think, was working up to. He was doing it in a way he felt if we're going to go in, we're going to win, whereas someone else might have said let's get in and bash them.

AC I think it was unfortunate for Forbes that he was let down by bad intelligence from the Admiralty which meant it took him a while to realise the Germans were launching an invasion of Norway

RB That didn't really come into my ken until way later when I heard about it.

AC Its claimed by people such as Levy in the *Mariner's Mirror* that seamen called him Wrong-Way-Charlie behind his back because he didn't know where the Germans were. Did you hear of that?

RB I don't think many people did to start with.

AC Have you heard of the name Wrong-Way-Charlie?

RB Yes, there were various names for everybody in those days. I fancy there were some people who thought we were getting nowhere 'so lets kick him out and put someone else in. We will go somewhere whether its good or bad!'

AC A lot of frustration then?

RB That's right, that's my impression. I didn't take notes because we weren't allowed to. And we were fairly busy most times.

AC Forbes has been criticised for not getting around his ships enough. Have you an opinion on that?

RB As far as I recall he came aboard regularly and inspected us.

AC Forbes seems to have suffered because of this accusation; for failing to defend himself by writing memoirs; for being outspoken to Churchill and Dudley Pound. He was replaced by Tovey, supposedly for losing the confidence of the fleet. Yet people like Cunningham described him as one of our best admirals. There seems to have been personality clashes.

RB Yes, this was so in all the services.

AC Was it Rodney or Nelson that was struck by a mine or something when Churchill was aboard?

RB That was in the Mediterranean but I do not think Churchill was aboard.

AC I think this was at Loch Ewe or Rosyth - maybe it was the Nelson.

RB I can't think back now. I know she was in the dockyard at Malta for 7 or 8 weeks Nelson was the C-in-C ship and did not always sail the same sea-time as Rodney did. We

weren't the flagship at all...

AC I may have got this wrong but I thought that Forbes had to use Rodney as the flagship whilst the Nelson was being repaired.

RB I think we were always a private ship which suited as well as we went over to Halifax and got cheap booze and then we did exceptionally well with the Bismark action because we sunk her...

AC What I am particularly interested in for my next chapter is the effect of aircraft against ships. It's said that if the RAF had been destroyed in the Battle of Britain, then German bombers would have easily sunk the fleet.

RB I'm not sure because our gunnery was pretty good.

AC That's interesting because it goes against what has been said about the anti aircraft system. I heard the High Angle Control System was very poor and could not elevate high enough to deal with dive-bombing.

RB Let me think, Rodney's main AA armament was 4.7" which is a pretty good gun. It fired a projectile that if you had half a dozen planes coming in close formation you were bound to hit 2 or 3 of them. Close in, before I left they put in 2 Oerlikons I think we had 32 of them at least. Now then our close-in protection really increased. If a German plane got in anywhere near it - and let's face it - planes were not anywhere near as fast as they are now..

AC This is still 1940?

RB Yes. The Oerlikon was only just coming into production.

AC I have heard it said that ships keeping together were much better off against aircraft.

RB Yes, a single one is very difficult because they can come in from all directions but if you're a group you can put up a pretty good barrage.

AC I suppose when it comes to dealing with Stukas coming in almost vertically I suppose a single ship can't elevate its guns whereas another ship by the side can.

RB It can but apart from that at the beginning of the war they didn't have Oerlikons on board. The Oerlikon could very nearly be got up to vertical and there were twins and single ones as well. When they were fitted you had a pretty good defensive system against aircraft. It wasn't 100% but it puzzled some of the pilots who didn't want to go into that lot.

AC Perhaps you wouldn't know too much about the intricacies of the fire-control-system but I heard that operating it was too difficult for the operators under combat conditions.

RB A lot of that computerised stuff wasn't available in Rodney in 1940.

AC Was it just down to the individual skill of gunners then?

RB Exactly, the control system was on top of the bridge and they had the big rangefinders. They passed the range and elevation forward. Now the 16" turrets, and we were a pretty good gunnery ship - that's why we did in the Bismark, because we were a good gunnery ship. We had the biggest projectiles in the fleet, we had 16" guns and the other battleships were 15.

AC Of course you were on a big ship in 1940 but I gather it was more difficult for destroyers as their anti-aircraft armament was...

RB Non-existent in the first years of the war.

AC Did that mean all the captains could do was take evasive action?

RB Yes, that's how they did it.

AC I heard the Director of Naval Ordnance did not approve of this. He claimed that bomb misses were the result of mistakes by the pilot and that taking evasive action only threw out the ship's AA defence. That seemed to go against the experience of men at sea?

RB I'm no expert but believe you me, if you've got a Stuka diving on you you're there and you do that, he could be too late or too early, but if you keep going he's got you on the direct line.

AC I suppose once the Stuka had begun the dive it's difficult for him to change direction.

RB It is but it's only seconds before he releases it and the bomb is on you. In fact when we were at Norway, we had 2 or 3 dive on us we could hear the noise of them through our engine room oil supplies.

AC That must have been scary because of the sirens.

RB It wasn't because of the turbines going at speed making a noise. If you were busy doing something else you didn't know but occasionally it was, I heard that one.

AC It must have been very hard on people's nerves especially for those on deck firing the guns putting up with all these Stukas coming in? Did you notice signs of mental breakdown at all, what might be known as Stukaritus?

RB Not that I was aware of, certainly down below we had very few problems from that point of view. Some didn't like being down there because when raids were on, hatches were shut. There was a little access hatch but you couldn't get out in time, your chances were very low. Some people were scared of that but it never worried me. It was such a tough ship, so heavily compartmentalised it would take a lot to sink us.

AC Can I ask a hypothetical question? If the worst had happened and Fighter Command had been destroyed in 1940 and the Captain had announced that the ship had to go in without fighter support and attack the enemy invasion, and that many of you would not come back - do you think the ship would still have gone into action?

RB Without a doubt though I don't think he would have put it like that. In Rodney, I never met anybody who was so scared stiff we were never going to get out because we thought she was a wonderful ship. We could tackle anything. We did, the morale was exceptionally high. Much higher than it was in Nelson because Nelson didn't go to sea as much as we did and weren't engaged in the same actions as we were. The C-in-C had to be in a ship that would look after him...

AC Did you have any contact with other ships' crews?

RB Yes, when we were at Scapa Flow, I played rugby for the ship against Nelson and we beat her.

AC Do you think morale was good across the other ships?

RB Generally across the whole fleet, yes. Thinking back we used to go into the canteen ashore and discuss with other crews how they felt about things and you never heard very much about 'oh blimey, we're going to get beat here'. It was always 'give us 6 months and we'll knock them to kingdom come'.

AC I suppose there must have been peaks and troughs of morale when things were not going

too well maybe?

RB Personally it never worried me...

RB when I left Rodney in 1941 I served in a Type 1 Hunt destroyer just over 1000 tons. That's what we did - dashed up and down the Channel all the time. I did the St Nazaire raid in her. It was a lovely little vessel. It was great for me because I was the chief on board and I was the man who ran the machinery for the captain. It was probably why I got made an officer at the age of 27. I had all my tickets and technical qualifications.

AC When you served in the destroyer, did you come under attack from the air at all?

RB Of course yes dozens of times. We dodged it because then they don't have a steady target.

AC I read the Germans didn't have much training in maritime techniques, I suppose it must be difficult to hit a moving target?

RB It is yes.

AC Well I think you have given me a lot to chew over so perhaps we should draw this to a close.. As I said earlier, I intend to use this material for my thesis and might use it in the future if I turn my thesis into a book. I will also let you have a copy of the transcript so that you have the chance to correct any of my mistakes.

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Devon

ADDENDUM

30/4/04. Ron telephoned to make two minor corrections.

Firstly the noise of the Stukas could be heard through the air ventilation system, not the oil supply. Secondly, Nelson went to Gibraltar, not Malta.

I also clarified the matter of Rodney serving as the flagship for the first half of 1940. Ron says that Forbes used the Rodney as a temporary HQ during that time but it was not the flagship as such. This happened because some work was needed on Nelson's guns.

Otherwise everything else was agreed.

A J Cumming

Appendix 9

On 2 July 2004, Col. Eric Wakeling of the Royal Engineers Bomb Disposal Club rang in response to my e-mail.

He confirmed the Germans used plenty of 1000kg (Herman) general-purpose bombs in 1940. He only occasionally dealt with semi armour piercing SD bombs as these were far more suitable for use against ships and fortifications. These were rarely above 600kg as far as he could remember. Those that fell below the high water mark were the responsibility of the Navy. The PC 500kg rocket bomb was used in 1940 rather than in 1940.

I thanked him for the information and told him I would use it for the PhD and the Julian Corbett application.

A J Cumming

**INTERVIEW WITH SIDNEY TYAS AT 4 BRAKERIDGE ROAD,
CHURSTON, DEVON ON 25 OCTOBER 2005.**

Summary

- Served as a gunnery officer in the merchant navy. Still at school during 1940. Went to the Merchant Navy College in Gibraltar where he took a gunnery course. Training was condensed. Had previously served with LDV and done commando training. Served on *SS Southgate* from 1942 onwards. Ship was fitted with AA rocket battery system in America. Pretty useless. Ship was involved in returning POWS from Spain.
- *The Oerlikon* was the most effective gun for dealing with dive and torpedo bombers, particularly torpedo bombers that made slow straight approach runs. Had no experience with the Vickers equivalent. Mountings could elevate well above 40 degrees.
- *The 4.7 medium gun* was usually ineffective although he recalled a German aircraft being shot down by one, though it was probably sheer chance.
- *Big-ship guns* were not accurate though he agreed enemy aircraft were often intimidated by them.
- *The .303 Lewis* was a WWI weapon and ineffective except for morale.
- *Read extract from thesis on 'maritime bombs', AA Defence of the Fleet' and 'Effect of bombing'*. He thought dive-bombing the most effective form of bombing though he had witnessed one vessel being destroyed by high level bombing. He agreed with official verdict that much depended on the skill of the individual Stuka pilot. Interestingly he did not think dodging very effective for a merchant ship compared to AA defence using Oerlikons but recognised the situation in 1940 was likely to be different bearing in mind the relative shortage of Oerlikon types. Also acknowledged that destroyers were more nimble. Best manoeuvre was to spin 90 degrees back towards the Stuka so that it would overshoot.
- *Convoys* usually adopted formations of approx six ship abreast though they would not extend backwards very far. Aircraft would usually attack ships at the edge although that was usually where AA escort ships were positioned.
- *High Angle Control*. Doubted if auto direction was any better than manual gunlaying despite problems of doing this when under fire.
- *Practice ammunition* was the same as normal ammunition except that it did not explode when hitting the target. Shot was solid and could still do damage.

A J Cumming

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