

THE CONCEPTUAL ORIGINS OF THE CONTROL OF THE AIR: BRITISH
MILITARY AND NAVAL AVIATION, 1911 – 1918

By

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ABSTRACT

This thesis examines the conceptual origins of the control of the air in Britain between 1911 and 1918. It concludes that military and naval aviators possessed an innate understanding of the concept, informed by the wider operational and organisational context of their respective parent services. For the Royal Flying Corps, the control of the air was understood in terms of providing auxiliary support to the British Army in the field. For the Royal Naval Air Service, the concept possessed an inherently strategic slant. Pre-war theorising, developed during the First World War, has been the subject of some controversy in the literature. The overtly tactical focus of the Royal Flying Corps and its concept of the control of the air, praised in the first instance, is now widely criticised. In contrast, naval aviators, highlighted as lacking focus and direction, are now hailed as progressive innovators. By examining various facets affecting the conceptual origins of the control of the air, including doctrine, education, and relations with allies, this thesis attempts to reinvigorate the traditional interpretation of military and naval air power in Britain during this period.

DEDICATION

To Ann

Who gives all and expects nothing in return

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ABBREVIATIONS

Admiralty Files, National Archives – ADM

Air Committee – AC

Air Historical Branch – AHB

Air Ministry Files, National Archives – AIR

Air Publication – AP

Army Doctrine Publication – ADP

Battle Cruiser Fleet – BCF

British Expeditionary Force – BEF

British Library – BL

Cabinet Papers, National Archives – CAB

Central Flying School – CFS

Chief of the Air Staff – CAS

Chief of the Imperial General Staff – CIGS

Committee of Imperial Defence – CID

Director General of Military Aeronautics – DGMA

Director, Air Department – DAD

Director of Air Services – DAS

Director of Naval Intelligence – DNI

Field Service Regulations – FSR

General Headquarters, British Expeditionary Force – GHQ, BEF

Grand Fleet Battle Orders – GFBO

Indian Office Records – IOR

Imperial War Museum – IWM

Joint War Air Committee – JWAC

Journal of the Royal United Services Institute – JRUSI

Liddell Hart Centre for Military Archives – LHCMA

Military Wing – MW

Ministry of Defence – MoD

National Aerospace Library – NAL

National Maritime Museum – NMM

Naval Intelligence Department – NID

Naval Wing – NW

Naval Records Society – NRS

North Atlantic Treaty Organisation – NATO

Royal Air Force – RAF

Royal Australian Air Force – RAAF

Royal Flying Corps – RFC

Royal Navy – RN

Royal Naval Air Service – RNAS

Royal United Services Institute – RUSI

The National Archives – TNA

The War in the Air series – WIA

United States Air Force – USAF

War Office – WO

CHAPTER ONE

INTRODUCTION

This thesis explores the conceptual origins of the control of the air, setting its examination in the context of the development of British military and naval aviation between 1911 and 1918. It is by examining these contexts that the thesis seeks to illuminate the factors that affected how military and naval aviators came to think about the control of airspace. This introductory chapter addresses several points: first, it will provide some background relating to the control of the air, offering a definition of the concept and justifying the use of modern terminology. Whilst a proactive attempt has been made to avoid the use of inherently technical language, the term 'doctrine,' used throughout the thesis, is also briefly defined. This will lead into a discussion of the general and specific literature relevant to the thesis, which, in turn, will be used to draw out the general and specific research questions that this thesis will seek to answer. After establishing the parameters and structure of the thesis, the chapter will conclude with a brief exploration of the archival foundations upon which the thesis is constructed.

Background

Air forces and academics agree that the notion of controlling airspace is at least one, if not the most important, of the central functions of air power. The Royal Air Force

(RAF) observes that '[s]ecuring control of the air is the RAF's paramount duty.'¹ RAF doctrine states that the control of airspace is the first of four fundamental air (and space) power roles:

[the control of the air] has doctrinal primacy because it enables freedom of manoeuvre in all of the Service environments: air, land and maritime. Control of the air provides commanders with the ability to retain the initiative while denying it to the enemy, and although military operations may be attempted without it, success may be fatally compromised beneath contested airspace.²

The Royal Australian Air Force (RAAF) supports this position, noting that the ability to exploit the medium of the air is considered to be the 'prerequisite for the conduct of all other operations to achieve campaign objectives,' and the control of airspace is an axiomatic priority amongst many air forces of the world.³ These air forces include those of the United States, the Russian Federation, and the aerial forces that are available to the North Atlantic Treaty Organisation (NATO).⁴ As with air forces, academics recognise the axiomatic quality of controlling airspace. Richard Hallion, a former chief historian of the United States Air Force (USAF), has referred to the

¹ Royal Air Force (RAF) Website,

<http://www.raf.mod.uk/rafoperationalupdate/opsupdate/controloftheair.cfm>. Accessed, 21 Mar 2013.

² Ministry of Defence (MoD), *British Air and Space Power Doctrine: AP3000, Fourth Edition* (London: MoD, 2009), pp.37 – 38.

³ Royal Australian Air Force (RAAF), *Australian Air Publication AAP 1000-D: The Air Power Manual, Fifth Edition* (Canberra: Air Power Development Centre, 2008), p.139.

⁴ United States Air Force (USAF), *Counterair Operations: Air Force Doctrine Document 3-01, Interim Change 2* (Maxwell, AL.: Centre for Doctrine Development and Education, 2011), pp.2 – 5; North Atlantic Treaty Organisation (NATO), *Three Air Power Considerations within a Comprehensive Approach* (Kalkar, Germany: Joint Air Power Competence Centre, 2010), p.15; Office of the President of the Russian Federation, *The Military Doctrine of the Russian Federation* (Moscow: Website of the President of the Russian Federation, 2010), p.6. Translated version available via the website of the Carnegie Endowment for International Peace.

Accessed, 15 Sep 2012. http://carnegieendowment.org/files/2010russia_military_doctrine.pdf.

control of airspace as an 'enduring requirement,' and continues to write of the importance of the concept.⁵

As a concept, the ability to control airspace has a long heritage, and it is the conceptual origins of this heritage that are examined in this thesis. This is achieved via an exploration of the development of military and naval aviation in Britain between 1911 and 1918. Given the somewhat cautious attitude of the British government toward aviation in the era preceding the First World War, it is telling that, by the conclusion of the conflict, great significance was attached to air power and its ability to control airspace. As RAF doctrine has stated,

By the end of the World War I ... the need to achieve control of the air was recognised as an important aim in its own right.⁶

For example, by 1917, the British Expeditionary Force's (BEF) greatest set-piece enterprise of the First World War, the Third Battle of Ypres, hinged, at least in part, upon the Royal Flying Corps's (RFC) ability to establish the control of the air.⁷ Such conclusions are supported by Morrow, who argues that

Control of the airspace over the battlefield became essential to victory in World War I, just as it would twenty years later in the next world war.⁸

⁵ R. Hallion, *The Control of the Air: The Enduring Requirement* (Washington, D.C.: Air Force History and Museums Program, 1999); R. Hallion, 'Air and Space Power: Climbing and Accelerating' in *A History of Air Warfare*, ed., J. A. Olsen (Washington, D.C.: Potomac Books, 2010), pp.379 – 380.

⁶ MoD, *Air Power Doctrine: AP3000, Second Edition* (London: MoD, 1993), p.40.

⁷ G. Sheffield & J. Bourne, eds., *Douglas Haig, War Diaries and Letters, 1914 – 1918* (London, Weidenfeld & Nicolson, 2005), Haig Diary, 7 Jul 1917, p.302.

⁸ J. H. Morrow, 'The First World War, 1914 – 1919,' in *A History of Air Warfare*, ed., J. A. Olsen (Washington, D.C.: Potomac Books, 2010), p.24.

The same could be said of the naval context, and the senior operational commanders of the Royal Navy (RN), Sir John Jellicoe and Sir David Beatty, continued to press the Admiralty to ensure that the Grand Fleet was able to control the airspace around their ships. For example, Beatty wrote in 1917 that

No naval operation *should* be complete without the co-operation of aircraft ... [emphasis in original].⁹

In many respects, the birth of the RAF in 1918, the world's first independent air force, was driven by considerations relating to the control of the air. However, when writing of the importance of air power in the aftermath of the Second World War, Churchill was to argue that

Air-power [sic] is the most difficult of all forms of military force to measure, *or even express in precise terms* [emphasis added].¹⁰

Thus, in the first instance, it is important to explore and, where appropriate, define the technical terms used throughout this thesis.

Understanding and Defining Doctrine

For some, 'doctrine is nothing more than a whole group of words,' but this thesis makes use of the term, arguing that it represents something much more than the

⁹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service, Vol. I, 1908 – 1918* (London: Navy Records Society, Vol. 113, 1969), p.497. Letter, Beatty to Geddes (First Lord), 12 Aug 1917.

¹⁰ W. S. Churchill, *The Second World War, Vol.I: The Gathering Storm* (London: Folio Society, 2000) [1948, revised 1949], pp.87 – 88.

traditional definition of 'that which is taught.'¹¹ The current definition accepted by Britain's armed forces comes from NATO, which defines doctrine as the

Fundamental principles by which the military forces guide their actions in support of objectives. It is authoritative but requires judgement in application.¹²

In discussing the nature of doctrine, Parton suggested that

doctrine can most usefully be thought of as representing a nexus between the past, present and future ... However, doctrine can also represent something deeper than simply the results of analysis; it can point to the most heartfelt beliefs of an organisation, and consequently to some extent reveals the culture of the organisation at the time that it was produced.¹³

Sheffield has written that

doctrine should establish a framework of understanding and action, which should inform the decision making process. Doctrine at the higher levels should permeate the language and thinking of those in high command, and their subordinates should be able to gauge their thoughts, and indeed, anticipate them because of a common background and training.¹⁴

In defining doctrine, Sheffield highlighted the work of J. F. C. Fuller. Fuller argued that doctrine was the 'central idea of an army ... nothing else than common sense – that is, action adapted to circumstances.'¹⁵ Possibly influenced by Fuller, General

¹¹ R. H. Kohn & J. P. Harahan, eds., *Air Superiority in the World War II and Korea* (Washington D.C.: Office of Air Force History, 1983), p.69; MoD, *AP3000, Second Edition*, p.7.

¹² NATO, *AAP-6 (2010): NATO Glossary of Term and Definitions* (Brussels, Belgium: Office of NATO Terminology Coordination, 2010), 2-D-9.

¹³ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine, 1919 – 1939' (PhD Thesis, University of Cambridge, 2009), p.6.

¹⁴ G. Sheffield, 'Doctrine and Command in the British Army: An Historical Overview,' in *Army Doctrine Publication (ADP): Operations* (London: MoD, 2010), E-3.

¹⁵ J. F. C. Fuller, *The Science of War* (London: Hutchinson, 1926), p.254.

Curtis LeMay, an advocate of strategic bombing and an influential figure in the creation of the USAF, suggested that

at the very heart of warfare lies doctrine. It represents the central beliefs for waging war in order to achieve victory. Doctrine is of the mind, a network of faith and knowledge reinforced by experience which lays the pattern for the utilization of men, equipment, and tactics. It is the building material for strategy. It is fundamental to sound judgment.¹⁶

Guided by the work of Corbett, Gray has emphasised that doctrine can be usefully thought of as allowing

politicians and military planners to be able to utilize 'mental power and verbal apparatus' on a level playing field.¹⁷

In terms of its production, Overy has argued that

Air power doctrine cannot be understood apart from the intellectual, cultural and political context in which it has been generated.¹⁸

In drawing together these thoughts and definitions, several key aspects of doctrine emerge: first, doctrine provides a conceptual framework of understanding; second, it should be the product of theory, experience, and practice; third, it reflects the cultural ideals and central beliefs of an organisation; fourth, doctrine makes it so that 'words have the same meaning for all;' and finally, that the production of doctrine is affected

¹⁶ USAF, *Air Force Basic Doctrine, Organization, and Command: Air Force Doctrine Document 1* (Maxwell, AL.: Centre for Doctrine Development and Education, 2011), p.vii.

¹⁷ P. Gray, *The Leadership, Direction and Legitimacy of the RAF Bomber Offensive from Inception to 1945* (London: Continuum, 2012), p.19; J. Corbett, *Some Principles of Maritime Strategy* (London, Longmans, 1911), p.3.

¹⁸ R. Overy, 'Introduction,' in *Air Power History: Turning Points from Kittyhawk to Kosovo*, eds. S. Cox & P. Gray (Abingdon: Frank Cass, 2002), p.x.

by a range of contextual factors. It is these five facets upon which this thesis bases its understanding of doctrine.

The Control of the Air: The Evolution of Air Power Language in the Professional and Organisational Context

It is apparent that the terminology relating to the control of airspace has changed over time and continues to evolve. For example, whilst some modern air forces use the term 'control of the air,' others, such as the USAF, make use of the term 'air control.'¹⁹ In contrast, the military doctrine of the Russian Federation stresses the importance of 'securing supremacy ... in the air' and taking active steps to defend 'air-space.'²⁰ To complicate matters, some air forces believe that differing conditions and levels of control exist in the air, whilst others are less comfortable with this suggestion.²¹ The use of terms such as 'control of the air' or 'air control' are only the most recent favoured taxonomic manifestations of a concept that, in the lengthening history of organised air power, has been referred to as 'superiority in the air,' 'mastery of the air,' 'air superiority,' 'air supremacy,' the 'command of the air,' and other variations on these linguistic themes.

Given the shifting taxonomic landscape, it is important to trace the manner in which the language relating to the control of airspace has evolved. The result of this process will be to present a working definition of the 'control of the air' that will inform

¹⁹ MoD, *AP3000, Fourth Edition*, p.38; RAAF, *Australian Air Publication AAP 1000-D*, p.139; USAF, *Counterair Operations: Air Force Doctrine Document 3-01, Interim Change 2*, pp.2 – 5.

²⁰ Russian Federation, *Military Doctrine*, p.6 and p.12.

²¹ *Australian Air Publication AAP 1000-D*, p.141; USAF, *Counterair Operations: Air Force Doctrine Document 3-01, Interim Change 2*, p.3, figure 1.1 – 'Air Control Relationships.' In contrast, see MoD, *AP3000, Fourth Edition*, p.38.

the rest of the thesis. To afford a clear focus for the discussion that follows, the language used by air power organisations and the air power professionals (usually service personnel) will be examined. These organisations and the professionals that work for them have a clear interest and involvement in the development of air power language. The air power language that they develop is usually deployed in official publications, such as doctrinal manuals, although some individuals also produce what could be termed 'unofficial' or 'informal doctrine.' As such, the following section explores RAF doctrine between 1922 and 2009 and, where especially relevant, some American air power doctrine.

This overview of RAF doctrine illuminates several important points. First, that concepts relating to the control of airspace hold a place of fundamental importance within British air power doctrine (and the air power doctrines of other air forces). In the case of the British example, the significance of this concept has fluctuated to an extent, particularly in the period between the First and Second World Wars, but has returned to a place of centrality. Second, the language used to define concepts relating to the control of airspace has changed over time and continues to evolve. In British air power doctrine, particularly since the end of the Cold War, the word 'control' has found increasing favour. Finally, this overview demonstrates that, whilst air power organisations and professionals spent much of the First and Second World Wars 'doing' rather than 'defining,' they have become increasingly comfortable, particularly in recent years, with developing and defining taxonomy relating to the concept of controlling airspace.²²

²² R. H. Kohn & J. P. Harahan, *Air Superiority*, pp.17 – 18; L. Baker & B. F. Cooling, 'Developments and Lessons before World War II,' in *Case Studies in the Achievement of Air Superiority*, ed., B. F. Cooling, (Washington, D.C.: Centre for Air Force History, 1994), p.2.

The idea that some form of control could be asserted in the air was a feature of the earliest air power doctrine produced in Britain, both officially and informally, and it is an exploration of such ideas that sits at the heart of this thesis.²³ However, as Parton records, it was not until 1928 that the RAF began to offer official definitions relating to such concepts.²⁴ Rather than defining terms, the RAF and its predecessor, the Royal Flying Corps (RFC), tended to define the method to achieve the aim. This invariably focused on offensive action to seize both material and moral ascendancy over the enemy.

In 1922, the RAF published its first operations manual, *Confidential Document 22 (C.D.22)*.²⁵ Discussed at length by Parton, this manual emphasised the prime importance of establishing control in the air to facilitate operations on land, at sea, and in the air.²⁶ A clear definition was not to be found in the manual, and, in the pages of *C.D.22*, at least four different terms were used to refer to establishing control of airspace: 'aerial supremacy,' 'supremacy in the air,' 'superiority in the air,' and 'aerial ascendancy.'²⁷ In turn, the words 'local' and 'temporary' were used to further refine these terms, suggesting that asserting control in the air could be limited in both time and space.²⁸

²³ General Staff, Air Publication (AP) 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914), p.47 and p.49. Copy held at RAF Museum (RAFM), Hendon.

²⁴ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.125.

²⁵ The National Archives (TNA), Air Ministry Files (AIR) 10/1197 – Air Ministry, *C.D.22, Operations Manual, Royal Air Force* (London: Air Ministry, 1922).

²⁶ N. Parton, 'The Development of Early RAF Doctrine,' *Journal of Military History* (Vol. 72, No.4, Oct 2008): pp. 1155 – 1177.

²⁷ AIR 10/1197 – Air Ministry, *C.D.22*, p.14, p.63, p.71, p.79, pp.105 – 106, and p.123.

²⁸ AIR 10/1197 – Air Ministry, *C.D.22*, p.14 and p.71.

In 1928, the RAF published what was the result of a significant expenditure of intellectual capital, *AP1300*, the 'operations' part of its war manual.²⁹ By 1928, the favoured term for establishing control in the air had become 'air superiority,' defined as

a state of moral, physical and material superiority which enables its possessor to conduct operations against an enemy, and at the same time deprive the enemy of the ability interfere effectively by the use of his own air forces.³⁰

As with *C.D.22*, *AP1300* continued to make the distinction that control in the air was limited in time and space; the word 'local' being a favoured adjective.³¹ However, in a break from its predecessor, *AP1300* emphasised that establishing control of airspace was a means and not an end.³² This reflected that, in the six year period since the release of *C.D.22*, the RAF's focus had begun to set on the central importance of the bomber as a war-winning weapon.³³ Such ideas were further developed in Slessor's *Air Power and Armies* (1936); a volume to which historians such as Higham and Parton attach great significance.³⁴ For example, Parton notes that some elements of *Air Power and Armies* were 'very close to official doctrine,' although Slessor's views on operational level air / land cooperation, crafted during the latter's time on the

²⁹ Air Ministry, *AP1300: Royal Air Force War Manual, Part I: Operations* (London: Air Ministry, 1928).

³⁰ Air Ministry, *AP1300, Part I* (1928), Chapter VII, 10.

³¹ Air Ministry, *AP1300, Part I* (1928), Chapter VII, 11 (i).

³² Air Ministry, *AP1300, Part I* (1928), Chapter VIII, 1.

³³ For the interwar years, see H. Montgomery Hyde, *British Air Policy between the Wars, 1918 – 1939* (London: Heinemann, 1976).

³⁴ J. C. Slessor, *Air Power and Armies* (Tuscaloosa, Ala.: University of Alabama Press, 2009) [1936]; R. Higham, *The Military Intellectuals in Britain, 1918 – 1939* (New Brunswick, NJ: Rutgers University Press, 1966), pp.208 – 217; N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.195 – 198.

directing staff at the Army Staff College in Camberley, had to be 're-learnt through bitter experience' during the Second World War.³⁵

In examining the use of air power during the First World War, Slessor briefly analysed air power language and terminology. He cited the RAF's official definition of 'air superiority' and explained the rationale behind the decision to use such a term.³⁶ Slessor noted the links between early air power taxonomy and ideas relating to the use of naval power. For Slessor, the concept of the 'command of the sea' had a direct influence on the way in which Britain's air power organisations and professionals came to think about the use of the air. As such, a term that found favour between 1911 and 1918 was the 'command of the air'.³⁷ However, as Slessor suggested, given the experiences of the First World War, particularly in relation to the evasive qualities of both submarines and aircraft, the use of the word 'command' fell out of favour because it suggested that a level of 'absolute command' could be attained where in practice it could not.³⁸ Slessor offered his own definition for air superiority, which may have reflected that the RAF's definition was falling out of favour. This new definition was simple and to the point, suggesting that air superiority was

the capacity to achieve our own objective in the air and to stop the enemy achieving his.³⁹

³⁵ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.198.

³⁶ J. C. Slessor, *Air Power and Armies*, p.4.

³⁷ For example, see H. R. M. Brooke-Popham, 'Military Aviation,' *The Army Review* (Jan 1912), p.96.

³⁸ J. C. Slessor, *Air Power and Armies*, p.5.

³⁹ J. C. Slessor, *Air Power and Armies*, p.4.

Again, reflecting the evolving nature of RAF doctrine and the growing importance of the bomber, Slessor emphasised explicitly that air superiority was a 'means and not an end.'⁴⁰

The question of controlling airspace was an important issue in the RAF, and, some five years before Slessor published his *Air Power and Armies*, Leigh-Mallory, an officer who would play a leading role in the Battle of Britain and the Normandy campaign, wrote an article addressing 'The Maintenance of Air Superiority in a Land Campaign.'⁴¹ Leigh-Mallory opened his article by clearly defining his terms, noting that 'air superiority' was

the attainment of operational freedom by our own aircraft, and denying it to the enemy.⁴²

In discussing the nature of language, Leigh-Mallory felt that 'superiority' was a more appropriate word than 'supremacy,' reflecting the impermanence of air power and the fluctuating nature of establishing control of airspace.⁴³ However, in 1940, when the second edition of *AP1300* was published, the term 'air superiority' was all but banished from its pages.⁴⁴ The only reference to 'air superiority' was found within a section relating to direct cooperation with the Army, and it may have been that its

⁴⁰ J. C. Slessor, *Air Power and Armies*, p.10.

⁴¹ T. Leigh-Mallory, 'The Maintenance of Air Superiority in a Land Campaign,' reprinted in *Air Power Review*, Vol.6, No.1 (Spring 2003): pp.152 – 159. On Leigh-Mallory, see R. W. Mahoney, 'The Forgotten Career of Air Chief Marshal Sir Trafford Leigh-Mallory: Leadership Development and Succession Planning in the Inter-War Royal Air Force,' (PhD Thesis, University of Birmingham, forthcoming).

⁴² T. Leigh-Mallory 'Air Superiority,' p.154.

⁴³ *Ibid.*

⁴⁴ Air Ministry, *AP1300: Royal Air Force War Manual, Part I: Operations, Second Edition* (London: Air Ministry, 1940).

use was the result of an editorial slip.⁴⁵ In expressing how control would be established in the air, the 1940 edition favoured the use of a somewhat unwieldy term, the 'Neutralization of the Enemy Air Forces.'⁴⁶ Again, this reflected the RAF's evolving views on the importance of establishing control in the air. By 1940, a direct contest to establish such control was not given the prominence that it had received in either *C.D.22* or the first edition of *AP1300*. The use of words such as 'local' or 'temporary' continued to indicate that the RAF understood that controlling airspace was never 'permanent or absolute,' particularly in light of the evasive qualities of air power.⁴⁷ In fact, it was the emphasis on the evasive qualities of air power that saw an evolution in the conceptual basis of controlling the air, and a subsequent shift in the importance attached to fighting for the control of airspace. This process has been described as 'tragic' and as a major factor contributing to the severe difficulties experienced during the RAF's strategic bombing campaign of the Second World War.⁴⁸ More generally, the 1939 – 1945 conflict seemed only to emphasise the importance of controlling airspace, and, in recording his four principles of air power, Trenchard stressed the primary importance of obtaining '**Mastery of the Air** [emphasis in original].'⁴⁹ This conclusion was supported by the work of the American official historians who declared that

⁴⁵ Air Ministry, *AP1300, Part I, Second Edition* (1940), Chapter XI, 46.

⁴⁶ Air Ministry, *AP1300, Part I, Second Edition* (1940), Chapter VII, 15 – 20.

⁴⁷ Air Ministry, *AP1300, Part I, Second Edition* (1940), Chapter VII, 21 – 24.

⁴⁸ AIR 41/57 – Air Historical Branch (AHB) Narrative, *The RAF in the bombing offensive against Germany, Vol. VII: The planning of the bombing offensive and its contribution to German collapse*, p.26; N. Frankland, *The Bombing Offensive Against Germany: Outlines and Perspectives* (London: Faber & Faber, 1965), pp.65 – 67 and pp.105 – 106.

⁴⁹ H. Trenchard, 'The Principles of Air Power in War,' in *Trenchard and Slessor: On the Supremacy of Air Power over Sea Power*, ed. G. L. Dyndal, (Trondheim: Tapir Academic Press, 2007), p.43.

Of all the accomplishments of the air forces, the attainment of air supremacy was the most significant.⁵⁰

In the aftermath of the Second World War, Tedder also noted the importance of controlling airspace when he recorded that

The first round in modern warfare takes place in the air – the fight for air superiority.⁵¹

As such, it is unsurprising that the next incarnation of *AP1300*, the third edition (1950), saw a resurgence of the concept.⁵² This edition returned to 'air superiority' as the favoured term, and the concept was the subject of detailed exposition.⁵³ It is interesting to note that the third edition embraced concepts from the two previous editions of *AP1300* and of *C.D.22*. As it had been in *C.D.22*, the prime importance of establishing control in the air was emphasised and, again, the concepts of time and space were also highlighted. In addition, the importance of 'moral factors' and the need for offensive action were also given prominence.⁵⁴ Air Superiority was defined as

a condition in which we are able to make use of the air for our own purposes and the enemy air forces are unable to operate against us effectively [emphasis in original].⁵⁵

⁵⁰ W. F. Craven & J. L. Cate, *The Army Air Forces in World War II, Vol.III: Europe: Argument to V-E Day, January 1944 to May 1945* (Washington, D.C.: Office of Air Force History, 1983) [1951], p.792; C. Webster & N. Frankland, *The Strategic Air Offensive Against Germany, 1939 – 1945, Vol.III: Victory* (London: HMSO, 1961), pp.291 – 294.

⁵¹ A. Tedder, 'Air, Land and Sea Power,' *Journal of the Royal United Services Institute (JRUSI)*, Vol.91 (Feb / Nov 1946), p.61.

⁵² Air Ministry, *AP1300: Royal Air Force War Manual, Third Edition, Part I: Operations* (London: HMSO, 1950).

⁵³ Air Ministry, *AP1300, Part I, Third Edition* (1950), pp.21 – 24.

⁵⁴ Air Ministry, *AP1300, Part I, Third Edition* (1950), pp.22 – 24.

⁵⁵ Air Ministry, *AP1300, Part I, Third Edition* (1950), p.21.

It is also noteworthy that, in summarising the RAF's doctrinal position relating to air superiority, the term 'control of the air' was used.⁵⁶ Tedder had also used the term in his 1946 lecture to the Royal United Services Institute (RUSI), and it may have been his influence as Chief of the Air Staff (CAS) that saw the RAF include the term in the 1950 edition of *AP1300*.⁵⁷ The heritage of the term 'control of the air' is unclear, but it had been used as early as 1908, when Alexander Graham Bell wrote that '[t]he nation that secures control of the air will ultimately rule the world.'⁵⁸ Its use in a military context seems to have been favoured by American air power professionals and organisations. Reflecting on his experience of the First World War, the US air power theorist 'Billy' Mitchell was to note that,

as a prelude to any engagement of military or naval forces, a contest must take place for control of the air.⁵⁹

The history of US air power language reflects the same shifting taxonomy as that of the British, and, as Maurer's official histories indicate, such language was directly influenced by British air power doctrine of the First World War.⁶⁰ For Lieutenant-General E. R. Quesada (USAF), concepts relating to air superiority came to be 'defined after the second [sic] World War started.'⁶¹ However, as Biddle notes, US military aviators were using the term 'control of the air' during the 1930s, and had

⁵⁶ Air Ministry, *AP1300, Part I, Third Edition* (1950), p.24.

⁵⁷ A. Tedder, 'Air, Land and Sea Power,' p.63.

⁵⁸ R. U. Johnson, *Remembered Yesterdays* (Boston, MA.: Brown, Little & Co., 1923), pp.347 – 348. Letter, Graham Bell to Johnson, 16 Mar 1908.

⁵⁹ W. Mitchell, *Our Air Force: The Keystone of National Defense* (New York: E. P. Dutton & Co., 1921), p.xix and p.5.

⁶⁰ M. Maurer, ed., *The U.S. Air Service in World War I, Vol.I: Early Concepts of Military Aviation* (Washington D.C.: Office of Air Force History, 1978), p.108, p.113, and p.117.

⁶¹ R. H. Kohn & J. P. Harahan, *Air Superiority*, p.18.

given prominence to the concept during the early 1920s.⁶² As USAF General R. M. Lee suggests, it was whilst working with British forces in the North African desert during the Second World War that US aviators came to revisit the use of airspace in terms of 'control' rather than 'superiority.'⁶³ This change was captured in the United States Army Air Force's (USAAF) doctrinal manual, *FM 100-20: Command and Employment of Air Power* (1943).⁶⁴ Use was made of the term 'control of the air,' and it was apparent that this term was an overarching concept, with other terms such as 'air superiority' and 'air supremacy' reflecting the various degrees of control that could be attained in the air.⁶⁵

It was in 1957 that the final (nuclear) edition of *AP1300* was published.⁶⁶ Given the importance of air-dropped nuclear weapons, particularly during the first decade of the Cold War, the control of airspace remained a crucial priority throughout this period.⁶⁷ Nonetheless, the Cold War was defined by something of a doctrinal drought in the RAF.⁶⁸ This was accompanied by stagnation in the officially promulgated air power terminology relating to the control of airspace, and the RAF returned to an attitude of 'doing' rather than 'defining.'⁶⁹

⁶² T. Davis Biddle, *Rhetoric and Reality: The Evolution of British and American Ideas about Strategic Bombing, 1914 – 1945* (Princeton: Princeton University Press, 2002), p.134 and pp.158 – 159.

⁶³ R. H. Kohn & J. P. Harahan, *Air Superiority*, p.35.

⁶⁴ United States (US) War Department, *Field Manual FM 100-20: Command and Employment of Air Power* (Washington D.C.: US Government Printing Office, July 1943)

⁶⁵ US War Department, *FM 100-20*, p.1 and p.7.

⁶⁶ AIR 10/5589 – Air Ministry, *AP1300: Royal Air Force War Manual, Fourth Edition, Part I: Operations* (London: HMSO, 1957).

⁶⁷ For example, see M. A. O'Neill, 'Air Combat on the Periphery: The Soviet Air Force in Action during the Cold War, 1945 – 1989,' in *Russian Air Power and Aviation in the Twentieth Century*, eds., R. Higham, J. T. Greenwood, & V. Hardesty (London: Frank Cass, 1998), p.210.

⁶⁸ N. Parton, 'Strategic Air Power Theory in the 21st Century,' *Air Power Review*, Vol.7, No.2 (Summer 2004), p.15.

⁶⁹ M. Mäder, 'In Pursuit of Conceptual Excellence: The Evolution of British Military-Strategic Doctrine in the Post-Cold War Era, 1989 – 2002,' *Studies in Contemporary History and Security Policy*, Vol.13 (Oxford: Peter Lang, 2004), pp.111 – 112.

However, the 1990s saw a doctrinal resurgence in the RAF with the publication of *AP3000* (four editions between 1991 and 2009).⁷⁰ It was in the pages of these manuals that the RAF again began to articulate and develop language relating to the control of the air. A comparison of the second, third, and fourth editions of *AP3000* (1993, 1999, and 2009) demonstrates how air power language and concepts continued to evolve. The second edition of *AP3000* saw the RAF fully embrace the concept of the 'control of the air,' noting its

crucial importance not only to air operations, but also to virtually all types of surface and sub-surface operations.⁷¹

Importantly, the second edition used historical examples to draw out pertinent factors relating to the control of airspace, and, in doing so, utilised and applied modern terminology ('control of the air') retrospectively.⁷² Within this over-arching concept, this edition also noted that there were varying degrees of control that could be attained: a 'favourable air situation,' 'air superiority,' and 'air supremacy.' Such levels were also a feature of the third edition of *AP3000*, and similar levels, within an over-arching concept of control, are also found in American and Australian air power doctrine.⁷³ In contrast, the fourth edition of *AP3000* (2009) utilised only the term 'control of the air,' rejecting

⁷⁰ B. Irondelle, 'Why States do or don't develop Military Doctrine: Lessons from Air Power Doctrines in France and the UK after the Cold War.' Paper presented at the ISA International Conference, Montreal, 16 – 19 Mar 2011, p.14; M. Mäder, 'Pursuit of Conceptual Excellence,' pp.114 – 116; S. Cox & S. Ritchie, 'The Gulf War and UK Air Power Doctrine and Practice,' in *Air Power History: Turning Points from Kittyhawk to Kosovo*, eds. S. Cox & P. Gray (Abingdon: Frank Cass, 2002), pp.288 – 289.

⁷¹ MoD, *AP3000, Second Edition*, p.41.

⁷² MoD, *AP3000, Second Edition*, p.40.

⁷³ MoD, *British Air Power Doctrine: AP3000, Third Edition* (London: MoD, 1999), chapter five, 2.5.1 – 2.5.2; *Australian Air Publication AAP 1000-D*, p.141; USAF, *Counterair Operations: Air Force Doctrine Document 3-01, Interim Change 2*, p.3.

traditional conceptions of air superiority [that] have limited utility in contemporary operations.⁷⁴

In the fourth edition, the control of the air is defined as

The freedom, bound by time, to use a volume of airspace for one's own purposes while, if necessary, denying its use to an opponent.⁷⁵

Of all the definitions highlighted and explored during this overview, the 2009 version is the most clear and concise. It embraces the impermanence of air power, the offensive and defensive aspects of controlling airspace, and the ability to fight or evade in order to establish control of the air. It is this definition that will inform the rest of the thesis, and the term 'control of the air' will be used throughout when referring to concepts relating to the control of airspace. It is important to note that such a definition could embrace a range of factors including both the political and economic dimensions of air power.⁷⁶ However, this thesis will focus exclusively on the operational aspects of the control of the air – i.e. how air forces conceptualise their use of airspace in an operational sense to achieve a particular tactical, operational, or strategic goal. This can also include the manner in which air forces prevent or restrict the ability of their opponents to use airspace. Naturally, non-operational factors affect the evolution and development of concepts relating to the control of airspace. However, such factors are considered only in relation to the development of operational ideas about the control of the air.

⁷⁴ MoD, *AP3000, Fourth Edition*, p.38.

⁷⁵ MoD, *AP3000, Fourth Edition*, p.38.

⁷⁶ I. B. Holley, 'Some Concluding Insights,' in *Case Studies in the Achievement of Air Superiority*, ed., B. F. Cooling, (Washington, D.C.: Centre for Air Force History, 1994), p.610.

In choosing to utilise modern terminology, it is important to emphasise that, given the ever changing linguistic environment in which the concept of the control of the air has emerged, this is an attempt to introduce a degree of taxonomic stability. This follows the example of *AP3000, Second Edition*, and the example of Olsen, who, in exploring aerial operations during the Gulf War of 1991, made use of the modern term 'control of the air' when the use of various other terms, including 'air superiority,' were favoured during the conflict.⁷⁷ Moreover, whilst aviators of the 1911 to 1918 period may have favoured terms such as 'superiority,' 'supremacy,' 'mastery,' or 'command of the air,' it will become apparent in this thesis that they would have possessed an innate understanding of the RAF's current definition.

Of course, another factor that has affected the need for a clear and concise definition is the manner in which academics have approached the concept of the control of the air. Whilst air forces have become increasingly comfortable with defining and developing air power terminology, there has not been a corresponding improvement in its use in the literature. The following section provides an overview of the development of air power terminology in the general and specialist literature relating to the control of the air. It demonstrates that, whilst an important precedent was set by the work of Webster and Frankland, academics have very mixed success when exploring the concept of the control of the air, particularly from the perspective of language. In many respects, academic terminology has not kept pace with the evolving language used by air power organisations and professionals.

⁷⁷ MoD, *AP3000, Second Edition*, p.40; J. A. Olsen, 'Operation Desert Storm, 1991,' in *A History of Air Warfare*, ed., J. A. Olsen (Washington, D.C.: Potomac Books, 2010), pp.177 – 200.

The Evolution of Air Power Language in the Academic Context

In the first volume of *The War in the Air* series (1922), Raleigh wrote of the importance of language, noting that

One of the strongest bonds of human sympathy is community in habits of speech.⁷⁸

Possibly reflecting his background in English literature, Raleigh left his linguistic analysis in the realms of the abstract and did not attempt to explore the development of specialist air power terminology relating to the control of the air.⁷⁹ Outside of Slessor's *Air Power and Armies* (1936), perhaps the most significant and proactive engagement with air power language came with the publication of Webster and Frankland's *The Strategic Air Offensive Against Germany* (four volumes, 1961). In their first volume, they were to write that

Air superiority is a term which has been in constant but generally vague and often conflicting use almost since the first military employment of aircraft.⁸⁰

Such conclusions may have been informed by the analysis of Slessor, who, in 1936, noted that the term 'air superiority' had 'become something of a catchword.'⁸¹ For Frankland, a lack of clarity in air power taxonomy created a 'language barrier,' which kept the fundamentals of strategic air power from entering the general field of

⁷⁸ W. Raleigh, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force (WIA), Vol.I* (Oxford: Clarendon Press, 1922), pp.210 – 211.

⁷⁹ C. Webster & N. Frankland, *The Strategic Air Offensive Against Germany, 1939 – 1945, Vols. I – IV* (London: HMSO, 1961).

⁸⁰ C. Webster & N. Frankland, *The Strategic Air Offensive Against Germany, 1939 – 1945, Vol.I: Preparation* (London: HMSO, 1961), p.20.

⁸¹ J. C. Slessor, *Air Power and Armies*, p.10.

historical research.⁸² In preparing his own PhD thesis, which came to form the final volume of the Air Historical Branch series, *The RAF in the Bomber Offensive against Germany*, Frankland noted that there was 'hardly any agreed grammar of air warfare,' and that he could not use the terms 'air superiority' and 'command of the air' without providing clear definitions.⁸³ In stating that 'air superiority' was measured by the 'gulf between strategic desirability and tactical feasibility,' Frankland argued that, because the battle for the control of airspace was 'continuous,' air superiority was not a 'static condition which can be precisely defined ...'⁸⁴ He also concluded that the degree of control that could be asserted in the air varied, and, within the overarching concept of the 'command of the air,' conditions existed which included 'air superiority' and the more dominant level of control, 'air supremacy.'⁸⁵

Given the importance Frankland's analysis attached to establishing control of the air, it is unsurprising that, in the official histories, he and Webster offered perhaps the fullest discussion of the subject.⁸⁶ In exploring the various different meanings of the term 'air superiority,' the official historians noted that, for some, the concept could mean possessing a larger air force or carrying a greater weight of bombs than an opponent. For others, it meant pushing one's enemy onto the defensive, or ensuring that one could operate over enemy territory whilst denying such freedoms to one's enemy.⁸⁷ For Webster and Frankland, such reasoning illuminated only aspects of air

⁸² N. Frankland, *History at War* (London: DLM, 1998), pp.224 – 225.

⁸³ N. Frankland, *History at War*, p.72.

⁸⁴ AIR 41/57 – *Bombing Offensive*, Vol.VII, p.258.

⁸⁵ Ibid.

⁸⁶ C. Webster & N. Frankland, *The Strategic Air Offensive Against Germany*, Vol.I, pp.20 – 23.

⁸⁷ C. Webster & N. Frankland, *The Strategic Air Offensive Against Germany*, Vol.I, p.20.

superiority. As Holley would later suggest, the concept was so complex that it constituted a 'seamless web' of factors.⁸⁸

As such, the official historians argued that

Air superiority can be measured by the extent to which it is possible for one side and impossible for the other to carry out constant and effective naval, military and air operations in spite of the opposition from the enemy air force.⁸⁹

However, as they continued,

Air superiority is not simply a question of being able to use an air force. It is a question of being able to use it *effectively* [emphasis added].⁹⁰

In developing and refining a definition of 'air superiority,' the official historians were able to enhance the clarity of their study by providing their readership with a fixed point of reference. The influence of Webster and Frankland was pronounced, and Cox has called their study

a model for all official historians to follow in terms of the depth and quality of analysis.⁹¹

The same could be said for their treatment of air power taxonomy, which had a direct influence on at least one important study that explored the concept of 'air superiority.'

⁸⁸ I. B. Holley, 'Some Concluding Insights,' p.610. See also A. Tedder, 'Air, Land and Sea Power,' p.61.

⁸⁹ C. Webster & N. Frankland, *The Strategic Air Offensive Against Germany, Vol.I*, pp.20 – 21.

⁹⁰ C. Webster & N. Frankland, *The Strategic Air Offensive Against Germany, Vol.I*, p.21.

⁹¹ S. Cox, 'Setting the Historical Agenda: Webster and Frankland and the Debate over the Strategic Bombing Offensive against Germany, 1939 – 1945,' in *The Last Word? Essays on Official History in the United States and British Commonwealth*, ed., J. Grey (Westport, CT: Praeger, 2003), pp.169 – 170.

Cooling's *Case Studies in the Achievement of Air Superiority* (1994), a volume produced under the auspices of the USAF's Center for Air Force History, made direct reference to Webster and Frankland's discussion of air superiority.⁹² Cooling observed that those involved in the production of air power doctrine continued to refine concepts relating to the control of airspace, although not always successfully. Moreover, he argued that air power 'operators have little time to differentiate the subtitles of the terms,' such as 'absolute,' 'defensive,' or 'local.'⁹³ Accepting Webster and Frankland's definition of air superiority as being able to make 'effective' use of an air force, Cooling defined air superiority as the

ability to deny the enemy air superiority as well as asserting friendly air superiority over him.⁹⁴

Other histories written during this period were also careful to define their terms relating to the control of the air, particularly when the concept was at the heart of their studies. McFarland and Newton's *To Command the Sky* (1991) provided brief and concise definitions of the terms 'command of the air,' 'air superiority,' and 'air supremacy,' each of which sat inside the overarching concept of the 'control of the air.'⁹⁵ It is perhaps natural to expect academics to clearly define terms relating to the control of airspace when such concepts are the focus of their studies. However, this is not always the case and the studies discussed above are, in fact, the exceptions to the rule.

⁹² B. F. Cooling, ed., *Case Studies in the Achievement of Air Superiority* (Washington, D.C.: Centre for Air Force History, 1994), pp.xv – xvi.

⁹³ B. F. Cooling, *Case Studies*, p.xv.

⁹⁴ B. F. Cooling, *Case Studies*, p.xvi.

⁹⁵ S. L. McFarland & W. Phillips Newton, *To Command the Sky: The Battle for Air Superiority over Germany, 1942 – 1944* (Washington: Smithsonian Institute Press, 1991), p.2.

For example, in Overy's study of the Battle of Britain, a contest with the control of airspace at its core, his use of specialist terminology was inconsistent.⁹⁶ Overy used the term 'air superiority' seven times, 'mastery of the air' twice, and 'air supremacy' on a further four occasions.⁹⁷ On page 33, Overy defined 'air superiority' for the German Air Force during the Battle as '[the defeat of the] enemy fighter force.'⁹⁸ This is the only point at which he offered a definition relating to the control of the air. Admittedly, Overy's history is aimed at a popular audience, and adopts an accessible and concise approach to the topic. Yet, in a recent collection of specialist air power essays, Overy continues to use such terminology without definition and clarification.⁹⁹ This is not to unduly criticise Overy, one of the pioneers of modern air power studies, but it serves to highlight a curious trend: the absence of clearly defined air power terminology in academic literature. It is more curious still given that, in his groundbreaking *The Air War, 1939 – 1945* (1980), Overy made frequent use of specialist terminology relating to the control of the air, favouring the terms 'air superiority' and 'command of the air,' whilst providing a simple working definition for both.¹⁰⁰

In fact, within Olsen's edited collection of essays, the linguistic treatment of concepts relating to the control of the air is extremely varied.¹⁰¹ Whilst Hallion clearly defines such concepts, and Gordon offers a highly succinct analysis of 'air superiority' in the Arab-Israeli conflict, chapters by Freedman and by Murray, for example, use a

⁹⁶ R. Overy, *The Battle* (London: Penguin, 2000).

⁹⁷ R. Overy, *The Battle*, p.8, p.19, p.27, p.33, p.42, p.47, p.56, p.61, p.62, p.87, p.112, and p.116.

⁹⁸ R. Overy, *The Battle*, p.33.

⁹⁹ R. Overy, 'The Air War in Europe, 1939 – 1945,' in *A History of Air Warfare*, ed., J. A. Olsen (Washington, D.C.: Potomac Books, 2010), p.29, p.30, p.37, p.39, p.41, and p.50.

¹⁰⁰ R. Overy, *The Air War, 1939 – 1945* (Washington, D.C.: Potomac Books Edition, 2005) [1980], pp.8 – 9.

¹⁰¹ J. A. Olsen, ed., *A History of Air Warfare* (Washington, D.C.: Potomac Books, 2010).

variety of specialist terms without definition.¹⁰² A possible explanation of this trend relates to the axiomatic qualities of the control of the air. As *AP3000, Fourth Edition* observes,

Because Western air power has been so dominant in post-Cold War conflicts, this fundamental requirement is easily forgotten and control of the air is taken for granted.¹⁰³

It is as if the concept of the control of the air and the accompanying taxonomy are recognised as being so obvious and important that their use has become routine and they require no explanation or definition. However, given the importance of the concept and the manner in which it evolves (linguistically, conceptually, and doctrinally), even greater care is required when discussing the control of the air.

Studies that explore air power during the First World War also provide further evidence of this phenomenon. For example, in Duffy's otherwise excellent study of the Somme campaign, the expressions 'air superiority' and 'command of the air' are both used without clear definition.¹⁰⁴ Ash, in his air power biography of Sykes, includes the terms 'mastery of the air' and 'command of the air,' yet does so without fully defining their meanings or justifying their use.¹⁰⁵ In a recent essay exploring air

¹⁰² R. Hallion, 'Air and Space Power,' pp.379 – 380; S. L. Gordon, 'Air Superiority in the Israel-Arab Wars, 1967 – 1982,' in *A History of Air Warfare*, ed., J. A. Olsen (Washington, D.C.: Potomac Books, 2010), pp.127 – 155; L. Freedman, 'Air Power and Falklands, 1982,' in *A History of Air Warfare*, ed., J. A. Olsen (Washington, D.C.: Potomac Books, 2010), p.161 and p.163; W. Murray, 'Operation Iraqi Freedom, 2003' in *A History of Air Warfare*, ed., J. A. Olsen (Washington, D.C.: Potomac Books, 2010), p.279, p.280, and p.285.

¹⁰³ MoD, *AP3000, Fourth Edition*, p.38.

¹⁰⁴ C. Duffy, *Through German Eyes: The British and the Somme, 1916* (London: Weidenfeld & Nicolson, 2006), pp.305 – 319.

¹⁰⁵ E. Ash, *Sir Frederick Sykes and the Air Revolution, 1912 – 1918* (London: Frank Cass, 1999), p.31, p.32, p.42, and p.44.

power during the First World War, Morrow follows a similar pattern.¹⁰⁶ As Buckley offers,

Such terms as 'air superiority,' 'air supremacy' and 'mastery of the air' were bandied about, usually then as now, in an interchangeable fashion.¹⁰⁷

In other words, the inconsistent nature of the use of specialised air power language in the literature, particularly that relating to the First World War, matches the manner in which such terms were deployed between 1911 and 1918.¹⁰⁸ As this overview of the academic literature indicates, the use of specialist terminology has met with varying degrees of success. Thus, the decision to utilise a modern term, the 'control of the air,' relating to the operational control of airspace, is entirely justified.

Literature Review

One of the central themes to emerge from the preceding discussion of air power language, in both an organisational and academic context, is that the control of the air has been, and continues to be, of fundamental importance in air power doctrine. As such, it is essential to trace the origins of this concept. This thesis seeks to explore these origins by examining how such concepts developed from the birth of organised aviation in Britain and on in to the First World War. In turn, it attempts to discover what factors affected the manner and nature of this development, in both a

¹⁰⁶ J. H. Morrow, 'The First World War,' p.11, p.15, p.16, p.21, p.23, and p.24.

¹⁰⁷ J. Buckley, *Air Power in the Age of Total War* (London: Routledge, 1999), pp.50 – 51.

¹⁰⁸ M. Paris, *Winged Warfare: The literature and theory of aerial warfare in Britain, 1859 – 1917* (Manchester: Manchester University Press, 1992), p.185.

military and naval context. For, as Biddle suggests, the 1914 – 1918 conflict 'tested theory and became the anvil on which new aerial missions were forged.'¹⁰⁹

In attempting to frame a series of research questions to examine this wider subject, it is vital to engage with the historiography relating to air power in Britain between 1911 and 1918. In addition, given that air power developed under the wider organisational context of both the British Army and Royal Navy, it is important to explore the historiography of both organisations during this period. Finally, given that this period was defined by the First World War, it is vital to embed the development of British air power in the historiography of this conflict. There are two distinct periods within the overall chronology of the thesis: the period before the First World War, and the conflict itself. These periods provide a natural structure for the review of the literature and, in turn, they inform the overall structure of the thesis.

As this review will demonstrate, there is a tendency to divorce the study of air power from the wider contexts in which it developed. Air power developed within the existing organisational framework of Britain's armed forces, organisations that had a particular understanding of warfare, and became an important aspect of the war at sea and a highly significant feature of the war on the Western Front. What is more, whilst this wider context affected the development of air power, the development of air power also affected this wider context.

¹⁰⁹ T. Biddle, 'Learning in Real Time: The Development and Implementation of Air Power in the First World War,' in *Air Power History: Turning Points from Kitty Hawk to Kosovo*, eds. S. Cox & P. Gray (London: Frank Cass, 2002), p.4.

There is an overwhelming consensus in the historiography that Britain's early aviators, both military and naval, were drawn to reconnaissance as the prime function of air power. In the naval context, Goulter argued that the first 'role envisaged for the aeroplane was coastal patrol,' with aircraft acting as the "'eyes" of the fleet.¹¹⁰ In similar vein, Mead noted that, by the outbreak of the First World War,

The necessity for aircraft for observation and reconnaissance was established beyond doubt.¹¹¹

These conclusions are supported by Paris, who noted that

officialdom and much expert opinion saw ... [aviation's] ... sole purpose as gathering information for the benefit of the Army or the Navy.¹¹²

What is less clear is the significance attached to the concept of the control of the air and the manner in which ideas relating to the concept developed. For example, Neville Jones asserts that, by August 1914, there were only 'vague ideas' relating to the control of airspace.¹¹³ What is more, there are suggestions in the literature that the conceptual origins of the control of the air were to be found in the First World War.¹¹⁴ As McFarland and Newton argue, the need to control the air was 'not long in dawning on commanders' once air power had been used in the opening campaigns of the First World War.¹¹⁵ For Hallion, it was after these opening encounters that

¹¹⁰ C. Goulter, *A Forgotten Offensive: Royal Air Force Coastal Command's Anti-Shipping Campaign, 1940 – 1945* (London: Frank Cass, 1995), p.2.

¹¹¹ P. Mead, *The Eye in the Air: History of Air Observation and Reconnaissance for the Army, 1785 – 1945* (London: HMSO, 1983), p.51.

¹¹² M. Paris, *Winged Warfare*, pp.154 – 155.

¹¹³ N. Jones, *The Origins of Strategic Bombing: A Study of the Development of British Air Strategic Thought and Practice up to 1918* (London, William Kimber, 1973), p.48.

¹¹⁴ R. P. Hallion, 'Foreword,' in *Case Studies in the Achievement of Air Superiority*, ed., B. F. Cooling, (Washington, D.C.: Centre for Air Force History, 1994), p.iii.

¹¹⁵ S. L. McFarland & W. Phillips Newton, *To Command the Sky*, p.13.

ground commanders began to engage with the problem of shielding 'their units from the prying eyes of enemy airmen.'¹¹⁶ However, as Buckley suggests, there had been some 'contemplation' in the pre-war period relating to the control of airspace.¹¹⁷

It is such statements that the opening chapters of the thesis seek to test. How much thought had gone into the concepts relating to the control of the air in the pre-war period, and what factors shaped the manner in which these thoughts were crafted? Of course, it is also important to examine the practical steps that were taken to turn theory and rhetoric into reality. Thus, an exploration of the development of policy and doctrine, and of the creation of an operational air power capability, will be another important aspect of the opening chapters.

In developing air power theory, the role of the individual is stressed in the historiography. Both Paris and Holman argue that authors such as H. G. Wells and Montagu of Beaulieu, both non-service personnel, asserted significant influence in this regard.¹¹⁸ For example, Paris highlights that *The War in the Air* (1908), a novel written by Wells, emphasised the importance of controlling airspace to make effective use of the medium.¹¹⁹ Also emphasising the significance of the individual, Gollin highlighted the important role played by military professionals; for example, the lectures and writings of J. E. Capper, an early air power professional in the British Army.¹²⁰ What is less well known is the influence of such theorising on the

¹¹⁶ R. P. Hallion, *Rise of the Fighter Aircraft, 1914 – 1918* (Baltimore, MD.: Nautical and Aviation Co., 1984), p.4.

¹¹⁷ J. Buckley, *Air Power*, pp.50 – 51.

¹¹⁸ M. Paris, *Winged Warfare*, p.35; B. Holman, 'The Next War in the Air: Civilian Fears of Strategic Bombardment in Britain, 1908 – 1941' (PhD Thesis, University of Melbourne, 2009), p.5.

¹¹⁹ M. Paris, *Winged Warfare*, p.35.

¹²⁰ A. Gollin, *No Longer an Island: Britain and the Wright Brothers, 1902 – 1909* (London: Heinemann, 1984), pp.146 – 147.

development of tentative air power policy and doctrine in Britain, particularly that which related to the control of the air.

As Howard urged, it is vital to study military history in 'context,' and perhaps the most significant context in which air power developed in Britain was within the country's two services departments; the War Office (WO) and the Admiralty.¹²¹ To an extent, a focus on this institutional context reflects a wider debate regarding the interaction of individuals (agents) and what Kershaw would refer to as 'structural determinants;' in this instance, how the culture and organisational structure of the British Army and Royal Navy affected the manner in which individuals developed air power concepts, and vice versa.¹²²

This military / naval dimension is an important feature of the historiography of British air power throughout this period, and is particularly significant in relation to the creation of the RFC, a joint venture between the WO and Admiralty. It was under the umbrella of the RFC project that the WO and Admiralty came to produce air power policy and doctrine, and to focus on the practical steps necessary to create and mould air power components that could provide assistance to the Army and Navy. In fact, given that the service departments clashed repeatedly over air power policy during the First World War, a certain tension has translated into the historiography, with historians supporting or criticising the WO and Admiralty based on a range of factors. Perhaps the most influential voices to examine British aviation during this period, at least in the first instance, were the official historians, Raleigh and H. A.

¹²¹ M. Howard, 'The Use and Abuse of Military History,' *JRUSI*, Vol.107, No.2 (Feb 1962), pp.7 – 8.

¹²² I. Kershaw, *The Nazi Dictatorship: Problems & Perspectives of Interpretation, Fourth Edition* (London: Arnold, 2000) [1985], p.70.

Jones. Commissioned by the Air Ministry in the aftermath of the First World War, *The War in the Air* series (six volumes plus a volume of appendices) was published between 1922 and 1937.¹²³ These volumes remain the starting point for scholars examining the history of British air power between 1911 and 1918.¹²⁴

The first volume, the weakest of the series, given its somewhat muddled structure and Raleigh's use of flamboyant and emotive language, highlighted the different approaches that military and naval aviators took to the conceptualisation of air power roles.¹²⁵ The use of air power in a military context was 'definitely conceived from the first ... brought into being to fulfil a certain purpose;' providing tactical support for the commanders of the BEF.¹²⁶ In contrast, the development of naval aviation was characterised by Raleigh as 'experimental,' reflecting that there was

no complete, definite, and practical scheme for the employment of aircraft in naval warfare.¹²⁷

For the official historian, these differences reflected the varying complexities of land and naval war respectively, although, as he was to note, naval aviators demonstrated a 'certain centrifugal tendency.'¹²⁸ In the words of Biddle, the result was that naval aviators continued to 'stretch in new directions.'¹²⁹ In many respects, there is something rather obvious about the analysis of Raleigh; reflecting the tactical outlook of the Army and the more complex, strategic focus of the Navy. Yet, in

¹²³ W. Raleigh & H. A. Jones, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force, Vols. I – VI and Appendices* (Oxford: Clarendon Press, 1922 – 1937).

¹²⁴ M. Cooper, *The Birth of Independent Air Power: British Air Policy in the First World War* (London: Allen & Unwin, 1986), p.xvii; M. Paris, *Winged Warfare*, chapter one.

¹²⁵ M. Cooper, *The Birth of Independent Air Power*, p.xvii.

¹²⁶ W. Raleigh, *WIA, Vol.I*, p.213.

¹²⁷ W. Raleigh, *WIA, Vol.I*, pp.212 – 213.

¹²⁸ W. Raleigh, *WIA, Vol.I*, p.207.

¹²⁹ T. Davis Biddle, *Rhetoric and Reality*, p.26.

placing air power in this wider service context, Raleigh and Jones established a vital precedent that pre-empted Howard's advice by several decades. In focusing on the control of the air, Raleigh made the comparison between the historic importance of the command of the sea and 'the new duty – command of the air.'¹³⁰ However, as Paris suggests, Raleigh tended to neglect the development of air power, particularly military aviation, before 1914, and his analysis of this period is not sustained.¹³¹

Of course, the volumes that comprise *The War in the Air* series are shaped by a certain penchant for criticising British naval aviation, particularly with regard to its 'experimental' approach to air power, and a somewhat sympathetic treatment of military aviation. As Higham, Cooper, Paris, Goulter, and Abbatiello have each observed, the content of these volumes was influenced to a significant degree by Hugh Trenchard, a wartime commander of the RFC and the RAF's first CAS (a post he would hold for a second time between 1919 and 1929/1930).¹³² Given Trenchard's close association with the development of British military aviation, he had a vested interest in ensuring his vision for air power was given a positive appraisal. Moreover, criticism of naval aviation and the Royal Navy provided the RAF with political ammunition in the ongoing battle for resources and responsibilities that characterised Air Ministry-Admiralty relations during the interwar years.¹³³

¹³⁰ W. Raleigh, *WIA, Vol.I*, pp.176 – 177.

¹³¹ M. Paris, *Winged Warfare*, p.2.

¹³² R. Higham, *The Military Intellectuals*, pp.120 – 121, fn; M. Cooper, *The Birth of Independent Air Power*, p.xvii; M. Paris, *Winged Warfare*, p.4; C. Goulter, 'British Official Histories of the Air War,' in *The Last Word? Essays on Official History in the United States and the British Commonwealth*, ed. J. Grey (Westport, CT: Praeger, 2003), p.139; J. J. Abbatiello, 'British Naval Aviation and the Anti-Submarine Campaign, 1917 – 18' (PhD Thesis, King's College London, 2004), pp.199 – 200.

¹³³ J. J. Abbatiello, 'British Naval Aviation,' p.202 and p.204.

As such, the objectivity of the official historians has been questioned, and their conclusions, focusing on 'experimental' and 'centrifugal' naval aviators and their 'purpose[ful]' colleagues in the Army, have been subject to question and revision. For Neville Jones, the official historians marginalised the important conceptual and developmental efforts of naval aviators, particularly in relation to the strategic deployment of air power.¹³⁴ However, in taking the official historians to task, Neville Jones deploys such forceful analysis that, in the words of Williams, he 'proceeded beyond [the conclusions of] *The War in the Air*,' perpetuating much of the subjective analysis of the series.¹³⁵

More recently, Goulter has sought to re-establish the reputation of Britain's naval aviators of the period.¹³⁶ For Goulter, the Royal Naval Air Service (RNAS), as it would become known, was a 'very modern force' that, on the eve of the First World War, was

materially, and perhaps psychologically, better prepared for its particular tasks than its military counterpart.¹³⁷

Drawing on the Navy's 'strong [institutional] tradition in research and development,' naval aviators made important advances with regard to technological experimentation and training.¹³⁸ In contrast, Goulter emphasises the WO's 'lethargic attitude to research and development,' resulting in poor aircraft and engines; a

¹³⁴ N. Jones, *The Origins of Strategic Bombing*, pp.21 – 23 and passim.

¹³⁵ G. K. Williams, *Biplanes and Bombsights: British Bombing in World War I* (Maxwell, AL: Air University Press, 1999), p.28 and p.67.

¹³⁶ C. Goulter, *A Forgotten Offensive*, p.8.

¹³⁷ C. Goulter, 'The Royal Naval Air Service: A Very Modern Force,' in *Air Power History: Turning Points from Kitty Hawk to Kosovo*, eds. S. Cox & P. Gray (London: Frank Cass, 2002), pp.51 – 65; C. Goulter, *A Forgotten Offensive*, p.9; M. Paris, *Winged Warfare*, p.195.

¹³⁸ C. Goulter, *A Forgotten Offensive*, p.9; C. Goulter, 'The Royal Naval Air Service,' pp.51 – 52.

situation compounded by a training regime that lacked the rigour and comprehensiveness of that offered by the RNAS.¹³⁹ Paris, in discussing the control of airspace, noted that both military and naval aviators understood the importance of the contemporary term 'command of the air,' but that it was only naval aviators that were taking any practical steps to be able to secure such a condition.¹⁴⁰ In fact, the Navy's advanced state in this regard is recorded by Raleigh.¹⁴¹ Like Goulter, Paris criticised the WO for its attitude to research and development, arguing that it ensured that the RFC was not 'in a position to gain aerial supremacy.'¹⁴² Paris also offered contrasting analysis of the RFC's clear focus, arguing that the desire to support the Army, particularly by providing reconnaissance support, served 'little purpose[,] ... tying up valuable resources.'¹⁴³

These appraisals, which seek to revise aspects of Raleigh's work, are now widely accepted. For example, Grove has written that, by August 1914, the RNAS was 'one of the most progressive air services in the world.'¹⁴⁴ Similarly, Parton argues that, as the outbreak of the First World War approached, naval aviators were 'far closer to being "fit for service" than was the RFC.'¹⁴⁵ However, whilst acknowledging aspects of the organisational context in which air power theory and practice developed, historians such as Goulter and Paris do not explore the wider historiography relating to the British Army and Navy of this period. Particularly relevant are studies that explore service culture and attitudes relating to education and doctrine. For it was

¹³⁹ C. Goulter, *A Forgotten Offensive*, pp.7 – 8.

¹⁴⁰ M. Paris, *Winged Warfare*, pp.187 – 188.

¹⁴¹ W. Raleigh, *WIA, Vol.I*, p.471.

¹⁴² M. Paris, *Winged Warfare*, p.188.

¹⁴³ M. Paris, *Winged Warfare*, p.157.

¹⁴⁴ E. Grove, 'Seamen or Airmen? The Early Days of British Naval Flying,' in *British Naval Aviation: The First 100 Years*, ed. T. Benbow (Farnham: Ashgate, 2011), p.7.

¹⁴⁵ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.27.

under the influence of the dominant intellectual paradigms of both the British Army and Royal Navy that military and naval aviators came to conceptualise their respective understanding of the control of the air.

Goulter does mention the 'strong tradition' of research and development in the Navy, but she does not examine how this strong tradition developed, the way it was emphasised to members of the service, and the manner in which it subsequently influenced naval attitudes to aviation and the concept of the control of the air. In writing of these wider attitudes, naval historians have been fairly critical of the RN's approach to education, innovation, and technology. For example, Hunt writes of the Navy's preoccupation with technological development, a 'material ethic' that saw a 'virtual atrophy of the Navy's apparatus.'¹⁴⁶ In offering similar criticism, Schurman argues that the Navy came to confuse means and ends.¹⁴⁷ Rüger supports such contentions, noting that the Navy's fascination with technology was also driven by considerations of cultural power projection.¹⁴⁸ As highlighted by the work of Andrew Lambert and of Dickinson, this fascination was driven home to officer recruits of the RN during their initial training and education with the service.¹⁴⁹ As Gordon's study of naval command and doctrine indicates, the influence of the 'scientific school' resulted in a tendency to seek 'one-dimensional' solutions, usually focused on material

¹⁴⁶ B. D. Hunt, *Sailor-Scholar: Admiral Sir Herbert Richmond, 1871 – 1946* (Ontario: Wilfrid Laurier University Press, 1982), p.3.

¹⁴⁷ D. M. Schurman, *The Education of a Navy: The development of British naval strategic thought, 1867 – 1914* (London: Cassell, 1965), p.4.

¹⁴⁸ J. Rüger, *The Great Naval Game: Britain and Germany in the Age of Empire* (Cambridge: Cambridge University Press, 2007), pp.113 – 114 and passim.

¹⁴⁹ A. Lambert, 'The Development of Education in the Royal Navy: 1854 – 1914,' in *The Development of British Naval Thinking: Essays in Memory of Bryan Ranft*, ed. G. Till (London: Routledge, 2006), pp. 34 – 59; A. Lambert, "'History is the Sole Foundation for the Construction of a Sound and Living Common Doctrine:" the Royal Naval College, Greenwich, and Doctrine Development down to BR1806,' in *The Changing Face of Maritime Power*, eds. A. Dorman, M. L. Smith & M. Uttley (London: Macmillan Press, 1999), pp.33 – 56; H. W. Dickinson, *Educating the Royal Navy: Eighteenth- and nineteenth-century education for officers* (London: Routledge, 2007).

considerations.¹⁵⁰ Thus, there seems something of a tension in the historiography. Whilst air power historians have stressed that the RNAS was 'fit for service,' an analysis of the wider Navy has led some historians to question if the Navy as a whole was indeed 'fit for purpose.'¹⁵¹ An exploration of these issues and the relevant historiography is a feature of the opening chapters of the thesis.

Again, whilst highly critical of the efforts of military aviators, neither Paris nor Goulter attempt to contextualise such efforts in regard to the British Army's attitude to education, technological innovation, or the production of doctrine during this period. In a similar vein, Woodman's study, which discusses the practical development of aviation armament in this period, does so without acknowledging this wider context.¹⁵² There is a growing historiography that examines the British Army's attitude to education, innovation, and doctrine, with important studies by Badsey, Palazzo, Simpson, and Bowman and Connelly (to name but a few), often using the provocative work of Travers as a foil.¹⁵³ Given that military aviators operated within this organisational context, it is vital to embed an analysis of air power in this period within this wider historiography. For, as Terraine remarked, 'the RFC was part of the

¹⁵⁰ A. Gordon, *The Rules of the Game: Jutland and British Naval Command* (London: John Murray, 1996), p.353.

¹⁵¹ N. A. M. Rodger, 'The Royal Navy in the Era of the World Wars: Was it fit for purpose?' *The Mariner's Mirror*, Vol.97, No.1 (Feb 2011): pp. 272 – 285

¹⁵² H. Woodman, *Early Aircraft Armament: The Aeroplane and the Gun up to 1918* (London: Arms and Armour, 1989), pp.13 – 17.

¹⁵³ S. Badsey, *Doctrine and Reform in the British Cavalry, 1880 – 1918* (Aldershot: Ashgate, 2008), pp.3 – 4; A. Palazzo, *Seeking Victory on the Western Front: The British Army and Chemical Warfare in World War I* (Nebraska: University of Nebraska Press, 2000), pp.4 – 24; A. Simpson, *Directing Operations: British Corps Command on the Western Front, 1914 – 1918* (Stroud: Spellmount, 2006), chapter one; T. Bowman & M. Connelly, *The Edwardian Army: Recruiting, Training, and Deploying the British Army, 1902 – 1914* (Oxford: Oxford University Press, 2012), chapters two and three; T. Travers, *The Killing Ground: the British Army, the Western Front and the Emergence of Modern War, 1900 – 1918* (Barnsley: Pen & Sword, 2003) [1987].

Army and did not pretend to be anything else.¹⁵⁴ As such, it is important to investigate the dominant paradigms that influenced the organisational culture / ethos of the British Army, how its members were inculcated into this culture, and, in turn, how, when the time came to produce policy and doctrine, these factors came to affect air power concepts and practices, particularly those relating to the control of the air.

In his biography of Frederick Sykes, a driving force behind the organisation and doctrine of the early RFC, Ash seeks to answer some of these questions, demonstrating that the Staff College education was one of the contextual factors that shaped the development of air power doctrine and practice; inculcating Sykes with a belief in the importance of offensive action to achieve a rapid victory.¹⁵⁵ In turn, this affected how Sykes came to conceptualise ideas and doctrine relating to the control of the air. As Ash notes, his 'short-sighted' understanding of the 'command of the air' was 'a product of Staff College teaching.'¹⁵⁶ Ash's analysis will be explored in more depth during the thesis, but his study is important at this stage because it is the exception that demonstrates the more general tendency to treat air power as an independent entity when, in fact, during this period, air power organisations were firmly embedded in the existing infrastructure and cultures of their parent services. For example, in recognising differing attitudes toward the production of air power doctrine, particularly with regard to the control of the air, Parton only hints at the influence of the wider organisational ethos of the British Army and the Royal Navy on

¹⁵⁴ J. Terraine, 'World War I and the Royal Air Force,' *Journal of the Royal Air Force Historical Society*, No.12 (1994), p.13.

¹⁵⁵ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.16 – 18.

¹⁵⁶ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.31 – 32.

this process.¹⁵⁷ It may seem axiomatic, but air power did not develop in a conceptual vacuum; military aviators came to understand the control of the air in keeping with the wider philosophy of the British Army, whilst their naval colleagues were influenced by paradigms dominant within the Royal Navy.

To summarise, the literature relating to British air power between 1911 and 1914 is shaped by several key facets: first, an overwhelming consensus that reconnaissance was seen as the most important role of aviation, both military and naval; second, a focus on the role of the individual; third, largely as a response to the first volume of *The War in the Air*, the historiography is now shaped by a general consensus that stresses the progressive nature of naval aviation, while being critical of military aviation; and finally, a tendency to examine air power in something of a conceptual vacuum. An examination of the conceptual origins of the control of the air provides an opportunity to test and challenge many of these conclusions.

The vibrant historiographical landscape of First World War studies, particularly that relating to the British Army's contribution to the conflict, provides clear evidence of Geyl's suggestion that history is 'an argument without end.'¹⁵⁸ These debates capture wider developments in the historiography of the First World War, and scholars such as Griffith and Sheffield, revising the traditional 'lions led by donkeys' interpretation, attempt to demonstrate that the British Army of the period underwent a process of learning, being honed into a sophisticated war winning weapon by the summer of

¹⁵⁷ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.37 – 38, p.54, and p.213, fn.548.

¹⁵⁸ P. Geyl, *The Use and Abuse of History* (New Haven: Yale University Press, 1955), p.70.

1918.¹⁵⁹ This revisionist school was a response, at least in part, to the critical work of scholars such as Travers and, more recently, Gardner and Greenhalgh.¹⁶⁰ However, it is telling that the richness of these debates has not carried over into the history of British air power during the First World War. In general, this is explained by two factors. The first of these is a tendency to 'dwell at great length on the romantic icons of that first war in the air,' a

"Knights of the Air" ... approach [that] robs World War I air power of its genuine military and industrial significance.¹⁶¹

A second factor reflects Overy's contention that the Second World War was the

greatest turning point in air power history ... closing the door on the early, tentative history of simple, lightly armed bi-planes.¹⁶²

As such, there is a trend for historians to view the history of air power during the First World War via the prism of air power during the Second World War, serving to enrich their studies of the latter conflict rather than examining air power during the 1914 – 1918 conflict as an entity in its own right. A very obvious exception in this regard is the work of Biddle.¹⁶³ Of course, as Buckley highlights, there is some debate relating to the importance of air power during the First World War, and, as he concludes, air

¹⁵⁹ P. Griffith, *Battle Tactics of the Western Front: The British Army's Art of Attack, 1916 – 18* (London: Yale University Press, 2000) [1994]; G. Sheffield, *Forgotten Victory: The First World War, Myths and Realities* (London: Review, 2002) [2001].

¹⁶⁰ T. Travers, *The Killing Ground*; N. Gardner, *Trial by Fire: Command and the British Expeditionary Force in 1914* (Westport, CT.: Praeger, 2003); E. Greenhalgh, *Victory through Coalition: Britain and France during the First World War* (Cambridge: Cambridge University Press, 2005).

¹⁶¹ M. Paris, *Winged Warfare*, p.2; J. Morrow, *The Great War in the Air: Military Aviation from 1909 – 1921* (Washington: Smithsonian Institution Press, 1993), p.xv.

¹⁶² R. Overy, 'Introduction,' p.xiii

¹⁶³ T. Davis Biddle, *Rhetoric and Reality*.

power gained more from the First World War than the conflict gained from air power.¹⁶⁴

A desire to revise the conclusions of the official historians has done much to shape perspectives on British air power during the First World War, as it had in relation to the historiography focused on 1911 to 1914. These perspectives, driven by the questionable objectivity displayed by Raleigh and H. A. Jones, have given rise to a notable consensus in the historiography that is highly critical of the manner in which military aviators conceptualised and developed their understanding of the control of the air. In contrast, authors such as Goulter, Biddle, and Neville Jones emphasise the progressive and revolutionary approach taken by naval aviators to the conceptualisation of air power roles.

For Goulter, the RNAS was 'at the forefront of aeronautical science and its military application,' with a 'striking' ability to think conceptually about air power roles.¹⁶⁵ These roles were extremely varied and included anti-submarine duties, air defence, an ambitious scheme to attack the German High Seas Fleet with aerially dropped torpedoes, and, of course, a far-sighted interest in strategic bombing. In terms of the control of the air, the air defence of the UK continued to be the major focus, and it was in such a field that the RNAS 'demonstrated its greatest ability to "think outside the box,"' striking at the sources of enemy air power.¹⁶⁶ As Goulter, Neville Jones,

¹⁶⁴ J. Buckley, *Air Power*, p.68.

¹⁶⁵ C. Goulter, 'The Royal Naval Air Service,' pp.51 – 52.

¹⁶⁶ C. Goulter, 'The Royal Naval Air Service,' p.56.

and Biddle have each observed, this was progressive thinking that, by the conclusion of the war, had evolved into a sophisticated conception of strategic bombing.¹⁶⁷

However, given that Goulter acknowledges that, in August 1914, one of the two main functions of naval air power was 'co-operation with the navy,' it is interesting that, other than the plans relating to the use of torpedo strike aircraft, she offers almost no discussion of the use of air power in conjunction with the most important assets of the RN – its Grand Fleet.¹⁶⁸ The conclusions of Wise go some way to explaining the balance of Goulter's chapter:

Direct co-operation with naval units was never the prime function of [British naval aviators] during the [First World] war.¹⁶⁹

The RNAS may have laid the conceptual foundations for some of the most important air power roles of the Second World War, but how did it approach conceptualising its more conventional duties, such as controlling the airspace over the Grand Fleet, or providing tactical support to its capital ships? What is more, if Wise's contention is correct, what explains the RNAS's decision to focus on such a diverse range of air power roles? In many respects, a focus on the RNAS's proclivity for the conceptualisation of advanced air power roles clouds what were very serious contemporary criticisms of naval aviation. Demands that the RNAS should be more 'naval' and less 'aerial' became commonplace as the war moved into 1915, and, as

¹⁶⁷ C. Goulter, 'The Royal Naval Air Service,' p.60; T. Davis Biddle, *Rhetoric and Reality*, pp.38 – 39; N. Jones, *The Origins of Strategic Bombing*, p.112 and pp.142 – 147.

¹⁶⁸ C. Goulter, 'The Royal Naval Air Service,' p.53 and pp.55 – 56.

¹⁶⁹ S. F. Wise, *Canadian Airmen in the First World War: The Official History of the Royal Canadian Air Force, Volume I* (Toronto, CA.: University of Toronto Press, 1980), p.127.

Grove suggests, naval aviators had an uneasy relationship with the wider RN.¹⁷⁰ As Rodger argues, post-1918, the RN came to believe that it had 'burnt its fingers badly' with the RNAS.¹⁷¹ This is supported by Till, who notes the Admiralty's belief that the RNAS's diffuse interests had resulted in the neglect of 'naval aviation proper.'¹⁷²

The official histories take a sympathetic approach to such criticism, noting that operating air power over water was an extremely hazardous pursuit.¹⁷³ What is more, the diversification of RNAS activities reflected the varied pursuits of the wider RN.¹⁷⁴ In practice, this saw a scattered RNAS operating independently and from a variety of locations. This was in marked contrast to the centralised command and control infrastructure of the BEF and RFC.¹⁷⁵ As Jones was to conclude,

on the whole, it is true to say that the naval airman stands out as a more solitary figure than his army comrade, having something of the loneliness of the element over which he flew.¹⁷⁶

The result, particularly in relation to RNAS operations from their central hub at Dunkirk, was a tendency for naval air power to be 'called upon to do too much by too many people.'¹⁷⁷ It is these differing perspectives, one focusing on the positive aspects of the RNAS's conceptualisation of air power, and the other stressing some

¹⁷⁰ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.209. Letter, M. Bonham-Carter, PM's Private Secretary to M. Hankey, Secretary of CID, 6 Jun 1915; E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps? The Royal Naval Air Service at War,' in *British Naval Aviation: The First 100 Years*, ed. T. Benbow (Farnham: Ashgate, 2011), p.27.

¹⁷¹ N. A. M. Rodger, 'The Royal Navy in the Era of the World Wars,' p.279.

¹⁷² G. Till, *Air Power and the Royal Navy, 1914 – 1945: A Historical Study* (London: Jane's, 1979), p.30.

¹⁷³ H. A. Jones, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force (WIA), Vol.II* (Oxford: Clarendon Press, 1928), pp.335 – 337.

¹⁷⁴ Ibid.

¹⁷⁵ H. A. Jones, *WIA, Vol.II*, pp.336 – 337.

¹⁷⁶ H. A. Jones, *WIA, Vol.II*, p.337.

¹⁷⁷ H. A. Jones, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force (WIA), Vol.IV* (Oxford: Clarendon Press, 1934), p.107.

of the more negative aspects of its pursuit of diversification, that the thesis will seek to evaluate. Again, the vital organisational context in which naval aviators conceptualised their ideas about the control of the air will provide the central focus of this analysis.

In moving to an examination of military aviation, Cooper has suggested that the RFC's approach to the control of the air – via an aggressive offensive to seize freedom of manoeuvre for aircraft engaged on tactical support duties – utilised air power as a blunt instrument, whilst Higham comments upon the 'high casualties' that stemmed from this approach.¹⁷⁸ Goulter also criticises this concept, arguing that it was based on inappropriate 'yardsticks of success.'¹⁷⁹ Furthermore, Neville Jones and Wise suggest that the RFC conceptualised an understanding of the control of the air that applied air power in an 'expensive and inefficient' manner.¹⁸⁰ For Paris, the RFC's approach to the control of the air, particularly in conditions of static trench warfare, was 'quite pointless and made little contribution to the eventual victory.'¹⁸¹ A stern critic of the RFC's concept of the control of the air during the First World War was Frederick Sykes, who lamented the RFC's use of 'battering-ram tactics;' the irony of which will become clear in the subsequent analysis of RFC doctrine.¹⁸²

¹⁷⁸ M. Cooper, *The Birth of Independent Air Power*, pp.19 – 20; R. Higham, *The Military Intellectuals*, p.141.

¹⁷⁹ C. Goulter, 'The Royal Naval Air Service,' p.52.

¹⁸⁰ N. Jones, *The Origins of Strategic Bombing*, pp.205 – 206; S. F. Wise, *Canadian Airmen in the First World War*, pp. 571 – 575.

¹⁸¹ M. Paris, *Winged Warfare*, pp.237 – 238.

¹⁸² F. H. Sykes, *From Many Angles: An Autobiography* (London: G. G. Harrap & Co., 1942), p.220.

Sykes was joined in such criticism by his loyal subordinate, P. R. C. Groves, who had served as Director of Flying Operations from April 1918.¹⁸³ For Groves, the RFC's concept of the control of the air resulted in the 'wholesale massacre of the Royal Flying Corps in France.'¹⁸⁴ The inadequate training of its pilots, coupled with the incessant nature of its operations, saw the RFC waste its qualitative and quantitative advantage in aircraft.¹⁸⁵ Of Sykes's rival, Trenchard, Groves argued that, given the wasteful nature of the RFC's approach to the control of the air, Trenchard's duty was to inform Haig that such a policy could not be maintained, although Groves insinuates that Trenchard lacked the 'courage' to do so.¹⁸⁶ Groves also took issue with the suggestion that the RFC's approach to the control of the air was 'dictated by military necessity,' arguing that, by not devoting more resources to strategic bombing, Britain missed opportunities to pursue the war more effectively and efficiently; a line of argument that the work of Williams does much to undermine.¹⁸⁷

There are also studies that, whilst remaining generally critical, offer a more balanced appraisal of the RFC's conception of the control of the air. Jordan, critical of the inflexibility of the RFC's offensive vision, stresses that it had a strong impact on the German Air Service, whose aircraft rarely ventured over the front. The result was relatively low losses amongst RFC tactical support squadrons.¹⁸⁸ Jordan does concede that the RFC, particularly under the command of Trenchard, misused

¹⁸³ P. R. C. Groves, *Behind the Smoke Screen* (London, Faber & Faber, 1934), pp.123 – 136. F. H. Sykes, *From Many Angles*, pp.218 – 219.

¹⁸⁴ P. R. C. Groves, *Behind the Smoke Screen*, p.135.

¹⁸⁵ P. R. C. Groves, *Behind the Smoke Screen*, pp.123 – 136.

¹⁸⁶ P. R. C. Groves, *Behind the Smoke Screen*, p.135.

¹⁸⁷ G. K. Williams, *Biplanes and Bombsights*, pxii and passim.

¹⁸⁸ D. Jordan, 'The Army Co-operation Missions of the Royal Flying Corps / Royal Air Force, 1914 – 1918' (PhD Thesis, University of Birmingham, 1997), pp.40 – 43.

resources, resulting in unnecessarily heavy losses of pilots and aircraft.¹⁸⁹ Biddle provides a brief, but masterly, overview of the debate on this subject. She emphasises both the strength of the RFC's vision for the control of the air and its weaknesses, including its high loss rates and its failure to respond effectively to German tactical evolution. Biddle concludes that the RFC's approach was not an 'unqualified success,' and her conclusions fit within the critical historiography on this subject.¹⁹⁰

However, in examining the conclusions of H. A. Jones and the official histories, Biddle draws attention to the former's contention that the RFC's vision for controlling the air was shaped by wider pressure from the British Army.¹⁹¹ As Jones argued, the BEF fought almost continually between 1914 and 1918, suggesting that the RFC was forced to match this pace for operational reasons, ensuring the adequate provision of tactical air support, facilitated by a constant struggle for the control of the air. He also asserts that the RFC conducted their operations under the influence of an intangible force akin to a comradesly obligation.¹⁹² As Jones notes,

it has never been the British way for one service to hold anything back when another service was giving all.¹⁹³

In spite of the very questionable objectivity that characterises the analysis of Jones, resulting in a somewhat clipped examination of the RFC's understanding of the control of the air, his focus on the wider context of the BEF, equating to a genuine

¹⁸⁹ D. Jordan, 'Army Co-operation Missions,' pp.346 – 347.

¹⁹⁰ T. Davis Biddle, *Rhetoric and Reality*, pp.27 – 29.

¹⁹¹ T. Davis Biddle, *Rhetoric and Reality*, p.28.

¹⁹² H. A. Jones, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force (WIA)*, Vol. VI (Oxford: Clarendon Press, 1937), pp.552 – 558.

¹⁹³ H. A. Jones, *WIA*, Vol. VI, p.557.

structural pressure upon the RFC, is entirely legitimate. What is more, this line of analysis is not generally reflected in the wider historiography of the RFC during the First World War. For example, Cooper notes that the RFC's concept of the control of the air was, amongst other factors, 'a product ... of the intellectual climate of [the] ... army.' However, he does not explore this contention in relation to the wider policies and practices of the BEF, the organisational and cultural climate in which the RFC was operating, or the existing historiography on the subject, such as Ashworth's *Trench Warfare* (1980).¹⁹⁴ As such, it is important to explore the influence of such structural pressure on the manner in which the RFC conceptualised and fought for the control of the air during the First World War.

Of course, another vital context of the First World War, particularly for the British Army, was that it operated as part of a coalition. The significance of this context has been recognised in a wider fashion by scholars such as Greenhalgh and Neilson, and in a specific air power context by the official histories and, more recently, by Dye.¹⁹⁵ As Dye notes, British and French military aviators were 'partners' during the First World War, supporting each other both materially and intellectually.¹⁹⁶ In reaching such conclusions, Dye does not embed his analysis in the wider historiography of the Anglo-French coalition during the conflict, further demonstrating the tendency to divorce air power from wider contexts. In turn, Greenhalgh's analysis of this wider coalition context, an account generally critical of British efforts, does not

¹⁹⁴ M. Cooper, *The Birth of Independent Air Power*, p.72; T. Ashworth, *Trench Warfare, 1914 – 1918: The Live and Let Live System* (London: Macmillan, 1980).

¹⁹⁵ E. Greenhalgh, *Victory through Coalition*; K Neilson, *Strategy and Supply: The Anglo-Russian Alliance, 1914 – 1917* (London: George Allen & Unwin, 1984); H. A. Jones, *WIA, Vol.II*, pp.164 – 165; P. Dye, 'France and the Development of British Military Aviation,' *Air Power Review*, Vol.12, No.1 (Spring 2009): pp.1 – 12.

¹⁹⁶ P. Dye, 'France and the Development of British Military Aviation,' p.6.

examine the air power aspects of the Anglo-French coalition.¹⁹⁷ Admittedly, air power was but a very small part of the wider Anglo-French war effort, yet, had Greenhalgh examined the subject closely, she may have found that it served to undermine one of her central contentions; that Anglo-French cooperation was not characterised by a genuine process of 'binding.' For Greenhalgh, true 'binding' was defined by cooperation and liaison that went beyond the practical and the logistical,

bind[ing] together the actions of one or more commanders and their armies, thus increasing effectiveness ...¹⁹⁸

In turn, Greenhalgh asserts that the British learned nothing from the French; particularly in relation to Verdun.¹⁹⁹ This focus on learning, as captured by the learning curve / learning process paradigm, is another aspect of the wider historiography of the First World War that has yet to penetrate into the realm of the air power history of the conflict.²⁰⁰ In many respects, the consistent and forceful rhetoric of the RFC – particularly that of Trenchard and his conception of the control of the air – goes some way to explaining historiographical criticism in the 'battering-ram' mould. Such rhetoric serves to cloud the increasingly nuanced operational and tactical evolution of the RFC and its approach to the control of the air; evidence of a process of learning. Interestingly, such nuances are a feature of the official histories.²⁰¹

¹⁹⁷ E. Greenhalgh, *Victory through Coalition*.

¹⁹⁸ E. Greenhalgh, *Victory through Coalition*, p.75 and p.88.

¹⁹⁹ E. Greenhalgh, *Victory through Coalition*, pp.60 – 63.

²⁰⁰ W. Philpott, 'Beyond the Learning Curve: The British Army's Military Transformation in the First World War,' *Royal United Services Institute Website*, Autumn 2009. Accessed, 14 Apr 2011. <http://www.rusi.org/analysis/commentary/ref:C4AF97CF94AC8B/>

²⁰¹ For example, see H. A. Jones, *WIA*, Vol.IV, p.176.

These two factors – operating as part of a coalition and the paradigm of the learning process – provide further opportunities to contextualise how military aviators conceptualised their understanding of the control of the air; a line of analysis absent from Parton's recent discussion of British air power doctrine. As such, what impact did the Anglo-French coalition have in relation to the control of the air, and was there an exchange of ideas at a practical or intellectual level? Did these relations also affect the production of air power doctrine? More generally, what relationship was there between the rhetoric of the RFC and the reality of its operational practices? If there was a gap between rhetoric and reality, what factors account for such differences?

Given that this review of the literature has emphasised the significance of structural or contextual factors, it is important to note that this thesis does not ignore the role of the individual. The existing literature places great store in the personalities that helped shape air power doctrine and practice. In the context of military aviation, no individual looms larger than Trenchard, although the work of Ash and of Pugh now highlights the important roles played by Sykes and by Sir David Henderson respectively.²⁰² In the case of naval aviation, the roles of both Winston Churchill and Murray Sueter, the first Director of the Admiralty Air Department (DAD), draw the attention of scholars.²⁰³ Hussey has gone as far as to say that

²⁰² A. Boyle, *Trenchard* (London: Collins, 1962); E. Ash, *Sir Frederick Sykes and the Air Revolution*; J. Pugh, 'David Henderson and the Command of the Royal Flying Corps,' in *Stemming the Tide: Officers and Leadership in the British Expeditionary Force 1914*, ed. S. Jones (Birmingham: Helion, forthcoming).

²⁰³ For example, see E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' pp.27 – 36.

[Trenchard] was the second greatest British fighting commander in France, after Haig himself.²⁰⁴

However, this view is at odds with characterisations of Trenchard that emphasise how he 'wasted men and aircraft.'²⁰⁵ Equally divisive appraisals are available in relation to Churchill and Sueter. For example, D'Este's study praises Churchill's attitude to technology and aviation, whilst emphasising the positive aspects of the latter's 'boundless thirst for adventure.'²⁰⁶ Such conclusions are generally supported by Best, although the accounts put forward by both he and D'Este are heavily influenced by the discredited 'lions led by donkeys' school.²⁰⁷ This is aggravated, particularly in the case of D'Este, by a severe case of ahistoricism; viewing the First World War by the standards of the Second.²⁰⁸ In contrast, Charmley's study emphasises Churchill's 'bellicose' attitude and his desire to interfere, which resulted in perceptions of Churchill as

a man whose mind was on every aspect of the war, rather than on that part of it which concerned the Admiralty.²⁰⁹

Again, the thesis will attempt to explore and, where possible, reconcile these differing perspectives. Of course, a focus on the individual, in the vein of Liddell

²⁰⁴ J. Hussey, 'Portrait of a Commander-in-Chief,' in *Haig: A Re-appraisal 80 Years on*, eds. B. Bond & N. Cave (Barnsley: Pen & Sword, 2009), pp.34 – 35 and n.33.

²⁰⁵ D. Jordan, 'The Battle for the Skies: Sir Hugh Trenchard as Commander of the Royal Flying Corps,' in *Leadership in Conflict, 1914 – 1918*, eds. M. Hughes & M. Seligmann (London: Leo Cooper, 2000), p.68.

²⁰⁶ C. D'Este, *Warlord: The Fighting Life of Winston Churchill, from Soldier to Statesman* (London: Penguin, 2010) [2008], pp.226 – 228 and pp.233 – 234.

²⁰⁷ G. Best, *Churchill and War* (London: Hambledon, 2005), pp.52 – 53 and p.82.

²⁰⁸ C. D'Este, *Warlord*, pp.335 – 339.

²⁰⁹ J. Charmley, *Churchill: The End of Glory: A Political Biography* (London: Hodder & Stoughton, 1993), pp.96 – 97, p.100, and p.105.

Hart's 'Great Captains' approach, continues to worry historians.²¹⁰ Yet, by exploring the agent *and* the structural determinants to which they were subject, it is possible, to an extent, to bridge this gap, demonstrating both the role of the individual and their interaction with existing organisations. For some, such as Churchill, their force as an individual was so great as to overcome a great many of the structural determinants that served to restrict and shape the actions of their subordinates. Moreover, personalities of the stature of Churchill had opportunities to mould the wider context in which ideas were created.

Churchill, Sueter, Trenchard, and Sykes are among just some of the personalities that feature in the thesis. In keeping with the importance of embedding aviation within the wider historiography of the British Army and Royal Navy, senior and influential commanders in both services are also examined. These include Sir John French and Sir Douglas Haig, as commanders of the BEF, and Sir John Jellicoe and Sir David Beatty, as commanders of the Grand Fleet, and, in the case of Jellicoe, First Sea Lord of the Admiralty.

Thesis Content and Structure

This thesis explores military and naval conceptions of the control of the air in the pre-war period, before moving to examine their evolution during the First World War. The thesis does not include an exploration of British air power in peripheral theatres, such as the Eastern Mediterranean (the Dardanelles / Gallipoli campaign and

²¹⁰ B. H. Liddell Hart, *Great Captains Unveiled* (London: Blackwood and Sons, 1927); J. Bourke, 'New Military History,' in *Modern Military History* eds. M Hughes & W. J. Philpott (London: Palgrave, 2006), pp.259 – 261.

Salonika), Palestine, and the Middle East. This decision was partly taken in the interests of manageability, but not exclusively so. The bulk of British air power was deployed in the North-West European theatre, specifically on the Western Front.²¹¹ In addition, genuine innovation in terms of the control of the air was often driven by considerations relating to the use of air power in this theatre of operations – for both military and naval aviators.²¹² As such, a focus on this theatre seems justified. The balance of the thesis favours military aviation, with three chapters examining the development of air power in the military context, and two in the naval context. From a statistical standpoint alone, this decision seems sensible. For example, in March 1918, the strength of the RNAS in officers and men was 55,066, whilst, at the same point, the strength in personnel of the RFC stood at 144,078.²¹³ However, it is not the only explanation, and, as Cooper notes, the conflict came to be dominated by the air power concepts of the RFC.²¹⁴ As such, a thorough exploration of these concepts is warranted.

The thesis also focuses generally on the tactical application of air power by both the British Army and Royal Navy. Given the sheer scale of tactical operations in this theatre, it has not proved possible to cover every aspect that relates to the control of the air. For instance, the use of static balloons has not been included. Of course, the control of the air impinged upon *all* aspects of the use of air power during the First World War. For example, this included such roles as strategic bombing and the use of air power on anti-submarine duties. Such topics, given their well developed

²¹¹ War Office, *Statistics of the Military Effort of the British Empire during the Great War* (London: HMSO, 1922), p.507.

²¹² J. Buckley, *Air Power*, p.53.

²¹³ War Office, *Statistics*, p.227; S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.747. Appendix I: The Growth of the Royal Naval Air Service.

²¹⁴ M. Cooper, *The Birth of Independent Air Power*, p. xviii.

historiography, are only touched upon in the thesis, and are sign-posted in a general sense where they affect wider conceptions of the control of the air.²¹⁵

What is more, as Holley argued, the concept of the control of the air can embrace a vast number of considerations including, but not limited to, technology, tactics, and logistics.²¹⁶ For example, Buckley stresses the importance of technology, and rightly so: the introduction of new aircraft types, for example, made a significant difference to the ability of an air force or service to secure control of the air.²¹⁷ However, given that there are some excellent studies available on each of these subjects, such issues are, again, sign-posted in a general sense rather than examined here in detail.²¹⁸ Furthermore, a focus on such subjects can also serve to downplay other vital factors, including the development of doctrine and policy.

In practical terms, the thesis is divided into two chronological periods, the first of which focuses on the development of aviation in the pre-First World War era. Whilst the formal chronology of the thesis starts in 1911, the year in which the British government began committee proceedings that resulted in the creation of a Flying Corps, the examination of air power concepts briefly considers developments beginning in 1906. As Paris's study indicates, the conceptual origins of British air power can be traced back to the beginnings of the 1900s.²¹⁹ Studies by Wohl and by Hallion indicate that the years 1908 to 1909 were particularly significant for air

²¹⁵ For example, see J. J. Abbatiello, 'British Naval Aviation;' G. K. Williams, *Biplanes and Bombsights*; T. Davis Biddle, *Rhetoric and Reality*.

²¹⁶ I. B. Holley, 'Some Concluding Insights,' p.610.

²¹⁷ J. Buckley, *Air Power*, pp.51 – 52.

²¹⁸ R. P. Hallion, *Rise of the Fighter Aircraft*; J. Morrow, *The Great War in the Air*; P. Dye, 'The RFC Logistical System on the Western Front, 1914 – 1918,' (PhD Thesis, University of Birmingham, Forthcoming).

²¹⁹ M. Paris, *Winged Warfare*, chapter two.

power, given the growing awareness of the work of the Wright Brothers, the proliferation of airships in Germany, and the increasing importance of aviation in France.²²⁰ However, as Gollin suggests, 1906 was itself a significant year, given that figures within Britain's service departments began to reflect seriously upon aviation, whilst the British government gave some consideration to purchasing an aircraft from the Wrights.²²¹

As such, the second chapter explores the development of military air power in Britain between 1911 and 1914, with a brief focus on developments from 1906. The chapter seeks to discover how military aviators came to understand the concept of the control of the air, and to examine the factors that came to affect these conceptions. In the first instance, this involves an exploration of material written for and presented in forums such as the RUSI and the Aeronautical Society of Great Britain, which proved to be important focal points for air power theorising. With the birth of the RFC in 1912, the chapter then seeks to explore how theorising relating to the control of the air was captured and codified into policy and air power doctrine. When investigating this process, the ethos and culture of the British Army provides the backdrop. How did dominant paradigms within the Army affect how military aviators conceptualised their understanding of the control of the air? An examination of the Staff College education of Frederick Sykes is used to test the suggestion that an offensively driven vision of warfare pervaded the British Army. In turn, it will then be possible to assess whether this vision shaped the creation of air power doctrine.

²²⁰ R. P. Hallion, *Taking Flight: Inventing the Aerial Age from Antiquity to the First World War* (Oxford: Oxford University Press, 2003), pp.236 – 238, pp.257 – 265, and pp.307 – 308; R. Wohl, *A Passion for Wings: Aviation and the Western Imagination, 1908 – 1918* (London: Yale University Press, 1994), pp.100 – 110.

²²¹ A. Gollin, *No Longer an Island*, chapter six.

Moreover, did the Army's wider attitude to doctrine affect how military aviators approached the business of codifying their ideas into an existing doctrinal hierarchy? Finally, in assessing if there was a gap between rhetoric and reality, the chapter explores the practical steps undertaken by military aviators to operationalise their concept of the control of the air, including the context in which such efforts were undertaken.

The third chapter of the thesis explores the development of naval air power before the First World War. Evaluating the literature that stresses the progressive attitude of naval aviators, this chapter seeks to juxtapose the development of aviation in a naval context against the previous chapter's focus on military aviation. Following a similar pattern to the second chapter, chapter three begins by examining early theorising on the control of the air, before moving to consider the way in which such ideas were codified into policy in the era of the Flying Corps. In particular, was initial theorising influenced by the Navy's inherently strategic focus, and, if so, how did this affect the Navy's concept of, and approach to, the control of the air? More generally, what were the dominant paradigms that served to shape the wider organisational culture and ethos of the RN? In turn, what influence did this organisational context exert upon naval concepts relating to the control of the air? How did such factors affect the Navy's wider attitude to doctrine and, in turn, the production of naval air power doctrine? This context is considered via an examination of the initial training received by officer recruits of the RN, which serves to demonstrate the intellectual environment into which naval recruits were inculcated. It was under the influence of these factors that the officers of the RN came to develop concepts relating to the control of the air. Finally, it is important to consider whether naval aviators were

equipped with the correct intellectual tools to ensure the smooth assimilation of air power into the wider organisational and operational context of the Navy.

The fourth chapter, the first to move into the 1914 – 1918 conflict, examines military aviation on the Western Front. In the first instance, the chapter considers an oft noted, but frequently unexplored, detail about the RFC: that it was an integral component of the BEF. Thus, to avoid surgically removing military aviation from the organisational and operational context in which it developed, the wider culture and policies of the BEF are examined. What was the wider strategic vision of the senior commanders in the BEF, and how was this vision operationalised? In turn, how did such considerations affect the development and conduct of the RFC and its conception of the control of the air? Did a close relationship exist between the senior commanders of the BEF – French and then Haig – and the senior command team of the RFC? If so, did the nature of this relationship also serve to affect the RFC's conception of the control of the air? Of particular interest is the relationship that existed between Haig and Trenchard. In essence, this chapter seeks to test the assertions of H. A. Jones regarding the pressure applied to the RFC via the BEF's operational tempo, a product of its aggressive doctrine, and the RFC's comradely obligation to their khaki brothers on the ground.²²²

The fifth chapter examines another aspect of military aviation on the Western Front, engaging with the subject via the coalition context and the importance the RFC attached to its use of information. Greenhalgh's suggestion, that a process of genuine 'binding' was absent from the Anglo-French coalition, is examined in relation

²²² H. A. Jones, *WIA*, Vol. VI, p.553 and p.557.

to the air power experiences of the Verdun and Somme campaigns. What was the nature of cooperation between the RFC and their French equivalents? Given the increasingly close cooperation between the British and French Armies during the pre-war period, were the origins of Anglo-French air power cooperation to be found in this period? During the conflict, did the RFC study the experiences of their French allies, and, if so, what lessons did the RFC take from the French? In turn, how did this affect the development of the RFC's conception of the control of the air? In part, such discussions must accept the criticism of Krause, who notes that 'Anglophone' historians

only discuss the French when doing so enriches the British or American narratives.²²³

However, it is hoped that this analysis will offer insights that illuminate aspects of both British and French air power during the conflict. Whilst continuing to acknowledge the coalition context, the chapter then seeks to examine how the RFC, particularly Trenchard, made use of information to help shape and develop an understanding of the control of the air. How was the RFC's vision of the control of the air presented to interested parties, and, in turn, was there a difference between the rhetoric of the RFC and the development of ideas relating to the control of the air in a tactical and operational context? In addition, both chapters four and five consider the doctrinal lineage of the RFC's conception of the control of the air, aiming to discover whether the RFC's approach to the control of the air can be traced to pre-war military aviation doctrine and the theorising of the pre-Flying Corps period.

²²³ J. Krause, *Early Trench Tactics in the French Army: The Second Battle of Artois, May – June 1915* (Farnham: Ashgate, 2013), p.11.

The sixth chapter of the thesis focuses upon naval aviation and the control of the air during the First World War. In the first instance, the chapter examines the senior command team of the RNAS – Winston Churchill as First Lord, Murray Sueter as DAD, and Charles Samson as the Service's senior squadron commander – and their impact on the development and direction of naval aviation. This discussion considers how the RNAS came to be involved in the development of armoured cars, and how the continued diversification of its activities affected its wider perception within the Navy. For example, how did senior operational commanders in the Navy – Jellicoe or Beatty – come to think about the control of the air, and what were their perceptions of the RNAS? Did they feel the RNAS did enough to support the Grand Fleet during the conflict, particularly in terms of the control of the air, and was the extent and effectiveness of such support affected by a lack of coherence in naval aviation policy? Moreover, did tensions exist between the RN and RNAS, and, if so, what were the results at the conceptual and practical levels? Where appropriate, comparisons are made between the RFC and RNAS, reflecting on their approaches to command and to doctrine, their interaction with their parent bodies, and their dealings with the numerous governmental air policy bodies. As the following chapters of the thesis indicate, the reputation of the RNAS as a force committed to the progressive conceptualisation of air power roles requires at least some revision. In contrast, it seems difficult to maintain a wholly negative appraisal of the RFC's conception of the control of the air.

Sources

A range of sources have been examined, none more important than the collection of primary documentation found in the AIR 1 (Air Ministry) files located at The National Archives, Kew. This vast and sprawling set of papers, collected by the fledging Air Historical Branch to assist in the production of *The War in the Air* series, contains copies (or originals) of the most important papers relating to British air power theory, policy, and practice, both naval and military, between 1911 and 1918. Additional material of value has been found in Admiralty, War Office, and Cabinet papers.

The private papers of various senior officers were also consulted, and the Trenchard and Sykes papers held at the RAF Museum, Hendon, were of particular interest. Likewise, the Brooke-Popham papers, located at the Liddell Hart Centre for Military Archives, King's College London, contained highly valuable doctrinal material. At the National Aerospace Library, Farnborough, the files of C. G. Grey, editor of the *Aeroplane*, were consulted. In addition, the Library's vast collection of aeronautical journals, particularly those of the pre-First World War period, also proved to be extremely useful.

In terms of published primary material, a number of volumes have proved indispensable, none more so than Roskill's Naval Records Society (NRS) edition on the RNAS (1969).²²⁴ Additional NRS volumes, particularly the Jellicoe and Beatty papers, were also useful.²²⁵ In a volume compiled and edited by Sheffield and

²²⁴ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*.

²²⁵ A. Temple Patterson, ed., *The Jellicoe Papers: Selections from the private and official correspondence of Admiral of the Fleet Earl Jellicoe of Scapa, Vol. I: 1893 – 1916* (London: Navy

Bourne, extracts from Haig's letters and diaries offer insights into Haig's increasingly positive attitude toward air power and his good working relationship with Trenchard.²²⁶ The introductory chapter, exploring the various versions of the Haig diaries, is especially informative.

Finally, the following chapters draw heavily on the much criticised official histories of Raleigh and Jones. Acknowledging the very real limitations of their volumes, this thesis attempts to provide a scholarly update to the arguments put forth by the official historians. The furore surrounding the objectivity of their study has done much to cloud the genuine and profound insight contained within the volumes. By exploring the operational and organisational context in which the concept of the control of the air was developed, it is hoped that this thesis goes some small way to reviving the reputation of *The War in the Air* series.

Records Society, Vol.108, 1966); A. Temple Patterson, ed., *The Jellicoe Papers: Selections from the private and official correspondence of Admiral of the Fleet Earl Jellicoe of Scapa, Vol.II: 1916– 1935* (London: Navy Records Society, Vol.111, 1968); B. Ranft, ed., *The Beatty Papers: Selections from the Private and Official Correspondence of Admiral of the Fleet Earl Beatty, Vol.I: 1902 – 1918* (London: Navy Records Society, Vol.128, 1989).

²²⁶ G. Sheffield & J. Bourne, eds., *Douglas Haig*.

CHAPTER TWO

THE MILITARY WING OF THE ROYAL FLYING CORPS, AND THE CONTROL OF THE AIR: THEORY, DOCTRINE, AND POLICY, 1911 – 1914

Introduction

Recent scholarship has established that the Military Wing (MW) of the RFC gave doctrinal primacy to aerial reconnaissance.¹ This primacy was evident during the formative pre-war years of the MW, and constituted its core task during the opening campaigns of the First World War. The *Training Manual* of the MW deals with the issue in a highly concise and transparent manner: '[t]he most important *rôle* of aircraft in war is reconnaissance.'² The importance of this task was itself the product of a discourse that pre-dated the creation of the RFC. Accompanying this debate was a growing realisation that aerial reconnaissance may provoke aerial fighting, which would provide the means to establish control of the air over the battlefield, acting as an enabler for friendly forces whilst preventing, or terminating, the operations of the enemy.

Lectures, articles, and speeches addressing the issue of military aviation were almost inevitably drawn to aerial reconnaissance as their central theme. As ideas became less speculative and more specific, a further consensus developed that aerial fighting would be an important enabler for reconnaissance. These ideas were shaped into tentative policy and moulded

¹ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' chapter two, particularly pp.24 – 30; P. Mead, *The Eye in the Air*, chapters five to eight.

² General Staff, AP 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914), p.22.

further with the production of the MW's first doctrinal publication – the *Training Manual* (June, 1914).³

This chapter analyses the pre-war hypothesising regarding the use of aerial fighting to control the airspace over the battlefield. These pre-war ideas had a direct influence on policy and doctrine, which subsequently shaped the practical response at the lower levels. In creating policy and doctrine, the Staff College education was of profound importance. This education proved to be a formative experience for Frederick Sykes, who was perhaps the most significant driving force behind the codification of the ideas of the MW.⁴ Whilst accepting that military aviators became fixated with the tactical application of air power, the chapter emphasises their attitude to the production of doctrine. This was sophisticated, modern, and highly successful, reflecting wider trends within the Army. In the final section, a case study of MW weapons development offers a counter to recognised historiographical criticisms of the Wing's experimental efforts.

Pre-War Hypothesising, 1906 – 1911

The roots of the pre-war discourse on aerial fighting can be traced to 1906. J. E. Capper, a senior military figure in Britain's early aviation community, delivered an address on 24 January 1906 to RUSI, discussing 'Military Ballooning'.⁵ RUSI would serve as an important forum for the discussion of defence topics during this period, with air power lectures and articles featured

³ General Staff, AP 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914).

⁴ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.16 – 18.

⁵ J. E. Capper, 'Military Ballooning,' *JRUSI*, Vol. 50, No.2 (Jul / Dec 1906): pp.890 – 909.

regularly. Raleigh terms Capper 'a firm believer in the aeroplane, and a true prophet,' but whilst there is no disputing his belief in the importance of powered flight, to label Capper a prophet is exaggerating somewhat.⁶ In a section that was more postscript than prophecy, Capper speculated that, once the mastery of powered flight had been achieved, the aircraft might make

a useful scout, whilst later, larger machines will be built and passengers will be carried who can devote all of their attention to observation or to offensive operations, and then a new phase of war will be brought into being.⁷

The importance of these largely speculative comments, influenced as they were by Capper's early association with the Wright Brothers' Flyer, was to highlight to a significant audience the potential of powered flight in the sphere of military operations.⁸ That Capper's thoughts gravitated toward the use of aircraft for scouting is easily explained, given his background in military ballooning, and the importance of reconnaissance in contemporary warfare. There were other, simple and logical reasons for the fascination with aerial reconnaissance that influenced all early air power practitioners and theorists. The prospect of powered flight seemed to offer unlimited potential with regard to speed, manoeuvrability, and access to height for unparalleled levels of observation. All these factors would give aviators incomparable reconnoitring powers that would improve on the limited capabilities of static and free-floating balloons.⁹

⁶ W. Raleigh, *WIA*, Vol. I, p.155.

⁷ J. E. Capper, 'Military Ballooning,' p.900.

⁸ A. Gollin, *No Longer an Island*, pp.146 – 147.

⁹ P. Mead, *The Eye in the Air*, p. 8.

Capper's reference to 'offensive operations,' vague as it was, also served an important purpose, offering the suggestion that powered flight could be used for tasks other than providing information. That Capper failed to conclude that 'offensive operations' might take the form of aerial fighting between powered aircraft is also understandable. For Gollin, successful hypothesising about future aircraft roles was particularly far-fetched in 1906, and could only be attained once the practice of flight had become routine.¹⁰ Moreover, Capper's failure to elaborate upon 'offensive operations' reflected that, in 1906, Britain lacked any means of powered military flight, its experiments being limited to preliminary work on man-carrying kites.¹¹

It was in 1909 that the British government was forced to engage with the question of developing Britain's military aviation capability. As Paris argues, this interest stemmed from the development of aviation in Germany and the proliferation of rigid airships such as the Zeppelin.¹² A Sub-Committee of the Committee for Imperial Defence, under the chairmanship of Lord Esher, reported in January 1909 upon developments in aerial navigation.¹³ The Committee, in making a direct comparison between the aerial situation and the development of the submarine, was reluctant to devote resources to military aviation, but felt that Britain had no choice but to develop aeroplanes

¹⁰ A. Gollin, *No Longer an Island*, pp.146 – 147.

¹¹ A. Gollin, *No Longer an Island*, pp.229 – 231.

¹² M. Paris, *Winged Warfare*, pp.66 – 67, p.99, p.127, and p.130. For the influence of the Zeppelin, see G. de Syon, *Zeppelin! Germany and the Airship, 1900 – 1939* (Baltimore: The Johns Hopkins University Press, 2001). This issue is addressed more thoroughly in the following chapter.

¹³ TNA, Public Record Office (PRO), Cabinet Paper (CAB) 16/17 – Report of the Aerial Navigation Sub-Committee of the CID, 28 Jan 1909. Alternatively, see S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.8 – 13.

and airships. If Capper's lecture was a fuse, then Esher's report was the spark that served to ignite a wider debate on the role of air power in a future conflict.

Another lecture by J. E. Capper appeared in the 25 January 1909 edition of *Flight*. In addressing the 'Military Aspect of Dirigible Balloons and Aeroplanes,' Capper took the significant step of attempting to move the discourse from the speculative to the practical. Capper's comments were still largely tentative, but it was clear that he realised that Britain needed to think more practically about the potential use of aircraft in war. In concentrating upon the invulnerability of aircraft, Capper suggested that the aeroplane 'must be fought in its own element – the air.'¹⁴ This is one of the earliest examples of a senior figure within Britain's military-aeronautical community recognising that a combative encounter may take place in the air between aircraft in order to establish control in the air. Again, the timing of this lecture is significant. Military aviation had moved from the realms of fantasy to a practical and increasingly valuable pursuit. Capper appears as something of a lone voice at this stage, confirming Mead's contention regarding the dearth of ideas upon subjects other than aerial reconnaissance.¹⁵

However, to detect the tangible influence of Capper's ideas is problematic. By 1911, junior figures within Britain's community of military aviators were attempting to wrestle with the issues of aerial fighting and the control of the air. In papers delivered to RUSI and the Staff College, Captains Burke and Brooke-Popham, respectively, followed the familiar pattern of focusing their

¹⁴ J. E. Capper, 'The Military Aspect of dirigible balloons and aeroplanes,' *Flight*, Vol. 2, No.4 (22 Jan, 1910): p.60 and 78 – 79.

¹⁵ P. Mead, *The Eye in the Air*, p.39.

lectures upon aerial reconnaissance, whilst also discussing issues concerning fighting in the air.¹⁶ It may have been that Capper's 1909 paper had forced others to think and engage with the subject of the control of the air. This is a very real possibility, as Britain's community of military aviators was comparatively small at this stage. Lectures were attended by familiar faces, and articles widely circulated, which meant that new ideas and theories travelled quickly.¹⁷

To give some idea of the scale of Britain's aviation community at this stage, it is worth reflecting upon the size of Britain's first military aviation unit, the Air Battalion of the Royal Engineers. This unit, created by a special Army Order dated 28 February 1911, was formed of two companies; one focusing on lighter-than-air-craft, the other on heavier-than-air-craft.¹⁸ As the Army Estimates of 1911 – 1912 recorded, the establishment strength of the Air Battalion was 190 officers and men.¹⁹ In reality,

The Air Battalion had very few serviceable aircraft for training and, by the end of 1911, it was thought that there were only 11 flying men in the Army...²⁰

¹⁶ C. J. Burke, 'The Aeroplane as an Aid to the Solution of Existing Strategical Problems,' *JRUSI*, Vol.55, No.2 (Jul / Dec, 1911): pp.1625 – 1642; H. R. M. Brooke-Popham, 'Military Aviation.'

¹⁷ M. Paris, *Winged Warfare*, p.11 and p.105.

¹⁸ Air Ministry, *AP 125: A Short History of the Royal Air Force* (London: HMSO, 1936), p.9.

¹⁹ War Office, *Army Estimates of Effective and Non-Effective Services, for the year 1911 – 1912* (London: HMSO, 1911), p.20. The establishment of 190 officers and men constituted 14 Officers, 1 Warrant Officer, 19 Serjcants [sic] and 2 Trumpeters, with Rank and File numbering 154.

²⁰ MoD, *AP 3003: A Brief History of the Royal Air Force* (London: HMSO, 2004), pp.4 – 5.

Irrespective of the small size of Britain's aviation community, it is also quite possible that Burke and Brooke-Popham arrived at a consensus about the need for aerial fighting independently of Capper. Mason offers wise counsel when he suggests that

Too often the coincidence of an idea about air power expressed at one time and then applied in another has been evaluated to cause and effect.²¹

Burke and Brooke-Popham, members of the Air Battalion, the pre-cursor to the MW, continued to move the debate from the speculative to the practical. Both acknowledged that aerial fighting would take place as a response to the need to deny the enemy's ability to reconnoitre from the air, whilst ensuring the success of friendly aerial reconnaissance. Importantly, their lectures showed that a language specific to military aviation was developing. Brooke-Popham believed that

A struggle for the command of the air will, no doubt, be a feature of the next great war.

In a similar fashion, Burke argued that

There will be a struggle for the supremacy of the air, from which one side or the other must emerge with a decided advantage.²²

The use of specialist language of this kind has been commented on by both Buckley and Frankland.²³ However, there were, perhaps, more subtle and

²¹ T. Mason, *Air Power: A Centennial Appraisal, Revised Edition* (London: Brassey's, 2002), p.3.

²² C. J. Burke, 'The Aeroplane,' p.1627; H. R. M. Brooke-Popham, 'Military Aviation,' p.96.

sub-conscious reasons for utilising language such as 'command,' 'supremacy,' or 'superiority.' Britain, at this time, was the world's leading imperial power, and ruled a massive global empire via an ethos that stressed the racial and moral superiority of the British. In practical terms, this control was exercised by the world's largest and most powerful navy. For those involved in Britain's defence establishment, the terms 'command of the sea,' or 'naval supremacy,' were axiomatic statements. For example, the term 'command of the sea' was such an integral aspect of Britain's cultural identity that it featured in the 1911 edition of *Encyclopaedia Britannica*.²⁴ Thus, it was natural to assume that Britain would pursue its interests in air power in a similar fashion. The Women's Aerial League and the Young Aerial League wrote to the Secretary of State for War in mid-1911 pressing the government along such lines.²⁵ In a specific air power context, Sykes made a direct comparison between 'command of the sea' and 'command of the air.'²⁶ Early aviators were comfortable with this association, not only from a rhetorical standpoint, but also because there were similarities between the mediums of the sea and air, a suggestion countered by Sykes.²⁷ In addition, writers such as H. G. Wells often stressed the imperial overtones and potential of air power. For Wells, this took the form of dystopian fiction, although, as Wohl notes, there were those who saw and articulated a utopian, imperialist vision of air power.²⁸ The use of the term 'command of the air' was entirely fitting in relation to Britain's

²³ J. Buckley, *Air Power*, pp.50 – 51; N. Frankland, *History at War*, pp.224 – 225.

²⁴ H. Chisholm, ed., *The Encyclopaedia Britannica: A Dictionary of Arts, Science, Literature and General Information, Eleventh Edition, Vol.XXIV: SAINTE-CLAIRE DEVILLE to SHUTTLE* (Cambridge: University of Cambridge Press, 1911), pp.529 – 531.

²⁵ *The Aerial Observer*, No.11 (June 1911): pp.94 – 103.

²⁶ F. H. Sykes, 'Military Aviation,' *The Aeronautical Journal*, Vol. 17, No. 67 (Jul 1913), p.129.

²⁷ *Ibid.*

²⁸ R. Wohl, *A Passion for Wings*, chapter three.

wider attitude to itself as a global empire and naval power, capturing the imperialist rhetoric of the time.

When analysing the meaning of the terms used by Burke and Brooke-Popham, it is evident that the two Captains were hypothesising in the broadest sense. They both concurred that an aerial battle would likely form a pre-cursor to the land campaign, and would be decisive and absolute in nature. As Burke remarked,

Since it is probable that both antagonists will put forward all their best pilots on the outbreak of war, in order to attain a decisive advantage from the beginning, it is improbable that either side will be able to replace their pilots, even if they are able to produce fresh aeroplanes. One antagonist will, after this aerial battle, remain, we may confidently assume, in command of the air.²⁹

There were excellent reasons for concluding that the battle for the control of the air would be decisive, none more so than the small size of air forces and their respective support infrastructure. In noting the likelihood of 100 percent casualties every three months, Brooke-Popham highlighted the fragility and unreliability of contemporary aircraft, as well as the strain placed on aviators by the stresses of flight.³⁰ That decisiveness and the importance of moral superiority in battle were strategic conditions sought by the British Army was also influential.

Paradoxically, Brooke-Popham's call for improvements in supply and production, to provide the quantitative edge during aerial fighting, would

²⁹ C. J. Burke, 'The Aeroplane,' p.1627.

³⁰ H. R. M. Brooke-Popham, 'Military Aviation,' pp.97 – 98.

actually reduce the chances of decisiveness. A focus on casualties, production, and supplies, a notable feature of the air war of 1916 – 1918, highlighted that attrition and pressure would play an important role in establishing control of the air. Brooke-Popham's conclusions were amongst the first to hint that the battle for the control of the air would not be a short, decisive encounter. Both lecturers also referred to the attainment of the control of the air via a pro-active offensive campaign. For Brooke-Popham, 'determined attempts' would be made to deny the 'command of the air' to the enemy, whilst, for Burke, defeating the enemy's aircraft was the only means of ensuring the success of friendly reconnaissance.³¹

That Brooke-Popham delivered his paper to the Staff College demonstrates the progressive attitude of some members of the British Army to aviation. Moreover, Brooke-Popham's lecture was presented when the Commandant at Camberley was Major-General William Robertson, who would become a noted supporter of aviation in his role as CIGS. The cultivation of the relationship between the Army's military aviators and the Staff College established an important precedent, and, by early 1914, MW personnel were being requested to assist in the delivery of Staff College Tours.³² Robertson's attitude built upon that of Henry Wilson, who, during his time as Commandant of the Staff College, arranged the delivery of two lectures focusing on air power. This was a small, but significant step during 1909 and 1910.³³ It is also telling that Brooke-Popham's paper was published in *The Army Review*. As

³¹ C. J. Burke, 'The Aeroplane,' p.1627; H. R. M. Brooke-Popham, 'Military Aviation,' p.96.

³² AIR 1/783/204/4/533 – Details of Staff College, Administrative Staff Tour, Senior Division, March 1914.

³³ B. Bond, *The Victorian Army and the Staff College, 1854 – 1914* (Norfolk: Eyre Methuen, 1972), p.255.

Bond notes, and in contrast to *The Naval Review*, *The Army Review* was an officially sanctioned publication that

provided a forum for debate and showed that the General Staff was making a serious attempt to educate the Army for war.³⁴

Another significant step in the pre-war debate on military aviation took place during December 1911 when the Aeronautical Society of Great Britain met to discuss 'The Military Aeroplane.'³⁵ The two meetings, on 6 and 18 December, confirmed that a consensus existed regarding the importance and likelihood of aerial fighting. Gollin establishes the prestige and reputation of the Aeronautical Society of Great Britain, and it was in front of this esteemed body that the pioneering military aviators of the day came to hypothesise about the use of air power.³⁶ In attendance during the meetings of December 1911 were figures of great significance, including David Henderson (future Director General of Military Aeronautics (DGMA) and head of the RFC), C. J. Burke (future squadron commander with the MW), and J. E. B. Seely (Under-Secretary of State for War).

At the first meeting, Capper noted that measures would need to be taken to ensure aircraft possessed 'immunity from destruction by the enemy,' as it was likely that

attempts may be made to interfere with a reconnoitring aeroplane from hostile aeroplanes, by rifles or pistols.³⁷

³⁴ B. Bond, *Staff College*, p.234.

³⁵ 'The Military Aeroplane,' *Aeronautical Journal*, Vol.16, No.61 (Jan 1912): pp.3 – 23.

³⁶ A. Gollin, *No Longer an Island*, p.21; M. Paris, *Winged Warfare*, pp.84 – 85.

³⁷ 'The Military Aeroplane,' *Aeronautical Journal*, p.5.

This echoed a point made by Brooke-Popham some weeks earlier regarding the likelihood and viability of the use of rifles for the purposes of aerial combat.³⁸ That rifles and pistols were of limited value during fighting in the air was not realised at the time. The failure of the participants to recognise the machine gun as the future in aerial weaponry was understandable. An attendee of the first meeting, Captain H. F. Wood, observed that mounting a heavy machine gun in a contemporary aircraft was far-fetched. Whilst Wood did not elaborate on the reasoning behind his comment, it is clear he was referring to the weight of a machine gun and the limited lifting power of aircraft.³⁹ Some eight months later, David Henderson still considered the development of an effective aerial weapon a very great challenge.⁴⁰ In contrast, in a report to the War Office (WO) upon French aviation, Sykes wrote that,

In a word[,] aeroplanes must be able to cope with hostile aerial reconnaissance, and stop the enemy from gaining information by means, probably, of some light form of machine gun.⁴¹

Sykes's attendance at the French Manoeuvres of 1911 may have been an important factor in his recognition of the need for aerial fighting, although, as Morrow observes, the French were 'not interested in aerial combat,' in spite of some experimentation during the pre-war period.⁴² Ash is correct when he stresses that Sykes's experience with French aviation was influential in an organisational and administrative sense, serving to highlight the gap between

³⁸ H. R. M. Brooke-Popham, 'Military Aviation,' p.96.

³⁹ 'The Military Aeroplane,' *Aeronautical Journal*, pp.6 – 7.

⁴⁰ D. Henderson, 'The Design of a Military Scouting Aeroplane,' *Aeronautical Journal*, Vol.16, No.62 (Jul 1912): pp.167 – 175.

⁴¹ Sykes Papers, RAFM, MFC 77/13/8 – Notes on French Aviation, 1911.

⁴² J. Morrow, *The Great War in the Air*, pp.15 – 16 and p.35.

the aerial capability of the British and the French.⁴³ It would be close wartime relations between the British and French air services that would help develop the aerial doctrine of both nations.⁴⁴ At the 6 December meeting, Burke discussed the design of aircraft types, pressing for the development of a specialist fighting machine.⁴⁵ The shift toward technical issues was a natural development as individuals became more aware of the technological nature of flight. Discussing the performance desired from future types was the first step toward what would become a technologically driven contest: the battle for superior aircraft during the First World War.⁴⁶

The second meeting, addressed by Major Radcliffe of the General Staff, also focused on reconnaissance. Radcliffe acknowledged the enabling qualities of aerial fighting, yet, importantly, he observed that '[aerial] fighting ... can only be a means to an end, and not the end itself.'⁴⁷ Radcliffe's central point was that fighting in the air was wasteful and unproductive if directed without sufficient care to wider strategic, operational, and tactical goals, and he urged his listeners to think beyond an aggressive desire for combat. Radcliffe's point, which was not addressed during the subsequent question and answer session, was of the most profound importance. The significance attached to the need for aerial fighting, which seemed to gather its own momentum during the First World War, had its origins in these debates and lectures. The desire and fervour for aerial fighting, once a consensus had been reached with

⁴³ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.24 – 25; P. Dye, 'France and the Development of British Military Aviation,' pp.1 – 12.

⁴⁴ See chapter five.

⁴⁵ 'The Military Aeroplane,' *Aeronautical Journal*, pp.9 – 11.

⁴⁶ R. Hallion, *The Rise of the Fighter Aircraft*, passim.

⁴⁷ 'The Military Aeroplane,' *Aeronautical Journal*, p.14.

regard to its inevitability, is almost palpable in the text of the lectures and articles cited above. Enthusiasm grew further as significant figures within Britain's military establishment recognised and endorsed the need for fighting in the air.⁴⁸ This enthusiasm translated into a self-sustaining phenomenon during the First World War as the need and desire for aerial fighting grew exponentially.⁴⁹ By not acknowledging this contention, the path to the RFC's 'battering-ram tactics' was laid open.⁵⁰

The Creation of Tentative Policy, 1911 – 1912

In late 1911, an attempt was made to turn theory into formative policy. The Standing Sub-Committee on Aerial Navigation tasked a small Technical Sub-Committee to explore recommendations to establish a 'corps of aviators.'⁵¹ The timing of the creation of the Committee reflected the terrible performance of the Air Battalion during the 1911 Army Manoeuvres.⁵² The conclusions of this Technical Sub-Committee, reported in February and approved in April 1912, led to the creation of the RFC and, importantly, the establishment of policy upon which the Corps would develop its doctrine and carry out its duties during any future conflict.⁵³ That Seely and Henderson, both present at the Aeronautical Society meetings, were two of the most important members of the Technical Sub-Committee on Aerial Navigation, provides a concrete

⁴⁸ A. Whitmarsh, 'British Army Manoeuvres and the Development of British Military Aviation, 1910 – 1913,' *War in History*, Vol.14, No.3 (Autumn 2007): pp.325 – 346.

⁴⁹ For example, see S. F. Wise, *Canadian Airmen in the First World War*, p.210.

⁵⁰ F. H. Sykes, *From Many Angles*, p.220.

⁵¹ CAB 16/16 – Report of Committee of Imperial Defence Sub-Committee on Aerial Navigation, 29 Feb 1912.

⁵² W. Raleigh, *WIA*, Vol. I, p.190.

⁵³ *Ibid.*

causal connection between these debates and the policy espoused by the Committee. Neville Jones reflects on the military domination of the Committee, whilst Ash comments upon the role played by Sykes in actually drafting the report in close liaison with Henderson.⁵⁴ Lewis makes the astute point that the composition of the Committee was, in large part, decided by a dearth of aviation expertise.⁵⁵

With reference to the use of aeroplanes in land warfare, the Technical Sub-Committee concluded three points of particular interest. The Committee stressed the importance of 'Reconnaissance [and the] Prevention of [the] enemy's reconnaissance.'⁵⁶ In giving primacy to these two tasks, the precedent was set that a central function of air power would be to establish the control of the air: first, to enable the success of friendly aircraft; and second, to deny success to the enemy. The third point of relevance, 'infliction of damage upon the enemy,' could be read to suggest that the Committee were interested in ground attack or aerial bombing.⁵⁷ However, this statement was influenced by British Army doctrine, which stressed the importance of an offensive mindset. The similarities between the consensus reached by the pre-1912 discourse and the recommendations and policy directives contained within the Technical Sub-Committee's reports are telling. The conclusions of the report, stressing the importance of reconnaissance and the need to fight for the control of the air, are almost identical to Henderson's comments at the

⁵⁴ N. Jones, *The Origins of Strategic Bombing*, p.36; E. Ash, *Sir Frederick Sykes and the Air Revolution*, p.26.

⁵⁵ P. Lewis, *The British Fighter Since 1912: Sixty-Seven Years of Design and Development* (London: Putnam, 1979), p.23.

⁵⁶ CAB 14/1 – Minutes, memos and papers of the Air Committee. See also CAB 16/16.

⁵⁷ *Ibid.*

18 December meeting.⁵⁸ Moreover, the focus on reconnaissance reflected Henderson's own expertise in the field.⁵⁹

Sykes and the Staff College Experience

Sykes, appointed the first operational commander of the MW, formed an integral part of the Technical Sub-Committee. In shaping policy and subsequent doctrine, Ash argues that Sykes was indoctrinated into dominant military trends, particularly the importance of offensive spirit, and that his Staff College experience was influential.⁶⁰ The following section seeks to provide an overview of this experience, whilst setting the discussion in the wider historiography of the Staff College. It is important to examine the ideas and teaching to which Sykes was exposed, because it was with such ideas that Sykes (and his contemporaries) came to shape MW doctrine.

Overview and Historiography of the Staff College

The British Army's Staff College, replacing the senior division of the Royal Military College, was created in 1858, moving to its now familiar home in Camberley in 1862. After an inauspicious start – attendance had fallen to as few as forty students in the 1870s – the Staff College came to fill an important role as the British Army edged toward the First World War.⁶¹ Developing the conclusions of Bond, Sheffield has noted that the prime function of the Staff

⁵⁸ 'The Military Aeroplane,' *Aeronautical Journal*, p.20.

⁵⁹ For example, see D. Henderson, *The Art of Reconnaissance* (London: John Murray, Third Edition, 1914) [1907].

⁶⁰ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.16 – 18 and pp.31 – 32.

⁶¹ B. Bond, *Staff College*, pp.333 – 334.

College was to 'train officers in staff work.' This comprised operational, administrative, and logistical functions.⁶²

The Staff College also performed the role, to a certain extent, of providing the British Army with a 'school of thought.' This function became increasingly important in the decade preceding the First World War, and, as Bond suggests, such a philosophy was designed to '... create a sense of uniformity and harmony in the Army as a whole.'⁶³ From a practical standpoint, such an aim was achieved via a focus on command functions and the underlying principles of war.⁶⁴ These were highlighted by examining strategic and tactical examples from historical and contemporary campaigns. As Robertson, the Commandant of Camberley during Brooke-Popham's tenure, wrote,

... there is no position in the army where greater influence can be exerted over the rising generation of officers than that of Commandant of the Staff College ... The object of the Staff College being to train officers not only for staff work but also for the duties of command, the name is rather a misnomer, and I have always thought that 'War School' would be more appropriate.⁶⁵

Between 1904 and 1907, as the importance of a Staff College education increased, a twin to the Camberley facility was established in Quetta, India (now Pakistan). This provided Indian Army officers with greater opportunities to receive a Staff College education, whilst opening up an additional route for British Army officers. As Quetta's official history notes,

⁶² G. Sheffield, *The Chief: Douglas Haig, The British Army and the First World War* (London: Aurum, 2011), p.26.

⁶³ B. Bond, *Staff College*, pp.258 – 259.

⁶⁴ G. Sheffield, *The Chief*, p.26.

⁶⁵ W. Robertson, *From Private to Field Marshal* (London: Constable & Company, 1921), pp.169 – 170.

The syllabus for the entrance examination was practically the same as that for the Home College, except for certain modifications in administration, languages, and geography, entailed by local requirements.⁶⁶

Obtaining the letters p.s.c. (passed Staff College) became increasingly important for career-minded officers. As Lieutenant-General Smith-Dorien observed during his address at the opening of the permanent buildings of the Staff College at Quetta, 'if you obtain the letters P.S.C [sic] you will find them really magic.'⁶⁷

In asserting an influence over the development of doctrine and military thought in Britain, the importance of a Staff College education has divided opinion. Bond argues that Staff College trained graduates had a positive impact on the performance of the BEF during the opening campaigns of the First World War.⁶⁸ However, Bowman and Connelly argue that historians tend to overemphasise the wider significance of the institution to the Army as a whole.⁶⁹ Travers, in his important, if somewhat dated, study of the British Army, cites Staff College notes, essays, and assessed material to argue that, whilst at Camberley, the BEF's future Commander-in-Chief, Douglas Haig, acquired and developed an antiquated, rigid, and inflexible approach to warfare, which would shape his strategic and operational conduct between 1914 and 1918.⁷⁰ This was based on the notion of the structured, decisive battle, viewed through the paradigm of the human-centric battlefield and the

⁶⁶ British Library (BL), India Office Records (IOR) /L/MIL/17/5/2276, *Records of the Staff College at Quetta, Chapters 1 to 5 and appendices* (Simla: Government Central Printing Office, 1908), p.3.

⁶⁷ BL, IOR /L/MIL/17/5/2276, *Records of the Staff College at Quetta* (1908), p.27.

⁶⁸ B. Bond, *Staff College*, p.328.

⁶⁹ T. Bowman & M. Connelly, *The Edwardian Army*, p.34 and pp.40 – 41.

⁷⁰ T. Travers, *The Killing Ground*, pp.86 – 88.

importance of the offensive.⁷¹ Sheffield, in his recent biography of Haig, has characterised such a line of argument as looking 'increasingly threadbare.'⁷² As Sheffield argues, Staff College teaching was based upon an 'unexceptional and sensible' approach, examining historical material in an attempt to draw out the underlying principles of warfare.⁷³ As Sheffield concludes,

rather than a rigid, doctrinaire approach, Haig learned at Camberley – or more likely had confirmed – an adaptable, empirical, pragmatic approach to war. This gave him an overall framework within which he could work out his ideas.⁷⁴

Sheffield suggests that to place too great an emphasis on the papers generated by students during their Staff College experience is inappropriate. It is very difficult to assert that what is written in student papers actually reflects the opinions of the students themselves. To be successful, students were required to show they had assimilated some of the lessons on offer, or, at the very least, to express criticism in sufficiently humble language. Such criticism needed to be less caustic than that utilised by J. F. C. Fuller during his time at Camberley.⁷⁵ In the case of Haig, there was well over a decade between the conclusion of his Staff College education and his appointment to a position in which he could shape the direction and outlook of the Army. This chronological gap is troubling, and serves to undermine Travers's cause and effect chain.⁷⁶ However, Sykes's Staff College experience is still worth considering, given that, within 24 months of leaving Quetta, Sykes was in a

⁷¹ T. Travers, *The Killing Ground*, pp.54 – 55.

⁷² G. Sheffield, *The Chief*, p.28.

⁷³ G. Sheffield, *The Chief*, p.27.

⁷⁴ G. Sheffield, *The Chief*, p.28.

⁷⁵ G. Sheffield, *The Chief*, pp.26 – 28.

⁷⁶ P. Gray, *Leadership, Direction and Legitimacy*, p.41.

position of sufficient seniority to have a decisive influence over the creation of the MW and its doctrine.⁷⁷

Sykes and Quetta

Ash suggests that, in conveying the impression of conforming to dominant strategic and military thinking, Sykes was motivated by a desire to progress his career and please his superiors.⁷⁸ On examining the evidence available, some of which was not consulted by Ash, it becomes clear that Sykes was heavily influenced by the teaching and education he received at Quetta.⁷⁹ This did no harm with regard to Sykes's ambitions within the Military. It is also apparent that Sykes embraced this education because he came to believe in the validity of the ideas being taught, not simply as a pragmatist but as a genuine advocate of such thinking.⁸⁰

Ash may feel his characterisation of Sykes as a revolutionary air power leader and true strategic visionary takes something of a blow if it is discovered that Sykes shared a vision of warfare, at least up to 1915, with Douglas Haig.⁸¹ In noting that Haig disagreed with Sykes's theories on air power, Ash does not

⁷⁷ E. Ash, *Sir Frederick Sykes and the Air Revolution*, chapters one and two.

⁷⁸ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.16 – 18.

⁷⁹ These sources include the papers of Field Marshal Montgomery Massingberd, at the Liddell Hart Centre for Military Archives, King's College London (LHCMA). Massingberd was a member of the directing staff at Quetta during Sykes's first year of study. At the British Library, see *Records of the Staff College at Quetta, Chapters 1 to 5 and appendices*. See also *Records of the Staff College, Quetta: Chapters 6 to 8 and appendices* (Simla: Government Central Branch Press, 1911). These volumes give details regarding admissions, course structure, and a brief history of the college. Another important source is B. Bond, *Staff College*.

⁸⁰ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.16 – 18.

⁸¹ On Haig, see G. Sheffield, *The Chief*, B. Bond & N. Cave, eds., *Haig: A Re-appraisal 80 Years on* (Barnsley: Pen and Sword Military, 2009).

acknowledge that, rather than disagreeing from the start, they came to disagree.⁸² Ash's decision to downplay Sykes's formative experience, which illustrates Sykes as a product of his environment, is interesting. That Sykes was a conformist to established British Army thinking and doctrine during the opening campaigns of the First World War makes his rejection of such ideas more profound, and serves to strengthen Ash's case.

As Gray records, entering Staff College required serious commitment in terms of time and finances.⁸³ After failing his entrance examination for the Staff College at Camberley in 1907, Sykes applied and passed the entrance examination for admission to Quetta. Between 1908 and 1910, during his time at the College, Sykes had five lessons driven home: first, the importance of moral superiority; second, the need for aggressive and relentless offensive action; third, the significance of concentrating forces at the decisive point; fourth, the need to engage and defeat the enemy's armed forces; and finally, that by following these steps, decisive victory would be attained in quick time.⁸⁴ That Sykes had observed the German Army's manoeuvres of 1907 reinforced his receptiveness to these five ideals, which Gat would characterise as coming from the 'German military school.'⁸⁵

Sykes's attendance at Quetta, rather than Camberley, is an interesting variable. Bond examines the early history of Quetta, and is largely positive

⁸² E. Ash, *Sir Frederick Sykes and the Air Revolution*, p.198.

⁸³ P. Gray, *Leadership, Direction and Legitimacy*, pp.41 – 42.

⁸⁴ F. H. Sykes, *From Many Angles*, pp.70 – 73.

⁸⁵ Sykes Papers, RAFM, MFC 77/13/5 – 'Report on German Army Manoeuvres;' A. Gat, *A History of Military Thought from the Enlightenment to the Cold War* (Oxford: Oxford University Press, 2001), p. 284.

about the role of the college, although, more recently, Gardner provides an alternative appraisal, suggesting that Quetta's regional focus did not equip students for the European style of warfare in 1914.⁸⁶ Even with regional variations, however, the curriculum at Quetta was still heavily focused upon European approaches to war. For example, special attention was paid to the Russo-Japanese conflict, providing, as it did, a (subjective) weight of evidence regarding the decisive value of moral superiority in contemporary warfare.⁸⁷ That the conflict also provided evidence regarding the strength of defensive firepower and the negative consequences of an over-focus on moral / human factors, was an alternative and underplayed conclusion at the time.⁸⁸

Ash argues that Sykes experienced a Staff College curriculum that focused on Clausewitz.⁸⁹ Such a statement requires immediate qualification. As Bassford suggests, some figures in the British Army may have been familiar with Clausewitz, and may even have read *On War*.⁹⁰ Consequently, these ideas may have found their way into the Staff College experience. However, he concedes that it is difficult to establish a concrete evidential chain.⁹¹ Referring to Haig's Staff College experience, Travers suggests that a selective interpretation of Clausewitzian ideas was in evidence, embracing the moral / human elements of *On War* and rejecting the notion of the power of the

⁸⁶ B. Bond, *Staff College*, pp.204 – 206; N. Gardner, *Trial by Fire*, pp.178 – 180.

⁸⁷ K. Simpson, 'Capper and the Offensive Spirit,' *JRUSI*, Vol.118, No.2 (Jul 1973): pp.51 – 56.

⁸⁸ M. Howard, 'Men Against Fire: Expectations of War in 1914,' *International Security*, Vol. 9, No.1 (Summer, 1984): pp. 53 – 67; S. Jones, 'The Influence of the Boer War (1899 – 1902) on the Tactical Development of the Regular British Army, 1902 – 1914' (PhD Thesis, University of Wolverhampton, 2009), pp.48 – 56.

⁸⁹ E. Ash, *Sir Frederick Sykes and the Air Revolution*, p.17.

⁹⁰ C. von Clausewitz, *On War*. Translated & Edited by M. Howard & P. Paret (Princeton, New Jersey: Princeton University Press, 1989) [1976].

⁹¹ C. Bassford, *The Reception of Clausewitz in Britain and America, 1815 – 1945* (New York: Oxford University Press, 1994), chapters eight, ten, and twelve.

defence.⁹² This interpretation may not have been as Clausewitz intended, but it is evident that the thinking highlighted by Travers in relation to Haig's Staff College experience was still active during Sykes's Staff College education. Quetta's Commandant during Sykes's tenure, Major-General Thomas Capper, has been characterised as being influenced by Clausewitz, and there are some examples of Capper citing the work of Clausewitz in his lectures to students.⁹³ It is difficult to extrapolate too much from these examples, although it is apparent that Capper continued to stress principles and ideas that could be interpreted as being Clausewitzian in nature.

In writing about the importance of Night Attacks during the Russo-Japanese War of 1905, Capper offered the distinctly Clausewitzian conclusion that

War is an art not a science ... [W]e must not think that we have evolved certain rules, capable of universal application. The human mind is always seeking to take refuge in the comfort of an established rule. Such refuge can never be attained in war.⁹⁴

Earlier in the same paper, Capper stressed that it was vital to

... foster and nourish by all means in our power the offensive and go-ahead spirit of our officers and men.⁹⁵

⁹² T. Travers, *The Killing Ground*, pp.86 – 88.

⁹³ K. Simpson, 'Capper and the Offensive Spirit,' p.53. For examples, see LHCMA, Capper Papers (CP), CP2/4/1 – Lecture on the Strategical Exercise Set to the Senior Division at the Staff College.

⁹⁴ LHCMA, CP, 2/1 – Paper by Capper, 'Deductions from the Accounts of Night Attacks During the Manchurian War, With Examples,' 1908, p.13.

⁹⁵ LHCMA, CP, 2/1 – Deductions from the Accounts of Night Attacks During the Manchurian War, With Examples, p.2.

Thus, it could be suggested that Sykes was subject to teaching that was flavoured with ideas and principles to which the label Clausewitzian could be attached. It is also possible to suggest that Sykes would have been familiar with Jominian theorising. Hamley's *The Operations of War* (seven editions between 1866 and 1922) was one of the two core texts upon which the military strategy and tactics section of the entrance examination was based.⁹⁶ Gat and Strachan acknowledge the Jominian roots of this study, noting the prescriptive arguments and conclusions forwarded by Hamley.⁹⁷ Bond recognises the influence of this work whilst conceding that, by the end of the nineteenth century, there had been a sharp move away from Hamley's theories.⁹⁸ This move away from geometric theorising saw the British Army actively reject prescription in favour of a flexible understanding of warfare that embraced the concept of the offensive based upon moral superiority. Capper, an advocate of such thinking – a focus on the 'importance of courage and self sacrifice' – was not an isolated voice at the Staff College, and his colleagues also stressed similar ideals.⁹⁹ A. A. Montgomery-Massingberd, a future CIGS, lectured Sykes during 1908. Massingberd's lectures focused upon Napoleon's early campaigns, the American Civil War, the Boer War, and the Russo-Japanese conflict. Emphasis was given to the importance of concentrating force and the need for decisive battle. Moral or human factors were stressed,

⁹⁶ See BL, IOR/L/MIL/17/5/2276: *Records of the Staff College at Quetta (1908)*; E. B. Hamley, *The Operations of War* (London: Blackwood & Sons, Second Edition, 1869).

⁹⁷ H. Strachan, *European Armies and the Conduct of War* (London: Routledge, 1983), pp.67 – 68; A. Gat, *A History of Military Thought*, pp.283 – 284.

⁹⁸ B. Bond, *Staff College*, pp.87 – 88.

⁹⁹ N. Gardner, *Trial by Fire*, pp.179 – 180.

and boldness, offensive spirit, and aggression were encouraged as characteristics to be cultivated and praised.¹⁰⁰

In an essay submitted at the end of October 1908, Sykes addressed the issue of strategy. This paper clearly demonstrated the nature of teaching to which Sykes was exposed. In the essay, Sykes argued that

The effects of the enormous size and cost of modern armies, are, amongst others, to cause the duration of wars to be shorter.¹⁰¹

This analysis would resonate with those individuals in Britain's armed forces who came to subscribe to a view subsequently associated with the short-war myth.¹⁰² Mid-way through the essay, Sykes wrote of the advantages of the offensive and of seizing the initiative, whilst, a page later, he noted that,

Assuming that the offensive has been decided upon, the great aim must now be to destroy the enemy's offensive power, and to ensure superiority at the decisive point, i.e., the point which will vitally affect the course of the campaign.¹⁰³

Sykes was effectively quoting Clausewitz's discussion and conception of the 'centre of gravity.'¹⁰⁴ It is also possible, however, that Sykes was influenced by the work of G. F. Henderson, whose notes upon strategy were periodically issued to the Staff Colleges. The Henderson notes, issued in 1911, are

¹⁰⁰ LHCMA, Montgomery-Massingberd Papers (MMP), 4/10, 4/11, 4/13, and 4/14.

¹⁰¹ Sykes Papers, RAFM, MFC 77/13/5 – Staff College Paper entitled, 'Outlines of Strategy,' (31 Oct 1908), p.15.

¹⁰² H. Strachan, *The First World War, Volume I: To Arms* (Oxford: Oxford University Press, 2001), pp. 1005 – 1014.

¹⁰³ Sykes Papers, RAFM, MFC 77/13/5 – 'Outlines of Strategy,' pp.7 – 8.

¹⁰⁴ C. von Clausewitz, *On War*, pp.485 – 486.

illustrative of his thinking, being presented as a series of maxims. Included amongst this list were the following:

- Concentration is important.
- The main objective is the enemy's main army.
- Concentrate a superior force at a decisive point.
- Moral advantage is obtained by seizing the initiative.
- The best defensive measure is a strategic counterstroke.¹⁰⁵

These are similar points to those stressed by the Commandant and Sykes's teachers. The ideas themselves could be characterised as distinctly 'Clausewitzian' in nature.

More generally, Sykes received instruction that stressed the importance of Britain's wider geo-political interests and, foreshadowing the modern focus on joint operations, the need for successful co-operation between the British Army and Royal Navy.¹⁰⁶ That this message had been understood was confirmed by Sykes's essay of October 1908. Sykes wrote of the importance of Britain's command of the sea in giving her the greatest flexibility when choosing a theatre of operations. In addition, he noted the significance of power projection and the deployment of the Army, as well as the indirect benefits gained by blockading.¹⁰⁷

¹⁰⁵ LHCMA, MMP 4/3 – Notes on Strategy by G. F. R. Henderson, issued to Staff College, Quetta, 20 Feb 1911. These were effectively a summation of Henderson's published work. See G. F. R. Henderson, *The Science of War: A Collection of Essays and Lectures, 1891 – 1903* (London: Longmans, Green & Co., 1908). See p.173 for Henderson on Clausewitz.

¹⁰⁶ LHCMA, CP 2/4/1 – Lecture on the Strategical Exercise Set to the Senior Division at the Staff College.

¹⁰⁷ Sykes Papers, RAFM, MFC 77/13/5 – 'Outlines of Strategy,' pp.10 – 12.

Tentative links between the Navy and Army, at the educational level, had been established as early as 1901. Julian Corbett, the noted naval theorist, began addressing the Staff College at Camberley from 1905 onwards. Lambert is persuasive when he discusses the links between the theorising of G. F. Henderson and of Corbett, and the subsequent link of both to Clausewitz.¹⁰⁸ Mahan, whose theoretical perspective was more akin to the prescriptive work of Jomini, was interpreted in Britain as arguing for large, concentrated battle fleets that would attain command of the sea by defeating an enemy's fleet, thus protecting friendly maritime trade.¹⁰⁹ Menon observes that the influence of the work of Alfred Thayer Mahan was pronounced in Britain during this period.¹¹⁰ The themes of decisiveness, concentration, aggression, and striking directly against the main enemy force are, again, remarkably similar to the theoretical trends cherished by the Army's Staff College.

Another obvious parallel is found when comparing Mahan's method for establishing command of the sea with the ideas espoused during the pre-war debates concerning aerial fighting. Command would be established by friendly units after a decisive contest with the equivalent forces of the enemy. This, in turn, would facilitate friendly activity and deny the benefits of such activities to the enemy. As Kennedy observes, the concept of the command of the sea

¹⁰⁸ A. Lambert, 'The Development of Education in the Royal Navy,' pp.52 – 54; B. Bond, *Staff College*, pp.197 – 199.

¹⁰⁹ D. Jablonsky, ed., *Roots of Strategy: Book 4* (Mechanicsburg, PA: Stackpole Books, 1999), pp.16 – 17; J. Sumida, *Inventing Grand Strategy and Teaching Command: The Classic Works of Alfred Thayer Mahan Reconsidered* (Baltimore: John Hopkins University Press, 1997), passim.

¹¹⁰ R. Menon, *Maritime Strategy and Continental Wars* (London: Frank Cass, 1998), pp.116 – 119.

was never implied in a total manner, 'being both physically impossible and strategically unnecessary.'¹¹¹

The evidence suggests that Sykes left Staff College with a disposition towards the importance of offensive action to seize the initiative. This was viewed through a lens that emphasised the moral / human aspects of warfare. By directing these efforts at the enemy's armed forces, a decisive and relatively quick victory would be attained. This, in turn, would be an enabling / disabling force for friend and foe respectively. It is significant that Sykes's command of the MW during the opening campaigns of the First World War, and the content of the *Training Manual*, a project for which he possessed administrative responsibility, reflected the ideals emphasised during his time at Quetta. For example, a lecture delivered by Sykes to the Aeronautical Society in February 1913 confirms this contention and suggests the ongoing influence of his Staff College experience:

The aircraft of one side will be imbued with greater staying powers, greater determination to fight. This side must be ours. It is this spirit which, creating moral ascendancy [sic], always wins on land or sea. It will do so in the air. Thus again, as usual, we come to the man, the numbers of him available, his patriotism, self-sacrifice and training.¹¹²

As Sheffield cautions, Staff College graduates did not enter Camberley or Quetta with minds empty of military thought and experience. In some cases, such as Haig or Sykes, it could be suggested that a Staff College education served only to reinforce existing ideas based on the experience already

¹¹¹ P. Kennedy, *The Rise and Fall of British Naval Mastery* (London: Penguin Classic Edition, 2001) [1976], p.2.

¹¹² F. H. Sykes, 'Military Aviation,' pp.129 – 130.

possessed by individuals: for Sykes, his participation in the German Army manoeuvres; and for Haig, his experiences in Sudan and during the Second South African war.¹¹³

However, this does not detract from the importance of the Staff College experience, as it helped to shape Sykes's understanding of warfare via the paradigms that were dominant within the British Army. Perhaps more importantly, familiarity with such thinking made Sykes fluent in the language of the British Army. In turn, he was able to frame his subsequent ideas about air power so as to increase the receptiveness of the wider military community to his vision. By utilising approved language and concepts, Sykes was able to communicate explicitly the role of the MW, including its mission and function, as well as its place within the British Army and the wider defence establishment. This echoes Corbett's conclusions that 'words must have the same meaning for all,' demonstrating that the Staff College system was creating a sense of 'uniformity and harmony in the Army.'¹¹⁴

The Staff College Education and the Military Wing

The analysis of Sykes at the Staff College can be used to highlight the Staff College education of other important figures within the MW. David Henderson, as Director General of Military Aeronautics – the professional head of the MW

¹¹³ G. Sheffield, *The Chief*, pp.26 – 28.

¹¹⁴ J. Corbett, *Some Principles of Maritime Strategy*, p.3; P. Gray, *Leadership, Direction and Legitimacy*, p.19; B. Bond, *Staff College*, pp.258 – 259.

– was a Staff College graduate, as was his deputy, Sefton Brancker.¹¹⁵ Robert Brooke-Popham, as a senior squadron commander and the Wing's most important logistician on the outbreak of war, was another graduate, as was Herbert Musgrave, squadron commander and officer in charge of technical experimentation. Other notable MW Staff College graduates included two future Marshals of the Royal Air Force, Geoffrey Salmond and William Sholto Douglas. E. B. Ashmore, who was to rise to command the London Air Defence Area (LADA) during the first Battle of Britain, also passed through the system.¹¹⁶ This seems to support the contention of Robbins that

A relatively small group of pre-war graduates of the Staff Colleges at Camberley and Quetta held most of the key positions in the BEF.¹¹⁷

It was not necessary to be a Staff College graduate in order to come under the influence of the offensive spirit so prevalent in the British Army during this period. This supports Sheffield's contention that pre-existing military experience could also prove to be a formative educational experience for junior officers.¹¹⁸ A figure who came to be synonymous with the RFC's offensive spirit, Hugh Trenchard, was not a Staff College graduate, nor did he have any significant role in shaping MW doctrine during this period. In addition, important squadron commanders, such as C. J. Burke or G. H. Raleigh, both of whom made positive contributions to the evolution of air

¹¹⁵ On Henderson, see J. Pugh, 'David Henderson and the Command of the Royal Flying Corps.'

¹¹⁶ Examples were selected from the *Quarterly Army List*. See War Office, *The Quarterly Army List for the Quarter Ending 31 March 1914* (London: HMSO, Apr 1914).

¹¹⁷ S. Robbins, *British Generalship on the Western Front, 1914 – 1918: Defeat into Victory* (London, Frank Cass, 2005), p.35

¹¹⁸ G. Sheffield, *The Chief*, pp.26 – 28.

power doctrine during this period, were not graduates of the system. However, the effect of the Staff College education was in evidence in a clear and concentrated manner during the formative years of the MW, as the majority of its senior commanders had passed through the system. Such a concentration of graduates gave the MW a remarkably cohesive philosophical outlook, based in no small part on the influence of the Staff College experience.

It is important to consider Bond's contention that there is limited value in considering the influence of the Staff College experience beyond the spring of 1915. As Bond asserts, by this point, the majority of Staff College trained officers had suffered very heavy casualties as the original divisions of the BEF were virtually annihilated.¹¹⁹ Thus, a rapidly expanding British Army contained few, if any, Staff College graduates. Moreover, the Staff College was closed at the outbreak of the war, preventing the addition of new p.s.c. qualified officers to the ranks of the British Army.¹²⁰ In the case of the MW, from 1914 to 1918 the size of the BEF's air arm expanded rapidly. In March 1912, the British Army possessed 21 officers and men capable flying. By March 1913, this number had risen to 134. The Army Estimates of 1914 – 1915 made provision to raise the number of pilots in the MW to 200. In contrast, by 1918, the RFC / RAF had risen to a strength of over 290,000 officers, men, and cadets.¹²¹

¹¹⁹ B. Bond, *Staff College*, p.305.

¹²⁰ B. Bond, *Staff College*, p.303.

¹²¹ War Office, *Cd 6888: Memorandum of the Secretary of State for War relating to the Army Estimates for 1913 – 14* (London: HMSO, 1913), pp.3 – 4; War Office, *Cd 7253: Memorandum of the Secretary of State for War relating to the Army Estimates for 1914 – 15* (London: HMSO, 1914), pp.3 – 4; H. A. Jones, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force (WIA), Appendices* (Oxford: Clarendon Press, 1937), p.160.

Thus, any influence that could be attributed to a Staff College education was diluted by the constant growth of this arm. In addition, the British Army did not produce additional Staff College graduates beyond those who had passed out prior to the outbreak of war. This meant there were few, if any, staff trained officers with which to strengthen the numbers of the MW and its successor organisations. However, whilst the RFC may have expanded rapidly, its core of p.s.c. qualified officers gained in seniority and continued to hold the most important positions within the Corps. Again, to cite the analysis of Robbins, 'Staff College graduates formed the spine of the BEF in the war years.'¹²² This allowed them to assert a positive influence over the evolution of doctrine and the ethos of the organisation. Crucially, this doctrine continued to possess core tenets from the original doctrinal manuals, as shaped and created by Staff College graduates between 1913 and 1914.

Doctrine and Air Power, 1912 – 1914

During 1912 and 1913, enthusiasm for air power continued to grow, particularly as influential figures within the military became interested in aviation. General James Grierson's successful exploitation of his air component during the 1912 manoeuvres, which was a major factor in his besting of General Haig's force, led to his oft quoted remark regarding the 'mastery of the air.'¹²³ Grierson's comment, based on his very limited experience with aircraft, was both dramatic and overstated. Delivered to a packed audience in attendance at the Aeronautical Society's meeting of 27

¹²² S. Robbins, *British Generalship*, p.41.

¹²³ A. Whitmarsh, 'Army Manoeuvres,' pp.335 – 344.

November 1912, it was vital in serving to legitimise the need for aerial fighting.¹²⁴ It also highlighted the pre-war discourse and recommendations of the Technical Sub-Committee.

Sykes, in attendance at the meeting, made use of the occasion to call for the use of armed aircraft to counter the reconnaissance machines of the enemy. The enthusiasm for Sykes's comment was reflected in the *Flight* editorial, which noted that the MW's commanding officer had, 'struck the right nail on the head.'¹²⁵ These sentiments were not new, but, as noted, they were put forward by increasingly senior and influential individuals. By the outbreak of war, Sir John French, the BEF's Commander in Chief (C-in-C), could be counted as a supporter of air power. As chair during Sykes's 1913 Aeronautical Society lecture, he showed enthusiasm and support for the potential of aircraft. The progressive and positive views espoused by French, who then occupied the role of CIGS, effectively the professional head of the British Army, would have done much to further the cause of military aviation.¹²⁶ In spite of gaining such support, Paris highlights the limits of this sponsorship. French was quickly replaced as commander of the BEF, whilst Grierson died during the opening days of the conflict.¹²⁷ Haig's attitude to air power, like so many other aspects of his military service, divides historians. Nonetheless, recent work by Jordan and Sheffield suggests he was

¹²⁴ 'Editorial Comment,' *Flight*, Vol. 6, No.49 (7 Dec 1912): pp.1127 – 1132.

¹²⁵ 'Editorial Comment,' *Flight*, p.1127.

¹²⁶ F. H. Sykes, 'Military Aviation,' pp.138 – 139; J. Pugh, 'David Henderson and the Command of the Royal Flying Corps.'

¹²⁷ F. H. Sykes, 'Military Aviation,' p.130; M. Paris, *Winged Warfare*, pp.210 – 211.

something of a technophile, becoming a powerful supporter of military aviation during the First World War.¹²⁸

The performance of the MW during the Army manoeuvres of 1912 was crucial in highlighting the potential of aircraft. It was also important for the Wing in terms of translating what had been largely intangible support into an increase in resources and a more concrete interest in air power. By 1913, War Office estimates for aviation rose to £501,000. This was a substantial increase upon the total aviation budgets of 1909 – 1910 (£9,000) and 1911 – 1912 (£131,000).¹²⁹ Even such a minor increase was telling, given the wider economic context of the period and the parsimonious attitude of the government toward defence expenditure.¹³⁰ It was also no coincidence that, with the growing awareness of the capabilities of air power, the WO updated *Field Service Regulations (FSR)* during 1912 with a section concerning aerial reconnaissance.¹³¹ This also demonstrated the inherently organic nature of *FSR*, which provided a framework upon which new concepts could be built.

¹²⁸ D. Jordan & G. Sheffield, 'Douglas Haig and Air Power,' in *Air Power Leadership: Theory and Practice*, eds. P. W. Gray & S. Cox (London: HMSO, 2002): pp.264 – 282; G. Sheffield, *The Chief*, pp.151 – 152.

¹²⁹ War Office, *Cd 6064: Memorandum of the Secretary of State for War relating to the Army Estimates for 1912 – 13* (London: HMSO, 1912), p.7; See also War Office, *Cd 6888*, pp.3 – 4; J. Morrow, *The Great War in the Air*, p.22 and p.42.

¹³⁰ M. Paris, *Winged Warfare*, pp.251 – 252.

¹³¹ Imperial War Museum, London (IWM), General Staff, War Office, *Field Service Regulations, Part One: Operations*. Reprinted with amendments, 1912 (London: HMSO, 1912), pp.118 – 123.

The Doctrinal Culture of the British Army

The historiography of pre-1914 British Army doctrine reveals polarised opinions. Whilst noting that the British Army generally rejected the notion of prescriptive, formal doctrine, scholars are divided upon the functions and merits of *FSR*. Holden Reid offers that

... a fundamental and instinctive reality in the British Army ... [was] a widespread reluctance to formulate scientific, doctrinal statements ... [I]t is abundantly clear that throughout the twentieth century, the army lacked a coherent doctrinal philosophy.¹³²

Taking such an argument further, Travers suggests that the inbuilt flexibility and lack of prescription contained within *FSR* meant that the British Army possessed 'no official doctrine,' a position supported by Brown and by Spencer Jones.¹³³ In a critical vein, Bidwell and Graham note that the British Army's

rejection of a totalitarian doctrine was sensible but its worship of pragmatism and its almost complete rejection of theory was not.¹³⁴

In contrast, Luvaas characterises *FSR* as providing the Army with a 'uniform doctrine.'¹³⁵ For Badsey, drills books and manuals such as *FSR* did constitute doctrine, and they came to play an increasingly important role as the British

¹³² B. Holden Reid, 'A Doctrinal Perspective, 1988 – 98,' *Strategic and Combat Studies Institute Occasional Paper No.33* (Camberley: SCSi, May 1998), p.12.

¹³³ T. Travers, *The Killing Ground*, p.54 and pp.66 – 67; I. M. Brown, *British Logistics on the Western Front, 1914 – 1919* (London: Praeger, 1998), pp.31 – 32; S. Jones, 'The Influence of the Boer War,' p.44 and p.46.

¹³⁴ S. Bidwell & D. Graham, *Fire-Power: The British Army Weapons and Theories of War, 1904 – 1945* (Barnsley: Pen & Sword Classic Edition, 2004) [1982], pp.18 – 19.

¹³⁵ J. Luvaas, *The Education of an Army: British Military Thought, 1815 – 1940* (London: Cassell, 1965), p.309.

Army approached the First World War.¹³⁶ In taking such arguments to their logical extreme, Winter, in his much criticised study of Haig, suggests that *FSR* was too prescriptive, possessing 'biblical authority in the Army.'¹³⁷ Palazzo's *Seeking Victory on the Western Front* (2000) utilises the notion of ethos to explain that the British Army was able to achieve success between 1914 and 1918 without possessing formal doctrine.¹³⁸ For Palazzo, the absence of doctrine did not reflect an absence of

[a] unifying philosophy, or, more accurately, an ethos that provided an equivalent structure for the decision making process.¹³⁹

This ethos was 'more dramatic and all encompassing than doctrine' and, based on cultural factors, 'provided the continuity of thought that welded the army into a whole.'¹⁴⁰ For Sheffield,

the BEF did evolve and apply a 'doctrine,' albeit a semi-informal one, based on the pre-war *Field service regulations*.¹⁴¹

Thus, *FSR*, in its evolving editions, provided 'broad principles for action' that reflected contemporary debates regarding the maintenance of flexibility in command.¹⁴² Thus, the British Army's doctrinal culture was well suited, given its capacity for evolution, to provide the foundation for the development of air

¹³⁶ S. Badsey, *Doctrine and Reform in the British Cavalry*, pp.3 – 4.

¹³⁷ D. Winter, *Haig's Command: A Reassessment* (London: Viking, 1991), pp.158 – 162.

¹³⁸ A. Palazzo, *Seeking Victory*, pp.4 – 24.

¹³⁹ A. Palazzo, *Seeking Victory*, pp.8 – 9.

¹⁴⁰ *Ibid.*

¹⁴¹ G. Sheffield, 'Review of *Seeking Victory on the Western Front: The British Army and Chemical Warfare in World War I* by A. Palazzo,' *Journal of the Australian War Memorial*, No.35 (Dec 2001). Accessed, 16 Feb 2011.

<http://www.awm.gov.au/journal/j35/palazzoreview.asp>

¹⁴² G. Sheffield, 'Doctrine and Command in the British Army,' E-9 – E-10; G. Sheffield, *The Chief*, p.60.

power doctrine. Sheffield's conclusions are supported by the judgements of Simpson, who refers to *FSR* as a framework upon which sat

a set of general principles for application by trained and experienced officers.¹⁴³

Bryson contends that *FSR* could be considered coherent doctrine, and he observes that

pre-war doctrine – both informal and formal – played a significant role in informing debate and development.¹⁴⁴

It is the word 'informing' that is significant here, particularly if one accepts a retrospective interpretation of doctrine based upon Corbett.¹⁴⁵ *FSR* may have embraced flexibility and a non-prescriptive approach, to such an extent that it warrants the critical reflections of Jones, yet it was more than merely tactical doctrine.¹⁴⁶ It also provided the Army with a vehicle to articulate its role and function to interested parties. In accepting the perspective that *FSR* represented formal doctrine, it is reasonable to conclude that the Army constituted an organisation that understood the importance of producing material that served one of the important functions of doctrine as defined in the introduction: providing a conceptual framework of understanding that resulted in 'words hav[ing] the same meaning for all.'¹⁴⁷ It is important to insert

¹⁴³ A. Simpson, 'British Corps Command on the Western Front, 1914 – 1918,' in *Command and Control on the Western Front: The British Army's Experience, 1914 – 1918*, eds. G. Sheffield & D. Todman (Staplehurst: Spellmount, 2004), p.99.

¹⁴⁴ R. Bryson, 'The Once and Future Army,' in *Eyes to your Front: Studies in the First World War*, ed. B. Bond. (Staplehurst: Spellmount, 1999), p.51.

¹⁴⁵ J. Corbett, *Some Principles of Maritime Strategy*, p.3; P. Gray, *Leadership, Direction and Legitimacy*, p.19.

¹⁴⁶ S. Jones, 'The Influence of the Boer War,' p.44 and p.46.

¹⁴⁷ J. Corbett, *Some Principles of Maritime Strategy*, p.3.

the caveat that to suggest to contemporary officers that *FSR* represented doctrine would have provoked much condemnation. As Bidwell and Graham observe, the very word 'doctrine' 'carried with it unwelcome foreign philosophical and political baggage.'¹⁴⁸ Such feelings were captured by a young J. F. C. Fuller in an article for *JRUSI* in the latter half of 1914. In his characteristically forthright language, Fuller was to remark that

I have no doctrine to preach, for I believe in none. Every concrete case demands its own particular solution, and for this solution all that we require is skill and knowledge ... If there is a doctrine at all it is common sense, that is, action adapted to circumstances.¹⁴⁹

As established, however, *FSR* served some of the very modern functions of doctrine, and the use of the term is justified.

The *Training Manual*: Conception and Birth

For the fledgling MW, having official British Army doctrine updated to include the role and tasks of their unit was significant. Yet this update also served to push the MW along a particular path. Irrespective of the influence of Sykes with regard to shaping the offensive spirit and outlook of the MW, it would have been difficult, if not impossible, to manoeuvre the route of the MW in any other direction. *FSR* sat proudly atop the Army's doctrinal hierarchy, and subsequent documents would have to adhere to its underlying principles. *FSR*

¹⁴⁸ S. Bidwell & D. Graham, *Fire-Power*, p.15.

¹⁴⁹ J. F. C. Fuller, 'The Tactics of Penetration: A Counterblast to German Numerical Superiority,' *JRUSI*, Vol.59, No.2 (Jul – Nov, 1914), p.389. For Fuller during this period, see B. Bond, *Staff College*, pp.290 – 291.

stated that '**Decisive success in battle can only be gained by a vigorous offensive,**' whilst

above all a firmer determination in all ranks to conquer at any cost, are the chief factors of success [emphasis in original].¹⁵⁰

This was the environment in which the MW was being created, and themes of aggression, moral superiority, and the value of the offensive were dominant. By the arrival of the Army Manoeuvres of 1913, the importance of aerial fighting had been accepted as almost routine. The War Office instructions issued in August 1913 offered that the most effective method of countering an aircraft was 'a superior fleet of aeroplanes to hunt those of the enemy from the air.'¹⁵¹ Whilst the specific date is unclear, the intention of the MW to produce a *Training Manual* is evident from the winter of 1912 / 1913.¹⁵² Appearing in print during 1914, the first part of the *Manual* was to be produced as a joint venture between the Military and Naval Wings, and was to be concerned with the technical aspects of flight, including maintenance of aircraft and engines.¹⁵³ Each Wing would also produce a second part to the *Manual* that would, amongst other tasks, set out the separate functions of the Wings in wartime.¹⁵⁴ Sykes had hoped to have proof copies of the *Training Manual* available for distribution to all of his units in time for the manoeuvres of 1913, noting that,

¹⁵⁰ *FSR* (1912 amendments), p.126.

¹⁵¹ AIR 1/780/204/4/483 – War Office instructions for Army Manoeuvres of 1913, 'Notes on Aerial Reconnaissance and how to avoid observation by hostile Aircraft.

¹⁵² See the correspondence in AIR 1/762/204/4/175 – Corrections, amends to RFC Training Manual, Part I; AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc.

¹⁵³ AIR 1/762/204/4/175. Proofs, Training Manual, Part I. See various letters between Paine and Sykes, January to June 1913; AIR 10/179 – General Staff, AP 143, *Training Manual, Royal Flying Corps, Part I* (Provisional, 1914).

¹⁵⁴ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.34.

When received, the instructions contained in these proofs should be carefully studied by all officers, and will be acted on as far as possible during these manoeuvres.¹⁵⁵

Wrangling over the title of the *Manual* and its content led to a delay in the MW obtaining proofs until September 1913.¹⁵⁶ Sykes was still able to forward a copy to Major-General Monro for use during the exercises of the same month.¹⁵⁷ As Sykes observed, it may have been only an early draft, but

It gives ... an idea of the lines on which the aircraft will be working during the Army Exercise.¹⁵⁸

This achieved the very modern and informative functions of doctrine, as highlighted by Sheffield.¹⁵⁹ In a letter to Sykes, Brancker, the Assistant DGMA, desired that a corrected proof of the *Manual* would be available prior to the training season of the following year (1914), a deadline met by Sykes.¹⁶⁰ Moreover, Brancker wished the proof to be ready for a General Staff conference of January 1914.¹⁶¹ These two requests serve to underline two functions of the *Manual*: first, the rather obvious goal of utilising the material in conjunction with training the officers and men of the MW; and second, to disseminate information about the Wing to the upper echelons of the Army. The latter goal was vital, and the senior command of the MW was aware of the importance of ensuring that those with influence and power within the Army were kept fully informed of the progress, roles, and functions of the

¹⁵⁵ AIR 1/780/204/4/483 – Sykes to RFC squadron commanders. Orders of 8 August 1913.

¹⁵⁶ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.34 – 35.

¹⁵⁷ AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc. Letter, Sykes to GSO, 'White Force,' HQ 2nd London Division, 9 Sep 1913.

¹⁵⁸ Ibid.

¹⁵⁹ G. Sheffield, 'Doctrine and Command in the British Army,' E.3.

¹⁶⁰ AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc. Letter, Brancker to Sykes, 11 Oct 1913.

¹⁶¹ Ibid.

Wing. This position seems to support the contentions of Paris and of Ash, who suggest that the MW undertook a proactive campaign to ensure support from its parent service.¹⁶²

In his response of 18 October 1913, Sykes also noted his desire to have copies of the proof available for the manoeuvres at the end of summer.¹⁶³ Not only would this attain the training and educational functions of doctrine, but, pragmatically, the experience gained could be utilised with regard to amending the *Manual*.¹⁶⁴ For Sykes, the production of the *Training Manual* was more than a mere administrative function for which he was responsible. As Brooke-Popham was to write when disseminating an early proof,

[the *Manual*] represents the expenditure of numberless hours of toil, much sweat & many tears.¹⁶⁵

Sykes, along with his team, understood the importance of producing doctrine that encapsulated the theories and philosophies of military aviation, alongside evolving the material to increase its relevance and worth. That the draft of the *Training Manual* was subjected to a period of scrutiny and testing is telling, and the diligence of Sykes and the MW during this process demonstrates a sophisticated understanding of doctrine. Gray highlights one of the traditional traits of successful strategic leadership as being able to 'provide and

¹⁶² M. Paris, 'The Rise of the Airmen: The Origins of Air Force Elitism, c. 1890 – 1918,' *Journal of Contemporary History*, Vol.28, No.1 (Jan 1993), pp.134 – 135; E. Ash, 'Air Power Leadership: A Study of Sykes and Trenchard,' in *Air Power Leadership: Theory and Practice*, eds. P. W. Gray & S. Cox (London: HMSO, 2002), pp.162 – 163.

¹⁶³ AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc. Letter, Sykes to Brancker, 11 Oct 1913.

¹⁶⁴ Ibid.

¹⁶⁵ AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc. Note, Brooke-Popham to MW HQ, 14 Jul 1913.

communicate the vision and purpose of [the] new organisation.¹⁶⁶ Gray argues that the reality of successful senior leadership is more complex. Specifically, he notes the importance of reacting to situations, particularly at the interfaces that exist between organisations, and at the interfaces within one's own organisation. Such leadership must be tempered by acknowledging the practical restraints of the time and responding appropriately.¹⁶⁷ It could be argued that Sykes's leadership of the MW during this period provides an excellent example that supports Gray's argument. Moreover, Sykes's wider communicative goal for the *Training Manual* supplies further evidence with which to commend Sykes's leadership during this period.

In a letter to the DGMA, Sykes urged the widespread dissemination of the *Manual*, including personal copies for officers and NCOs, whilst central supplies would be held at HQ, squadron, and flying depot level.¹⁶⁸ Plainly, Sykes wanted to ensure that the message and philosophy contained within the pages of the *Manual* reached a wide audience. Without acknowledging as much, Sykes was subscribing to Corbett's belief with regard to the importance of language providing a shared meaning and understanding. In another letter to the DGMA, on the eve of the training season, Sykes urged the release of the approved version of the *Manual* in time for use during the proposed MW camp of June 1914.¹⁶⁹ Sykes noted that, without the *Manual*, the work of the

¹⁶⁶ P. Gray, *Leadership, Direction and Legitimacy*, pp.101 – 102.

¹⁶⁷ *Ibid.*

¹⁶⁸ AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc. Letter, Sykes to DGMA, 29 Apr 1914.

¹⁶⁹ AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc. Letter, Sykes to DGMA, 9 May 1914.

Wing during the camp would be 'very much hampered.'¹⁷⁰ The importance of the *Manual* was captured in Brancker's reply, in which 100 uncorrected proofs were supplied so as not to hinder the training of the Wing.¹⁷¹ Again, the intent of the senior hierarchy of the MW was clear: the message contained within the *Manual* was crucial, and it was vital that MW personnel were familiar with its contents.

During the month-long training camp of June 1914, arranged by Sykes, days were devoted to both flying training and lectures.¹⁷² Never one to miss a public relations opportunity, Sykes choreographed the activities of his Wing to garner maximum publicity in the press.¹⁷³ This highlights Sykes's general use of the press, a factor upon which he reflects in his memoirs.¹⁷⁴ The training undertaken at the camp, albeit in a concentrated manner, captured the varied work that constituted the routine of pre-war squadrons.¹⁷⁵ In the era of the Air Battalion, the business of military aviation was very much focused on exploring the art of flying and learning the limitations and possibilities of aircraft. As Raleigh observes,

the pilots were new to their work, and the triumph was to get into the air at all.¹⁷⁶

¹⁷⁰ Ibid.

¹⁷¹ AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc. Letter, Brancker to Sykes, 18 May 1914.

¹⁷² AIR 1/772/204/4/304 – Concentration Camp, Training Scheme, June 1914; W. Raleigh, *WIA, Vol. I*, p.259.

¹⁷³ P. Joubert de la Ferté, *The Third Service: The Story Behind the Royal Air Force* (London: Thames and Hudson, 1955), p.20.

¹⁷⁴ F. H. Sykes, *From Many Angles*, pp.112 – 113.

¹⁷⁵ AIR 1/772/204/4/304 – Concentration Camp, Training Scheme, June 1914.

¹⁷⁶ W. Raleigh, *WIA, Vol. I*, p.192.

Such activities were limited by the small numbers of aircraft available, and by an understandably cautious attitude, given that aviation was still a relatively new pursuit.¹⁷⁷ The work of MW squadrons varied greatly, with No.3 Squadron, for example, in addition to the normal duties of maintaining the flying skills of its pilots, undertaking experimentation with guns and bombs. For other squadrons, routine cross-country flights, experimentation, and preparation for the summer manoeuvres, were central tasks.¹⁷⁸ As Hearn suggests, individual squadrons displayed initiative in developing practical methods for the utilisation of air power in a military context.¹⁷⁹ Such activity was in addition to running up and testing new aircraft. As daily orders from the period indicate, Squadron commanders had the additional burden, supported by HQ staff, of undertaking the logistical and administrative functions to build the Wing and its squadrons from scratch.¹⁸⁰

It was during the summer training camp of 1914 that the serious likelihood of war with Germany was conveyed to the assembled personnel of the MW.¹⁸¹ Such news did nothing to diminish interest in discussing fighting in the air, and it may well have galvanised attention anew, with such activities now increasingly likely in the near future. In a talk delivered on 15 June 1914, Musgrave was insistent that efforts in developing aerial gunnery were now of 'paramount importance.'¹⁸² In the discussion that followed Musgrave's lecture, an important issue regarding the significance of aerial fighting was raised by

¹⁷⁷ W. Raleigh, *WIA, Vol. I*, p.190.

¹⁷⁸ W. Raleigh, *WIA, Vol. I*, p.214 and p.231.

¹⁷⁹ P. Hearn, *Flying Rebel: The Story of Louis Strange* (London: HMSO, 1994), pp.24 – 26.

¹⁸⁰ AIR 1/772/204/4/306 – Daily Orders, No.4 Squadron, Jun 1914.

¹⁸¹ P. Joubert de la Ferté, *The Third Service*, p.23.

¹⁸² AIR 1/800/204/4/1087 – Major Musgrave, Lecture on Experimental Work, 15 Jun 1914.

Major Raleigh, commander of No.4 Squadron. In debating the merits of seeking or avoiding combat with enemy aircraft, Sykes made a highly succinct point and stressed that, whilst obtaining information was the prime role of the MW, this would be the same for the enemy.¹⁸³ As a result, fighting in the air would form an integral part of hindering and disabling the enemy's means of collecting information. In essence, Sykes was reaffirming the inter-dependency of reconnaissance and aerial fighting, established in the Technical Sub-Committee's report of 1912.¹⁸⁴

This inter-dependency was formalised during this period with the publication of the *Training Manual*, which confirmed the MW's commitment to aerial fighting as the method to establish the control of the air. In line with the administrative measures discussed above, this document was widely available to MW personnel in attendance at the camp.¹⁸⁵ Reconnaissance and aerial fighting would go hand in hand as the BEF sought contact with the enemy (the strategic phase), and as the enemy was brought to battle (the tactical phase). Sykes was not the sole author of the *Training Manual*, and his senior squadron commanders, such as Brooke-Popham, wrote large sections of the text. However, Sykes was responsible for the overall content of the *Manual*, and it reflected the ideas to which he gave primacy. As noted, the command of the MW was remarkably cohesive, and the pre-war writings of Henderson, Burke, Brooke-Popham, and Sykes shared common values, none more so than a commitment to an offensive spirit.

¹⁸³ Ibid.

¹⁸⁴ Ibid.

¹⁸⁵ AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc. Letter, Brancker to Sykes, 18 May 1914.

There was a sense from the *Manual* that the whole manner of hypothesising and codifying ideas concerning aircraft in war was at an early stage. In keeping with the doctrinal style of *FSR*, which rejected prescription, the *Training Manual* served to give a general overview of the capabilities of aircraft, whilst enthusing the MW with the correct spirit in which to carry out its operations.¹⁸⁶ Parton contends that the development of early air power doctrine was problematic, because ideas and doctrine were created without analysed experience as a basis upon which to theorise. Due to this lack of experience, it would have been difficult, if not impossible, to make the *Manual* any more prescriptive.¹⁸⁷

An important feature of the *Manual* was the framing of air power in moral terms, and its pages provided an apt companion to *FSR*'s focus on moral superiority. Fighting against other aircraft would be a moral struggle between the pilots of the opposing forces.¹⁸⁸ Such fighting would also have a moral effect on ground forces, and it was important for friendly troops to see friendly aircraft dominating the skies. In being a fitting addition to *FSR*, the *Training Manual* was authored so as to lead to a receptive response from the hierarchy of the British Army. French and Haig's approval and support of RFC operational and tactical practice during the First World War (such practices based on the doctrine contained within the *Training Manual*) is perhaps the most compelling evidence that, in formulating the doctrine of the MW, Sykes and his colleagues had constructed their ideas expertly and consistently, in a language that would gain widespread approval from the Army.

¹⁸⁶ F. H. Sykes, *Aviation in Peace and War* (London: Edward Arnold & Co., 1922), p.39.

¹⁸⁷ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.4 – 5.

¹⁸⁸ General Staff, AP 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914), p.47.

Aggression was another key theme that was expressed with some clarity: 'Opposing aircraft ... must be relentlessly pursued and destroyed.'¹⁸⁹ The teaching staff at Quetta would have approved of this language and the aggressive intent contained within the *Manual*. The *Training Manual* left no confusion over the goal of aerial fighting and the tactics to be adopted: 'To disable the pilot of the opposing aeroplane will be the first objective.'¹⁹⁰ Above all, this meant killing the enemy pilot, and MW aviators were under no illusions with regard to their duty in the air. The chivalrous nature of early air combat may be an image cultivated in popular histories of the First World War, but it does not sit comfortably with the content of early air power doctrine.¹⁹¹

Another fascinating element of the *Manual* was the language used to discuss fighting in the air. The 'command of the air' was characterised on page 47 as being a struggle between individual and / or pairs of aircraft.¹⁹² Successive victories would lead to moral ascendancy over the enemy's pilots, which would leave friendly reconnaissance machines unopposed. On page 49, use was made of the term 'superiority in the air.'¹⁹³ The intention of using differing terms is unclear, but it hints at the realisation that there may in fact be differing levels of control in the air. Linguistically, 'command of the air' implied an absolute dominance, whilst 'superiority in the air' appeared to be a lesser condition, possibly as an intermediate step before total command was obtained.

¹⁸⁹ General Staff, AP 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914), p.49.

¹⁹⁰ General Staff, AP 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914), p.47.

¹⁹¹ M. Paris, *Winged Warfare*, pp.7 – 8.

¹⁹² General Staff, AP 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914), p.47.

¹⁹³ General Staff, AP 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914), p.49.

It is unclear whether this intermediate condition captured an understanding of the impermanence of air power, with the effects of the control of the air being limited in both time and space. It is more likely that it reflected the Army's focus on the importance of moral factors and the prevalence of the short-war myth. The difference at this stage, however, was largely semantic, and it is clear that, even if Sykes accepted that an intermediate condition of the control of the air was possible, he believed that absolute dominance in the air based upon a relentless, aggressive campaign would be decisively achieved in a short space of time. The decisive character of this struggle would be attained by achieving moral superiority over the enemy.

That only three pages were devoted to 'fighting against other aircraft' was entirely proper, given that there was almost no practical basis upon which to create doctrine or to provide guidance.¹⁹⁴ It would require active operations to gain this knowledge, and the tactics and methods for aerial fighting would have to be codified once this had been obtained. This is a significant detail, and, from its inception, the *Manual* was conceived as a document that, in keeping with the precedent of *FSR*, would provide a framework upon which effective operational methods and tactical solutions could evolve.¹⁹⁵ It is evident that, in contrast to Winter's assertion that pre-war British Army doctrine was prescriptive to the point of dogma, both *FSR* and the *Training Manual* embraced the organic nature of doctrine.¹⁹⁶ A most prudent example is captured in the 1914 amendments to *FSR*, which included a significant increase in the material relating to air power and a clearer focus on, and

¹⁹⁴ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.34 – 37.

¹⁹⁵ G. Sheffield, 'Doctrine and Command in the British Army,' E.12.

¹⁹⁶ D. Winter, *Haig's Command*, pp.158 – 162.

understanding of, contemporary expectations and beliefs concerning the control of the air:

By far the most effective method of dealing with hostile aircraft is to attack them with armed aeroplanes.¹⁹⁷

FSR, along with the *Training Manual*, was designed to evolve, and was not static. Within the *Manual*, the lengthier sections on reconnaissance did reflect the importance of the task, but also that it was more straightforward to extrapolate instructions from existing doctrine. Moreover, in Henderson and Sykes, the MW possessed two recognised experts in the field. A more general criticism of the *Manual* was its total focus on the MW's operations in conjunction with an expeditionary force. As the introduction to this chapter established, such a focus reflected the tactical obsession of military aviators. Whereas the principles espoused in the *Manual* could be applied to almost any military situation, the failure to include material concerning air defence, a task for which the MW possessed at least joint (if not sole) responsibility, is a striking omission. Whilst this is explored more fully in the following chapter, it is important to note that, throughout the proofing process of the *Training Manual*, there was not a single reference made to air defence. When this omission is considered in light of continued War Office attempts to ensure that the military possessed responsibility for the aerial defence of the UK, it is difficult not to be critical of the WO.¹⁹⁸ There was a clear disconnect between

¹⁹⁷ General Staff, War Office, *Field Service Regulations, Part One: Operations*. Reprinted with amendments, 1914 (London: HMSO, 1914), pp.127 – 128.

¹⁹⁸ For example, see AIR 1/654/17/122/493 – War Office and Admiralty Correspondence regarding air defence, Oct 1912 to Feb 1913. See also S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.148 – 155. Minutes, CID Sub-Committee on 'Allocation and Location of Seaplane and Aeroplane Stations,' 25 Jun 1914.

the functions of the MW as foreseen by the War Office, and those articulated in the formal and informal doctrine produced by Sykes and his senior team.

As Ash states,

The size of the manual and the areas covered by it are less important than its influence. It was the air power bible the RFC carried into battle.¹⁹⁹

Gray cautions against overemphasising the influence of doctrinal publications, and, to an extent, Ash may overstate the influence of the *Manual*.²⁰⁰ However, this document reflected the ideals to which Sykes and the command of the MW gave precedence. Importantly, the MW conducted its operations in line with these ideals. The aggressive spirit evident in the opening encounters of the First World War was in keeping with the doctrine contained in the *Manual*. Again, the sophisticated and modern functions served by the *Manual* are further evidence that, in line with Gray's analysis, Sykes was demonstrating the traits of successful strategic leadership.

As noted above, Sykes was a great believer in spreading the gospel of air power. For Ash, Sykes was 'a salesman to the receptive and a gadfly to the sceptical.'²⁰¹ However, advocating doctrinal concepts to the Army was anything but new, and Haig's authorship and promotion of *FSR* provides another example of this process. A crucial element to this strategy was the *Training Manual* and the articulation of the importance of air power via official

¹⁹⁹ E. Ash, *Sir Frederick Sykes and the Air Revolution*, p.40.

²⁰⁰ P. Gray, *Leadership, Direction and Legitimacy*, p.41.

²⁰¹ E. Ash, 'Air Power Leadership,' pp.162 – 163.

channels. Yet, Sykes's efforts on behalf of military aviation extended into the sphere of the demi-official. For example, Sykes and other senior figures within the MW made extensive use of forums such as RUSI and the Aeronautical Society to convey their visions for air power. As Sykes noted in a lecture delivered in February 1913, he felt it important to disseminate information concerning the RFC to the wider public. This would be a vital step in building a 'partnership' between the Corps, its parent bodies (the Army and Navy), and the public.²⁰² Sykes was hopeful that a 'Royal Flying Corps Journal' could be established, in which those interested in service aviation, professional and public alike, could submit articles.²⁰³ For Sykes, generating widespread interest in military aviation was a significant component of his command of the MW.

In his memoirs, John Slessor, a future MRAF, recalled a pre-war visit from Brooke-Popham to the public school at Haileybury, in which the latter, an alumnus of the school, gave out prizes and delivered a brief talk on air power to the assembled boys.²⁰⁴ Via official, demi-official, and unofficial channels, the MW undertook a vigorous campaign to 'sell' air power to 'interested parties.' These included those in the armed forces who would be their 'service users' and patrons; the public, who would ultimately foot both the political and economic bill for military air power; and young schoolboys, who would be the future recruits of the service. Sykes was also to take advantage of royal interest in aviation, and, in May 1913, King George V and Queen Mary visited

²⁰² F. H. Sykes, 'Military Aviation,' p.135.

²⁰³ F. H. Sykes, 'Military Aviation,' p.136.

²⁰⁴ J. C. Slessor, *The Central Blue: Recollections and Reflections* (London: Cassell, 1956), p.2.

the Corps for the second time. Sykes's memoirs, citing an extract from an article in the *Morning Post*, record the positive impression left with 'Their Majesties' as the 'capacity and efficiency of the Royal Flying Corps was seen.'²⁰⁵ The MW was even included as part of the 1914 recruiting film, *The British Army Film*, being referred to as the 'fourth arm of the Army.'²⁰⁶

The MW's active courting of the press, generally in stark contrast to their naval counterparts, was not always successful. C. G. Grey, editor of the *Aeroplane*, was often hypercritical of the efforts of Britain's military aviators. Such criticism prompted Henderson to write to Grey, informing the latter that

I think the *Aeroplane* is useful and your criticisms are of much value ... But with regard to your correspondents ... [I am] rather tired of being spoon fed with advice which is so obviously based on ignorance and lack of advisory care in reading official publications.²⁰⁷

It is interesting to note that this exchange did not sour the attitude of all RFC officers, and Trenchard and Grey had a seemingly cordial relationship.²⁰⁸ Moreover, Grey's negative feelings toward military aviation during this period did not find their way into Raleigh's volume of official history, in spite of Grey's role in providing notes and reading parts of the study.²⁰⁹

²⁰⁵ F. H. Sykes, *From Many Angles*, p.109.

²⁰⁶ N. P. Hiley, "'The British Army Film,'" "You!" and "For the Empire:" Reconstructed Propaganda Films, 1914 – 1916,' *Historical Journal of Film, Television, and Radio*, Vol.5, No.2 (Summer 1985), pp.166 – 167 and p.169.

²⁰⁷ National Aerospace Library (NAL), Farnborough, Papers of C. G. Grey (CGG), File 1. Letter, Henderson to Grey, 9 May 1912.

²⁰⁸ For example, see NAL, CGG, File 5. Letter, Trenchard to Grey, 16 Jul 1920; NAL, CGG, File 2. Letter, Trenchard to Grey, 15 Jun 1921.

²⁰⁹ NAL, CGG, File 3. Letter, Raleigh to Grey, 31 Oct 1919. See also NAL, CGG, File 7. Letter Raleigh to Grey, 19 Aug 1919.

Military Wing Weapons Testing

As *BR 1806, Third Edition* (2004) suggests, doctrine has a role to play with regard to the articulation of material requirements and the subsequent development and utilisation of technology.²¹⁰ If the pre-1914 conception of the control of the air was based upon the use of armed aircraft to dominate the skies, then, in keeping with the doctrine articulated in the *Training Manual*, the MW needed to undertake a programme of experimentation with regard to the development of armament suitable for use in aircraft. Neville Jones, the most vehement critic of the MW, asserts that

There were, it is true, vague ideas that aircraft might have to fight in the air ... [b]ut in August 1914 not even the first steps had been taken to make possible such offensive action.²¹¹

As the following section demonstrates, such conclusions require revision. The arguments of Goulter and Paris, who criticise the MW for their approach to experimentation, not only for a lack of enthusiasm, but also for the rudimentary nature of the testing and development that was undertaken, need contextualising.²¹² Unlike their naval colleagues, the Army did not possess a culture that embraced material innovation and the professional approach required to develop increasingly complex technological weapons and systems.²¹³ In addition, there were pragmatic reasons for the manner in which experimentation was undertaken by the MW.

²¹⁰ MoD, *British Maritime Doctrine, BR 1806, Third Edition* (London: MoD, 2004), p. 5.

²¹¹ N. Jones, *The Origins of Strategic Bombing*, p.48.

²¹² C. Goulter, *A Forgotten Offensive*, pp.8 – 9; M. Paris, *Winged Warfare*, p.225.

²¹³ B. Holden Reid, 'A Doctrinal Perspective, 1988 – 98,' p.12.

Serious experimentation with heavy machine guns began during 1913. Far from appearing unenthusiastic, Sykes and the MW were frustrated by the lack of aircraft and weapons with which to conduct their tests.²¹⁴ There were delays due to concerns regarding the practicalities of mounting a gun in an aircraft, which required the greatest care and attention.²¹⁵ Such delays must also be placed within the wider context of the development of the MW. In September 1912, Sykes had addressed the officers and men of the MW, and noted that

The opening months of our career as a unit have been difficult ones. They were bound to be so. There were no cut and dried lines or precedents upon which to work ... We are forming a corps with great speed, – I suppose unprecedented speed, in peace time.²¹⁶

Every matter was a matter of concern for Sykes and the MW, and preparing to capitalise on the success of the 1912 manoeuvres was a high priority. The relatively slow progress made with regard to aerial firing reflected the multitude of tasks that required attention, and the pace at which change was being driven.²¹⁷ Establishing a logistical and support infrastructure was a high priority, but involved seemingly tedious staff work with regard to the development of a logistical infrastructure. Between March and October 1913, Sykes also organised the MW's contribution to the Army's summer manoeuvres, as well as sitting on various interdepartmental committees.²¹⁸

²¹⁴ AIR 1/784/204/4/544 – Sykes to G. W. Dawes (MW), 6 Mar 1913.

²¹⁵ AIR 1/758/204/4/122 – Correspondence between Sykes and Director of Artillery, Jan – Apr 1913.

²¹⁶ Sykes Papers, RAFM, MFC 77/13/12 – Speech to men and officers of MW, 23 Sep 1912.

²¹⁷ AIR 1/118/15/40/52 – This file provides an illustrative sample of the range of issues to which Sykes devoted his time. Examples provided are from Mar to Oct 1913.

²¹⁸ Ibid.

These tasks were in addition to his work on aerial gunnery. It would perhaps be fitting to characterise this, following Ash, as building without any bricks.²¹⁹

Experiments were undertaken during June and July 1913, but were concluded in time for No.3 Squadron to devote its attention to the Army Manoeuvres. Woodman is too critical of these efforts, removing them from the wider context of the period.²²⁰ Progress was necessarily steady, given the unprecedented nature of the work and the lack of a data set upon which to build. The reliability of the weapons had to be established on the ground before aerial testing could take place. Basic questions regarding the stability of the aeroplane whilst firing in the air had to be answered, as did the weight carrying capability of the aircraft.²²¹ Moreover, before serious testing could begin, No.3 Squadron required technical instruction in the use of the weapons.²²² As a result of testing, important groundwork was laid, and Sykes was keen to resume experiments as soon as the pressure of the manoeuvres had passed, seeking to relocate future testing to the Musketry School at Hythe.²²³ Demonstrating the bureaucratic fog which can affect the most determined efforts, the administrative steps to begin experiments at Hythe were somewhat involved, and it took a long exchange of letters between Sykes and the School to finalise arrangements.²²⁴ The length of time also

²¹⁹ E. Ash, *Sir Frederick Sykes and the Air Revolution*, p.26.

²²⁰ H. Woodman, *Early Aircraft Armament*, pp.13 – 17; M. Paris, *Winged Warfare*, pp.177 – 180 and pp.225 – 227.

²²¹ AIR 1/784/204/4/544 – Brooke-Popham to OC, MW Flying Depot, May 1912. No.3 Squadron to OC, MW Flying Depot, 20 May 1912; AIR 1/761/204/4/148 – various reports from No.3 Squadron to OC, MW Flying Depot, Jun – Jul 1913.

²²² AIR 1/784/204/4/544 – Sykes to Chief Inspector of Small Arms Enfield, 2 May 1913. Sykes to Brooke-Popham, 16 May 1912.

²²³ AIR 1/761/204/4/148 – Musgrave (OC Experiments) to Brooke-Popham, 23 Oct 1913; AIR 1/784/204/4/540 – Lewis Gun Experiment, 27 Nov 1913.

²²⁴ AIR 1/763/204/4/191 – Correspondence between Sykes and School, Oct and Nov 1913.

reflected the important staff preparations needed to ensure the success of these experiments, and provisions were made for aircraft sheds and accommodation, whilst the ground and ranges at Hythe had to be inspected by MW personnel in order to ensure their suitability.²²⁵

A more complete schedule of testing was drawn up, and it is clear that more comprehensive results were expected than those obtained during the preliminary trials.²²⁶ Whilst Sykes was to thank the School for the help the MW received, the evidence suggests that full and timely co-operation was not forthcoming. The Commandant reminded Sykes that his prime responsibility was the running of the School, and it was noted in the final report that testing could only take place on days when the ranges were not in use.²²⁷ It is clear that, in conducting these tests, procedural issues, as well as matters of health and safety, were factors that did not help facilitate expeditious experimentation. These were matters out of the hands of Sykes, and timely intervention on his behalf was not forthcoming.

The experiments, taking place between December 1913 and February 1914, were hampered by bad weather, whilst basic measures had to be taken to provide flyers and gunners with maximum assistance. These were necessary because, as the report on such experiments concedes, the science of aerial gunnery was in its infancy and had no foundation of pre-existing knowledge upon which to build; every experiment was literally exploring uncharted

²²⁵ For example, see AIR 1/763/204/4/191 – Musgrave to Brooke-Popham, 7 Nov 1913.

²²⁶ See AIR 1/761/204/4/157 for details of the programme for Experiments, 8 Dec 1913.

²²⁷ AIR 1/763/204/4/191 – Commandant of Musketry School to Sykes, 4 Nov 1913. Sykes to Commandant of Musketry School, 26 Feb 1914. AIR 1/763/204/4/191 – Report on Experiments in conjunction with R.F.C., 17 Feb 1914.

territory.²²⁸ For example, experimentation with the Lewis Gun, a weapon that showed much promise, needed to be carried out in a thorough fashion. This included endurance work to ensure its long-term viability under the strains of heavy usage; a point not acknowledged by Paris.²²⁹ Testing could not be rushed or hurried, as a thorough approach was required in order to ensure the development and subsequent deployment of effective weapons.²³⁰ That the experiments during the summer of 1913 and the winter of 1913 – 1914 were disappointing does not make them failures, nor was the lack of success based upon a deficiency of enthusiasm. The nature of progress reflected the trial and error process that the MW was forced to undergo in order to establish the rudimentary knowledge necessary for the successful development of efficient aerial weapons. Sykes left the decision regarding the ordering and development of future weapons in the hands of the War Office and Directorate of Military Aeronautics. The last recorded correspondence in this series is dated at the beginning of March 1914. This is the most patent example of a lack of urgency, but it must be remembered that Sykes was also involved in developing plans for the future mobilisation of the MW, as well as organising the summer training camp. Moreover, he did not possess the necessary authority to make final decisions regarding the procurement of armament.

In reviewing the progress made with regard to the testing of guns in the air, Musgrave produced a paper in April 1914.²³¹ His summary was succinct, and within the report was a body of information upon which the MW could take its

²²⁸ AIR 1/763/204/4/191 – Report on Experiments in conjunction with R.F.C., 17 Feb 1914. pp.2 – 5; M. Paris, *Winged Warfare*, pp.177 – 178.

²²⁹ Ibid.

²³⁰ AIR 1/763/204/4/191 – Report on Experiments in conjunction with R.F.C., 17 Feb 1914.

²³¹ AIR 1/758/204/4/122 – H. Musgrave, Report on RFC, MW Experiments, 30 Apr 1914.

developmental efforts to the stage of final experimentation and procurement. It was conceded, however, that further developmental efforts might have to wait until after the training season. This was sensible, given that the steps involved in planning and organising the Hythe experiments had been complex and lengthy.²³² As noted, the summer season of training was overtaken by the pace of events, and the MW concluded its concentration camp with deployment for war, rather than a further round of experimentation. Even with the limited progress made, these experiments constituted an important 'first step' in developing the technologies necessary to seize control of the air.

The Air Committee

Another potentially significant development of the recommendations of the Technical Sub-Committee was the creation of the Air Committee (AC). This body, established in July 1912, and formed of members of the newly created RFC and representatives from the Royal Aircraft Factory, as well as senior figures in the Admiralty and War Office, was tasked with offering advice to the Cabinet on air matters. In addressing the opening meeting, J. E. B. Seely, Secretary of State for War and chairman of the AC, commented that he envisaged the Committee as an intermediate step prior to the establishment of an 'Air Office ... having the same status as the War Office and Admiralty.'²³³ Being advisory in nature, the Committee lacked any executive powers and was unable to resolve forcibly any disagreements or matters of contention. Cooper, in highlighting the increasingly difficult relationship between the air

²³² Ibid.

²³³ CAB 14/1 – Minutes of the first meeting of the Air Committee, 31 Jul 1912.

arms of the War Office and Admiralty, is perceptive in noting the detrimental effect that this relationship had on the conduct of the air war between 1914 and 1917, it being a major factor in the creation of the Royal Air Force.²³⁴

The origins of these disagreements are found with the AC's lack of executive power, which provided the Army and Navy with the opportunity to develop a different approach to air power. This in itself was not troubling, as land and sea forces saw differing needs for aircraft. However, a lack of centralised authority provided the scope for the collapse of the joint military-naval RFC. This was due primarily to a duplication of effort and competition for resources and responsibilities.²³⁵ The AC's lack of decision-making ability also set a precedent for the largely ineffective Joint War Air Committee (JWAC) and Air Board of the First World War. The AC failed to give adequate support and direction to the MW, which was effectively left to its own impromptu development. Seely resigned in response to the Curragh incident, and it would be interesting to speculate upon the future development of the RFC had he continued as Secretary of State for War beyond March 1914.²³⁶

A lack of executive authority also saw an intransigent attitude creep into the proceedings of the AC. The result was the prioritisation of some relatively unimportant issues, which further served to undermine its potentially influential role. A debate regarding the nomenclature of aircraft preceded that of aircraft armament, and it took over eighteen months from the formation of the AC for a serious discussion to take place concerning aircraft armament. It

²³⁴ M. Cooper, *The Birth of Independent Air Power*, pp.5 – 6.

²³⁵ Ibid.

²³⁶ P. Mead, *The Eye in the Air*, p.46.

is true that a preliminary discussion had taken place as early as the fourth meeting (3 December 1912), but little further direction was offered until October 1913.²³⁷ As a consequence, the MW was forced into a series of ad-hoc testing that, whilst forming useful groundwork, failed to deliver results to match the theoretical and doctrinal enthusiasm for aerial fighting. Much of this work was duplicated by independent tests conducted by the Naval Wing (NW). By forcing both the Army and Navy into improvised development and evolution, the AC effectively sealed its own downfall as both the Military and Naval Wings became accustomed to making their own decisions and deciding upon their own direction. This emphasised the superfluous nature of the AC as a forum.²³⁸

A more generous interpretation of the AC would argue that spending time discussing the production and development of aircraft engines was vital, given the large gap between the capabilities of Britain's military aviators and their European rivals. That the MW had no infrastructure upon which to build was another pressure that increased the amount of basic and, at times, seemingly trivial work with which the MW and AC had to engage. What is more, naval and military aviation had been moving in diverging directions prior to the creation of the AC, and it was simply beyond expectations for any committee or body to reunite these factions, short of the creation of a centralised headquarters for both the MW and NW.²³⁹ Nonetheless, the AC did not help to

²³⁷ See CAB 14/1 – Minutes of the 13th Meeting of the Air Committee, 7 Aug 1913. Minutes of the 14th Meeting of the Air Committee, 14 Oct 1913.

²³⁸ W. Raleigh, *WIA*, Vol. I, p.212.

²³⁹ C. Goulter, *A Forgotten Offensive*, pp.1 – 3 and p.7.

translate the very real enthusiasm for aerial fighting, reflected in ideas, policy, and doctrine, into practical, preparatory measures.

Conclusion

As the discussion of pre-war ideas demonstrated, the importance of aerial fighting was noted, and its close links to reconnaissance – as a facilitator and disabler – were integral to this discourse. The consensus reached during these theoretical discussions was codified into tentative policy, which gave primacy to the notion of the control of the air and formalised the interdependency of reconnaissance and fighting in the air. The importance of these ideas was only heightened by the interest of influential military figures in the development of aviation. These ideas were shaped by dominant military and strategic trends, which were typified by the Staff College education of Sykes and other graduates within the MW. This education stressed moral superiority, aggression, decisiveness, and offensive spirit, and these ideals were internalised by Sykes and many of his contemporaries.

Such thinking was internalised and subsequently applied with a consistent logic during the formative years of the MW. The result was the influence of such ideas over the important *Training Manual* of June 1914. The writing and dissemination of the *Manual* encapsulated the sophisticated understanding of doctrine possessed by the Army. Importantly, it was an aggressive intent that remained the most obvious constant to RFC policy, doctrine, and practice during the First World War. Significantly, the early experiences of the air war

confirmed the appropriateness of the MW's pre-war decision to link reconnaissance and aerial fighting.

CHAPTER THREE

THE NAVAL WING OF THE ROYAL FLYING CORPS, AND THE CONTROL OF THE AIR: THEORY, DOCTRINE, AND POLICY, 1911 – 1914

Introduction

As noted in the first chapter, the Naval Wing of the RFC, later to become the RNAS, is characterised by Goulter as a 'very modern force.'¹ Her conclusions are supported by Parton, Paris, Neville Jones, and Grove.² To misquote Orwell, the historiographical trend of pre-war aviation in Britain could be described as 'Naval Wing good, Military Wing bad.' Again, as noted previously, the dominance of such an interpretation is a response to the work of Raleigh and H. A. Jones. In particular, historians are troubled by Raleigh's contention that, at the outbreak of war, the NW was still an experimentally driven organisation that lacked the focus and definitive purpose of the MW.³

This chapter explores the naval interpretation of the concept of the control of the air. Unlike most historical analyses of the Naval Wing, this chapter seeks to place naval air power within the wider strategic and philosophical context of its parent body, the Royal Navy. This is achieved by examining early naval air power hypothesising and the codification of these ideas into policy. The chapter concludes with an analysis of the wider philosophical and cultural

¹ C. Goulter, 'The Royal Naval Air Service,' pp.51 – 65.

² N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.52 – 53; M. Paris, *Winged Warfare*, p.195; N. Jones, *The Origins of Strategic Bombing*, particularly chapter one; E. Grove, 'Seamen or Airmen?' p.7.

³ W. Raleigh, *WIA, Vol. I*, pp.212 – 213.

trends that affected naval attitudes towards doctrine. This serves to highlight the dominant 'material ethic' prevalent in the Navy during the decades leading to the First World War. This was also reflected in the educational experiences of senior members of the Naval Wing, which had a direct impact on the production of doctrine and the subsequent creation and maintenance of legitimate roles for air power within a naval context.

Naval interest in aviation was varied, complex, and closely wedded to wider strategic interests. Naval aviation policy and practice prior to 1914 could be characterised as a response to a growing sense of strategic vulnerability, reflected in Admiralty papers of the period.⁴ Historically, the RN had assumed significant responsibilities for the strategic defence of Britain's Imperial and domestic interests.⁵ The RN developed aviation policy and practice that attempted to acquire a fleet of aerial craft to counter the air operations of the enemy. In terms of the control of the air, this led to the adoption of a counter offensive strategy in keeping with the aggressive and offensive philosophy of the RN. As Paris notes, the sense of a growing threat of German air power, based upon a sensationalised perception of the threat of rigid airships, came to influence naval aviation policy.⁶ The role occupied by airships within wider German naval strategy is instructive, and Germany's failure to keep pace with Britain in the naval arms race of the decade prior to the First World War made

⁴ For example, see J. Hattendorf et al., eds., *British Naval Documents, 1204 – 1960* (London: Navy Records Society, Vol.131, 1993), pp.563 – 566, pp.595 – 598, pp.601 – 604, pp.607 – 609, pp.620 – 621, and pp.741 – 743.

⁵ On British naval policy and the RN prior to 1914, see A. Mahan, *The Influence of Sea Power upon History, 1660 – 1783* (London: Sampson Low, 1890); J. Corbett, *Some Principles of Maritime Strategy*; N. A. Lambert, *Sir John Fisher's Naval Revolution* (Columbia, South Carolina: University of South Carolina Press, 1999); P. Kennedy, *The Rise and Fall of British Naval Mastery*; A. Gordon, *Rules of the Game*.

⁶ M. Paris, *Winged Warfare*, pp.125 – 127.

the proliferation of airships an important strategic priority for Germany.⁷ As Powers suggests, airships were viewed as a force multiplier for the German Navy.⁸ German airships could undertake strategic reconnaissance on behalf of the German fleet, whilst there were also suggestions that they could be used for direct attack against British capital ships and the Royal Navy's support infrastructure in the UK. These possibilities, which were recognised as threatening Britain's naval dominance, and thus Britain's overall security, were a significant influence on naval aviation policy prior to the First World War.⁹ Thus, as with the military, at the core of naval aviation doctrine was the notion of the control of the air. In the naval instance, pre-war air policy emphasised the protection of Britain's strategic interests by countering the air operations of a hostile state. The contrast between the tactical emphasis of the Military and the strategic focus of the Naval Wing in relation to the control of the air is palpable.

Early Hypothesising

As it had for the Army, RUSI and its accompanying journal (*JRUSI*) provided the Navy with a demi-official forum for the discussion of issues relating to air power. In the naval instance, there was not the same level of causal connection between the establishment of the RFC and pre-1911/12 hypothesising. By highlighting several prominent naval themed lectures, it is

⁷ J. S. Corum, *The Luftwaffe: Creating the Operational Air War, 1918 – 1940* (Kansas: University Press of Kansas, 1997), pp.16 – 20.

⁸ B. D. Powers, *Strategy Without Slide-Rule: British Air Strategy, 1914 – 1939* (London: Croom Helm, 1976), p.12.

⁹ J. J. Tritten, 'Introduction of Aircraft Carriers into the Royal Navy: Lessons for the Development of Naval Doctrine,' *The Naval Review*, Vol.83, No.3 (Jul 1994), p.261.

possible to demonstrate this disconnect. It was no coincidence that 1906 proved to be the year in which a senior naval figure delivered an address that, however briefly, touched upon the potential impact of aviation in a naval sense. Sir Charles Campbell, delivering his lecture some four months after J. E. Capper's offering, concluded that developments in aviation required that the Navy give the subject 'serious consideration.'¹⁰ Campbell continued by suggesting that, once perfected, 'free airships' – i.e. powered and navigable balloons – could be utilised in a tactical role to monitor the activities of enemy ships or, in a more distant role, the activities within enemy harbours.¹¹ The need to gather information relating to enemy intentions and movements was a logical role foreseen by most individuals who took an early interest in aviation (irrespective of their professional allegiance).¹²

Toward the end of his lecture, Campbell delivered a seemingly nonchalant comment, which argued that improvements in the technical proficiency of flying machines could lead to the capital ship becoming the 'sparrow,' and the airship, the 'hawk.'¹³ As with J. E. Capper's 1906 comments, Campbell's contention was overstated and underdeveloped, evidenced by the crude illustration featured in his article.¹⁴ Yet, his suggestion served to highlight the potential of aerial navigation and the threat that it posed to Britain's historic and vital naval supremacy. In addition, if an airship (or aircraft) had the potential to carry and drop explosive ordnance, then the possibilities against

¹⁰ C. Campbell, 'The Organisation of a Modern Fleet for War; Conduct in Action etc. etc,' *JRUSI*, Vol. 50, No.2 (Jul / Dec 1906), pp.1448 – 1450.

¹¹ C. Campbell, 'Organisation of a Modern Fleet,' p.1446.

¹² N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.26.

¹³ C. Campbell, 'Organisation of a Modern Fleet,' p.1450.

¹⁴ C. Campbell, 'Organisation of a Modern Fleet,' pp.1449 – 1450. Campbell referred to an 'Aërial [sic] microbe' that could drop a 'dynamite shell.'

which such a weapon could be utilised were not limited to seaborne targets.¹⁵

Without suggesting an antidote to the threat of air power, Campbell observed that it might not be too long before discussions took place regarding 'the tactics of an aerial battle.'¹⁶

Campbell hinted that a contest for the control of the air could be a feature of a future conflict, following the likely pattern of a fleet action in the skies. More generally, Campbell's lecture touched upon feelings of vulnerability that were to affect naval aviation policy prior to the First World War. It is also interesting to note that not one of the naval officers in attendance at the meeting felt compelled to offer any comment on the threat constituted by air power in relation to Britain's naval position. In fact, there appeared to be a general lack of interest displayed toward any of Campbell's comments. Only two naval officers offered any feedback, and the transcript of the post-lecture discussion feels somewhat subdued. This was an unusual occurrence for RUSI lectures, which often concluded with a vigorous and, at times, fiery debate.¹⁷ As a final point, developed further below, it is prudent to comment upon the technical composition of Campbell's address. This reflected the organisational focus of the RN, which attached high priority to technical innovation and proficiency.

It would not take long, some two years after Campbell's lecture, for the attention of the RN to return to the threat of air power. In a translation from the German, *JRUSI* printed an article written by Captain Neumann, an instructor

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ C. Campbell, 'Organisation of a Modern Fleet,' pp.1474 – 1476.

in the German Airship Battalion.¹⁸ It is of no small significance that the article was translated and forwarded to *JRUSI* by the RN's Director of Naval Intelligence (DNI), and Andrew Lambert praises the role of the Naval Intelligence Department (NID) in helping shape defence debates at RUSI.¹⁹ In developing upon the speculative conclusions of Campbell, and with the benefit of a wealth of practical experience, Neumann concluded that the prime use of free or motor air-ships was for tactical scouting in conjunction with the fleet.²⁰ Of course, he was careful to qualify all his statements, noting that aerial navigation was still in an early stage of development.²¹ However, it was with a series of increasingly alarming conclusions that Neumann's article attracted the attention of the DNI. First, Neumann noted the relative invulnerability of airships from ground fire; second, the ability of the airship to carry explosive ordnance; and, most worryingly, that such ordnance could be directed against ships (including blockading vessels), land based naval establishments, docks, and coastal forts. Such attacks would have a profound moral effect upon the side being subjected to such bombardment.²² Moreover, these operations could quite easily be conducted during the hours of darkness.²³ The seriousness of these statements was further heightened by

¹⁸ Captain Neumann, 'The Possibility of Making Use of Balloons and Motor Air-ships in the Navy,' *JRUSI*, Vol. 52, No.2 (Jul / Dec 1908): pp.1502 – 1517 and pp.1653 – 1675.

¹⁹ A. Lambert, 'The Development of Education in the Royal Navy,' pp.48 – 49. On the origins of the NID and the DNI, see J. Hattendorf et al., eds., *British Naval Documents, 1204 – 1960*, pp.610 – 612. Minutes by members of Admiralty on proposals for a new department for intelligence and mobilization 6 Oct 1886. See pp. 612 – 614 for Instructions for the Director of Naval Intelligence, January 1887.

²⁰ Captain Neumann, 'Balloons and Motor Air-ships in the Navy,' pp.1502 – 1503 and p.1666.

²¹ Captain Neumann, 'Balloons and Motor Air-ships in the Navy,' p1501.

²² Captain Neumann, 'Balloons and Motor Air-ships in the Navy,' pp.1514 – 1515 and p.1670.

²³ Captain Neumann, 'Balloons and Motor Air-ships in the Navy,' p.1515 and p.1669.

Neumann's observation of the lack of progress made with regard to aerial navigation and airship development in England [sic].²⁴

Possibly reflecting the influence of Neumann's articles, the threat of German air power was considered by the Admiralty in December 1908 (constituting an aerial attack on the fleet as a preliminary to a German invasion), but was not thought feasible.²⁵ The threat of invasion, considered unrealistic by the Navy throughout this period, was a recurring theme in high-level political and strategic discussions.²⁶ These debates achieved little, except to highlight feelings of vulnerability that were only aggravated by the German proliferation of air power.²⁷ However unlikely, the Admiralty was sufficiently alarmed to monitor the situation, and it is very probable that these fears were conveyed to Lord Esher's Sub-Committee on Aerial Navigation.²⁸ Esher's Sub-Committee, which reported in January 1909, concurred with the conclusions of both Neumann and Campbell, emphasising the use of airships for scouting work with the fleet and stressing their potential with regard to offensive, bomb-dropping operations.²⁹ Neville Jones noted that the conclusions of the Committee were remarkable

²⁴ Captain Neumann, 'Balloons and Motor Air-ships in the Navy,' p.1675.

²⁵ A. J. Marder, *From the Dreadnought to Scapa Flow: The Royal Navy in the Fisher Era, 1904 – 1919. Vol.I: The Road to War, 1904 – 1914* (Oxford: Oxford University Press, 1961), p.181

²⁶ See the relevant letters in M. Brett, ed., *Journals and Letters of Reginald Viscount Esher, Vol. II, 1903 – 1910* (London: Nicholson & Watson, 1934) and Viscount Esher, ed., *Journals and Letters of Reginald Viscount Esher, Vol. III, 1910 – 1915* (London: Nicholson & Watson, 1938). For example, see letter from Esher to George V, 29 May 1908, *Vol.II*, pp.316 – 317.

²⁷ S. W. Roskill, *The Strategy of Sea Power: Its Development & Application* (London: Collins, 1962), p.104.

²⁸ CAB 16/17 – Report of the Aerial Navigation Sub-Committee of the CID, 28 Jan 1909; S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.8 – 13.

²⁹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.5 – 7. Terms of Reference of the CID Sub-Committee on 'Aerial Navigation,' 23 Oct 1908.

for the formation of a body of opinion which recognized the growing offensive power of the air machine and the extreme vulnerability of Britain to air attack.³⁰

Whilst noting Britain's vulnerability, the Committee chose to act cautiously and to recommend funds to procure experimental craft for the Navy. This was an important decision, as naval aviation strategy, policy, and doctrine could not be created without some practical understanding of the nature and capabilities of aerial craft. There is obvious similarity here with regard to RN policy in relation to the submarine.³¹ However, it was at the demi-official forum of RUSI that further hypothesising took place regarding the control of the air.

F. G. Stone, an artilleryman with an interest in aviation, delivered a paper in the aftermath of the Esher report that sought to explore the 'Defence of Harbours against Naval Airships.'³² Citing the work of Neumann, Stone's March 1909 lecture reflected the now established consensus that naval air power, specifically airships, would be utilised to scout for the fleet and to drop explosive ordnance on warships and other vital targets. It was, of course, the latter contention that continued to galvanise attention.³³ In being the first to offer serious consideration to the methods for countering airship attack, Stone highlighted the difficulties of utilising high angled guns for defence, particularly against targets moving through the air.³⁴ J. E. Capper, in the discussion that followed the address, delivered what was effectively a mini-lecture on

³⁰ N. Jones, *The Origins of Strategic Bombing*, pp.27 – 30.

³¹ N. A. Lambert, *Sir John Fisher's Naval Revolution*, pp.38 – 72; M. F. Sueter, *Airmen or Noahs: Fair Play for our Airmen, The Great 'Neon' Myth Exposed* (London: Pitman & Sons, 1928), p.111 – 112.

³² F. G. Stone, 'Defence of Harbours against Naval Airships,' *JRUSI*, Vol. 53, No.1 (Jan / Jun 1909): pp.559 – 577.

³³ F. G. Stone, 'Defence of Harbours,' pp.559 – 562.

³⁴ F. G. Stone, 'Defence of Harbours,' pp.563 – 565.

countering the operations of enemy airships.³⁵ Whilst acknowledging the importance of ground-based defences, Capper, with rhetoric distinctly Mahanian in tone, noted that

you must have an airship fleet in being which can put the enemy's airship fleet out of action before it reaches your vital area. It is the history of war all through: you must go for the enemy's army; you must go for the enemy's navy; you must go for the enemy's air fleet. Do not let his air fleet come to you ... we [must ensure we] can get to them in their own country and attack them.³⁶

Capper believed that, to counter the air offensive of the enemy, one must launch one's own air offensive. These conclusions support Paris's contention that a counter offensive air policy was being advocated some time before Churchill's speech to the House of Commons in March 1914, in which he set out details of British air defence policy.³⁷ Capper's likening of this aerial conflict to something akin to a decisive fleet action in the skies was another logical conclusion, and was echoed in Campbell's brief offering during the post-lecture discussion.³⁸

As with Campbell's 1906 offering, Stone's lecture, which focused upon a naval topic, provoked no response from any other naval officer. Whilst it is not clear whether any other naval officers were present during Stone's lecture, this omission places air power in its correct position within the wider priorities of

³⁵ F. G. Stone, 'Defence of Harbours,' pp.566 – 569.

³⁶ F. G. Stone, 'Defence of Harbours,' p.568.

³⁷ W. S. Churchill, Speech to House of Commons, 17 Mar 1914. *Hansard Parliamentary Debates*, 5th Series, Vol. LIX, Feb – Mar 1914, Cols.1911 – 1914; M. Paris, *Winged Warfare*, p.138.

³⁸ F. G. Stone, 'Defence of Harbours,' p.573.

the RN.³⁹ As Brooks's study indicates, on the eve of the First World War, the Navy had much greater priorities than air power, including the crucial issue of providing the RN's most prized assets – heavy capital ships – with an advanced and capable fire control system.⁴⁰ What is more, between 1911 and 1913, only three specific articles and lectures addressed naval aviation directly, and one of these was printed in an unofficial journal, *The Naval Review*, which, as explored below, had earned itself a dubious reputation.⁴¹

The threat of foreign air power continued to vex the Admiralty, and was the subject of a meeting at the Naval Intelligence Department (NID) in January 1910.⁴² The perceived vulnerability of cordite factories, particularly to German air power, was the focus of the discussion, and, whilst emphasising the practical difficulties of aerial bomb dropping, the NID felt the issue was serious enough to recommend postponing the construction of new naval magazines.⁴³ From a practical standpoint, the report recommended a two-pronged approach to defence against such attacks, with the provision of both mobile and fixed protection. Fixed defences would take the form of high angled guns positioned close to important and vulnerable targets, alongside mobile defences consisting of aeroplanes, airships, and mobile guns.⁴⁴ NID supported the now established consensus that the most effective counter against airships was the airship, although the defensive qualities of the

³⁹ S. W. Roskill, *Hankey: Man of Secrets, Vol. 1, 1877 – 1918* (London: Collins, 1970), p.102.

⁴⁰ J. Brooks, *Dreadnought Gunnery and the Battle of Jutland: The Question of Fire Control* (London: Routledge, 2005), chapter one, pp.1 – 18.

⁴¹ F. L. Boothby, 'Aircraft for Sea Service,' *JRUSI*, Vol.56, No.1 (Jan / Jun, 1912): pp.751 – 780; H. S. Massy, 'The Seaplane and its Development,' *JRUSI*, Vol.57, No.2 (Jul / Dec, 1913): pp.1452 – 1467; L. C. Burney, 'Air Power,' *The Naval Review*, Vol.1, No.2 (1913): pp.59 – 75.

⁴² AIR 1/654/17/122/491 – Report of NID, 7 Jan 1910.

⁴³ *Ibid.*

⁴⁴ *Ibid.*

aeroplane, whilst not subject to extensive analysis, were not dismissed completely. In fact, Lord Esher was to reverse his position during 1910 as he concluded that the development of 'heavier-than-air-craft' had reached such a stage as to make them viable and important weapons of war.⁴⁵ In his October 1910 paper, submitted to the Committee of Imperial Defence (CID), Esher also urged the consideration of whether a 'corps of aviators' should be created.⁴⁶

In February 1911, the Navy took a further tentative decision and selected four officers to undertake flying training.⁴⁷ Arthur Longmore, later to attain a senior rank with the Royal Air Force, was of this number, and, possibly reflecting wider attitudes within the RN, his commanding officer offered to have the posting overturned as it would ruin a promising career.⁴⁸ It was no small irony that Longmore's commanding officer, Godfrey Paine, rose to the highest position within the RNAS, being appointed as the newly created Fifth Sea Lord – responsible for naval aviation – during the latter half of the First World War. Thus, Raleigh's contention that Paine 'befriended aviation from the first' is somewhat misleading.⁴⁹ It may have been another relatively cautious decision, but, by September 1911, the RN was in possession of four well-trained aviators who could serve to train new pilots and act as a core upon which to develop naval aviation. Longmore's visit to France in October 1911

⁴⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.24 – 25. Note by Lord Esher to CID, 6 Oct 1910.

⁴⁶ *Ibid.*

⁴⁷ National Maritime Museum, Greenwich (NMM), Papers of Arthur Longmore (LP), MS 64/062 – BG7/L/2, Longmore: Foundations of RNAS. Lecture delivered at opening of National Maritime Museum Exhibition commemorating 50 years of Naval flying, 22 Jul 1964.

⁴⁸ A. Longmore, *From Sea to Sky, 1910 – 1945* (London: Geoffrey Bles, 1946), pp.10 – 20.

⁴⁹ W. Raleigh, *WIA, Vol. I*, p.127.

further highlighted the gap between the capabilities of British naval and military aviation and their counterparts on the continent.⁵⁰

The Technical Sub-Committee on Aerial Navigation

These steps formed the background to the Navy's participation in the Committee, which was established to investigate Esher's concept of a national 'corps of aviators.'⁵¹ As the previous chapter observed, a small Technical Sub-Committee was tasked with producing practical proposals to take Esher's vision forward.⁵² Parton and Neville Jones highlight the peculiarities of the Technical Sub-Committee's report in relation to naval aviation.⁵³ As the report concluded, further experimentation was required by the Navy to establish the roles and requirements of naval air power:

Until such experiments have proved conclusively how far such operations are practicable it is impossible to forecast what the rôle of aeroplanes will be in naval warfare, or to elaborate on any permanent organisation.⁵⁴

However, as this chapter has demonstrated, the Admiralty, to a greater or lesser extent, was aware of the threat of German air power. As Neville Jones comments, pre-1911 hypothesising did not seem to affect the conclusions of the Technical Sub-Committee's report. In particular, the need to undertake

⁵⁰ A. Longmore, *From Sea to Sky*, pp.19 – 20.

⁵¹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.24 – 25. Note by Lord Esher to CID, 6 Oct 1910.

⁵² CAB 16/16 – Report of Committee of Imperial Defence Sub-Committee on Aerial Navigation, 29 Feb 1912.

⁵³ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.26; N. Jones, *The Origins of Strategic Bombing*, pp.36 – 39.

⁵⁴ CAB 16/16 – Report of Committee of Imperial Defence Sub-Committee on Aerial Navigation, 29 Feb 1912.

defensive preparations against enemy air power, a key facet of the control of the air, was not considered in any depth.⁵⁵ The overwhelming tactical focus of the report, particularly in relation to land-based air power, reflected the composition of the Committee, which was dominated by the military. The naval members of the Committee lacked the authority and standing of their military counterparts. For example, those signing the report for the War Office included Seely, as Under-Secretary of State for War, and Henderson and Scott-Moncrieff, both Brigadiers. The Admiralty's representatives consisted of Commander C. R. Samson and Lieutenant R. Gregory.⁵⁶

Neville Jones, heavily critical of the military throughout his study, does not explore this issue, as it was the Admiralty that was responsible for appointing such junior officers to the Committee. Furthermore, it was the Admiralty's responsibility to ensure that these officers were provided with sufficient senior support that, in ideal circumstances, should have constituted an officer of equivalent station and standing to Henderson. The Navy would be subject to similar criticism during the First World War, as its interaction with air policy bodies was characterised by a somewhat intransigent attitude and the appointment of officers lacking sufficient executive authority.⁵⁷

The composition of the Committee is more curious when it is noted that, at this time, the Navy's First Lord (Admiralty's political head) was Winston Churchill, a renowned 'aero-phile' and committed supporter of the 'corps of

⁵⁵ N. Jones, *The Origins of Strategic Bombing*, p.36.

⁵⁶ CAB 16/16 – Report of Committee of Imperial Defence Sub-Committee on Aerial Navigation, 29 Feb 1912; N. Jones, *The Origins of Strategic Bombing*, p.36.

⁵⁷ M. Cooper, *The Birth of Independent Air Power*, pp.56 – 59.

aviators' concept.⁵⁸ Sir John Fisher, former First Sea Lord (Admiralty's professional chief) and unofficial advisor to Churchill, was also an enthusiastic supporter of aviation.⁵⁹ The Admiralty lacked senior officers with the technical experience of aviation who could match the standing and status of Henderson, yet a more concerted effort was required to ensure that early aviation policy incorporated the intentions and desires of the RN. It was the Admiralty's failure to participate effectively in the production of this early policy that laid the foundations for a divergent approach to air power and a potentially destructive split from the military, sealing the collapse of the Flying Corps concept before it was given an adequate chance to succeed.

It was not the case that the RN lacked preliminary material upon which to draw to make policy suggestions during this period. The Admiralty was also aware of the need to advise the Committee of their desires and intentions regarding aviation. In a letter to Prince Louis of Battenberg, First Sea Lord, the secretary of the CID suggested that the RN needed to consider drawing up proposals setting out the use of aerial craft in a naval context.⁶⁰ Specifically, Battenberg was advised to consult with the two officers who had the greatest experience and standing with regard to naval aviation: Murray Sueter, who would be appointed as the first DAD; and Charles Samson, who

⁵⁸ A. J. Marder, *Dreadnought to Scapa Flow*, Vol.I, p.337.

⁵⁹ A. J. Marder, ed., *Fear God and Dread Nought: The Correspondence of Admiral of the Fleet Lord Fisher of Kilverstone*, Vol.II: *Years of Power, 1909 – 1914* (London: Jonathan Cape, 1956), pp.407 – 408, pp.426 – 427, pp.433 – 434, and p.438. On Fisher generally, see N. A. Lambert, *Sir John Fisher's Naval Revolution*; J. Sumida, 'British Naval Administration and Policy in the Age of Fisher,' *Journal of Military History*, Vol.54, No.1 (Jan 1990): pp.1 – 26.

⁶⁰ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.28. Letter, Secretary CID to Battenberg, 16 Jan 1912.

would assume the role of the Naval Wing's first operational commander.⁶¹ Both men were intriguing individuals who seemed to share a restless passion for mechanical and technical innovation.

In a lengthy paper written in December 1911, and pre-empting the above, Sueter attempted to address the issue of the purpose of naval aviation (amongst several other topics).⁶² Sueter set out seven specific tasks for naval air power, which could be grouped under two headings: first, scouting (both tactical and strategic), including in connection with naval gunnery; and second, the attack of hostile aircraft and airships.⁶³ The latter role encompassed air defence, as Sueter commented on the importance of ensuring cooperation between military and naval aviators in relation to coastal defence.⁶⁴ As Raleigh observes, Sueter was invited to give evidence to the Sub-Committee, and, in doing so, stressed the importance of attaining 'command of the air.'⁶⁵ It seems something of an anomaly that Sueter was not a full member of the Technical Sub-Committee. Rear-Admiral Troubridge, who became Chief of Staff at the Admiralty, also concurred with the importance of coastal defence, and produced a paper addressing such an issue.⁶⁶ Yet, Troubridge was not well respected by senior members of the Admiralty, possibly reflecting his role in the creation of the Naval Staff.⁶⁷

⁶¹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.56 – 58; M. F. Sueter, *Airmen or Noahs*; C. R. Samson, *Fights and Flights* (London: Ernest Benn, 1930).

⁶² AIR 1/626/17/91 – M. Sueter, 'Naval Aviation,' Dec 1911.

⁶³ AIR 1/626/17/91, p.5.

⁶⁴ AIR 1/626/17/91, pp.17 – 18.

⁶⁵ W. Raleigh, *WIA, Vol. I*, pp.176 – 177; CAB 16/16 – Report of Committee of Imperial Defence Sub-Committee on Aerial Navigation, 29 Feb 1912.

⁶⁶ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.29 – 33.

⁶⁷ N. A. Lambert, *Sir John Fisher's Naval Revolution*, p.262; N. Black, 'The Admiralty War Staff and its influence on the conduct of the naval war between 1914 and 1918' (PhD Thesis, University College London, 2005), chapter two.

However, the February 1912 report of the Technical Sub-Committee made no mention of the defence of British airspace, a core component of the control of the air. This is an interesting development when it is noted that senior officers within the RN were producing papers in which significance was attached to the subject. In addition, Sueter gave evidence to the Committee that stressed the importance of air defence. Thus, if there was a clear causal connection between pre-war hypothesising and the policy produced by the Committee in relation to military air power, then there was a distinct disconnect in the case of naval aviation. It is somewhat cynical, but it appears that the RN may have had little interest in the national 'corps of aviators' project from the beginning. Churchill was a noted supporter of the idea, yet, in general, the Admiralty seemed somewhat aloof in its approach to any discussions with external bodies or organisations.⁶⁸ As both Kennedy and Nicholas Lambert acknowledge, this was part of a wider trend as the Navy, after dominating defence policy in the second half of the 1800s, became increasingly isolated in such debates after 1906.⁶⁹ However, the Committee's report was approved and a Royal Warrant issued in April 1912, leading to the formation of the RFC in the following month. For the RN, the implications were the creation of the NW, and participation in the joint military-naval Central Flying School (CFS).

In the aftermath of its creation, three simultaneous courses of action were now required by the NW. First, there was an urgent need to continue the practical development of air power (experimentation, the procurement of

⁶⁸ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.148 – 155, especially p.152. Minutes, CID Sub-Committee on Air Stations, Jun 1914.

⁶⁹ P. Kennedy, *The Rise and Fall of British Naval Mastery*, pp.234 – 235; N. A. Lambert, *Sir John Fisher's Naval Revolution*, pp.17 – 18 and pp.171 – 172.

aircraft and weapons, etc). Second, there was a need to articulate the NW's role and position in relation to the RN and Britain's wider defence establishment – above all else, this meant the production of clear and concise doctrine. Finally, there was a need to develop policy in relation to the application of naval air power.

Naval Wing Air Defence Policy, 1912 – 1914

Sueter's appointment as DAD was appropriate, reflecting the significant experience he possessed and his reputation as an officer with proven successes in the field of technological innovation.⁷⁰ For example, Sueter had conducted important work with regard to the RN's early submarines, and was a noted and published expert on the subject.⁷¹ Prior to his appointment as DAD, Sueter had served as the Navy's Inspecting Captain of Airships.⁷² In setting out the remit of the post of DAD, the Admiralty assigned Sueter the task of developing naval aviation policy, whilst articulating the role and functions of the Wing via internal and external communications, including the production of formal publications.⁷³ Sueter, prior to his appointment as DAD, had produced a paper that essentially restated the conclusions he had reached in December 1911. His August 1912 memo reemphasised the two important functions of naval air power as: reconnaissance work, both tactical and strategic; and the prevention of attacks against vital naval installations in

⁷⁰ AIR 1/674/21/6/59 – The Development of the Air Department, Admiralty: 1912 – 1916.

⁷¹ M. F. Sueter, *The Evolution of the Submarine Boat, Mine and Torpedo from the Sixteenth Century to the Present Time* (Portsmouth: Griffins & Co., 1907); 'Notice of Books,' *JRUSI* Vol. 52, No.1 (Jan / Jun 1908): pp.888 – 889.

⁷² *The Times*, 5 Feb 1960, Sueter's Obituary, p.15.

⁷³ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.60 – 61. Instructions for the Director of the Air Department, September 1912. In particular, see points 2, 9c and 9d.

Britain.⁷⁴ This confirmed that the concept of the control of the air, in the strategic and defensive sense of the term, was at the heart of naval aviation policy. However, a dialogue continued within Britain's defence community and within the Navy itself regarding the relative merits of airships and aircraft.⁷⁵ These discussions had clear implications for the implementation of a scheme for the practical air defence of vulnerable naval installations and facilities in Britain. Churchill's crucial role in these debates, and in shaping naval aviation policy, particularly in relation to air defence and the control of the air, is discussed below.

Whilst the Navy's own rigid airship programme had resulted in failure, developments in Germany refocused naval attention on the potentialities of airships and the gap that existed between British and German capabilities.⁷⁶ A report submitted to the CID in July 1912 concurred with the pre-1911 conclusions of Campbell and Capper, arguing that the most effective counter to the airship was a fleet of friendly airships.⁷⁷ However, in a December 1912 meeting of the CID, Churchill found himself in a pitched battle with Admiral Sir Arthur Wilson with regard to the relative merits of airships and the threat they posed. Wilson believed the threat of the airship was overstated, particularly in relation to the performance of the aeroplane. Wilson also argued that he saw no evidence to suggest that a fleet of airships was the most effective counter

⁷⁴ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.56 – 60.

⁷⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.70 – 73, pp.73 – 81, and pp.81 – 85. CID minutes, 7 Jan 1913, letter, Churchill to Wilson, 3 Feb 1913, and CID minutes, 6 Feb 1913.

⁷⁶ W. Raleigh, *WIA Vol.I*, pp.173 – 174; S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.45 – 55. Report of the Technical Sub-Committee of the Standing Sub-Committee of the CID, 30 Jul 1912; M. F. Sueter, *Airmen or Noahs*, pp.114 – 116.

⁷⁷ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.45 – 55. Report of the Technical Sub-Committee of the Standing Sub-Committee of the CID, 30 Jul 1912.

to an attack by airships. In *The World Crisis, 1911 – 1914* (1923), Churchill claimed that he had never believed that the airship was a valuable weapon of war.⁷⁸ However, as the evidence suggests, Churchill was fearful of the threat of German airships and expressed such thoughts with great clarity to the CID.⁷⁹ In many respects, this exemplifies the difficulties of relying on Churchill's writings. Churchill regularly swings from venomous attacks to sympathetic treatments, with scant regard for logic or accuracy. However, his writings cannot be dismissed because, in the same measure, it is possible to locate significant sections containing balanced, accurate, and insightful reasoning.⁸⁰ Being alarmed by the threat of German airships, Churchill sought the development of such craft so as to explore their capabilities. Any data gleaned from such developments would be utilised to plan for the defence of vulnerable naval targets in Britain.⁸¹ What is more, in subsequent discussions of the subject, Churchill, in correspondence with Wilson, and in front of the CID, continued to highlight the threat of the airship.⁸²

There was logic to Churchill's contentions, and airships did possess attractive and threatening qualities, depending on perspective. In comparison to aircraft, the airship had greater endurance, range, and weight carrying capability. In addition, it could gain height very rapidly, operate with little difficulty at night,

⁷⁸ W. S. Churchill, *The World Crisis, 1911 – 1914* (London: Thornton Butterworth, 1923), p.313.

⁷⁹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.65 – 68. Extracts from minutes of 120th meeting of the CID, 6 Dec 1912. See also pp.70 – 73, pp.73 – 81, and pp.81 – 85. CID minutes, 7 Jan 1913, letter, Churchill to Wilson, 3 Feb 1913, and CID minutes, 6 Feb 1913.

⁸⁰ R. Prior, *Churchill's World Crisis as History* (London: Croom Helm, 1983).

⁸¹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.65 – 68. Extracts from minutes of 120th meeting of the CID, 6 Dec 1912.

⁸² S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.70 – 73, pp.73 – 81, and pp.81 – 85. CID minutes, 7 Jan 1913, letter, Churchill to Wilson, 3 Feb 1913, and CID minutes, 6 Feb 1913.

and provided a stable platform upon which to mount defensive armament. The influence of these factors was heightened by the dearth of practical knowledge of the capabilities of airships, which resulted from the failure of the pre-1912 rigid airship programme. The airship was also appealing to the naval mind at an intangible level. For example, during Burke's November 1911 lecture to RUSI, a young naval officer made the direct parallel between the airship and the battleship, and the aircraft and the torpedo boat.⁸³ Airships were to be the capital ships of the skies that, under anything but the least favourable conditions, would 'destroy large numbers of aeroplanes with ... [their] ... gun fire.'⁸⁴ As Finlan highlights, the role of the ship is hugely important to the RN, whilst individualism is not a trait that is cultivated in the service.⁸⁵ Contemporary aircraft were piloted by a single person, sometimes with an observer, and could be considered the embodiment of an antithetical culture that was alien to the RN. In contrast, the airship, with its large crew, was more attuned to the importance of the ship within the Navy's institutional traditions. It is evident in a minute to the Fourth Sea Lord that Churchill subscribed to such thoughts, suggesting that, to succeed in airships, a more mature officer was needed who possessed an expertise in sea-going skills – i.e. resolution, experience, and seamanship.⁸⁶

Even if Churchill was later to downplay his fear of German airships, he had a responsibility as political head of the Navy to take seriously any issues that

⁸³ C. J. Burke, 'The Aeroplane,' pp.1635 – 1636.

⁸⁴ Ibid.

⁸⁵ A. Finlan, *The Royal Navy in the Falklands Conflict and the Gulf War: Culture and Strategy* (London: Frank Cass, 2005), p.7.

⁸⁶ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.115. Minute to Fourth Sea Lord, Sep 1913.

threatened to undermine the strategic and material dominance of the RN. However, Churchill devoted what was a seemingly inordinate amount of his energies to ensure the development of Britain's own airship capability, whilst he did not seriously digest and analyse Wilson's strong arguments in favour of aircraft. In notes relating to the outbreak of war, should such an event occur, Churchill listed matters relating to the provision of air defence and air power as points twelve and thirteen respectively out of a numbered list of seventeen items.⁸⁷ Churchill may well have been a fervent supporter of naval aviation, yet, in his *World Crisis, 1911 – 1914*, he devoted less than ten pages to its discussion. This is important because it places naval aviation, and wider aviation interests, within a wider context: the pre-war effort devoted to aviation – philosophically and materially – was very slight.

As Roskill notes, Britain was never able to gain a lead in rigid airship development, although this did very little harm because the limitations and vulnerable nature of the airship became clear.⁸⁸ Thus, in giving his opinion to the CID, Churchill was too dismissive of the improvements in aeroplane technology, although the provision of adequate air defence measures was a very difficult task.⁸⁹ If Britain possessed no airships, aircraft of very limited performance, and inadequate supplies of ground based air defences, there was a very obvious capability gap with regard to Britain's ability to defend its own airspace and attain control of the air over vital installations that were vulnerable to air attack. Nonetheless, naval interest in air defence did not

⁸⁷ W. S. Churchill, *The World Crisis, 1911 – 1914*, p.194.

⁸⁸ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.4.

⁸⁹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.70 – 73, pp.73 – 81 and pp.81 – 85. CID minutes, 7 Jan 1913, letter, Churchill to Wilson, 3 Feb 1913, and CID minutes, 6 Feb 1913.

automatically equate to overall responsibility for such tasks. In an exchange of letters over the winter of 1912 / 1913, the War Office effectively claimed responsibility for the air defence of the United Kingdom, including the defence of ports and, at the request of the Admiralty, magazines and oil storage facilities.⁹⁰ In practice, these arrangements divided the responsibility of air defence between the Navy, whose aerial craft would be responsible for defence over water, and the Army, whose aircraft would provide localised defences over vulnerable land based targets.⁹¹

If the WO emerged in at least a partially positive light from the last chapter, its performance must be questioned with regard to air defence. It failed to make any serious provision to meet such responsibilities; responsibilities for which it continued to fight until the outbreak of war.⁹² As established, the *Training Manual* contained no reference to the task of air defence, and it seems certain that there was a doctrinal and policy disconnect between the functions of military air power as anticipated and planned for by Sykes, who saw the MW as forming an integral component of the BEF, and statements from the War Office, in which claims for responsibility for air defence were made.⁹³ Of course, whilst Sykes did acknowledge that air defence would become a focus of MW policy, he stressed that current efforts were devoted in their entirety to honing, developing, and strengthening the MW's expeditionary contingent.⁹⁴ If

⁹⁰ AIR 1/654/17/122/493 – War Office and Admiralty Correspondence regarding air defence, Oct 1912 to Feb 1913.

⁹¹ Ibid; H. A. Jones, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force (WIA)*, Vol.III (Oxford: Clarendon Press, 1931), p.71.

⁹² H. A. Jones, *WIA*, Vol.III, pp.70 – 76.

⁹³ AIR 1/654/17/122/493 – War Office and Admiralty Correspondence regarding air defence, Oct 1912 to Feb 1913.

⁹⁴ AIR 1/118/15/40/56 – Letter, Sykes to Henderson, 16 Dec 1913.

the WO had accepted sole or joint responsibility for controlling the airspace over the British Isles, then it did not convey the significance of this decision to Sykes.

This exchange, which does not portray the WO favourably, was an extension of the struggle for resources and influence that characterised pre-war military-naval relations. However, the Admiralty seemed content with these arrangements and accepted the position of the WO almost without question.⁹⁵ Churchill continued to make provisions for ensuring that the Navy was able to meet, and go beyond, its obligations with regard to air defence.⁹⁶ Gollin is persuasive when he notes that air defence represented another field in which the Admiralty and War Office could continue their fight for influence and resources.⁹⁷ Thus, one could agree with Churchill's post-war suggestion that he realised that the WO would not be in a position to assist in the air defence of Britain and tried to plan accordingly.⁹⁸ However, viewed more cynically, and in keeping with Gollin's contention, Churchill's efforts could be seen as representing the Darwinian struggle between Britain's two defence departments, not only at the micro level regarding air power, but at the macro-level of wider defence responsibilities.⁹⁹ Taking such a contention further, Grove suggests that Churchill grew 'to like the idea of his own air force.'¹⁰⁰

⁹⁵ AIR 1/654/17/122/493 – War Office and Admiralty Correspondence regarding air defence, Oct 1912 to Feb 1913.

⁹⁶ W. S. Churchill, *The World Crisis, 1911 – 1914*, p.312; CAB 18/27 – Various CID papers regarding the defence of Britain.

⁹⁷ A. Gollin, 'A Flawed Strategy: Early British Air Defence Arrangements,' in *The Great War, 1914 – 1918: Essays on the Military, Political and Social History of the First World War*, ed. R. J Adams (London: Macmillan, 1990), p.35.

⁹⁸ W. S. Churchill, *The World Crisis, 1911 – 1914*, p.312.

⁹⁹ A. Gollin, 'A Flawed Strategy,' pp.35 – 36.

¹⁰⁰ E. Grove, 'Seamen or Airmen?' p.22.

In February 1913, Churchill put forward a tentative policy suggestion for the air defence of Britain. Downplaying the effectiveness of passive defence, i.e. defensive patrols and the provision of anti-airship / aircraft guns, Churchill argued that the correct course of action was to ensure that enemy airships were 'kept away altogether[,] and that would only be done by attacking them.'¹⁰¹ This sentiment, whilst lacking in clarity, was the first suggestion that the Naval Wing would pursue a counter offensive policy to secure the vital interests of the Navy. By June 1913, the Admiralty had adopted Churchill's statement as policy, noting the ineffectiveness and costly nature of the provision of passive defences.¹⁰² In a passage remarkably similar to that offered by J. E. Capper in 1909, the Admiralty suggested that the provision of extensive passive defences would be

as mistaken a policy as the provision all round our coast of passive defences against an enemy's fleet instead of the maintenance of a fleet whose function it is to seek out and destroy all hostile ships. This argument that applies to warfare on the sea must inevitably apply to warfare in the air, and aerial attack must be met by the provision of airships and aeroplanes to seek out and destroy hostile craft of the same type.¹⁰³

Since October 1912, the Navy had engaged in the construction of coastal air stations that served to facilitate defensive air patrols and coastal reconnaissance missions.¹⁰⁴ The purpose of such a scheme was captured in a policy paper of August 1913, which envisaged the use of these bases for defensive patrolling in conjunction with more traditional forms of sea-based

¹⁰¹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.83 – 84.

¹⁰² CAB 37/115/35 – Admiralty paper, 'Aerial Navigation,' Jun 1913.

¹⁰³ CAB 37/115/35 – Admiralty paper, 'Aerial Navigation,' Jun 1913, pp.7 – 8.

¹⁰⁴ W. Raleigh, *WIA, Vol. I*, pp.263 – 264; J. J. Abbatiello, 'British Naval Aviation,' pp.132 – 134.

operations.¹⁰⁵ As Churchill stated in a paper of November 1913, the strategic importance of these bases was significant, whilst, in a note of the following month, he observed that it was a natural function for the Navy to assume the role for the development and operation of these coastal air stations, as they could make use of existing coast guard facilities.¹⁰⁶ These bases, located at various points, but particularly the vulnerable eastern coast of Britain, did not fit strictly with the Admiralty's counter offensive vision for air defence, yet they served as a foundation upon which to build Britain's air defence network, and reflected the insight of Churchill and Sueter.¹⁰⁷ In a letter of 1927, Sueter noted his interest in coastal air patrols and his role in persuading Churchill of the soundness of such a policy.¹⁰⁸ This is supported by Grove, who interprets the growth and expansion of the RNAS as being driven to a large extent by Sueter.¹⁰⁹ However, one must treat Sueter's letter with caution, given his strong desire for personal recognition, which, at its most dramatic, saw him write directly to King George V.¹¹⁰ The development and strategic functionality of these coastal bases was closely monitored during the annual reviewing process of the RFC, further indicating their importance.¹¹¹ These measures were driven by a realisation of Britain's strategic vulnerability in relation to air power. This sense of vulnerability, which, as events of the First World War

¹⁰⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.109 – 112. Memo, Sueter, 'Instructions for the Conduct of Naval Air Stations,' Aug 1913.

¹⁰⁶ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.116 – 117 and pp.119 – 120. Memo, Churchill to Second Sea Lord and DAD, 12 Nov 1913; Memo, Churchill to Secretary of State for War, 6 Dec 1913.

¹⁰⁷ G. F. Snowden Gamble, *The Story of a North Sea Air Station* (London: Neville Spearman, 1967) [1928].

¹⁰⁸ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.112 – 113. Letter, Sueter to Admiral Gamble, 1 May 1927; M. Paris, *Winged Warfare*, p.176.

¹⁰⁹ E. Grove, 'Seamen or Airmen?' p.7.

¹¹⁰ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.57.

¹¹¹ CAB 14/1, 'Second Annual Report of the Air Committee on the Progress of the Royal Flying Corps,' May 1914, pp.6 – 7.

would demonstrate, was based on an understandable, if sensationalised, conception of the threat of contemporary air power, continued to focus the Admiralty's mind during the final months of peace.

In March 1914, Churchill delivered the Naval Estimates of 1914 / 1915 to the House of Commons, and spent at least a portion of his speech addressing the development and policy of the Naval Wing.¹¹² In line with the now orthodox position of the Admiralty, Churchill stressed the value of air power in relation to scouting, before moving on to the issue of air defence.¹¹³ It must be remembered that in delivering his hyperbole-riddled statement, Churchill was undertaking perhaps the most important political function of the First Lord; securing the funding of the RN for the coming financial year.¹¹⁴

As Sumida notes, the pressure upon the Admiralty in relation to the Naval Estimates of 1914 / 1915 was profound, and the process by which these estimates were scrutinised was unusually thorough and painful, reflecting the stark economic and political pressures of the time. In making use of such forceful and clear assertions, Churchill was taking heed of his own advice issued to the Second Sea Lord in November 1913. In submitting documents relating to the NW, Churchill urged the use of clear arguments, including comparative references to the provisions of foreign air services. This was undoubtedly aimed at securing greater funding for the NW. In a joint submission to the Cabinet, Churchill and Seely made use of such

¹¹² *Hansard Parliamentary Debates*, 5th Series, Vol. LIX, Cols.1911 – 1914.

¹¹³ *Ibid.*

¹¹⁴ J. Sumida, 'British Naval Administration and Policy in the Age of Fisher,' p.18; J. Sumida, *In Defence of Naval Supremacy: Finance, Technology and British Naval Policy, 1889 – 1914* (London, Unwin Hyman, 1989).

techniques.¹¹⁵ In his speech, Churchill highlighted the vulnerability of Britain's east coast, before underlining 'the indefinite menace of aerial attacks' to which 'nerve centres of naval power have ... been exposed.'¹¹⁶ Churchill then commented upon the uselessness of passive defence against aerial attacks ('perfectly hopeless'), whilst stressing the value of the aggressive use of aero- and seaplanes to counter enemy aerial raiders (the infamous 'swarm of very formidable hornets').¹¹⁷

Both Paris and Powers comment upon the significance of Churchill's address to the House, although neither draw the conclusion that the control of the air was at the core of naval aviation policy. Using highly effective and characteristically Churchillian rhetoric, the First Lord offered that

the only real security upon which sound military principles will rely is that you should be *master of your own air* [emphasis added].¹¹⁸

Another crucial theme of the 1914 / 1915 Navy Estimates was the requirement for major financial support with regard to the procurement of oil, and an oil infrastructure to support Britain's growing fleet of oil powered capital ships. As Churchill noted, oil, the air service, and an increase in personnel were major factors in the increased estimates being presented.¹¹⁹ As Marder observes, the shift to oil gave a great many benefits to the technical

¹¹⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.117 – 118 and pp.124 – 125. Memo, Churchill to Second Sea Lord, Nov 1913; Memo, Churchill and Seely to Cabinet, Feb 1914.

¹¹⁶ *Hansard*, 5th Series, Vol. LIX, Col.1912.

¹¹⁷ *Hansard*, 5th Series, Vol. LIX, Cols.1912 – 1913.

¹¹⁸ *Hansard*, 5th Series, Vol. LIX, Col.1913; M. Paris, *Winged Warfare*, p.175; B. D. Powers, *Strategy Without Slide-Rule*, p.34.

¹¹⁹ *Hansard*, 5th Series, Vol. LIX, Cols.1897, 1907 – 1911.

performance of capital ships, although there was one overwhelmingly negative strategic implication: Britain lacked a sufficient indigenous supply of oil.¹²⁰ Between 1912 and 1914, Churchill (and Fisher) moved the RN inexorably toward a policy of utilising oil as an auxiliary and primary fuel for capital ships.¹²¹ Whilst a committee headed by Fisher recommended various measures, including the purchase of a large number of foreign oil fields, Fisher wrote to Churchill in August 1913 to urge the latter to establish vast oil reserves in the UK.¹²² In effect, this created another strategically vital target set that was potentially vulnerable to air attack.

As a logical conclusion to this hugely significant change of policy, the Admiralty tasked a small Sub-Committee, chaired by Sueter, to investigate the camouflaging of oil storage and other vulnerable sites to prevent attacks upon the former by aerial craft or gunfire.¹²³ From the outset, the Committee noted that it felt compelled to investigate matters outside its reference, as palliative methods, such as disguising buildings, would only provide limited defensive benefits.¹²⁴ The conclusions offered in the report were based upon the evidence supplied to the Committee by ten NW pilots, including senior squadron commanders, who undertook experimental investigations from the air.¹²⁵ In offering practical suggestions, the NW officers generally concurred that, in spite of creative camouflaging efforts, vital targets, particularly oil

¹²⁰ A. J. Marder, ed., *Fear God and Dread Nought, Vol.II*, p.404; A. Gordon, *Rules of the Game*, pp.8 – 9.

¹²¹ A. J. Marder, ed., *Fear God and Dread Nought, Vol.II*, pp.404 – 407.

¹²² A. J. Marder, ed., *Fear God and Dread Nought, Vol.II*, pp.404 – 407. See also pp.489 – 490, Letter from Fisher to Churchill, 19 Aug 1913.

¹²³ TNA, Admiralty Files (ADM) 116/1220 – 'Report of the Committee appointed to inquire into the question of rendering oil fuel tanks and other vulnerable points indistinguishable from their surroundings when viewed from a distance, and more particularly from the air,' Apr 1914, p.3.

¹²⁴ *Ibid.*

¹²⁵ ADM 116/1220, Appendices I – V, pp.13 – 21.

storage facilities, could not be concealed from the air.¹²⁶ Sampson, commander of the NW air station at Eastchurch, recommended the use of 'active' (guns, aircraft and airships) and 'passive' defences (camouflage and construction techniques) to counter enemy operations.¹²⁷

It was the notion of 'active' defence that seemed to strike a chord with the Committee, who observed that they felt it 'desirable' to offer conclusions outside their remit, which had been 'forced' upon them as a result of 'prolonged and careful consideration of the whole subject.'¹²⁸ Thus, the report concluded with a triple-pronged approach to the defence of vulnerable strategic targets: localised active defence (i.e. aircraft and guns); localised passive defence (i.e. camouflaging); and finally,

offensive attack on the enemy's coast ... a vigorous and offensive attack on the enemy's airsheds, &c., and on his aircraft, before they are able to reach these shores.¹²⁹

For Abbatiello, the conclusions reached by Sueter and his Committee fitted 'naturally' with existing policy.¹³⁰ In contrast, Tritten does not acknowledge the frequency and regularity with which this policy was articulated prior to the outbreak of war.¹³¹ The conclusions of this Committee were in keeping with the policy espoused by the Admiralty since at least early 1913, and with the counter offensive hypothesising of individuals such as Capper. As Powers remarks, it was the policy with which the Admiralty undertook the air defence

¹²⁶ Ibid.

¹²⁷ ADM 116/1220, pp.13 – 14.

¹²⁸ ADM 116/1220, p.5.

¹²⁹ Ibid.

¹³⁰ J. J. Abbatiello, 'British Naval Aviation,' p.134.

¹³¹ J. J. Tritten, 'Introduction of Aircraft Carriers,' p.261.

of Britain during the opening aerial campaigns of the First World War, and Powers is critical of the effectiveness of what he terms a policy of 'forward air defence.'¹³² However, even if localised air defences came to be effective, at the outbreak of war, and in spite of the establishment of a chain of air stations and other defensive measures, the NW lacked the equipment to undertake an air defence of Britain based solely upon local defences, either plane, gun, passive, or otherwise.¹³³ The NW possessed a combined total of only seventy-one aircraft and seaplanes, all of which were of limited performance and utility in relation to defensive operations.¹³⁴

What is more, the NW was left in the invidious position, as discussed above, of possessing joint responsibility for the air defence of Britain, whilst its military partner took almost no active measures to ensure that it could meet its obligations. There is additional scope to criticise the War Office in relation to air defence policy. In a June 1914 meeting of a Sub-Committee of the CID, Henderson continued to argue that the MW should have a major role in air defence.¹³⁵ Whilst conceding that the MW planned to deploy eight squadrons with the expeditionary force, its entire proposed strength, Henderson asserted that the MW required aircraft to conduct air defence duties around vital centres, including ports and coastal locations.¹³⁶ The meeting ended with Henderson's promise that the WO would investigate questions of air defence

¹³² B. D. Powers, *Strategy Without Slide-Rule*, pp.16 – 17.

¹³³ *Ibid.*

¹³⁴ CAB 14/1, 'Second Annual Report of the Air Committee on the Progress of the Royal Flying Corps,' May 1914,

¹³⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.148 – 155. Minutes, CID Sub-Committee on 'Allocation and Location of Seaplane and Aeroplane Stations,' 25 Jun 1914.

¹³⁶ *Ibid.*

and would report back to the Sub-Committee.¹³⁷ As Roskill comments, two further meetings in July 1914 produced no progress, and the matter was overtaken by the outbreak of war.¹³⁸ This is not strictly correct, however, and Henderson produced an air defence plan on 29 July 1914.¹³⁹ In reality, this did little more than pay 'lip service' to the subject. Thus, it is far from surprising that, shortly after the outbreak of war, it became apparent that, materially, the MW were unable to meaningfully assist their naval colleagues with regards to the air defence of Great Britain. Further evidence exists of Churchill's foresight with regard to the likelihood of assistance from the WO. In a letter written only a month after the 25 June 1914 CID Sub-Committee meeting, Churchill informed the DAD and First and Fourth Sea Lords that coastal patrolling would be only a secondary consideration, and that

naval aircraft are to regard the defence against attack from the air as their first and main responsibility. They must be carefully husbanded.¹⁴⁰

Driven by unproductive meetings and a realisation of the doctrinal inclinations of the MW, Churchill had undoubtedly grasped that, at least for an extended period, the NW would possess sole practical responsibility for the air defence of Britain. Of course, this does not exclude the alternative motivation that air defence represented another field in which the Admiralty could erode the influence of the War Office. On 3 September 1914, Lord Kitchener, as Secretary of State for War, formally requested that the Admiralty assume

¹³⁷ Ibid.

¹³⁸ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.155 – 156.

¹³⁹ AIR 1/511/16/3/59 – Memo, Henderson – Allotment of responsibility for Home Defence, 29 Jul 1914.

¹⁴⁰ W. S. Churchill, *The World Crisis, 1911 – 1914*, p.208; W. Raleigh, *WIA, Vol. I*, p.274; H. A. Jones, *WIA, Vol.III*, p.75.

responsibility for air defence, and, whilst noting the problems this would create for his department, Churchill accepted.¹⁴¹ Churchill observed that, if aircraft were the answer to the defence against the Zeppelin, he was not in possession of sufficient resources at the beginning of the war to affect an adequate localised air defence of Great Britain. As Churchill commented, aeroplane engines were not powerful enough to reach the altitudes at which Zeppelins operated, night flying was in its infancy, and the ground based communication organisation necessary to make air defence effective was not in existence. Guns and searchlights could be ordered, and the above deficiencies rectified with time and development, yet a more expeditious response was required.¹⁴²

Whilst issuing statements regarding the counter offensive, Churchill did not neglect localised measures. His memos of 3 and 5 September 1914 made further provisions for local air defences, including aerial patrolling, ground based defences, and rudimentary air raid precaution measures.¹⁴³ As H. A. Jones remarks, Churchill's 5 September 1914 policy statement concerning air defence 'restated and amplified' the conclusions reached by Sueter's 'camouflaging' Sub-Committee.¹⁴⁴ This built upon Churchill's 1 September 1914 memorandum, in which he provided strategic and operational guidance to Sueter with regard to establishing a base on the French / Belgian coast, from which to undertake counter offensive and localised defence

¹⁴¹ AIR 1/2314/22/6 – Memo, Churchill to Cabinet, Air Defence, 22 Oct 1914; W. S. Churchill, *The World Crisis, 1911 – 1914*, p.312.

¹⁴² W. S. Churchill, *The World Crisis, 1911 – 1914*, pp.313 – 314.

¹⁴³ W. S. Churchill, *The World Crisis, 1911 – 1914*, pp.315 – 316.

¹⁴⁴ H. A. Jones, *WIA, Vol.III*, pp.78 – 79.

operations.¹⁴⁵ Importantly, the Admiralty's counter offensive policy was not adopted solely for pragmatic or logistical reasons. Whilst Admiralty policy had noted the difficulties and impracticalities of providing extensive localised air defences, its earliest statements embraced the counter offensive because it was in keeping with the traditions of the offensive spirit so prevalent in the Navy.¹⁴⁶ This naval spirit, captured in wider service attitudes that favoured the decisive, offensive battle, has been explored by Breemer.¹⁴⁷ As Raleigh notes, this spirit was in evidence from the very beginning of the war, and the RNAS 'sought every available opportunity for offensive action.'¹⁴⁸

'The Silent Service:' Naval Wing Doctrine¹⁴⁹

To suggest that NW policy was preoccupied solely with air defence is misleading. Air defence was one of the few policy areas driven by centrally administered directives, yet naval aviators pursued a diverse range of experimental and developmental efforts, largely outside the scope of this thesis.¹⁵⁰ More generally, senior figures within the NW realised that naval aviation policy lacked direction and cohesion.¹⁵¹ The lack of coherent policy

¹⁴⁵ W. S. Churchill, *The World Crisis, 1911 – 1914*, pp.313 – 314.

¹⁴⁶ P. Kennedy, *The Rise and Fall of British Naval Mastery*, pp.242 – 243; A. Finlan, *The Royal Navy in the Falklands Conflict and the Gulf War*, pp.12 – 14.

¹⁴⁷ J. S. Breemer, *The Burden of Trafalgar: Decisive Battle and Naval Strategic Expectations on the Eve of the First World War* (Newport, Rhode Island: Naval War College, Newport Paper No.9, 1995).

¹⁴⁸ W. Raleigh, *WIA, Vol. I*, pp.370 – 371.

¹⁴⁹ W. S. Churchill, *The World Crisis, 1911 – 1914*, p.93.

¹⁵⁰ AIR 1/725/1/181 – 'Early bomb armament experiments and early naval air experiments: guns and bombs, by Group Captain R. H. Clark-Hall,' 24 Nov 1924; Sueter Papers, RAFM, AC74/21/2/1 – Collection of documentation reflecting the development of the torpedo-carrying seaplane; C. Goulter, *A Forgotten Offensive*, chapter one; J. J. Abbatiello, 'British Naval Aviation.'

¹⁵¹ NMM/LP/MS 51/012 – ADL/2/1/5 – 8: Minutes of Air Department Conference, 8 Jan 1914; S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.144 – 147. Sueter, Draft Proposals for the Reorganisation of the Naval Air Service, 24 Feb 1914.

did not escape the attention of contemporary commentators, and C. G. Grey's *Aeroplane* highlighted the issue.¹⁵² This realisation is captured in the historiographical consensus that the NW lacked clear policy, whilst being an experimentally driven organisation.¹⁵³ There is no consensus, however, regarding the reasoning for this lack of policy. For Goulter, the NW's focus on experimentation and diversification was entirely appropriate, as policy and doctrine would serve only to constrain innovative approaches to the conceptualisation of air power roles and practices, as it had in the case of the MW.¹⁵⁴ In contrast, and with reference to the lack of NW doctrine, Parton counters the suggestion that the underdeveloped state of air power, coupled with the diffuse roles foreseen and pursued by naval aviators, precluded the production of formal doctrine. As Parton continues, this failure is particularly difficult to reconcile with the positive attitude of senior figures within the NW toward the production of formal doctrine.¹⁵⁵ Yet, due to the dearth of doctrinal evidence, Parton feels unable to offer another suggestion for the failure of the NW to produce doctrine.¹⁵⁶ Later in his thesis, Parton does make reference to a possible difference in the value attached to doctrine by the Army and Navy, but does not develop this contention further.¹⁵⁷ Abbatiello, echoing Overy's contention that doctrine is a synthesis of theory, history, and experience, contends that a lack of coherent doctrine was logical, given that the NW lacked any combat experience:

¹⁵² 'The Royal Naval Air Service,' *The Aeroplane*, Vol.6, No.6 (25 Jun 1914): pp.707 – 708.

¹⁵³ S. F. Wise, *Canadian Airmen in the First World War*, pp. 126 – 127; C. Goulter, *A Forgotten Offensive*, pp.8 – 9; N. Jones, *The Origins of Strategic Bombing*, particularly chapter one.

¹⁵⁴ C. Goulter, *A Forgotten Offensive*, pp.8 – 9.

¹⁵⁵ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.37 – 38 and p.54.

¹⁵⁶ *Ibid.*

¹⁵⁷ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.213, n.548.

The absence of a coherent British maritime air doctrine — that is, an accepted method of applying the air power of the Royal Naval Air Service — at the start of the First World War comes as no surprise. Theory and history combine to form doctrine, yet at the start of the war the RNAS possessed no combat experience to provide a guide for operating their tiny force of aircraft against the Germans.¹⁵⁸

However, a fuller explanation concerning the NW's failure to produce formal doctrine can be adduced by engaging with the wider philosophical and cultural trends within the RN. The dearth of primary evidence is symptomatic of these tendencies. In the case of the British Army, the previous chapter established that, whilst polarising historiographical opinion, a moderate analysis of doctrinal trends concludes that, prior to 1914, and in the guise of *FSR*, the British Army possessed a semi-formal doctrine that rejected prescription, whilst providing a framework upon which effective operational methods and tactical solutions could be built. Consequently, MW doctrine, in the form of the *Training Manual*, was produced in accordance with this ethos.

In contrast, naval historians have not devoted the same depth of analysis to doctrinal trends within the RN. In his essay concerning the development of RN doctrine, Grove argues that the navy of the Fisher era, particularly the Grand Fleet under Jellicoe, had 'too much doctrine in Grand Fleet Battle Orders [GFBOs].'¹⁵⁹ Grove, in basing this contention on Gordon's *The Rules of the Game* (1996), contrasts this with Nelson's intuitive doctrinal approach.¹⁶⁰

¹⁵⁸ J. J. Abbatiello, 'British Naval Aviation,' p.98; R. Overy, 'Doctrine not Dogma: Lessons from the Past,' *Air Power Review*, Vol.3, No.1 (Spring 2000): pp.32 – 47; N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.6 and introduction generally.

¹⁵⁹ E. Grove, 'The discovery of doctrine: British naval thinking at the close of twentieth century,' in *The Development of British Naval Thinking: Essays in Memory of Bryan Ranft*, ed. G. Till (London: Routledge, 2006), p.182.

¹⁶⁰ *Ibid* and p.190, note two; A. Gordon, *Rules of the Game*. *passim*.

Grove is at pains to establish that Gordon's central thesis does not make the case for either doctrine or initiative; rather, it highlights a clash of doctrinal styles – one over-centralised (Jellicoe), and the other based on intuitivism (Nelson and, to a lesser extent, Beatty).¹⁶¹ In other words, Grove defines the pre-1914 RN as being a doctrine-heavy organisation. Yet what does Grove mean by doctrine, and how does this contention tally with Parton's discovery that naval aviators failed to produce formal doctrine?¹⁶² When examining GFBOs, it becomes clear that these vast documents are not doctrine as defined by Parton or Johnston.¹⁶³ To take but one of these examples,

... modern writers of doctrine are generally at pains to avoid prescribing overly precise, drill-like procedures. They are seeking rather to describe the conceptual framework of how best to prosecute military operations.¹⁶⁴

If GFBOs can be labelled doctrine, then they are more akin to tactical doctrine as defined by Parton, 'the "how to do it" questions at the front-line, rather than the "why" questions further back,' and cannot be considered the naval equivalent of *FSR*.¹⁶⁵ As an officer of the Royal Marines noted in 1913,

the Army have a complete guidance [sic] for their officers in the field service regulations [sic], it is greatly to be wished that some authoritative pronouncement of the same nature might be issued in some form to the Navy.¹⁶⁶

¹⁶¹ Ibid.

¹⁶² N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.37 – 38 and p.54

¹⁶³ ADM 186/595 – Grand Fleet Battle Orders, Aug 1914 to May 1916; S. W. Roskill, *The Strategy of Sea Power*, pp.108 – 109; P. Johnston, 'Doctrine is not enough: The Effect of Doctrine on the Behavior of Armies,' *Parameters* (Autumn 2000): pp.30 – 39.

¹⁶⁴ P. Johnston, 'Doctrine is not enough,' pp.30 – 31.

¹⁶⁵ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.7 – 8.

¹⁶⁶ L. S. T. Halliday, 'Orders and Instructions,' *The Naval Review*, Vol.1, No.3 (1913), p.172.

This contention is supported by current RN doctrine, which stresses that, whilst the lineage of tactical doctrine in the Navy extends to over three hundred years, non-tactical doctrine was not officially promulgated until early editions and antecedents of *BR 1806* during the latter half of the twentieth century.¹⁶⁷ As Tritten confirms,

The Royal Navy ... has primarily devoted its attention to the development of service-unique doctrine at the tactical level of war ... The Royal Navy did not have a coherent doctrine at all levels of warfare.¹⁶⁸

Tritten finds this lack of doctrine

somewhat surprising, since Britain was involved in global conventional war and numerous regional contingencies against France and other nations for many years.¹⁶⁹

It is clear that Tritten believes doctrine can exist in many forms and at differing levels of war. However, his essay does not define what is meant by the term doctrine, nor does it offer a working definition. Gordon's *Rules of the Game* does much to strengthen such analysis, suggesting that the Navy's need for formal, written doctrine was low because value was attached to experience rather than theory. Traditionally, the Navy needed no doctrine because the captains of its ships were, in the Nelsonian tradition, a 'band of brothers,' commanding with initiative, based on a wealth of practical experience.¹⁷⁰

¹⁶⁷ MoD, *BR 1806, Third Edition*, pp.1 – 2.

¹⁶⁸ J. J. Tritten, 'Doctrine and Fleet Tactics in the Royal Navy,' in *A Doctrine Reader: The Navies of the United States, Great Britain, France, Italy, and Spain*, eds. J. J. Tritten & L. Donolo (Newport, Rhode Island: Naval War College, Newport Paper Number Nine, 1995), pp. 18 – 28 and pp.30 – 31.

¹⁶⁹ J. J. Tritten, 'Doctrine and Fleet Tactics in the Royal Navy,' p.30.

¹⁷⁰ A. Gordon, *Rules of the Game*, p.156.

However, even with the rise of GFBOs, the Navy of the Fisher era was an organisation light on formal written doctrine. Unintentionally, Parton's 'how to do' and 'why' questions serve to highlight broader attitudes in the Navy that affected this situation.

In an important collection of essays, which offered a more positive interpretation of Admiralty attitudes to technology and innovation, Ranft argued that, from the mid-nineteenth century, the RN was faced with a revolution in technology so profound in its nature that it appeared to 'put every accepted concept of naval warfare in doubt.'¹⁷¹ This revolution shaped the RN into

a service whose recent history and whose current sense of urgency were geared to a material ethic.¹⁷²

During this era of technical change, the Navy's focus was drawn to producing ships that were faster, better armed, and better armoured. This approach left a significant gap with regard to the uses of these newly developed ships and their wider role within Britain's naval strategy and, at the higher level, national grand strategy. Schurman argues that, to a certain extent, the Admiralty's focus on technical matters was logical in a period of transition, although he concedes that there was a 'preoccupation with means rather than ends.'¹⁷³ For Fisher's navy, this translated into 'a vigorous drive for mechanical

¹⁷¹ B. Ranft, ed., *Technical Change and British Naval Policy, 1860 – 1939* (London: Hodder and Staughton, 1977), p.ix.

¹⁷² B. D. Hunt, *Sailor-Scholar*, p.3.

¹⁷³ D. M. Schurman, *The Education of a Navy*, p.4.

excellence,' both in the development of technology and in the mastery of its technical application.¹⁷⁴ As Marder argued,

the stress was upon the technical and mechanical aspects of the profession: gunnery, torpedoes, ship-handling, and so on.¹⁷⁵

Put more bluntly, Hunt argues that

The virtual atrophy of the Navy's apparatus had its roots in the revolution in technology which, since the mid-nineteenth century, had kept naval thinkers' minds almost exclusively with questions of ship design and weapons performance.¹⁷⁶

Two implications of this approach are particularly relevant to this thesis, and the technical and materially dominated outlook of the RN conditioned the manner in which its recruits were educated. Undergoing such an education restricted the ability of naval officers to produce doctrine. Rather than articulating a philosophical vision for the application of naval power, they attached the greatest significance to attaining prowess in technical matters. Unlike the varied routes of officer cadets into the British Army, naval officer recruits of the pre-1914 period generally joined the service as young boys (around the age of 13).¹⁷⁷ As Dickinson observes, this was a pro-active decision by the Navy, who continued to desire the recruitment of cadets at the youngest possible age, and it was only in 1955 that cadets had to be 18 to join the Navy.¹⁷⁸ By recruiting cadets at such an early age, naval educators were able to mould and indoctrinate malleable young minds with the ethos

¹⁷⁴ A. Gordon, *Rules of the Game*, p.346.

¹⁷⁵ A. J. Marder, *Dreadnought to Scapa Flow, Vol.I*, p.402.

¹⁷⁶ B. D. Hunt, *Sailor-Scholar*, p.3.

¹⁷⁷ H. W. Dickinson, *Educating the Royal Navy*, p.209.

¹⁷⁸ *Ibid.*

and dominant ideas of the contemporary RN.¹⁷⁹ Dickinson notes that one of the main functions of this initial education was to build (a naval approved) character.¹⁸⁰ Whilst the relevance of Sykes's educational experience was enhanced by its chronological proximity to his appointment to the MW, the educational experiences of Sueter, Samson, Paine, and Longmore were significant because they took place at a time when their minds were most susceptible to influence.

Andrew Lambert, Dickinson, Marder, Schurman, and Hunt observe the technical focus of the education provided to young naval recruits, reflecting the wider importance attached to technical and material matters within the service. For example, the records of both Sueter's and Samson's initial naval education demonstrate the highly technical syllabus upon which recruits were examined.¹⁸¹ As noted by Lambert and Dickinson, this syllabus was heavily focused on mathematical and scientific subjects.¹⁸² For young cadets, such as Sueter and Samson, their educational experiences, coupled with the Navy's wider ethic, translated to a natural pre-occupation with the technical. Moreover, the early promotional examinations undertaken by aspiring officers retained this technological focus. The records of Samson's promotion to Lieutenant demonstrate the desire of the RN to keep its officers focused on

¹⁷⁹ The Duke of Montrose, 'The Navy and Public Schools,' *JRUSI*, Vol. 71 (Feb – Nov, 1926), pp.739 – 740.

¹⁸⁰ H. W. Dickinson, *Educating the Royal Navy*, p.208.

¹⁸¹ ADM 6/470 – H.M.S. *Britannia*, Cadets – Final Examinations, 1883 – 1893; ADM 6/471 – H.M.S. *Britannia*, Cadets – Final Examinations, 1894 – 1902.

¹⁸² A. Lambert, 'The Development of Education in the Royal Navy,' p.41; H. W. Dickinson, *Educating the Royal Navy*, pp.162 – 163.

the technological aspects of their craft.¹⁸³ Thus, it seems unsurprising that both Sueter and Sampson pursued careers that focused on the inherently technical aspects of their profession; Sampson specialised as a gunner, whilst Sueter's involvement in the Navy's innovative and technologically driven arms has been noted.

A more appropriate comparison with Sykes's experience at Quetta might be found via a focus on the Navy's Staff College. However, not a single member of the senior command team of the NW attended this course. If they had, they would have found the experience to be very different to the teaching offered at Camberley and at Quetta. Whilst noting the important example set by the Naval Staff College, Lambert argues that

The Royal Navy did not engage in speculative and lateral thinking, it did not teach philosophy or logic, and left mid-career officers with the impression that there were simple, correct answers to any problem they might face.¹⁸⁴

As both Lambert and Dickinson record, individuals such as Corbett fought to reverse such trends, and with some effect.¹⁸⁵ However, for Dickinson, Greenwich was not a *bona fide* higher education establishment, and the Navy 'defined' the 'higher education of [its] officers ... in technical terms[,] focusing on "knowledge" rather than "thought."¹⁸⁶ This approach was in stark contrast to the education offered at the Army's Staff College. Whilst the 'magical'

¹⁸³ IWM, Papers of Air Commodore C. R. Samson (SP), DS/MISC/100 – Examinations and promotion to Lieutenant, May 1902. For Paine's records, see ADM 13/225. For Sueter's, see ADM 13/226.

¹⁸⁴ A. Lambert, 'The Development of Education in the Royal Navy,' p.54.

¹⁸⁵ A. Lambert, 'The Development of Education in the Royal Navy,' p.54; H. W. Dickinson, *Educating the Royal Navy*, p.151.

¹⁸⁶ H. W. Dickinson, *Educating the Royal Navy*, p.151.

qualities of the p.s.c. qualification were being emphasised to those attending the Army's Staff Colleges, Lambert observes that

the work of the Royal Naval College before 1914 was limited, dominated by technical issues and made little contribution to the development of naval thought.¹⁸⁷

Thus, when discussions on the production of naval aviation doctrine took place during 1913, two factors shaped the response of the senior command of the NW.¹⁸⁸ In the first instance, an obsession with the technical, based upon their education and the wider ethos of the RN; and second, the Navy's attitude to doctrine, which, during this period, was focused exclusively at the tactical level, reflecting a process by which

... war became confused with battle, and the logic of naval strategy was confounded with the logic of battle.¹⁸⁹

It is not being suggested that talented officers such as Sueter were incapable of creative thought; as Lambert argues, 'there were many fine minds in the service,' yet such minds had their priorities attuned to the technical.¹⁹⁰ In referring to the RN as the 'Silent Service,' Churchill argued that it was

not mute because it was absorbed in thought and study, but because it was weighted down by its daily routine and by its ever-complicating and diversifying technique.¹⁹¹

¹⁸⁷ A. Lambert, "History is the Sole Foundation for the Construction of a Sound and Living Common Doctrine," p.47.

¹⁸⁸ AIR 1/762/204/4/175 – RFC *Training Manual, Part I*, Correspondence and Proofs, Jan to Jun 1913.

¹⁸⁹ J. S. Breemer, *The Burden of Trafalgar*, pp.15 – 16.

¹⁹⁰ A. Lambert, 'The Development of Education in the Royal Navy,' p.54.

¹⁹¹ W. S. Churchill, *The World Crisis, 1911 – 1914*, p.93.

Churchill's characterisation suggests that this process was passive, but the evidence indicates that the Navy took a proactive decision to focus on the material and technical aspects of their profession. In a lecture to be issued to H.M. ships, the material ethic of the Navy's approach to aviation was evident.¹⁹² In a document that could be considered the NW's first attempt at the production of informal doctrine, the text of the Air Department's lecture was overwhelmingly technical in nature, the first half of which was littered with mathematical formulae and detailed, technical drawings and diagrams.¹⁹³ The genuinely innovative sections of the lecture, dealing with what could be loosely termed as doctrine, gave primacy to obtaining 'command of the air' via a decisive aerial encounter, besting the enemy's craft with one's own materially superior craft.¹⁹⁴ These statements, however, were qualified with the assertion that air power would not revolutionise naval warfare, whilst the value of naval aviation would not be known until fully tested.¹⁹⁵ In other words, the meaningful sections were deposited with a post-script at the rear of the text, whilst the majority of the lecture dealt with naval air power via the encouraged, demanded, and acceptable technical language in accordance with RN ethos. To return to Parton's analysis, there was significant material on the 'how to do' and very little on the 'why.'

Parton was the first to highlight that there were figures within the NW who wished to produce formal doctrine more akin to the second part of the MW's

¹⁹² AIR 1/626/17/47 – 'Lecture on Aircraft for Naval Purposes,' 1913.

¹⁹³ AIR 1/626/17/47 – 'Lecture on Aircraft for Naval Purposes,' 1913, pp.3 – 16.

¹⁹⁴ AIR 1/626/17/47 – 'Lecture on Aircraft for Naval Purposes,' 1913, pp.26 – 28.

¹⁹⁵ AIR 1/626/17/47 – 'Lecture on Aircraft for Naval Purposes,' 1913, p.28.

Training Manual.¹⁹⁶ In particular, Paine's letter to Sueter is cited, with the former arguing for the production of two manuals, one of which should include the 'Strategical Use of Aircraft.'¹⁹⁷ Thus, whilst Gordon may argue that the Navy valued experience more than theory, senior officers in the NW were reflecting on the need for doctrine that was more in keeping with the Army's *FSR*. However, when it eventually appeared, the NW counterpart to the MW's *Training Manual* was in keeping with the technical and material priorities of the RN.¹⁹⁸ The vaguely doctrinal sections contained within the lecture of 1913 had been banished, and the entire document was almost completely focused on the technological and scientific aspects of flight. This included an entire chapter devoted to tables and formulae, whilst the initial sections dealt with 'Theoretical Principles of Flight' and 'Construction of Aircraft.'¹⁹⁹

To a certain extent, a focus on the technical aspects of flight was warranted, as flight was an inherently technical subject that could be accurately characterised as being in a period of experimentation and transition. Nonetheless, a lack of formal doctrine led to a failure with regard to Corbett's goal of ensuring that 'words have the same meaning for all.'²⁰⁰ With this definition in mind, *BR 1806, Third Edition* (2004) notes that

¹⁹⁶ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.38.

¹⁹⁷ AIR 1/762/204/4/175 – RFC *Training Manual, Part I*, Correspondence and Proofs. Letter, Paine to Sueter, 10 Jan 1913.

¹⁹⁸ AIR 1/824/204/5/71, Admiralty Air Department, *Training Manual, RFC (Naval Wing), Part II* (1914).

¹⁹⁹ AIR 1/824/204/5/71, Admiralty Air Department, *Training Manual, RFC (Naval Wing), Part II*, pp.124 – 143.

²⁰⁰ J. Corbett, *Some Principles of Maritime Strategy*, p.3.

Doctrine ... serves to inform the wider defence community and those with an interest in understanding the role and functions of maritime [read air] power.²⁰¹

In his autobiographical *Airmen or Noahs* (1928), Sueter argued that, whilst being able to offer expert technical opinion on the sciences of gunnery, navigation, or seamanship, the Sea Lords 'found themselves quite at sea over air matters.'²⁰² Consequently, Sueter suggested that the Admiralty were unable to make technical criticism of the air service, focusing their condemnation of naval aviators on the independent spirit of NW personnel and the non-regimented manner in which the Wing was managed.²⁰³ It is important to place such criticism in context, and Sueter's opinions were influenced by his acrimonious departure from the RN at the end of the First World War. Yet, Admiralty attitudes towards aviation continued to polarise opinion within the Navy.²⁰⁴ If Sueter's contention regarding the Admiralty's ignorance of air power was correct, then Sueter himself had failed in one of the central functions of his role as DAD; articulating the role and functions of the Wing to both internal and external audiences.²⁰⁵ The NW might not have sat within an organisation that understood doctrine in such terms, but, as noted, senior figures in the NW clearly felt an *FSR* like approach to doctrine had some merit.²⁰⁶ In line with Corbett's interpretation, a lack of NW doctrine had a direct impact on the willingness of the wider RN to accept the legitimacy of naval aviation. If language did not mean the same for all, and air power

²⁰¹ MoD, *BR 1806, Third Edition*, pp.4 – 5.

²⁰² M. F. Sueter, *Airmen or Noahs*, pp.16 – 17.

²⁰³ M. F. Sueter, *Airmen or Noahs*, pp.16 – 17; S. F. Wise, *Canadian Airmen in the First World War*, p.128.

²⁰⁴ S. F. Wise, *Canadian Airmen in the First World War*, p.127.

²⁰⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.60 – 61. Instructions for the Director of the Air Department, September 1912. In particular, see points 2, 9c and 9d.

²⁰⁶ AIR 1/762/204/4/175 – RFC *Training Manual, Part I*, Correspondence and Proofs. Letter, Paine to Sueter, 10 Jan 1913.

concepts were ill-understood due to a lack of officially sponsored articulation, then the failure of Sueter to produce a NW equivalent to the MW's *Training Manual* is a striking condemnation of a naval ethos that overemphasised the 'how to do' and failed to adequately explore and verbalise the 'why.' This was less problematic during Churchill's 'aero-friendly' regime, but, as Cooper notes, the post-Churchill administration of Jackson and Balfour unleashed a conservative backlash upon the RN and the RNAS.²⁰⁷

However, doctrine did not necessarily have to take the form of an official publication, and, as Ash remarks, Sykes and senior figures within the MW supplemented the production of formal doctrine for internal consumption with a public relations effort driven by the publication of articles and the delivery of lectures to further the cause of military aviation.²⁰⁸ In contrast, the NW failed to match these efforts. In examining material from contemporary journals and forums, an absence of contributions from senior NW officers is evident. During the period relevant to this chapter, no evidence could be found of Sueter, Samson, or Paine writing an article for, or delivering a lecture to, any external organisation. As Messinger highlights, the Navy was held in a cherished place by the British public, and so, institutionally, it did not feel obliged to open itself to public scrutiny or draw attention to its activities and wider goals.²⁰⁹ However, as Rüger's more recent study suggests, the Navy made great efforts with regards to its public relations activities.²¹⁰

²⁰⁷ M. Cooper, *The Birth of Independent Air Power*, p.37; chapter six.

²⁰⁸ E. Ash, *Sir Frederick Sykes and the Air Revolution*, p.27.

²⁰⁹ G. S. Messinger, *British Propaganda and the state in the First World War* (Manchester: Manchester University Press, 1992), p.111.

²¹⁰ J. Rüger, *The Great Naval Game*, p.3 and pp.72 – 82.

Samson was present during Major Radcliffe's talk, although the tactical focus of the discussions seemed to limit his input.²¹¹ Prince Louis of Battenberg, the honouree guest at the same lecture, did offer some thoughts on the tactical aspects of naval air power, although his comments were somewhat underdeveloped.²¹² The lectures and articles that did appear were invariably produced by junior officers, who lacked the standing necessary to convince senior figures in the RN of the importance of aviation.²¹³ Naturally, such lectures were highly technical in composition, with Boothby's paper showing a particular affinity for graphs, charts, and formulae. *The Naval Review*, a journal created to invigorate debate on naval policy and strategy (whilst countering the technical obsessions of the Navy), was not held in the same esteem as *JRUSI* or *The Army Review*. As such, its pages were not likely to convert wider naval opinion toward the benefits of air power or the NW.²¹⁴

In discussing one such article, Paris highlights that the author set his discussion within the contexts of existing naval strategy, whilst, more generally, he attempted to appeal to the naval mind by couching his article in conventional naval language and expressions.²¹⁵ However, this article was closely associated with the troubled reputation of its literary medium. The progressive and iconoclastic intent of the journal can be succinctly expressed with a short quotation from the first issue:

²¹¹ 'The Military Aeroplane,' *Aeronautical Journal*, p.20.

²¹² 'The Military Aeroplane,' pp.22 – 23.

²¹³ F. L. Boothby, 'Aircraft for Sea Service;' H. S. Massy, 'The Seaplane and its Development.'

²¹⁴ B. D. Hunt, *Sailor-Scholar*, pp.32 – 38.

²¹⁵ L. C. Burney, 'Air Power;' M. Paris, *Winged Warfare*, p.136.

The fact that we know how to handle our ship and manipulate her gun does not indicate that we are ready to play our part in war.²¹⁶

Whilst this captured the perspective of the anti-material school, such criticism would have been considered sacrilegious by the majority of conservative officers in the Navy. As Hunt observes, the unofficial nature of *The Naval Review* led to the journal being viewed with suspicion, which severely limited its ability to influence the Navy. As Hunt continues, the *Review* was heavily censored during wartime, and its publication was eventually suspended for the duration.²¹⁷ Nevertheless, if the NW failed to articulate its role and functions to interested internal and external parties, this did not hide the Wing's informal doctrinal appetite for the technical and for the offensive, conceptualised through the lens of a growing awareness of Britain's strategic vulnerability. This proclivity was captured in NW attitudes and approaches to experimentation, which, in turn, have passed into the historiography with uniform levels of praise.

Naval Wing Experimentation

As it was for the military, the need for weapons with which to arm aircraft to fight for the control of the air was a central feature of pre-1914 naval experimentation. For the NW, this process has been well documented in the secondary literature, whilst an excellent primary source summary is available

²¹⁶ W. Boyle, 'Individual Preparations for War,' *The Naval Review*, Vol.1, No.1 (1913), p.44.

²¹⁷ B. D. Hunt, *Sailor-Scholar*, p.36.

and has been much cited.²¹⁸ Goulter's summation of this process encapsulates the general historiographical trend, which concludes that the NW was at the forefront of aviation research because it was supported 'by an institution which had a strong tradition in research and development.'²¹⁹ Thus, if the RN's technical obsession served the NW poorly in the production of doctrine and the wider dissemination of ideas, concepts, and roles of air power, it provided a nurturing environment within which to develop innovative aeronautical technologies and techniques.²²⁰ As Gordon notes, the Navy placed great store in vocational competence, as without such skills officers and men were effectively liabilities rather than assets when serving on ships.²²¹

If Goulter's contention regarding the advanced material state of the NW is irresistible, it is important to place the efforts of both Wings within the wider context of their parent services. As noted, one service was historically at ease with technological development, the other not so. This was manifest in the pre-war experiments of both branches of the Corps, and the MW was naturally more inclined to be conservative, and necessarily measured with regard to experimentation. Consequently, their experimentation seemed rather basic in comparison to the efforts of the NW. Of course, given the extra level of complexity in operating aircraft in a naval context, the advanced

²¹⁸ AIR 1/725/1/181 – 'Early bomb armament experiments and early naval air experiments: guns and bombs, by Group Captain R. H. Clark-Hall,' 24 Nov 1924; C. Goulter, *A Forgotten Offensive*, chapter one; H. Woodman, *Early Aircraft Armament*, pp.16 – 19.

²¹⁹ C. Goulter, *A Forgotten Offensive*, p.2.

²²⁰ W. Raleigh, *WIA, Vol.1*, pp.471 – 472.

²²¹ A. Gordon, *Rules of the Game*, pp.178 – 179.

material state of the NW is perhaps even more impressive.²²² However, both Wings utilised an identical and logical methodological approach to these efforts. As Marder remarks,

Overwhelming changes were pressing on the Navy from all sides with very little experience of modern war to guide it. Trial and error were inevitable, and were, indeed, not peculiar to the Navy.²²³

In addition, Grove notes that, at the outbreak of war, the RNAS's limited technical capabilities were very probably the most decisive factor in restricting the ability of the RN's aviation arm to provide genuine support to the Grand Fleet at Sea.²²⁴

Conclusion

The *de facto* separation and collapse of the 'corps of aviators' concept was completed during July 1914, as an Admiralty circular confirmed that the 'Royal Naval Air Service will form part of the Military Branch of the Royal Navy.'²²⁵ As Roskill notes, this separation was not officially sanctioned until 29 July 1915, although Grove argues that the RNAS remained a formal part of the RFC until the creation of the RAF in April 1918.²²⁶ As suggested, this reflected a separatist intent that was present during the initial Admiralty participation in the creation of the Flying Corps and throughout the pre-war period. The

²²² G. Till, *Air Power and the Royal Navy*, pp.60 – 61.

²²³ A. J. Marder, *Dreadnought to Scapa Flow, Vol.I*, p.427.

²²⁴ E. Grove, 'Seamen or Airmen?' pp.25 – 26.

²²⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.156 – 162. Extracts from Admiralty Circular, 'Royal Naval Air Service – Organisation,' 1 Jul 1914.

²²⁶ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.212 – 213. Admiralty Weekly Order, 29 Jul 1915; E. Grove, 'Seamen or Airmen?' pp.24 – 25.

administrative impetus to change the name to the RNAS may in fact have originated with Henderson, although the term 'Naval Air Service' seems to have been first coined by Sueter.²²⁷ The NW's decision to modify its name in August 1914 to the 'cumbersome' 'Royal Flying Corps, Naval Wing (Royal Naval Air Service)' met with some displeasure. Henderson, in a letter of 13 September 1914, suggested the name be changed to the more straightforward RNAS. This met with some resistance, and the Admiralty continued to stall until the beginning of 1916. Henderson's motivation may have been to simplify the nomenclature, although he also wished to seize the title of the RFC for sole use by his military aviators.²²⁸

In effect, Britain entered the First World War with two air forces, a source of much friction during the conflict. Whilst materially better prepared and more open to the innovative uses of air power, the failure of the NW to produce effective doctrine during this period had a profound impact during the First World War. As the following chapters demonstrate, it is difficult to dismiss the conclusion that, due to differing attitudes to doctrine, and particularly via its Corbettian function, the NW's failure to produce doctrine led to the domination of the conflict by the views of air power so successfully articulated by the MW in the *Training Manual*. Although it did not possess formal doctrine, NW policy was unmistakably focused on the strategic conception of the control of the air. For pragmatic and philosophical reasons, this policy was shaped by Churchill and Sueter to take the form of a counter offensive. If the NW is to be criticised

²²⁷ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.109 - 112. Extracts from Memorandum by the Director, Air Department, 'Instructions for the Conduct of Naval Air Stations,' Aug 1913.

²²⁸ AIR 1/118/15/40/53 – Renaming of Naval Wing, RFC – Approaches to Admiralty, Sep – Oct 1914 and Jan 1916.

for its lack of doctrine, then the foresight shown concerning air defence preparations, even if very limited in the context of the sophisticated air defence system of the latter war years, must be commended.

CHAPTER FOUR

THE CONTROL OF THE AIR ON THE WESTERN FRONT: THE RFC AND THE AGGRESSIVE CULTURE OF THE BEF

Introduction

Between 1915 and 1918, the RFC pursued a vision of the control of the air that stressed the importance of a constant offensive to seize material and moral superiority over the enemy, by utilising armed fighting aircraft on offensive patrols deep inside enemy territory. The degree of control attained via such operations would allow the RFC to conduct its vital work in tactical support of the BEF, primarily reconnaissance and artillery observation. The dogged pursuit of this conception of the control of the air has been the subject of significant criticism in the historiography. By contextualising this criticism, this chapter will seek to redress the historiographical balance.

As the use of air power on the Western Front represented the major theatre in which British air power was utilised during the First World War, it is necessary to devote significant time and space to its study.¹ The chapter begins by establishing a working understanding of the RFC's conception of the control of the air. This is followed by an examination of the structural and cultural pressure generated by the BEF that was at work on the RFC. In establishing

¹ War Office, *Statistics*, p.507.

the wider context of these pressures, a focus on the control of the air comes only during the second half of the chapter.

It is possible to demonstrate that, in spite of significant criticism of the RFC, the Corps found itself to be a prisoner of circumstance; trapped by an aggressive organisational culture that resulted in a conflict that was characterised by high tempo, aggressive, and offensive operations. This was a tempo and temperament with which the RFC had little choice but to conform. These factors allow the criticism of the RFC, particularly of its conception of the control of the air, to be placed in the wider context of the conflict. This chapter does not suggest that all criticism of the RFC is unwarranted, but that it is necessary to place such criticism in a broader context. Importantly, the concept of the control of the air, being so broad, necessitates the exploration of a diverse range of subjects, including organisational culture, educational experiences, the nature of doctrine, and the effectiveness of commanders. However, and unapologetically, this is not a narrative of RFC control of the air operations during the war. Operational and tactical practices feature only when demonstrating the development of control of the air doctrine, or to highlight wider structural and cultural pressures at work on the RFC. It is important to emphasise that the RFC was a subordinate unit of the BEF and, as such, it did not operate in a vacuum, either in a military sense, or in an organisational or cultural sense. The ground and air aspects of the campaigns of the Western Front are often divorced, which creates an artificial boundary between the RFC and BEF.

The RFC and Control of the Air: Background

In spite of the RFC's pre-war commitment to aerial fighting as a means to establish the control of the air, the outbreak of war in August of 1914 interrupted any further preparatory steps, and the Corps was thrown into a period of fluid manoeuvre warfare.² The deployment plans for the RFC, the result of involved staff work throughout 1913 and 1914, concluded that four squadrons would accompany the Expeditionary Force to France with at least one reserve squadron upon which the RFC could draw.³ Morrow offers an apt analysis of the RFC's deployment when he observes that,

In August 1914, the RFC's chief planner ... [Sykes] ... was convinced ... of a short and glorious war. He threw nearly every man and machine into the fray, believing that neither could stand more than three months in the field.⁴

In total, as Raleigh states, the RFC deployed to France with some 105 officers, 755 men, and 63 aeroplanes. A seemingly large reserve left in Britain, of 116 aircraft, contained only 20 machines serviceable and fit for purpose.⁵ A crucial aspect of this deployment came to involve the senior command of the RFC scrambling for resources to ensure that they possessed armed aircraft capable of fighting for the control of the air.

On 29 July 1914, Brancker informed Sykes that, in addition to the one Hotchkiss gun already possessed by the RFC, three Lewis, one Madsen, and

² M. Baring, *R.F.C. H.Q.* (London, Bell & Sons, 1920), chapter three.

³ AIR 1/118/15/40/56 – Military Wing Mobilisation Plan, 29 Jul 1914.

⁴ J. Morrow, *The Great War in the Air*, p.75.

⁵ W. Raleigh, *WIA, Vol. I*, p.411.

one additional Hotchkiss gun would be made available. Fifty service rifles would also be issued, whilst orders for 500 light bombs and 200 hand grenades had been placed. The following day, Brancker had been able to obtain four Vickers-Maxim guns, which would be forwarded to Sykes immediately. Sykes must have experienced profound frustration in being forced to write to HQ Southern Command in order to seek permission to test his new weapons.⁶ In looking for longer-term solutions, Sykes possessed the foresight to request the despatch of a weapons expert from the Musketry School to liaise with manufacturers concerning mounting armament on aircraft. The expert's visit to Vickers met with some success, and progress was made, not only because of his expertise but also because of the base of knowledge generated during the tests of 1913 and 1914.⁷ Important modifications and recommendations could be made to manufacturers, particularly regarding the mount for the Lewis light machine gun, the secure stowage of ammunition, and general safety precautions for the gunner.⁸ The majority of these features had been highlighted during testing in 1913 and 1914, and almost certainly saved time with regard to providing the RFC with effective and efficient aerial weaponry. By December 1914, some 36 fighting aircraft, of pusher configuration, were on order from Vickers, each armed with a single Lewis gun. Maurice Farman types, specially armed with Lewis guns, were despatched to France during September 1914, but confirmed Sykes's

⁶ AIR 1/812/204/4/1250 – DGMA to Sykes, 29 and 30 Jul 1914. See AIR 1/812/204/4/1250 – Sykes to Southern Command, 3 Aug 1914.

⁷ AIR 1/812/204/4/1250 – Sykes to DGMA, 23 Sep 1914 and H.E. Cheney, School of Musketry to Sykes, 21 Nov 1914.

⁸ AIR 1/812/204/4/1250 – Sykes to Vickers, 4 Dec 1914 and Sykes to British Small Arms Company, 4 Dec 1914.

pre-war fears that, lacking in lifting power, which severely restricted their ability to climb quickly, they were of limited value.⁹

These steps, however rudimentary, give a clear indication that the RFC intended to give more concrete and practical form to the doctrine of aerial fighting contained within the *Training Manual*. By early 1915, this vision was somewhat clearer, as the role played by air power was becoming increasingly important, particularly in the fields of reconnaissance and artillery observation. As such, and confirming pre-war hypothesising, it was apparent that aircraft would have to fight for their operational freedom of movement whilst denying such freedoms to the enemy.¹⁰ By the beginning of 1915, the RFC had arrived at a conception of the control of the air that reflected the coupling of pre-war hypothesising and doctrine with the priceless experience gained during the opening campaigns of the conflict. This conception focused upon constant aggressive action to seize moral and material superiority over the enemy.

As a result of the change of command of the RFC in the summer of 1915, with Henderson returning to London, and Sykes sent to Gallipoli, it was left to the Corps's senior Wing Commander, Hugh Trenchard, to put this vision into practice on a sustained and expanded level. Possibly the most zealous disciple of the British Army's focus on moral superiority and the offensive, Trenchard pursued a dogged vision for controlling the skies. His fighting aircraft would push into enemy territory, forcing the German Air Service onto

⁹ H. A. Jones, *WIA, Vol.II*, p.136.

¹⁰ H. A. Jones, *WIA, Vol.II*, pp.78 – 79.

the defensive and, in turn, securing operational freedom for RFC aircraft engaged in the vital work of offering direct support to the BEF on the ground.

Captured most clearly in his memorandum of September 1916, Trenchard concluded that the aeroplane was an offensive weapon that, if used in the correct manner, could allow the establishment of moral superiority over the enemy.¹¹ For Trenchard, the correct use of air power was achieved by 'attacking and continuing to attack.'¹² This vision saw the RFC through the majority of the First World War, shaping the operational and strategic conduct of the Corps from its highly successful contribution to the Somme campaign, and the Hundred days of 1918, to the brutal struggles of late 1916 and early 1917. It is this vision, resulting in heavy losses for the RFC, which has become the subject of significant criticism in the literature. Of this criticism, a single example is offered for illustrative purposes. Sykes, an individual inherently bound to the RFC's concept of the control of the air, wrote that

Spectacular dog-fights over the German lines achieved little strategic effect and resulted in grave losses ... [Moreover,] ... some R.F.C. commanders accepted too readily the demands of Army commanders.¹³

As the opening chapter recorded, it was such demands that Jones highlighted in the official history, touching upon the pressures that affected the RFC's approach to the control of the air.¹⁴ These pressures were two-fold: the first

¹¹ AIR 1/789/29/1 – Memo, Trenchard to WO, 'Future Policy in the Air,' 22 Sep 1916; H. A. Jones, *WIA, Vol.II*, pp.472 – 475.

¹² AIR 1/789/29/1 – Memo, Trenchard to WO, 'Future Policy in the Air,' 22 Sep 1916, p.2.

¹³ F. H. Sykes, *From Many Angles*, p.220.

¹⁴ H. A. Jones, *WIA, Vol.VI*, pp.552 – 558.

based on purely operational considerations, and the second based upon the aggressive culture of the British Army during this period.

The RFC and the influence of Structural and Cultural Pressures

The brief discussion of *Field Service Regulations*, found in chapter two, emphasised the aggressive doctrine of the British Army. Sheffield offers an important overview of the origins of *FSR*, which was produced under the auspices of Haig, serving to establish 'broad principles for action.'¹⁵ As noted, the nature of doctrine in the British Army during this period is the subject of some debate, yet few scholars would disagree that, at its heart, the values of aggression, moral superiority, and the importance of the offensive were stressed above all others. A typical example of such values, as offered in *FSR*, notes that

Half-Hearted measures never attain success in war, and the lack of determination is the most fruitful source of defeat
[emphasis in original]

More specific advice, such as advancing the firing line toward the enemy, reemphasised these core ideals:

... the advance of the firing line must be characterized by the determination to press forward at all costs [emphasis in original].¹⁶

¹⁵ G. Sheffield, 'Doctrine and Command in the British Army,' E.9 – E.10.

¹⁶ *FSR* (1912 amendments), p.135.

Whilst some scholars may be critical of the British Army's focus on the offensive, particularly its concentration on the importance of moral superiority, these examples are cited to demonstrate that the British Army went to war with a doctrine that placed significant weight on aggression, moral superiority, and the offensive.¹⁷ The sections on defensive warfare within *FSR* confirm this contention and, whilst not dismissing the importance of assuming a defensive posture on occasions, the advice is explicit:

... if victory is to be won, the defensive attitude must be assumed only in order to obtain or create a favourable opportunity for **decisive offensive action** [emphasis in original].¹⁸

As the second chapter also concluded, such values had an impact on the doctrine that was produced by military aviators prior to the First World War. However, the BEF, including its aerial component, did not have the opportunity to dictate terms during the opening engagements and battles of 1914. As such, it was difficult, if not impossible, to develop an aggressive and offensive outlook. From the perspective of the RFC's experience of, and contribution to, this period, Baring's *R.F.C. H.Q.* (1920) gives invaluable insights.¹⁹ Baring, as assistant to Henderson and later to Trenchard, was in a unique position to record the activities of the RFC, and his account of the summer of 1914 provides a genuine flavour of the chaotic and fluctuating nature of the campaign, in which fluidity, manoeuvre, and a lack of initiative were the dominating themes.²⁰ Baring also does an excellent job of capturing

¹⁷ T. Travers, *The Killing Ground*.

¹⁸ *FSR* (1912 amendments), p.127.

¹⁹ M. Baring, *R.F.C. H.Q.*

²⁰ M. Baring, *R.F.C. H.Q.*, chapter three.

the transition from manoeuvre to static warfare and the establishment of a routine for the RFC.

With the stabilisation of the front during the winter of 1914, particularly after the First Battle of Ypres, the RFC and BEF were able to settle into the rhythm and routine of what came to be known as trench warfare.²¹ As Sykes was to comment in his autobiography, when the front became more stabilised,

we were able to give much more time to improving our technique in the light of experience.²²

In practical terms, this also included the development of a more offensive outlook, as reflected in the Corps *Training Manual* and in line with wider BEF policy and practice. Wider BEF policy shifted to a more offensive posture due to a combination of factors. High amongst these was the pressure placed upon Britain by her French allies. As Edmonds and Wynne highlight, the Commander of the BEF, Sir John French, was given specific instructions from the WO to 'conform, as far as possible, to the plans and wishes of [the French].'²³ Such instructions, the result of significant pressure from the high command of the French Army, also reflected the wider opinion of the French public, who felt that 'the British Empire was not making the utmost effort for the common cause.'²⁴ These concerns were legitimate, and the French,

²¹ Ibid; F. H. Sykes, *From Many Angles*, pp.127 – 138. On First Ypres, see I Beckett, *Ypres* (London: Pearson Education, 2004); R. Holmes, *The Little Field Marshal: A Life of Sir John French* (London: Weidenfeld & Nicolson, 2004) [1981], pp.244 – 256; J. E. Edmonds, *Military Operations: France and Belgium (OH), 1914, Vol. II* (London: Macmillan & Co., 1925).

²² F. H. Sykes, *From Many Angles*, p.139.

²³ J. E. Edmonds & G. C. Wynne, *Military Operations: France and Belgium (OH), 1915, Vol. I* (London: Macmillan & Co., 1927), p.2.

²⁴ Ibid.

whose territory was under occupation, desired an active and aggressive strategy that would expel German forces from France in a rapid fashion.²⁵ The wider political context of such instructions reflected the nature of coalition warfare in which, at this stage, Britain was the junior partner to France.²⁶ As Sheffield notes, Britain's decision to deploy significant numbers of troops to the Continent ensured that Britain was sending the

right signals, to demonstrate ... that 'Perfidious Albion' was indeed committed to the war.²⁷

Justifiable concerns for Sir John French, including a lack of resources and manpower, were not deemed sufficient to maintain a defensive posture until they had been remedied.²⁸ Other factors that affected the BEF's shift to a more offensive policy included the manner in which the BEF's General Headquarters (GHQ) viewed the importance of offensive action. This was a tangible manifestation of the values found within *FSR*. The campaigns of 1914 had been extremely hard on the BEF, and it was deemed vital to shift to the offensive in order to boost the morale of the British forces in France.²⁹ This offensive policy would aim to assist the French (or take the lead) in large set-piece battles, whilst launching patrols and raids against German positions on a regularly irregular basis. As Ashworth suggests, the move to an active front

²⁵ *Ibid.*

²⁶ On the coalition context, see E. Greenhalgh, *Victory through Coalition*. See also chapter five.

²⁷ G. Sheffield, *Forgotten Victory*, p.86.

²⁸ R. Holmes, *The Little Field Marshal*, pp.256 – 258.

²⁹ J. E. Edmonds & G. C. Wynne, *OH, 1915, Vol. I*, pp.2 – 3.

policy was designed, at least in part, to counter what Holmes characterised as the 'sedentary habits of trench warfare.'³⁰

The development of an offensive outlook was driven both by directives from GHQ and by ad-hoc initiatives at the lower levels. During the early stages of 1915, Ashworth suggests that 'elite battalions' helped develop an aggressive and offensive posture via a process of innovation and improvisation.³¹ Senior figures within the BEF also continued to press their units to adopt a more offensive outlook, based in no small part on the guidance contained within *FSR*. On the eve of being appointed to command First Army, Haig recorded the results of a meeting with his divisional commanders and other senior officers, in which the importance of local attacks, and an active defence, were to be two of the key features of 'carrying on operations under new conditions' – i.e. trench warfare.³² Two weeks earlier, Haig had also expressed displeasure with the lack of offensive energy displayed by his colleagues in II and III Corps. Haig's own Corps had started to improvise with specialist weapons for use under these 'new conditions,' and Haig's diary makes specific mention of the development and production of trench mortars.³³ It was not until 7 February 1915 that French issued a formal directive with regard to the development of a more vigorous policy at the front. This directive called for the undertaking of active raiding and patrolling against the German positions opposite British trenches:

³⁰ T. Ashworth, *Trench Warfare*, pp.43 – 45; R. Holmes, *The Little Field Marshal*, p.301.

³¹ T. Ashworth, *Trench Warfare*, p.45.

³² G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 24 Dec 1914, p.87.

³³ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 12 Dec 1914, p.84.

The Field-Marshal Commanding-in-Chief desires me again to draw attention to the importance of constant activity and of offensive methods in general in dealing with the enemy opposed to us.³⁴

For Edmonds and Wynne, this directive was the result of the continued and worrying display of initiative by the German Army. For French, a more aggressive policy would serve to recapture the initiative and establish moral superiority over the enemy.³⁵ From a more practical standpoint, raiding and patrolling also allowed the BEF to blood its inexperienced new drafts whilst gathering useful intelligence for future operations, conclusions supported by Ashworth and Sheffield.³⁶ Griffith, in discussing this process ('battle inoculation'), also stresses the importance of raids in allowing new technical and tactical concepts to be tried.³⁷ Reflecting the restricted resources of the BEF during this period, French's directive was careful to stress the desire to avoid aimless operations that would result in an unnecessary loss of life for limited tactical gains. Consequently, such operations 'must invariably be well thought out beforehand ...'³⁸ Ashworth, in developing his thesis on the 'live and let live system,' suggests that French's February 1915 directive sought to counter the tendency for trench warfare to descend into long periods of inactivity, governed by informal or tacit truces coupled with ritualised aggression designed to avoid casualties.³⁹ For Ashworth, this directive did not instigate the formal British policy of active trench warfare (that came later

³⁴ J. E. Edmonds & G. C. Wynne, *OH, 1915, Vol. I*, p.33.

³⁵ J. E. Edmonds & G. C. Wynne, *OH, 1915, Vol. I*, pp.31 – 32.

³⁶ *Ibid*; T. Ashworth, *Trench Warfare*, p.196; G. Sheffield, *The Chief*, p.148.

³⁷ P. Griffith, *Battle Tactics of the Western Front*, pp.60 – 62.

³⁸ J. E. Edmonds & G. C. Wynne, *OH, 1915, Vol. I*, p.34.

³⁹ T. Ashworth, *Trench Warfare*, p.43.

under Haig), yet the 'memo did establish the *principle* of active trench warfare [emphasis in original].⁴⁰

The impact of French's directive was limited by the lack of technical and tactical expertise required to issue highly specific orders. In line with the command principles of the British Army during this period, general directives were issued from GHQ, which were given greater specificity as they descended the chain of command from the strategic to the tactical level.⁴¹ As a consequence, by the time the directive had reached the level at which such operations would be executed (battalion, company, and platoon level, depending on scale), it may have been watered down to the extent that local commanders were able to circumvent the spirit of the directive and continue to adhere to a system of live and let live.⁴² The focus on husbanding resources, a factor that severely limited French's conduct of the conflict during his time as C-in-C, BEF, was another element that restricted the impact of his directive.⁴³

The RFC and the BEF's Offensive Posture

Whilst French's directive was focused on the conduct of British troops in the trenches, the sentiment contained within its paragraphs had significant implications for the RFC. It is no coincidence that, during this period, the senior command of the RFC wished to record that their unit was already

⁴⁰ Ibid.

⁴¹ G. Sheffield, *The Chief*, pp.26 – 27.

⁴² T. Ashworth, *Trench Warfare*, pp.45 – 46.

⁴³ J. E. Edmonds & G. C. Wynne, *OH, 1915, Vol. I*, p.37.

adhering to a more offensive outlook. On 2 February 1915, five days before French's directive was issued, Sykes was to observe that

The principle of attacking hostile aircraft whenever and wherever seen ... has been adhered to and has resulted in the moral fact that enemy machines invariably beat immediate retreat when chased.⁴⁴

These echoed similar sentiments expressed by David Henderson some days earlier:

...with regard to fighting in the air, there has been a considerable amount of it; but the great difficulty has been to bring the enemy to action. The German when tackled usually bolts straight for his home and the protection of his anti-aircraft guns. Nevertheless we have managed to bring down a good many, usually by the fire of a rifle carried by the observer.⁴⁵

Whilst it has not proved possible to discover primary, documentary evidence that recorded the response of Sykes, Henderson, or the RFC to French's directive, this does not preclude drawing certain conclusions based upon a wider understanding of the close links between GHQ and the RFC.

Sir John French was an early supporter of aviation within the British Army, and had chaired a talk delivered by Sykes to the Aeronautical Society in February 1913. Whilst French has been criticised for his seemingly antiquated views on warfare, his thoughts about aviation, offered at the conclusion of

⁴⁴ AIR 1/1176/204/1/2595 – Sykes to GHQ, 2 Feb 1915. p.2.

⁴⁵ Henderson to unknown, very probably War Office, 31 Jan 1915. Quoted in F. W. Lanchester, 'Author's Review of *Aircraft in Warfare*,' 1940, p.vi. This review is contained in Lanchester's personal copy of *Aircraft in Warfare: Dawn of the Fourth Arm*, which is held at National Aerospace Library, Farnborough. Henderson's letter is cited from Lanchester's review, as it has not proved possible to locate an original copy.

Sykes's lecture, were both positive and progressive.⁴⁶ He believed that aviation had much to offer the commander, particularly in the realm of operational and tactical intelligence; helping to 'dispel the "Fog" of war.'⁴⁷ He was also perceptive in drawing the parallel between the clash that often took place between friendly and enemy cavalry reconnaissance units, and the 'battles in the air,' which would undoubtedly be a feature of future conflicts. This indicates that French had an understanding of the concept of the control of the air, even if only in a rudimentary fashion.⁴⁸ At something akin to a philosophical level, Sir John was also significantly impressed with the spirit of the RFC. The bravery of the pilots was stressed, particularly in light of the pioneering nature of their work.⁴⁹

Thus, it is unsurprising that French had a good understanding of what he could expect from the RFC during the opening campaigns of the First World War. This was due not only to French's own personal interest, but also to the efforts of Sykes and the Corps in spreading the gospel of military aviation in the years 1912 – 1914.⁵⁰ What may be termed an affinity with the RFC explains French's decision to take time out of his enormous workload to inspect the squadrons of the RFC as they arrived in France in August 1914.⁵¹

French was to remark that he was

⁴⁶ F. H. Sykes, 'Military Aviation,' pp.138 – 139.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ See chapter two.

⁵¹ M. Baring, *R.F.C. H.Q.*, p.17.

much impressed with the general efficiency of the aircraft force. I saw the Squadron Commanders and told them so.⁵²

On a personal level, French was also on good terms with the senior command of the RFC, having supported the Corps in the pre-war era. In particular, he had a long professional relationship with Sir David Henderson, an officer of whom Sir John 'thought highly.'⁵³ Such relations reflected wider trends within Britain's defence establishment, as officers often belonged to competing cliques or cabals. As Travers argues, senior officers would have favourite subordinates and would promote or protect these individuals, as long as loyal service was forthcoming.⁵⁴ Recent analysis by Connelly and Bowman has sought to revise such conclusions, stressing the limitations of patronage within the British Army.⁵⁵ Whatever the limits of their influence, cliques existed within both the Army and Navy of this period, and examples include Admiral Fisher's 'fishpond,' and the competing groups headed by Lord Roberts and Lord Wolseley during the time of the Boer War.⁵⁶

During 1914 and 1915, Haig and French came to represent rival factions within the BEF, and the RFC did not escape this phenomenon.⁵⁷ At a macro level, Henderson and Sykes could be considered as part of French's clique, whilst Trenchard became a 'Haig man.' Sykes's early connection with, and

⁵² G. French, ed., *Some War Diaries, Addresses and Correspondence of Field Marshal the Right Honourable, Earl of Ypres* (London: Herbert Jenkins, 1937), pp.144 – 145. Extract from War Diary, 14 Aug 1914.

⁵³ R. Holmes, *The Little Field Marshal*, p.317, p.401, and n.17; J. Pugh, 'David Henderson and the Command of the Royal Flying Corps.'

⁵⁴ For an overview of this system, see T. Travers, *The Killing Ground*, pp.3 – 6.

⁵⁵ T. Bowman & M. Connelly, *The Edwardian Army*, pp.35 – 36

⁵⁶ W. S. Churchill, *The World Crisis, 1911 – 1914*, pp.71 – 74; A. Gordon, *Rules of the Game*, p.301; E. M. Spiers, *The Late Victorian Army, 1868 – 1902* (Manchester: Manchester University Press, 1992), pp.68 – 69; T. Travers, *The Killing Ground*, chapter one.

⁵⁷ J. P. Harris, *Douglas Haig and the First World War* (Cambridge: Cambridge University Press, 2008), pp.182 – 185.

sponsorship by, Henry Wilson was another association that did much to shape the career of the former.⁵⁸ At a micro-level, cliques existed within the RFC. In John Salmond, Trenchard possessed a loyal subordinate whom he groomed into a suitable successor. Sykes had his own cabal, including P. R. C. Groves, and, on assuming the role of CAS in April 1918, the former was able to promote its members to important posts. It is important not to overemphasise the close relations between French and the RFC, but it was clear that, in Sir John, the RFC had a commander who believed in the capability of air power and the efficiency of the Corps. French's faith in air power was rewarded and enhanced by the RFC's performance during the Battle of the Marne, and his despatches to the WO during the autumn and winter of 1914 consistently praised the performance of the BEF's aviators.⁵⁹

As Sykes suggested, the RFC, at the behest of French and GHQ, operated with a high tempo and under significant pressure.⁶⁰ On occasions, French would make specific requests of Sykes and his pilots. These included ensuring liaison between the much pressed I Corps and II Corps, communicating with the besieged city of Antwerp, and conveying messages to the high command of the French Army.⁶¹ In other words, the RFC, with close relations to its overall C-in-C, was an integral part of the BEF. French's February directive attempted, in a general sense, to enthuse the BEF with a

⁵⁸ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.196 – 197. On Wilson, see K. Jeffery, *Field Marshal Sir Henry Wilson: A Political Soldier* (Oxford: Oxford University Press, 2006); C. E. Callwell, *Field-Marshal Sir Henry Wilson: his life and diaries, Vols. I & II*, (London: Cassell, 1927); B. Bond, *Staff College*, chapter eight.

⁵⁹ J. French, *The Despatches of Sir John French, Vol. I* (London: Chapman & Hall, 1914). See 7 Sep 1914 despatch relating to Mons, p.16. See also 8 Oct 1914 despatch relating to the Aisne, p.58 and pp.60 – 61. Finally, see 20 Nov 1914 despatch relating to Flanders, pp.158 – 159.

⁶⁰ F. H. Sykes, *From Many Angles*, p.130 – 132.

⁶¹ F. H. Sykes, *From Many Angles*, pp.137 – 138, p.141, and p.151.

more aggressive outlook. As a subordinate unit of the BEF, the RFC was no exception to such a directive. Had Sykes or Henderson not been performing in line with the wider policy directives issued by French, who took a close interest in the activities of their unit, then the C-in-C could have replaced them with more aggressive officers.

As was the case in the wider BEF, it did not always require directives from on high to ensure that all units were acting aggressively, and it appears that, even prior to French's February directive, the RFC were inclined to be aggressive. To a large extent, the aggressive intent of the RFC was curtailed only by material considerations. Throughout 1915, the Corps lacked efficient armament for their aircraft. As Jones asserts, up until early 1915, the primary weapon of the RFC was the service rifle.⁶² This reflected pre-war logistical decisions that made no provision for squadrons to be provided with machine guns, with aircrew relying on service revolvers and rifles.⁶³ This is confirmed by the reflective comments of Sholto Douglas, recorded during his time at the RAF's Staff College in the post-war period.⁶⁴ Despite lacking in efficient armed aircraft, it was aggressive intent that was the constant of RFC operations during the first twelve months of the conflict. The first recorded attempt at aerial fighting took place on 22 August 1914, as pilots from No.2 Squadron attempted to engage a low-flying German reconnaissance machine that passed over their airfield. Louis Strange, a noted pre-war pilot and daredevil, attempted to give chase in No.5 Squadron's Maurice Farman armed with a

⁶² H. A. Jones, *WIA, Vol.II*, p.136.

⁶³ AIR 1/118/15/40/37 – Store Table for RFC Squadron to be deployed in the case of war, late 1913.

⁶⁴ AIR 1/2393/240/1 – W. S. Douglas, *A Record of the Experience during the War, 1914 – 1918*, RAF Staff College Essay, pp.2 – 3.

Lewis Gun. As Strange's biographer records, the sheer weight of the Lewis Gun (and passenger) made climbing to engage the German craft an impossible feat.⁶⁵ The rifle-armed aircraft from No.2 Squadron also made an abortive attempt at engagement.⁶⁶ The early and limited results obtained did not obscure the fact that RFC pilots were exceptionally keen to grapple with the enemy. For example, on 25 August 1914, No.2 Squadron attained its first success, although without weapons. Achieving results via the aggressiveness of their flying, a German observation plane was hounded by three British machines and forced to make a landing, upon which the German aircraft was promptly burnt.⁶⁷ That the first battles in the sky were essentially moral contests reflected not only the lack of weapons, but also the spirit with which the RFC had been indoctrinated since its earliest existence, manifest in clearest form in the *Training Manual*. Moral superiority could not achieve success on its own, and Henderson, in correspondence with his deputy, concluded that

Any fighting machine is wanted, but not Henri Farman's: these cannot climb fast enough. Any machine sent out must be able to climb really fast.⁶⁸

Henderson's request, coupled with these early encounters, confirmed the validity of pre-war hypothesising and of the doctrinal importance attached to aerial fighting. With reference to early combats, Raleigh's taste for literary flourishes is apt:

⁶⁵ P. Hearn, *Flying Rebel*, pp.30 – 32.

⁶⁶ W. Raleigh, *WIA, Vol.I*, pp.327 – 329.

⁶⁷ *Ibid.*

⁶⁸ AIR 1/118/15/40/36 – Précis of remarks, Henderson to Brancker, 9 Sep 1914.

the confidence and determination with which ... [RFC aviators] attacked [often] did the work of a machine-gun and brought the enemy down.⁶⁹

From an evidential standpoint, firsthand accounts of aerial combats during this period are sparse, and, as Wise notes, squadrons began to submit formal reports after mid-April 1915.⁷⁰ For example, Nos.1 and 5 Squadrons began submitting formal combat reports during April 1915, whilst No.3 Squadron began submitting reports in May.⁷¹ However, Jones records several occasions during early to mid-1915 in which successful aerial combats took place.⁷² Such aggressiveness did not go unnoticed by French, and his despatch of 2 February 1915 recorded that

Five German aeroplanes are known to have been brought to the ground, and it would appear probable that others, though they have managed to reach their own lines, have done so in a considerably damaged condition.⁷³

Much of this material was 'borrowed' from Sykes's report of the same day, indicating that French continued to take a keen interest in the reports and work of the RFC.⁷⁴ French's decision to highlight the appalling weather conditions under which the RFC continued to operate also captured French's admiration and appreciation of the efforts of the Corps. Such efforts were undertaken with the correct 'active' and aggressive mindset deemed crucial by

⁶⁹ W. Raleigh, *WIA, Vol.I*, p.329.

⁷⁰ S. F. Wise, *Canadian Airmen in the First World War*, p.346.

⁷¹ AIR 1/1216/204/5/2634 – Combat Reports, No.1 Squadron, Apr 1915 – Oct 1918; AIR 1/1217/204/5/2634 – Combat Reports, No.5 Squadron, Apr 1915 – Sep 1918; AIR 1/1216/204/5/2634 – Combat Reports, No.3 Squadron, May 1915 – Oct 1918.

⁷² H. A. Jones, *WIA, Vol.II*, pp.136 – 138.

⁷³ F. H. Sykes, *From Many Angles*, p.152.

⁷⁴ AIR 1/1176/204/1/2595 – Sykes to GHQ, 2 Feb 1915. p.2.

Sir John.⁷⁵ Thus, as French pressed the BEF hard during the winter of 1914 / 1915, there was little for the RFC to do but to match these efforts and conduct their operations in keeping with the wider aggressive culture of the BEF, captured in *FSR* (and the *Training Manual*) and pushed further with French's February 1915 directive.

Importantly, there were additional battlefield implications, which affected the tempo at which the RFC was forced to operate. After the impressive performance of the Corps during the opening encounters of the conflict, senior BEF commanders came to rely on air power as a source of information, not only to monitor the movements of the enemy, but in the planning and execution of friendly ground operations. With the expansion of the BEF in the winter of 1914, the RFC undertook a corresponding reorganisation, encouraged by the support of French.⁷⁶ As the BEF grouped its Corps into Armies, the RFC grouped its squadrons into Wings. Each Wing, comprising two squadrons, was attached to an Army, with the Wing responsible for meeting the air power needs of its parent Army.⁷⁷ This decentralisation of air power demonstrated the responsive nature of the RFC's commanders, who grasped the expanding nature of the conflict and the need to ensure that the British Army was supplied with effective air support.⁷⁸ It was during the BEF's offensive battles of early 1915 that the RFC came to be relied upon to perform

⁷⁵ F. H. Sykes, *From Many Angles*, p.152.

⁷⁶ On the expansion of the BEF, see Haig's Diary entries of 21 Nov, 23 Nov, and 25 Dec 1914. G. Sheffield & J. Bourne, eds., *Douglas Haig*, p.82 and p.87.

⁷⁷ Paper, GHQ, 15 Jan 1915, 'Notes on Air Reconnaissance,' copy in F. H. Sykes, *From Many Angles*, pp.525 – 526; H. A. Jones, *WIA, Vol.II*, pp.79 – 80; S. F. Wise, *Canadian Airmen and the First World War*, pp.342 – 343.

⁷⁸ E. Ash, *Sir Frederick Sykes and the Air Revolution*, p.61.

a variety of tasks.⁷⁹ The planning for the Neuve Chapelle offensive, for example, was the first to make extensive use of aerial reconnaissance and photography to locate German trenches, gun emplacements, and firing positions. These locations were then transposed onto trench maps, which were utilised in planning the operation.⁸⁰ The initial success of the battle was due in no small part to the information gathered by the RFC.⁸¹

From the perspective of the control of the air, the increasingly important contribution made by air power meant that it was becoming vital to ensure the freedom of action of friendly aerial units, whilst denying such benefits to the enemy. Reflecting the evolving nature of aerial operations on the Western Front, operational orders issued to No.16 Squadron (First Wing) on 29 March 1915 were the first to order a formal offensive patrol aimed at the destruction of hostile aircraft in the air.⁸² As Wise remarks, further orders of this kind were issued to First Wing squadrons on 1, 7, 12 April and 7 May 1915. By 24 June 1915, fighting patrols had become a formalised element of operations conducted by First Wing squadrons.⁸³ During the fighting around Hill 60 in mid-April 1915 (part of the wider Neuve Chapelle operation), No.1 Squadron had been transferred to the area with the specific instructions to keep 'German aircraft away from the hill.'⁸⁴ The work of the RFC during Neuve Chapelle received warm approval from French, who commended the high

⁷⁹ AIR 1/1176/204/1/2595 – Sykes to GHQ, 2 Feb 1915; P. Mead, *The Eye in the Air*, pp.65 – 71.

⁸⁰ H. A. Jones, *WIA, Vol.II*, pp.90 – 92.

⁸¹ J. E. Edmonds & G. C. Wynne, *OH, 1915, Vol. I*, pp.85 – 86; D. Jordan & G. Sheffield, 'Douglas Haig and Air Power,' pp.270 – 271.

⁸² AIR 1/1252/204/8/7 – First Wing, RFC Operation Orders, Jan – Jun 1915; S. F. Wise, *Canadian Airmen in the First World War*, p.348.

⁸³ S. F. Wise, *Canadian Airmen in the First World War*, p.348.

⁸⁴ H. A. Jones, *WIA, Vol.II*, pp.99 – 100.

tempo of their operations in the face of difficult weather conditions.⁸⁵ In French's eighth despatch, issued during the summer of 1915, the C-in-C was to write that

[the] Royal Flying Corps is becoming more and more an indispensable factor in combat operations.⁸⁶

In observing the significant increase of German air power at the front, French praised the consistent activity of the Corps. Aerial combat was on the rise, and French was delighted with the moral superiority the RFC had established over their German counterparts, with such engagements 'invariably [taking place] over or behind the German lines.'⁸⁷ The display of initiative, aggression, and activity by the RFC was in keeping with French's directive of February 1915, the wider doctrinal culture of the British Army (*FSR* and the *Training Manual*), and the practical dictates of the operations on the ground. Thus, it is apparent that it was not only the aggressive culture of the BEF that shaped the tempo and nature of the response of the RFC during this early period. Battlefield considerations, and the increasing importance of air power to the successful conduct of ground operations, forced the RFC to fight for the control of the air.

It is important to draw a direct parallel between the RFC and BEF during the first twelve months of the conflict. Both Sir John French and the senior command of the RFC were forced to curtail their naturally aggressive instincts because they lacked adequate resources. French, and the pairing of Sykes

⁸⁵ F. H. Sykes, *From Many Angles*, pp.154 – 155.

⁸⁶ F. H. Sykes, *From Many Angles*, p.155.

⁸⁷ *Ibid.*

and Henderson, established the offensively driven philosophy that would guide the BEF and RFC throughout the conflict. This philosophy was based on pre-war doctrine contained in both *FSR* and the *Training Manual*. However, it was left to their successors, Haig and Trenchard, to put this philosophy into more widespread practice. This reflected their affinity with offensive measures and the significant increase in material and manpower resources (not available to their predecessors). For example, the size of the RFC expanded from its initial deployment strength of four squadrons in August 1914 to seven squadrons and a flight in March 1915. By September 1915, this had risen to twelve squadrons, and, by the opening of the Somme campaign in the summer of 1916, RFC strength stood at 27 squadrons.⁸⁸

The Arrival of Trenchard

It was during the reorganisation of November 1914 that Hugh Trenchard was appointed as Commander of First Wing. Up to this point, Trenchard occupied the post of Assistant Commandant at the RFC's Central Flying School. From an administrative and logistical perspective, Trenchard undertook important work in establishing the school and shaping its practices.⁸⁹ On the outbreak of war, Trenchard was appointed as Commandant of the RFC forces left in the UK, and he made a vital contribution in preparing additional squadrons for deployment to France.⁹⁰ Boyle characterises this period as one of improvisation for Trenchard, whilst stressing the latter's good working

⁸⁸ For these figures, see the RFC's order of battle contained in H. A. Jones, *WIA, Vol.II*, pp.456 – 459.

⁸⁹ Trenchard Papers, RAFM, MFC 76/1/61 – Autobiographical Notes, undated, p.61.

⁹⁰ Trenchard Papers, RAFM, MFC 76/1/61 – Autobiographical Notes, pp.64 – 65.

relations with Lord Kitchener.⁹¹ In contrast, Trenchard's contribution to RFC doctrine, particularly the production of the *Training Manual*, was slight to nil, and his hand is absent from the archival record.⁹² Yet, this did not mean that Trenchard did not adhere to such doctrine. Trenchard was an ardent disciple of the offensive spirit stressed in the pages of *FSR* and the *Training Manual*.

Trenchard's appointment to First Wing coincided with the appointment of Haig as Commander of the First Army. This was the beginning of a close working relationship, built on the foundation of a shared vision that placed significant emphasis on the importance of aggressive, offensive action.⁹³ In December 1914, Trenchard met Haig for the first time. After a brief discussion on the merits of air power, Trenchard considered Haig to be a 'believe[r] in the Air though he did not understand very much about it.'⁹⁴ These reflections may have been shaped by Trenchard's affinity for 'The Chief,' but it is apparent that, at the very least, Haig was starting to take a more positive interest in air power.⁹⁵

If Haig was the BEF's most aggressive ground commander between 1914 and 1915, then, in Trenchard, he had found his equal in the air.⁹⁶ As his biographer notes, Trenchard arrived in France with the intention to undertake 'more positive action in the air.'⁹⁷ The close cooperation between Haig and

⁹¹ A. Boyle, *Trenchard*, pp.116 – 119.

⁹² AIR 1/785/204/4/558 – Training Manual, Part II: Suggested Amendments etc.

⁹³ D. Jordan & G. Sheffield, 'Douglas Haig and Air Power,' pp.272 – 273.

⁹⁴ Trenchard Papers, RAFM, MFC 76/1/61 – Autobiographical Notes, p.68.

⁹⁵ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 9 Sep 1914, pp.68 – 69

⁹⁶ J. Hussey, 'Portrait of a Commander-in-Chief,' pp.34 – 35 and n.33.

⁹⁷ A. Boyle, *Trenchard*, p.128.

Trenchard during the battles around Neuve Chapelle is well documented.⁹⁸ The increased prevalence of aerial combat did little to douse Trenchard's appetite for the aggressive. As Boyle records,

One day soon, he [Trenchard] vowed, the Germans would be made to fight in the air.⁹⁹

Trenchard's frustration was not due to a lack of offensive spirit within the RFC, nor was official sanction lacking for a more offensive posture. As noted above, his Wing was the first to undertake deliberate fighting patrols. However, material and manpower considerations undermined the ability of the RFC to be more aggressive in the air, and to instigate a systematic policy by which the control of the air would be actively sought via aerial fighting. As Boyle asserts, Sykes was to complain directly to French that Trenchard's operations during Neuve Chapelle were incurring 'too many casualties.'¹⁰⁰ Boyle is dismissive of Sykes's complaint, citing Haig's own unconcern in the matter. Sykes was not being unfairly critical, and, as Ash notes, he tempered such criticism by praising the efforts of Trenchard's Wing in the war diary of the RFC.¹⁰¹ Sykes approved aggressive operations, and was infused with an offensive spirit. However, as part of the senior command team of the RFC, he had a better understanding of the challenges of sustainability facing the Corps. Boyle dismisses the 'light' casualties suffered by Trenchard's Wing, but does not acknowledge that losses of six aircraft and twelve men, representing half the effective frontline strength of a squadron, were significant, given the

⁹⁸ Trenchard Papers, MFC 76/1/61 – Autobiographical Notes, pp.72 – 73.

⁹⁹ A. Boyle, *Trenchard*, p.133.

¹⁰⁰ A. Boyle, *Trenchard*, pp.136 – 137.

¹⁰¹ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.65 – 66.

relatively small size of the RFC at this time. In addition, Haig, at this stage a commander fairly inexperienced in the use of air power, was not an authority to cite regarding the sustainability of aerial operations.

In March 1915, the RFC possessed less than 90 frontline aircraft, deployed in seven squadrons (plus one flight).¹⁰² Given the scale of casualties during this period, twelve personnel lost represented a significant amount. Between August 1914 and May 1915, the RFC lost 134 officers and observers. Of this number, 62 were lost via sickness or accidents. The loss of twelve members of First Wing represented close to ten percent of the entire losses of the RFC during the opening ten months of the war. This may have been 'light' in comparison to the losses of 1916 and 1917, but, in the context of the period, Sykes was right to worry.¹⁰³ Sustaining the operations of the Corps was a vital task, to which Henderson devoted a significant proportion of his energies. His discussions with Brancker, captured in a document of September 1914, demonstrate that the RFC faced a range of logistical issues that threatened the sustainability of operations on a meaningful level.¹⁰⁴

However, Sykes, who at the time was frequently left in charge of the RFC, had ultimate responsibility for the manner in which Trenchard utilised his Wing. At the very least, and whilst accepting that Wings had a significant degree of operational autonomy, Trenchard's aggressive use of his squadrons was in keeping with the pre-war military aviation doctrine that Sykes played a significant role in shaping.

¹⁰² H. A. Jones, *WIA, Vol.II*, pp.456 – 457, Appendix I: RFC Order of Battle, 10 Mar 1915.

¹⁰³ War Office, *Statistics*, p.496.

¹⁰⁴ AIR 1/118/15/40/36 – Précis of remarks, Henderson to Brancker, 9 Sep 1914.

Trouble at the Top: Sykes and Trenchard

This exchange highlights the troubling personal relations that were a factor of the command of the RFC during this period. With the RFC being such a small 'community,' personality clashes were difficult to disguise. In writing privately to the editor of the *Aeroplane*, a senior instructor at the CFS was to observe that '[t]he Lord only knows who is commanding – I don't.'¹⁰⁵ Ash notes the difficult relationship between Sykes and Trenchard and, eventually, Sykes and Henderson.¹⁰⁶ Much of this material comes from Trenchard and his biographer, and it is important to treat such evidence with care.¹⁰⁷ With distance from events, the hostile nature of the Sykes-Trenchard relationship seemed only to increase.¹⁰⁸ For example, Sykes's post-war criticism of Haig can be viewed through the prism of the latter's close relationship with Trenchard.¹⁰⁹

One of the major disputes between Trenchard and Sykes focuses on the former's handling of the RFC. This was described by Sykes as Trenchard's use of 'battering-ram tactics.' In turn, Trenchard and his biographer spend significant time defending the RFC's offensive policy, whilst characterising Sykes as an intriguer, a loner, and a poor leader of men.¹¹⁰ This debate reflects questions relating to the ownership of the RFC's conception of the control of the air, and the origins of its offensively driven doctrine. In reality,

¹⁰⁵ NAL, CGG, File 3. Letter, Fulton to Grey, 19 Dec 1914.

¹⁰⁶ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.192 – 195.

¹⁰⁷ A. Boyle, *Trenchard*, p.123.

¹⁰⁸ For example, see Henderson Papers, RAFM, AC71/12/195 – letter, Trenchard to Lady Henderson, 7 Oct 1954.

¹⁰⁹ F. H. Sykes, *From Many Angles*, p.134; G. Sheffield, *The Chief*, p.62.

¹¹⁰ A. Boyle, *Trenchard*, pp.203 – 204; F. H. Sykes, *From Many Angles*, p.220.

both men were firm believers in the offensive use of air power, and both adhered to the same vision of the control of the air: to establish moral and material superiority over the enemy via pro-active aerial patrolling with armed aircraft.¹¹¹ For pragmatic reasons, Sykes wished to distance himself from the concept because he did not wish to be associated with the heavy losses suffered by the RFC in the second half of the conflict. Sykes also came to view air power in far-reaching terms, as a force that could be put to wider use than offering auxiliary support to ground forces.¹¹² Thus, Sykes's post-war attempt to distance himself from the offensive doctrine and policy of the RFC is somewhat disingenuous. To quote Ash's conclusions,

Historians have condemned Trenchard's offensive policy from 1915 to 1917, but he merely maintained the policy Sykes had established before the war ... [T]he goal was to obtain mastery of the air ... In all, Sykes was guilty of letting his enthusiasm for morale blind him to the realities of modern warfare.¹¹³

Ash was not the first to stress this point, and Cooper observed that the

offensive ethos which characterised ... [RFC] fighter operations later in the war [was established before Trenchard rose to command the RFC].¹¹⁴

French and Sykes sought to develop the offensive outlook of the BEF and RFC respectively, yet the combination of Haig and Trenchard would take the conception to its logical extremes.

¹¹¹ E. Ash, 'Air Power Leadership.'

¹¹² E. Ash, *Sir Frederick Sykes and the Air Revolution*, passim.

¹¹³ E. Ash, *Sir Frederick Sykes and the Air Revolution*, p.42.

¹¹⁴ M. Cooper, *The Birth of Independent Air Power*, pp.19 – 20.

Haig, the BEF, and Raiding: A Study in Aggression¹¹⁵

Before establishing the nature of the relationship between Haig and Trenchard, it is first necessary to expound briefly upon Haig's rise to command of the BEF, and his strategic vision for the organisation as it moved forward into 1916. To begin, it is important to record that Haig, as Director of Staff Duties at the WO between 1907 and 1909, was responsible for the production of *Field Service Regulations* (1909). As noted above, this document played no small part in shaping the aggressive culture of the British Army. As the officer with primary responsibility for the production of *FSR*, it would be appropriate to assume that Haig was a commander who placed great store in offensive action, aggression, and moral superiority.¹¹⁶ Haig's development of French's active trench warfare policy demonstrates such a contention.

For both Sheffield and Ashworth, Haig's appointment as C-in-C, BEF was highly significant to the BEF's offensive posture, and raiding became a central tenet in his wider policy of attrition.¹¹⁷ Ashworth, who labelled Haig the 'thruster in chief,' characterises this process as the institutionalisation of aggression, with the issuing of directives and orders followed by the establishment of specialist training schools to instruct in the art of raiding. Such steps were supplemented by the publishing of specialist instructional

¹¹⁵ Prof. Gary Sheffield and Dr. Michael LoCicero were extremely helpful in providing details of Haig's trench raiding policy.

¹¹⁶ A. Simpson, *Directing Operations*, pp.5 – 6.

¹¹⁷ T. Ashworth, *Trench Warfare*, p.88; G. Sheffield, *The Chief*, p.148.

manuals.¹¹⁸ The formalisation of trench raiding began in early 1916, and Haig's diary entry of 14 January 1916 records his belief in the value of 'winter sports' as a crucial component of his strategy as C-in-C.¹¹⁹ There were other localised factors that encouraged GHQ to pursue such a policy. In the spring of 1916, a stretch of the Western Front was passed from French to British control. As Edmonds observes,

When the British took over from their Allies, they generally found a kind of unofficial suspension of arms or truce prevailing ... With a view to cultivating an 'aggressive spirit,' ... G.H.Q. did not allow the state of affairs to continue. Sniping, fire surprises and raids were ordered and encouraged.¹²⁰

In his first despatch as C-in-C, written in May 1916, Haig, who had not yet launched a full-scale offensive, was to note that his troops had been

... far from idle or inactive. Although the struggle in a general sense, has not been intense, it has been everywhere continuous, and there have been many sharp local actions.¹²¹

For Haig, these local actions, including raids that would be launched 'twice or three times a week,' were the method with which the enemy would be dominated, and both the initiative and moral superiority attained. In stressing the immensity of the conflict, Haig was to concede that such operations were

¹¹⁸ T. Ashworth, *Trench Warfare*, pp.72 – 73.

¹¹⁹ R. Blake, ed., *The Private Papers of Douglas Haig, 1914 – 1919* (London: Eyre & Spottiswoode, 1952). Haig's Diary, 14 Jan 1916, p.125. This entry is not included in Sheffield and Bourne's edition of the Haig Diary.

¹²⁰ J. E. Edmonds, *Military Operations: France and Belgium (OH), 1916, Vol. I* (London: Macmillan & Co., 1932), p.156 .

¹²¹ J. H. Boraston, ed., *Sir Douglas Haig's Despatches, December 1915 – April 1919* (London: J. M. Dent & Sons, 1919), p.3.

seemingly insignificant on an individual scale. However, they relieved the 'comparative monotony of th[e] struggle,' whilst having a

... cumulative effect [which], though difficult to appraise at its true value now, will doubtless prove hereafter to have been considerable.¹²²

The cumulative effect was the attrition of the enemy's strength on the ground, both physically and morally. The official history provides an example of a 'model' raid, which was conducted by a unit of Haig's First Army, shortly before his ascension to the command of the BEF. The brigade and battalions in question, units of the 1st Canadian Division, part of the wider Canadian Expeditionary Force, had a noted reputation for innovation and improvisation, as well as for their fearsome battlefield performance.¹²³ The rather sterile language of the report belies the aggressive intent of the operation, although the objectives do provide some hints.

The raid would have specific localised objectives, including the capture of prisoners. More generally, losses were to be inflicted upon the enemy, his moral [sic] lowered, and, importantly, the continued domination of the ground up to the enemy's front line trench attained.¹²⁴ The raid was considered a huge success, and, in summing up the lessons of the operation, the report was to stress that the German forces opposing the Canadians had shown

¹²² J. H. Boraston, ed., *Haig's Despatches*, p.4.

¹²³ For example, see B. Rawling, *Surviving Trench Warfare: Technology and the Canadian Corps, 1914 – 1918* (London: University of Toronto Press, 1992).

¹²⁴ J. E. Edmonds, *Military Operations: France and Belgium (OH), 1916, Appendices, Vol. I* (London: Macmillan & Co., 1932), Appendix 6, Organization and Execution of a Raid, pp.42 – 48. See also D. Winter, *Death's Men: Soldiers of the Great War* (London: Allen Lane, 1978), pp.92 – 95; J. Ellis, *Eye-Deep in Hell: The Western Front, 1914 – 18* (London: Book Club Associates, 1975), chapter five.

poor discipline, poor military skill, and a lack of co-operation.¹²⁵ Perhaps most importantly, German forces had failed due to a '[c]omplete lack of active patrolling and the surrender of the initiative.'¹²⁶ All of the negative factors stressed by the report were the evils that a policy of active raiding were designed to counter.

Haig's despatch and report cited above provide many insights into the policy of constant raiding. Haig embraced the core tenets of French's February 1915 directive, yet the formalisation of raiding took another step in March 1916 with the publication of *Notes for Infantry Officers on Trench Warfare*.¹²⁷ The very notion of issuing notes and pamphlets of this kind conformed to wider practice within the British Army. As Sheffield notes, the nature of *FSR* meant that it provided the basis upon which tactical and operational best practice could be built, in the form of training pamphlets and manuals (notably the *S.S.* series of pamphlets).¹²⁸ Whilst offering specific tactical advice, the March 1916 pamphlet reinforced the importance of constant aggressive activity, which

... always results in an ultimate mastery ... achiev[ing] the double purpose of raising the moral [sic] of our own troops whilst lowering that of the enemy's.¹²⁹

Such a tempo of activity also served to foster the offensive spirit in officers and men who, under the conditions of trench warfare, had the 'insidious

¹²⁵ J. E. Edmonds, *OH, 1916, Appendices, Vol. I*, p.48.

¹²⁶ *Ibid.*

¹²⁷ General Staff, War Office, *Notes for Infantry Officers on Trench Warfare* (London: HMSO, 1916),

¹²⁸ G. Sheffield, 'Doctrine and Command in the British Army,' E.11. For details of the evolution of the *S.S.* series, see P. Griffith, *Battle Tactics of the Western Front*. For an example of such a pamphlet, see General Staff, War Office, *S.S. 143: Instructions for the Training of Platoons for Offensive Action, 1917* (London: HMSO, 1917).

¹²⁹ General Staff, War Office, *Notes for Infantry Officers on Trench Warfare*, p.8.

tendency to lapse into a passive and lethargic attitude.¹³⁰ Haig was to benefit from the accumulation of manpower and resources that allowed this policy to be pursued in a more widespread and vigorous fashion. For example, at the outbreak of war, the BEF deployed to France with four infantry divisions and one cavalry division. By 1 January 1916, less than a month into Haig's new command, the BEF comprised 38 infantry and five cavalry divisions, just short of a million men in total.¹³¹ As the table below demonstrates, raiding was to undergo a marked increase between 1915 and 1917, before reducing in frequency in 1918 as the BEF shifted to the defensive while suffering the effects of a manpower shortage. These statistics, compiled from a range of sources, are not comprehensive but are given to indicate the important role raiding played under Haig's command.

¹³⁰ Ibid.

¹³¹ J. E. Edmonds, *OH, 1916, Vol. I*, pp.18 – 19.

Table One

Period	Number of Raids
19 December 1915 – 30 May 1916	63 raids
Late June 1916	43 raids
July – Mid-November 1916	310 raids
9 April 1917 – Mid-November 1917	270 raids
8 December 1917 – 21 March 1918	125 raids

BEF Raiding in France, December 1915 – March 1918

Sources: J. E. Edmonds, *OH, 1916, Vol. I*, p.242 and p.310; W. Miles, *Military Operations: France and Belgium (OH), 1916, Vol. II* (London: Macmillan & Co., 1938), p.544; J. H. Boraston, ed., *Haig's Despatches*, p.135 and p.181.

It is instructive to note that such raiding took place in addition to the enormous ground campaigns and battles of 1916, 1917, and 1918, and losses during conditions of 'active trench warfare' remained high. For example, from 19 December 1915 to the end of June 1916, the BEF suffered casualties amounting to 5,845 officers and 119,296 men.¹³² These figures were not entirely made up from casualties suffered during trench raiding, but they do indicate the effects of more 'active' conditions at the front. The scale of trench raiding was reduced only when a manpower crisis threatened the BEF. This was aggravated by the threat of a massive German offensive in the spring of 1918.¹³³ Even then, Fifth Army Commander, General Hubert Gough, upon whom the weight of the German attack would fall, continued to utilise raiding as part of his policy of active defence. As Edmonds notes, some divisions

¹³² J. E. Edmonds, *OH, 1916, Vol. I*, pp.242 – 243.

¹³³ J. E. Edmonds, *Military Operations: France and Belgium (OH), 1918, Vol. I* (London: Macmillan & Co., 1935), pp.43 – 44.

instigated a policy of friendly competition between their battalions to see who could undertake the most successful raiding.¹³⁴ In sum, Haig was an aggressive commander, with the result that, as H. A. Jones suggests, the BEF undertook 'almost continuous fighting,' which was 'mostly offensive' in character.¹³⁵ Not only did the BEF possess an aggressive culture, captured in *FSR*, but it possessed commanders in French and, more profoundly, in Haig, who actively cultivated this spirit. As such, Haig expected the behaviour and performance of subordinates to match his ideals. In Trenchard, he found a compliant disciple.

Haig and his 'Magnificent' Trenchard

In his final despatch as Commander of the BEF, Haig was to write:

I recall with gratitude the magnificent work done during the fighting of 1916 and 1917 by ... Trenchard, at that time commanding the [RFC]. The influence exerted by this able and distinguished officer upon the moral and the development of the British Air Service and in the creation of its splendid traditions can scarcely be exaggerated.¹³⁶

Such sentiment was not restricted to public documents. On being faced with Trenchard's redeployment to Britain, Haig, in a letter to Lord Derby, Secretary of State for War, was to offer his frank opinion:

The importance of Trenchard's personality with the Flying Units in the Field and its direct effect in maintaining the offensive spirit in the air so vital to the success of our Armies in the Field is not, I

¹³⁴ J. E. Edmonds, *OH, 1918, Vol. I*, p.97.

¹³⁵ H. A. Jones, *WIA, Vol. VI*, p.553.

¹³⁶ J. H. Boraston, ed., *Haig's Despatches*, p.353.

think, fully realised at home ... I have no hesitation in saying that it is more than probable that the removal of Trenchard from active command in the Field would, in a short time directly impair the offensive fighting efficiency of the [RFC].¹³⁷

On another occasion, whilst having his portrait painted by William Orpen, official artist for the War Office, Haig was to insist that Trenchard too must be immortalised. As the artist recalls, Haig stated that, 'Orpen must see "Boom," he's great.'¹³⁸ Such feelings were more than reciprocated. In his autobiographical notes, Trenchard was to record that 'I can safely say here that he [Haig] made me all I rose to in France.'¹³⁹ In the post-war battle of reputations, Trenchard was an ardent supporter of 'The Chief,' writing a glowing foreword to Davidson's biography of Haig's time as Commander of the BEF.¹⁴⁰ As Jordan and Sheffield have suggested, the close relationship between Haig and Trenchard was based upon a shared vision of warfare that stressed the primacy of aggressive, offensive action aimed at achieving moral superiority.¹⁴¹ More specifically, both Haig and Trenchard believed that the only path to victory lay in the defeat of the German Army in France and Flanders. Trenchard placed his units at Haig's disposal in order to achieve such an aim, whilst Haig drove the expansion of the RFC.¹⁴²

When the possibility of an independent air force was mooted in some earnest during 1917, Trenchard, who stood to gain significantly from the creation of a separate service, opposed the move on the grounds that it would undermine

¹³⁷ AIR 1/521/16/12/3 – Haig to Derby, 6 Oct 1917, pp.1 – 2.

¹³⁸ W. Orpen, *An Onlooker in France, 1917 – 1919* (London: Williams & Norgate, 1921), p.29.

¹³⁹ Trenchard Papers, RAFM, MFC 76/1/61 – Autobiographical Notes, p.68.

¹⁴⁰ J. Davison, *Haig: Master of the Field* (London: Peter Nevill, 1953), pp.vii – xi

¹⁴¹ D. Jordan, 'Army Co-operation Missions,' pp.338 – 339; D. Jordan & G. Sheffield, 'Douglas Haig and Air Power,' pp.272 – 273; D. Jordan, 'The Battle for the Skies,' pp.73 – 74 and p.77.

¹⁴² M. Cooper, *The Birth of Independent Air Power*, p.63.

the aerial support that would be available to the BEF.¹⁴³ As Boyle offers, one of the reasons Trenchard reluctantly accepted the post as CAS of the new Royal Air Force was out of a wider loyalty to Haig. Trenchard, who wished to remain in France, was, according to both Boyle and Trenchard, forced into the role of CAS by Lord Northcliffe and the designated Secretary of State for Air, Lord Rothermere. The Harmsworth brothers threatened to launch a bitter campaign in the press against Haig if Trenchard did not accept the post of CAS.¹⁴⁴ This incident serves to demonstrate the loyalty and close professional relationship between Haig and Trenchard.

Cooper emphasises Trenchard's hero-worshipping of Haig, and the latter's total dependence on the former for specialist advice regarding air power.¹⁴⁵ This is echoed in the latest biography of Haig, in which Sheffield stresses Haig's deference to his subject matter experts. In the case of Trenchard, Sheffield suggests that Haig provided his air power commander with considerable latitude in running the RFC and developing its policy.¹⁴⁶ This is supported by both Jordan and Cooper, who note the free hand provided to Trenchard by Haig.¹⁴⁷ However, such conclusions have a tendency to downplay Haig's responsibility for the aggressive conduct of the RFC. Of course, at the tactical and operational level, Haig could not hope to possess as deep an understanding of air power as Trenchard, his subject matter

¹⁴³ AIR 1/521/16/12/3 – Undated, unsigned paper, 'The principle reasons against the creation at the present moment of an Air Ministry ...' Almost certainly written by Trenchard during the late summer / early autumn of 1917. See also Haig to CIGS, 15 Sep 1917.

¹⁴⁴ A. Boyle, *Trenchard*, pp.252 – 253; J. Morrow, *The Great War in the Air*, pp.248 – 249.

¹⁴⁵ M. Cooper, *The Birth of Independent Air Power*, pp.72 – 73.

¹⁴⁶ G. Sheffield, *The Chief*, pp.151 – 152.

¹⁴⁷ M. Cooper, *The Birth of Independent Air Power*, pp.72 – 73; D. Jordan, 'Army Co-operation Missions,' pp.230 – 232.

expert. Yet, it must not be overlooked that the RFC was a subordinate unit of the BEF for which Haig retained ultimate authority. As such, the RFC's conduct was governed via the prism of the wider organisational ethos of the British Army. This ethos, stressing constant aggressive action, was actively cultivated by Haig.¹⁴⁸ Moreover, to suggest that Trenchard operated with autonomy is misleading. Haig had an appetite for RFC reports and memos, and commented upon their contents with favour and regularity. For example, Haig's comments on Trenchard's report of 7 October 1916 are revealing. Sections relating to the high tempo of Corps operations received clear approval via the generous application of Haig's blue pencil. At the bottom of the report, Haig wrote of the RFC's '... highly credible performance in view of the weather conditions.'¹⁴⁹ In a report written at the height of the Somme campaign, Trenchard was to note that

My chief point at present is to try to keep German machines from crossing our lines or interfering with photography, contact patrols, or wireless work with artillery.¹⁵⁰

Such sentiment received Haig's endorsement and appreciation, again marked in his thick blue pencil.

Requests to rest squadrons were also sent to Haig. Two examples in early August 1916, again annotated with Haig's comments, approved Trenchard's decision to rest hard-pressed squadrons. On 3 August 1916, such a request was met with the following response from Haig: 'Certainly – They thoroughly

¹⁴⁸ M. Cooper, *The Birth of Independent Air Power*, pp.75 – 76.

¹⁴⁹ TNA, War Office Files (WO) 158/34 – Report, RFC HQ, Summary of Operations, 7 Oct 1916.

¹⁵⁰ WO 158/34 – Report, RFC HQ, Summary of Operations, 9 Jul 1916, p.3.

deserve a [rest].¹⁵¹ These comments, a feature of many RFC reports and memos forwarded to Haig, are instructive. They demonstrate that Haig was aware of the tactical and operational conduct of the RFC, and he commended the spirit and tempo with which their operations were undertaken. His decision to allow RFC squadrons periods of rest, not in keeping with his reputation as a 'butcher,' is also illustrative. The receipt of such approval is more surprising, given as it was at the height of the Battle of the Somme, when the forces of the BEF were engaged in the largest and most intense period of operations in the history of British Army (up to that point).¹⁵² Such a decision shows that Haig felt the RFC were fighting hard, and that squadrons that had suffered heavily were perfectly entitled to rest, as their operations had been conducted in the correct spirit. In contrast, during the height of the Passchendaele offensives, French aviation units working under Haig were chastised because many French pilots did not 'mean business.'¹⁵³ Whilst Haig could not override French orders to withdraw a 'group of machines,' he recorded his displeasure, hinting that they did not require a rest because they were operating with a lack of offensive spirit.¹⁵⁴

In noting the heavy losses suffered by the RFC, Mason draws a direct parallel with the catastrophic casualties experienced by the wider BEF, particularly during the Battle of the Somme. As Mason suggests, Trenchard would have been well aware of the losses being suffered by the BEF, whilst

¹⁵¹ WO 158/34 – Report, RFC HQ, Summary of Operations, 3 Aug 1916.

¹⁵² For operations on the Somme, see C. Duffy, *Through German Eyes*; W. Philpott, *Bloody Victory: Sacrifice on the Somme* (London: Abacus, 2010); G. Sheffield, *The Somme* (London: Cassell, 2003).

¹⁵³ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 18 Aug 1917, p.318.

¹⁵⁴ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 20 Aug 1917, p.319.

He would have expected little sympathy [from GHQ] for an RFC casualty rate measured in tens rather than thousands.¹⁵⁵

As D. R. Jones records, loss statistics for the RFC, compared to the ground components of the BEF, were miniscule. Between August 1914 and December 1915, the BEF lost 85,598 ground troops on the Western Front. During the same period, the RFC lost 89 men to enemy action. Even during July 1916, and with the institutionalisation of fighting in the air, only 42 RFC personnel died.¹⁵⁶ It is important to note that Haig would also have been aware of such losses. As Mason contends, the RFC was exceptionally proficient at recording its losses, whilst Haig himself noted the 'difficulties in the air' being experienced by the RFC.¹⁵⁷ The reporting of losses was very often juxtaposed against those supposedly inflicted upon the enemy. Thus, the heavy losses experienced by the RFC were almost always offset by claims of a higher rate of attrition against the German Air Service. Such sentiment was captured in Brancker's letter to Trenchard, in which he noted that

I rather enjoy hearing of our heavy casualties as I am perfectly certain in my own mind that the Germans lose at least half as many again as we do.¹⁵⁸

Whilst difficult to ascertain whether Haig was provided with an accurate statistical picture of the aerial conflict that raged above the Western Front, he

¹⁵⁵ T. Mason, *Air Power: A Centennial Appraisal*, pp.28 – 29.

¹⁵⁶ D. R. Jones, 'Flying and Dying in WWI: British Aircrew Losses and the Origins of U.S. Military Aviation Medicine,' *Aviation Space, and Environmental Medicine*, Vol. 79, No. 2 (Feb 2008), p.139.

¹⁵⁷ T. Mason, *Air Power: A Centennial Appraisal*, p.30; Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 18 Aug 1917, p.318; AIR 1/758/204/4/119 – Combats in the Air, Summary of Results, 20 June – 29 Dec 1915; War Office, *Statistics*, p.505.

¹⁵⁸ Trenchard Papers, RAFM, MFC 76/1/7 – Letter, Brancker to Trenchard, 22 Sep 1916.

was aware of the heavy losses being suffered by the RFC, and yet continued to support Trenchard and commend the efforts of his Corps. In his despatch of December 1916, Haig praised the 'varied' and 'admirable' work of the RFC. Rather than focusing on the operational or tactical achievements of military aviators during the Somme campaign, Haig was careful to emphasise the spirit in which such operations were carried out. Much as his predecessor, French, had done, Haig stressed the 'bravery,' 'daring,' and 'determination' of the Corps.¹⁵⁹

As the war moved into 1917, Haig met more frequently with Trenchard. This reflected the increasing importance of air power, particularly in the sphere of spotting for artillery.¹⁶⁰ As was the case during this period, massive artillery bombardments were deemed the necessary prerequisite for success on the Western Front.¹⁶¹ Such sentiment was captured in Haig's despatch of December 1917 when, in relation to operations around Arras (April – May, 1917), he was to write of the importance of gaining 'local supremacy in the air.' Haig offered praise and noted that

... the offensive tactics most gallantly persisted in by our fighting aeroplanes secured our artillery machines from serious interference and enabled our guns to carry out their work effectively.¹⁶²

¹⁵⁹ J. H. Boraston, ed., *Haig's Despatches*, p.54.

¹⁶⁰ J. Hussey, 'Portrait of a Commander-in-Chief,' pp.16 – 17; D. Jordan, 'Army Co-operation Missions,' chapters five and six.

¹⁶¹ J. Bailey, 'British Artillery in the Great War,' in *British Fighting Methods in the Great War*, ed. P. Griffith (Oxon: Frank Cass, 1996), pp.23 – 49.

¹⁶² J. H. Boraston, ed., *Haig's Despatches*, pp.86 – 87.

This built on the experiences of 1916, captured in General Horne's assessment that

the operations on the Somme had proved that tactical success is largely dependent on superiority in artillery and supremacy in the air.¹⁶³

Haig's awareness of the importance of air power continued to grow throughout 1917, and, as he records in his diary, the preparations and execution of the BEF's main offensive of 1917 (Third Ypres) depended to a great extent on establishing 'supremacy in the air.'¹⁶⁴ As the BEF's operations expanded in scale, the nature of air support that the RFC was required to provide underwent a subsequent and natural increase.¹⁶⁵ In attempting to meet the rapid growth of the BEF, particularly its infantry and artillery components, the RFC underwent a further expansion during early 1916. Developing on the reorganisation of late 1914, an additional echelon of command was created between RFC HQ and Wing level, and thus the RFC Brigade was born.¹⁶⁶

As noted, on the eve of the Battle of the Somme, the RFC comprised some 27 squadrons. On the eve of Third Ypres (July 1917), RFC strength in France stood at some 50 squadrons.¹⁶⁷ Such an expansion was forcefully pursued by Haig, who chafed and harassed the War Office from late 1916 and

¹⁶³ H. A. Jones, *WIA, Vol.III*, p.309; S. Robbins, *British Generalship during the Great War: The Military Career of Sir Henry Horne (1861 – 1929)* (Farnham: Ashgate, 2010).

¹⁶⁴ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 7 Jul 1917, p.302.

¹⁶⁵ H. A. Jones, *WIA, Vol. VI*, p.554.

¹⁶⁶ AIR 1/1/4/3 – Memo, RFC HQ, 'Organization of the British Royal Flying Corps in the Field,' 10 Feb 1916; H. A. Jones, *WIA, Vol. II*, pp.147 – 148; S. F. Wise, *Canadian Airmen and the First World War*, p359; D. Jordan, 'Army Co-operation Missions,' pp.23 – 25.

¹⁶⁷ AIR 1/520/16/11/1 – 'Precis of files relating to expansion of RFC / RAF between 1915 and 1918,' 18 Nov 1920. For orders of battle of the RFC during 1917, see H. A. Jones, *WIA, Vol.III*, Appendix XII, no page number; H. A. Jones, *WIA, Vol.IV*, Appendices III, V, and X, pp. 409 – 412, pp.414 – 418, and pp.426 – 430.

throughout 1917.¹⁶⁸ On Trenchard's recommendation, he pressed for an additional 20 fighter squadrons, aiming for a ratio of two fighting units to one army co-operation squadron.¹⁶⁹ That the RFC was constantly below the ideal strength advocated by Trenchard and Haig prompted the latter to send letters of complaint to the WO.¹⁷⁰ As Sheffield observes, Haig's requests for resources were insatiable, and largely unrealistic, given the global nature of the conflict.¹⁷¹ Trenchard was also guilty of following Haig's example in this regard. The tables below demonstrate the expanded scale of the aerial effort, driven by Haig's desire for increased aerial support for the BEF.

Table Two

Period	Casualties (Killed or Missing)	Hours Flown	Hours Flown Per Casualty
July – Dec, 1916	419	88,300	206
Jan – June, 1917	917	141,500	193
July – Dec, 1917	997	169,000	172
Jan – Jun, 1918	1077	238,215	222

Hours Flown / Casualties suffered by RFC / RAF. Western Front, September 1916 – June 1918

Sources: Statistics generated from War Office, *Statistics*, p.505.

¹⁶⁸ See AIR 1/520/16/12/1 for a range of correspondence between late 1916 and 1917.

¹⁶⁹ AIR 1/520/16/12/1 – Haig to WO, 30 Sep 1916.

¹⁷⁰ AIR 1/520/16/12/1 – Haig to WO, 16 Nov 1916 and 3 May 1917; AIR 1/503/16/3/17 – Haig to CIGS, 13 Feb 1917.

¹⁷¹ G. Sheffield, *The Chief*, pp.157 – 158.

Table Three

Period	Strength of RFC, Officers and Men
August 1914	1,200
December 1914	2,280
March 1915	3,666
August 1915	7,234
December 1915	15,023
March 1916	22,980
August 1916	42,185
December 1916	54,731
March 1917	65,349
August 1917	87,603
December 1917	111,955
March 1918	144,078

Strength of RFC (Officers and Men), August 1914 – March 1918

Sources: War Office, *Statistics*, p.227.

Haig did rely heavily on Trenchard with regard to advice on all air power matters.¹⁷² Haig's reports and letters to the War Office concerning aviation are a feature of the primary documentation in the area. These are often accompanied in the file by a draft report written by Trenchard and his staff. The material Haig would forward to the WO was based almost verbatim on

¹⁷² J. Morrow, *The Great War in the Air*, p.175; M. Cooper, *The Birth of Independent Air Power*, pp.72 – 73; G. Sheffield, *The Chief*, pp.151 – 152; D. Jordan, 'The Battle for the Skies,' p.74; G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 4 Sep 1916, p.226.

the drafts provided by RFC HQ.¹⁷³ Yet, via his regular meetings with Trenchard, and his close interest in the activities of the RFC, Haig could be said to be a commander that had a reasonably firm grip on his air power component.¹⁷⁴

Even if Haig left air power matters largely to Trenchard, and was influenced by the latter to some extent, Haig would not have devoted considerable time and effort, and utilised precious resources, to expand the BEF's aerial component if he did not think it was producing tangible benefits for the wider execution of his strategy on the Western Front. Specifically, Haig might not have understood the intricate details of the use of air power, but he understood the importance of having air power assist the artillery in their all-important work.¹⁷⁵ As he noted in his diary, by fighting for the control of the air,

our artillery airoplanes [sic] are free to carry out their important duties ... unmolested.¹⁷⁶

The following chapter suggests that Trenchard was able to deliver a view of air power that was acceptable to GHQ.¹⁷⁷ However, had Trenchard's use of air power been unacceptable to GHQ, then its use could have been stopped and modified. Take, for example, the various points at which concerns were raised over the heavy losses being suffered by the RFC.¹⁷⁸ This criticism, of

¹⁷³ AIR 1/524/16/12/20 – Trenchard to GHQ, 2 Aug 1917 and GHQ to BEF Army Commanders, 5 Aug 1917; AIR 1/520/16/12/1 – Trenchard to Haig, 16 Nov 1917 and Haig to WO, 20 Nov 1917.

¹⁷⁴ J. Hussey, 'Portrait of a Commander-in-Chief,' pp.16 – 17. See also the numerous examples of meetings with Trenchard in Haig's diary.

¹⁷⁵ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 7 Jul 1917, p.302.

¹⁷⁶ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 18 Sep 1916, p.232.

¹⁷⁷ See chapter five.

¹⁷⁸ A. Boyle, *Trenchard*, pp.189 – 190.

which Haig was aware, did not compel the Commander of the BEF to force his air power commander to change his policy or methods.¹⁷⁹ Haig may be accused of failing to grip Trenchard, yet he retained ultimate authority for the manner in which the RFC was utilised. That Trenchard pursued a consistent vision of the control of the air, which resulted in heavy losses for the RFC, reflects that Haig felt Trenchard was utilising the BEF's air component in the most appropriate manner. Again, these conclusions appear at odds with those of Sheffield, and, during his time as Commander of the BEF, Haig had a clear grasp of the nature of RFC operations and the consequences of an offensive strategy in the air. Moreover, Haig expected high tempo, aggressive operations from all his commanders. His trench raiding policy reflected this reality, which, in turn, reflected Haig's wider vision of warfare. If commanders did not meet these expectations, then Haig could be a ruthless leader.¹⁸⁰ The example of Haig's handling of Lieutenant-General Hunter-Weston, Commander of VIII Corps, is instructive in this regard.¹⁸¹

Assessing Haig's management of subordinates – promoting or 'degumming' – is challenging. Sheffield highlights the very mixed success Haig had in this field, over-promoting and protecting some less able officers, whilst simultaneously choosing a series of very able officers for other positions.¹⁸² Hubert Gough had a particularly close relationship with Haig, whilst the latter

¹⁷⁹ R. Higham, *The Military Intellectuals*, p.137.

¹⁸⁰ P. Simkins, 'Haig and the Army Commanders,' in *Haig: A Re-appraisal 80 Years on*, eds. B. Bond & N. Cave (Barnsley: Pen & Sword, 2009), pp.78 – 106.

¹⁸¹ G. Sheffield & J. Bourne, eds., *Douglas Haig*, 29 Jun 1916, 1 Jul 1916, p.194 and pp.196 – 197; A. Simpson, *Directing Operations*, pp.26 – 27.

¹⁸² G. Sheffield, *The Chief*, pp.138 – 139.

provided significant patronage to the former.¹⁸³ Gough, a controversial commander during 1916 and 1917, received strong support from Haig until his failings during Third Ypres could not be ignored. As Sheffield and McCartney suggest, when Gough gave a 'generally creditable' performance during the German offensives of 1918, he was made a scapegoat for British reverses.¹⁸⁴ Conversely, Haig's relationship with another of his subordinates, Rawlinson, who was to rise to command at the Army level, demonstrates Haig's ruthlessness and his ability to re-establish good working relations.¹⁸⁵

In the case of Trenchard, whilst Haig had clear admiration for the manner in which he commanded the RFC, there were alternative officers available to replace Trenchard, should Haig have felt that the former was not utilising air power in the manner he deemed appropriate. For example, John Salmond, who came to replace Trenchard, was a suitable and able alternative. David Henderson was a viable, if unlikely, candidate, as he was a noted confederate of Sir John French. In many respects, Haig's vision of warfare embraced Travers's notion of the moral battlefield, yet without neglecting the technological. Travers comments that the

paradigms [of the moral and technological] did not confront each other, but simply slid past each other.¹⁸⁶

¹⁸³ P. Simkins, 'Haig and the Army Commanders,' pp.88 – 90; G. Sheffield, 'An Army Commander on the Somme: Hubert Gough,' in *Command and Control on the Western Front: The British Army's Experience, 1914 – 1918*, eds. G. Sheffield & D. Todman (London: Spellmount, 2004), pp.71 – 95.

¹⁸⁴ G. Sheffield & H. McCartney, 'Hubert Gough,' in *Haig's Generals*, eds. I. F. Beckett & S. J. Corvi (Barnsley: Pen & Sword, 2006), pp.75 – 96.

¹⁸⁵ R. Prior & T. Wilson, *Command on the Western Front: The Military Career of Sir Henry Rawlinson, 1914 – 1918* (Barnsley: Pen & Sword, 2004) [1992].

¹⁸⁶ T. Travers, *Killing Ground*, pp.76 – 78, p.82, n.54, and p.91.

Yet, in many respects, Haig, and his chief disciple, Trenchard, were able to partially bridge the gap between the moral and technological battlefields. However, the importance of the moral battlefield to both men cannot be overstated. During the crisis of the German spring offensives of 1918, Trenchard wrote a private letter of support to Haig, sent via the latter's private secretary. At a time of such significant crisis, it is illustrative that Trenchard was to write that

It is only for him to know that at any rate I am still imbued with the right spirit which he instilled into me of attacking the enemy.¹⁸⁷

Conclusion

In expanding upon the conclusions of the official history, it is possible to demonstrate that the RFC's vision of the control of the air was fashioned, at least in part, by wider structural and cultural pressures. These pressures consisted of the aggressive culture of the BEF and, in turn, the aggressiveness of its two C-in-Cs. This resulted in a conflict characterised by a high tempo offensive spirit, placing a correspondingly high tempo pressure on the RFC. This was shaped further by the close personal interest taken in aviation by both French and Haig, and the value they placed in ensuring the ground component of the BEF was provided with efficient aerial support.

¹⁸⁷ Trenchard Papers, RAFM, MFC 76/1/18 – Trenchard to Sassoon, 24 Mar 1918.

CHAPTER FIVE

THE WESTERN FRONT AND THE CONTROL OF THE AIR: THE RFC, ITS ALLIES, AND ITS USE OF INFORMATION

Introduction

As established, the RFC, and its approach to the control of the air, is the subject of significant criticism in the historiography. In large part, such criticism focuses on several factors, including doctrinal inflexibility, the dogmatic application of offensive air power, and an inadequate training regime. To take but one example, criticism of RFC training is a feature of most studies.¹ Trenchard's command, characterised as stubborn and unimaginative, is often attributed as the root cause of such difficulties. An analysis of the RFC on the Western Front is often given a final critical twist by juxtaposing these factors against the tactical and technological superiority of German aerial forces in the theatre. This is coupled with the flexible and progressive manner in which Germany conceptualised air power roles and utilised its aviation resources.

The areas of technology, tactics, and logistics are well covered in the literature, whilst studies by Morrow, Corum, and Cuneo provide an excellent

¹ D. Winter, *The First of the Few: Fighter Pilots of the First World War* (London: Allen Lane, 1982), pp.36 – 37; D. Jordan, 'Army Co-operation Missions,' p.35; N. Jones, *The Origins of Strategic Bombing*, pp.83 – 84; M. Cooper, *The Birth of Independent Air Power*, pp.79 – 81.

overview of German air power on the Western Front.² Hallion's examination of the technological evolution of fighting aircraft demonstrates the importance of possessing high-performance aeroplanes, and the role of such aircraft in establishing tactical initiative in combat.³ From a logistical standpoint, Morrow's *Great War in the Air* (1991), a generalist history of air power during the First World War, is particularly strong on the importance of logistics and the creation of an efficient aeronautical production base.⁴ In addition, Dye's forthcoming thesis on the RFC's logistical system on the Western Front will fill a significant gap in the historiography.⁵ Even from a policy and doctrinal standpoint, there is a sizeable body of literature already present. Jordan's thesis examines RFC policy in some depth, whilst Cooper's study offers significant insights into Trenchard's command of the RFC and its impact on policy and practice.⁶ What is more, Parton's exploration of RFC doctrine during this period analyses the subject in considerable depth.⁷

Thus, when seeking to explore RFC doctrine and policy on the Western Front, it is necessary to shift the focus in an attempt to offer new interpretations, as the debates concerning the control of the air have become rather entrenched. As with the wider BEF, of which the RFC was an integral component, British military air power possessed a progressive attitude toward such matters as the production of doctrine and the dissemination of information that would aid

² J. S. Corum, *The Luftwaffe*; J. R. Cuneo, *Winged Mars, Vol. II: The Air Weapon, 1914 – 1916* (Harrisburg, PA.: Military Service Publishing Co., 1947); J. H. Morrow, *German Air Power in World War I* (Lincoln, Nebraska: University of Nebraska Press, 1982).

³ R. P. Hallion, *Rise of the Fighter Aircraft*; R. P. Hallion, *Taking Flight*.

⁴ J. Morrow, *The Great War in the Air*.

⁵ P. Dye, 'The RFC Logistical System on the Western Front.'

⁶ D. Jordan, 'Army Co-operation Missions;' M. Cooper, *The Birth of Independent Air Power*.

⁷ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' chapter two.

in the learning process.⁸ Yet, it was in its relations with the French Army's Air Service that the RFC's most progressive attitude was on display. These relations are explored via the prism of the historiography on coalition warfare during the First World War. This focus provides further opportunities to revise the characterisation of the RFC as a blunt and unsophisticated instrument. As with the previous chapter, it is necessary to establish the wider context in which the RFC conceptualised and developed its understanding of the control of the air. As such, a direct discussion of the control of the air is a feature of the second half of the chapter.

Finally, it is important to recall the unprecedented nature of the use of air power in warfare. Whilst some small-scale, peripheral operations had been undertaken prior to the First World War, the 1914 – 1918 conflict saw the first significant application of air power, on both a large scale and over an extended period of time.⁹ Understandably, the use of air power was often governed by existing paradigms of warfare. In the case of the MW (and subsequently the RFC), air power doctrine was shaped by the themes of moral superiority, offensive action, and aggression, which were stressed above all in British Army doctrine of the period. RFC control of the air doctrine, for the majority of the First World War, was created with this structural / institutional pressure in mind. The offensive use of air power is still given precedence, even in contemporary doctrine, which reflects that the RFC had discovered the correct theoretical application of air power.¹⁰

⁸ W. Philpott, 'Beyond the Learning Curve.'

⁹ M. Paris, 'The First Air Wars – North Africa and the Balkans, 1911 – 1913,' *Journal of Contemporary History*, Vol.21, No.1 (Jan 1991): pp.97 – 109.

¹⁰ For example, see current RAF doctrine. MoD, *AP3000, Fourth Edition*, p.27.

The Coalition Context: The RFC and its French Allies

Kennedy suggests that the First World War was a conflict defined by coalitions.¹¹ Neilson has stated that

Britain did not fight alone. Instead, Britain was part of an alliance, a fact which meant that strategic decisions were made within the context of group endeavour.¹²

Neilson's conclusions stem from the contention that 'coalition warfare is a complex and complicated matter.'¹³ Literature that explores the Anglo-French coalition during the First World War does so effectively, yet without reference to the extremely close relations that developed between military aviators in Britain and France during the conflict.¹⁴ Greenhalgh's *Victory through Coalition* (2005) is a model study that develops the general historiographical outlook established by Neilson's examination of the Anglo-Russian alliance of 1914 – 1917.¹⁵ Greenhalgh could be termed a post-revisionist, and is resistant to interpretations that stress the more positive aspects of the BEF's performance during the conflict. For example, her interpretations of Haig's command, and the British campaign on the Somme, are at odds with the revisionist perspective put forward by Philpott.¹⁶ This translates into an

¹¹ P. Kennedy, 'Military Coalitions and Coalition Warfare over the Past Century,' in *Coalition Warfare: An Uneasy Accord*, eds. K. Neilson & R. Prete (Ontario: Wilfred Laurier University Press, 1983), p.7.

¹² K. Neilson, *Strategy and Supply*, p.viii.

¹³ K. Neilson & R. Prete eds., *Coalition Warfare*, p.vii.

¹⁴ E. Greenhalgh, *Victory through Coalition*; W. J. Philpott, *Anglo-French Relations and Strategy on the Western Front, 1914 – 1918* (London: Macmillan Press, 1996); R. A. Prete, *Strategy and Command: The Anglo-French Coalition on the Western Front, 1914* (Montreal: McGill-Queen's University Press, 2009); W. Philpott, *Bloody Victory*.

¹⁵ E. Greenhalgh, *Victory through Coalition*.

¹⁶ E. Greenhalgh, 'Why the British were on the Somme in 1916,' *War in History*, Vol.6, No.2 (Summer 1999): pp.147 – 173; W. Philpott, 'Why the British were really on the Somme in

analysis of the Anglo-French coalition in which she does not acknowledge some of the genuinely progressive aspects of the relationship, such as air power.¹⁷

It is the theoretical framework Greenhalgh establishes for the nature of coalitions and liaison that makes her study so vital to this chapter. As she suggests, there are two supportive functions to liaison within a coalition. The first is based on practical, logistical support, and the second, where allies attempt to promote an authentic understanding and closeness; a process Greenhalgh terms 'binding'.¹⁸ As she asserts, the former was the most common type of support provided by the coalition, whilst the latter was largely out of reach during the conflict.¹⁹ In the field of air power and, more specifically, in relation to the control of the air, the close cooperation between the RFC and the French Army's Air Service embraced the practical aspects of liaison, whilst providing a genuine example of 'binding' at the doctrinal / philosophical level. The process by which liaison and cooperation was established between the two services mirrored wider trends in Anglo-French relations before and during the First World War. Dye, in an article that examines Anglo-French aviation relations during this period, utilises a similar framework, noting two aspects of cooperation: the material contribution, and the 'moral / intellectual' contribution.²⁰ In this regard, Dye is able to demonstrate that the British drew heavily from the French in both regards, yet

1916: A Reply to Elizabeth Greenhalgh,' *War in History*, Vol.9, No.4 (Winter 2002): pp.446 – 471; E. Greenhalgh, 'Flames over the Somme: A Retort to William Philpott,' *War in History*, Vol.10, No.4 (Autumn 2003): pp.335 – 342.

¹⁷ E. Greenhalgh, *Victory through Coalition*, pp.60 – 63.

¹⁸ E. Greenhalgh, *Victory through Coalition*, p.75.

¹⁹ E. Greenhalgh, *Victory through Coalition*, p.88.

²⁰ P. Dye, 'France and the Development of British Military Aviation.'

he does not set his conclusions explicitly in the wider context of coalition warfare during this period. Nor does he assess the manner in which such relations reflected the progressive attitude of the RFC.

Anglo-French Cooperation in the Pre-War Period

As Kennedy observes, wartime coalitions are very often defined by the peacetime relations between the states involved.²¹ In the case of Britain and France, closer relations developed in the pre-war period as a result of specific self-interests. In the case of Britain, France provided land-based power to counter the continental threat posed by Germany, whilst an alliance with the French Navy freed additional resources for deployment against the growing German naval threat in the North Sea.²² For France, the financial and industrial muscle of Britain was vital, as was its naval strength and powerful, if latent, manpower resources.²³ Informal staff talks during 1906 saw the establishment of closer working relations between the British and French Armies.²⁴ As Strachan acknowledges, it was the appointment of Henry Wilson as Director of Military Operations in 1910 that gave 'substance' to the 1906 staff talks.²⁵ This also saw the development of closer relations between British and French military aviators during 1911.

²¹ P. Kennedy, 'Military Coalitions.'

²² F. Maurice, *Lessons of Allied Co-operation: Naval, Military and Air, 1914 – 1918* (London: Oxford University Press, 1942), pp.2 – 4; H. Strachan, *The First World War, Vol. I*, chapter one.

²³ *Ibid.*

²⁴ B. Bond, *Staff College*, p.256.

²⁵ H. Strachan, *The First World War, Vol. I*, pp.26 – 27; K. Jeffery, *Henry Wilson*, chapter 6.

On completion of his Staff College training, Sykes was appointed as a staff officer in Wilson's directorate.²⁶ Sykes possessed useful language skills, having spent eighteen months in Paris to learn 'French and as much German as might be possible,' and was granted the appointment on the proviso that he would qualify as an interpreter of German.²⁷ In Sykes, Wilson saw a valuable asset as an intelligence officer, whilst the latter did much to aid the former's interest in aviation. As Ash records, Wilson despatched Sykes to the Continent during 1911 to visit Spain, Italy, and France. Sykes was to report on how European armies were approaching the business of military air power.²⁸ Sykes's report on French aviation, written in the winter of 1911, covered a variety of topics, and both Dye and Ash emphasise the importance of the paper in relation to the early organisation of the MW.²⁹ It is likely that Wilson intended Sykes's visit to include intelligence gathering aspects, as well as promoting closer relations with the French.³⁰ Even without such objectives in mind, the opportunity to discuss the practical elements of flight, or the sheer novelty of the experience, could have done little to harm relations between British and French aviators. The importance of French aviation did not escape the attention of the fledgling Air Battalion, and one of its founding members wrote an article for *JRUSI* that offered thoughts on the subject. These touched on at least some of the themes contained within Sykes's report.³¹ As the second chapter records, *JRUSI* was an important forum for the military to

²⁶ F. H. Sykes, *From Many Angles*, pp.77 – 81.

²⁷ F. H. Sykes, *From Many Angles*, p.16.

²⁸ E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.23 – 25.

²⁹ Sykes Papers, RAFM, MFC 77/13/8 – 'Notes on Aviation in France, 1911;' E. Ash, *Sir Frederick Sykes and the Air Revolution*, pp.24 – 25; P. Dye, 'France and the Development of British Military Aviation,' pp.3 – 4; F. H. Sykes, *From Many Angles*, pp.93 – 95.

³⁰ K. Jeffery, *Henry Wilson*, pp.100 – 101 and pp.103 – 104.

³¹ B. H. Barrington-Kennett, 'Military Aeronautics in France,' *JRUSI*, Vol. 56, No.1 (Jan / Jun 1912): pp.171 – 178.

discuss air power topics. Barrington-Kennett's article indicates that, even before 1914, a coalition context was already creeping into the debate.

Sykes's paper also contained material that could be defined as loosely doctrinal in nature. His experiences in France seemed to confirm ideas already prevalent amongst Britain's military aviators, and he concluded that fighting aircraft would be a necessary adjunct to air forces in order to establish control of the air.³² Christienne and Lissarague's authoritative study on French aviation inadvertently highlights that the development of early control of the air doctrine in Britain and in France was remarkably similar.³³ However, it is impossible to state categorically if this was the result of an overt cross-fertilisation of ideas. Senior officers within the British and French Armies focused on the use of aircraft as a means to gather information, whilst, at the lower levels, ad-hoc efforts were made to experiment with armament in both air services.³⁴ Both British and French air power practitioners grasped the significance of reconnaissance. In obtaining such information, they also realised that an integral aspect of the task would be to seize control of the air.³⁵

Sykes clearly appreciated the value of the experience, and, after the creation of the Flying Corps, he encouraged his officers to visit France to study how

³² Sykes Papers, RAFM, MFC 77/13/8 – 'Notes on Aviation in France, 1911.'

³³ C. Christienne & P. Lissarague, *A History of French Military Aviation*. Translated by F. Kianka. (Washington, D.C.: Smithsonian Institution, 1986), pp.35 – 53.

³⁴ C. Christienne & P. Lissarague, *A History of French Military Aviation*, pp.43 – 45 and pp.49 – 51.

³⁵ C. Christienne & P. Lissarague, *A History of French Military Aviation*, pp.43 – 45.

the French used air power and organised their aviation units.³⁶ As he recorded in a letter of June 1914, visits to the French (and, if possible, the German) manoeuvres would result in '[v]ery considerable benefits.'³⁷ Several officers had visited France during May of 1914, and a detailed report, written by Brooke-Popham, was circulated.³⁸ The majority of the report focused on the technical aspects of flight, such as developments in aero-engines, new airframes, and the latest maintenance practices. As military aviators were supplied with the majority of their equipment from the French, this was entirely fitting.³⁹ However, Brooke-Popham also reflected on the importance of including sufficient 'spare time' in the itinerary. This provided visiting officers with the opportunity to speak to a range of personnel associated with military aviation in France. It was by

meeting all classes of men & by looking into odd corners, that information ... [could] ... be gleaned on new and unexpected subjects.⁴⁰

Such meetings were the foundations for the close cooperation and relations that would develop between the air services during the First World War. That the report was circulated to all squadrons within the MW, as well as to the relevant sections of the War Office, further reflects the value that was placed upon information gained from the French.⁴¹

³⁶ AIR 1/772/204/4/303 – Letter, Sykes to War Office, 3 Jun 1914.

³⁷ Ibid.

³⁸ AIR 1/783/204/4/515 – Report on Visit to France, May 1914.

³⁹ P. Dye, 'France and the Development of British Military Aviation,' pp.4 – 6.

⁴⁰ AIR 1/783/204/4/515 – Report on Visit to France, May 1914.

⁴¹ Ibid.

This was not a one-way process, and French officers were permitted to visit British establishments. For example, the administrative steps taken to ensure a French officer could attend the trials of the *Astra Torres* airship demonstrate that Britain made genuine efforts to promote cooperation and liaison between the respective aviation services.⁴² In addition, ensuring close cooperation with the French went further than a desire to secure material resources to help grow and expand the fledgling Flying Corps. As Prete records, one of the historic problems of coalitions was managing the impact of cultural differences.⁴³ As pioneers of military aviation sharing the dangers of a new medium of combat, there was a genuine closeness that characterised the relationship between British and French aviators. This closeness even extended to the respectful dynamic that existed between the opposing air services of the conflict.⁴⁴ As a junior pilot of the RFC recorded,

flyers on both sides have ... [their] ... own code in this nasty war ... We don't hate each other ... Hun pilots and observers are just the same types as we are in the RFC ...⁴⁵

In the realm of aesthetics, British and French pilots were able to draw on a shared culture, and both possessed reputations within their respective parent services as *Corps d'elites*, reflected in their unique uniforms. For the French, this constituted a dark blue jacket with a close-fitting collar and special insignia.⁴⁶ For the British, it was the striking double-breasted maternity style jacket, coupled with the prominent 'Wings,' which singled out the wearer as an

⁴² AIR 1/783/204/4/530 – Letter, Sueter to War Office, Flying Corps Committee, 30 May 1913. Letter from War Office. Recipient unclear, very probably Henderson, 31 May 1913.

⁴³ R. A. Prete, *Strategy and Command*, pp.71 – 72.

⁴⁴ L. Kennett, *The First Air War, 1914 – 1918* (New York: Free Press, 1991), pp.171 – 172.

⁴⁵ A. G. Lee, *No Parachute: A Fighter Pilot in World War I* (London: Jarrolds, 1968), p.135.

⁴⁶ C. Christienne & P. Lissarague, *A History of French Military Aviation*, p.45.

elite military pilot.⁴⁷ Such cultural closeness was absent from the more general military relations of the two powers.

Language Skills and Personal Relations

A shared medium of combat, and a reputation for elitism, could only balance cultural differences to a certain extent. As the historiography records, the problem of language greatly hindered effective cooperation and liaison between the British and the French.⁴⁸ In turn, such cultural difficulties could affect the nature of personal relations that were so vital to a coalition that lacked formal integrated mechanisms of command and decision making.⁴⁹ As Reynolds notes, even a common language could not ensure that a coalition would function without difficulties, although, in the case of UK-US relations, shared language helped facilitate greater cooperation and understanding.⁵⁰

French, the recognised language of international relations during this period, was the official language of the Anglo-French coalition. It was only in the aftermath of the conflict that English became the dominant language of international politics.⁵¹ As Greenhalgh records, it was the English language skills of French officers that tended to be lacking. For example, only 21 percent of French Generals (promoted to the rank between 1889 and 1914)

⁴⁷ F. H. Sykes, *From Many Angles*, pp.96 – 97.

⁴⁸ E. Greenhalgh, *Victory through Coalition*, pp.8 – 10; R. A. Prete, *Strategy and Command*, pp.71 – 72; F. Maurice, *Lessons of Allied Co-operation*, p.11.

⁴⁹ E. Greenhalgh, *Victory through Coalition*, pp.21 – 22; R. A. Prete, *Strategy and Command*, p.209.

⁵⁰ D. Reynolds, 'A "special relationship?" America, Britain and the International Order since the Second World War,' *International Affairs*, Vol.62, No.1 (Winter, 1985 / 1986), pp.5 – 6.

⁵¹ E. Greenhalgh, *Victory through Coalition*, pp.8 – 10 and p.284; R. A. Prete, *Strategy and Command*, pp.71 – 72.

had a language qualification in English.⁵² Of course, this does not include those Generals who possessed language skills without a formal qualification. As Greenhalgh continues, the willingness of British officers to speak French was a vital aspect of the coalition.⁵³ Staff College training could be a useful adjunct in this regard, and the assessment and study of a modern language, French being a more common requirement when attending Camberley, was a feature of both the entrance examination and the course material.⁵⁴ As the *Training and Manoeuvre Regulations* (1913) noted, 'a knowledge of foreign languages is necessary for admission to the Staff College.'⁵⁵ The manual continued by suggesting that

It is of importance that officers should acquire a knowledge of French and German sufficient to enable them to converse and to read with facility the many excellent military treatises published in those languages. Commanding officers should encourage their young officers to become interpreters in these languages as early in their service as possible.⁵⁶

Whilst the range of language skills possessed by officers in the RFC is not clear, given the high concentration of Staff College graduates amongst their number, at least some of the Corps's senior positions were filled by those that could speak French. As noted, Sykes had proficient skills in French, whilst, with the addition of Maurice Baring to the staff of RFC HQ, the senior command team gained a linguist of some renown.

⁵² E. Greenhalgh, *Victory through Coalition*, p.8.

⁵³ E. Greenhalgh, *Victory through Coalition*, pp.9 – 10.

⁵⁴ BL, IOR /L/MIL/17/5/2276, *Records of the Staff College at Quetta (1908)*, pp.15 – 16.

⁵⁵ General Staff, War Office, *Training and Manoeuvre Regulations* (London: HMSO, 1913), p.22.

⁵⁶ General Staff, War Office, *Training and Manoeuvre*, pp.21 – 22.

Contrasting examples of the impact of proficient language skills can be found in the experiences of the BEF's two C-in-Cs, French and Haig. As Holmes notes, Sir John French took an enthusiastic interest in the French language, and made repeated attempts to improve his language skills.⁵⁷ Unfortunately, his abilities in French 'remained extremely shaky, and always broke down under pressure.'⁵⁸ During the retreat in 1914, the result of this weakness was evident in Sir John's dealings with the Commander of the French Fifth Army, General Lanrezac. The narrative of their stormy encounter in August 1914 highlights Sir John's poor language abilities, which only exacerbated the acerbic, Anglophobic tendencies of Lanrezac.⁵⁹ The interaction of French and Lanrezac during this period did much damage to the harmony of the Anglo-French coalition, and Holmes records that the experience left in Sir John 'seeds of distrust which, from time to time, bore bitter fruit.'⁶⁰ In contrast, General Foch grasped the importance of warm personal relations for the smooth running of a coalition.⁶¹

Greenhalgh also indicates that Haig understood this reality. Often critical of various aspects of Haig's command of the BEF, she praises Haig's efforts with regard to learning French. As she notes, when breaks in fighting occurred, Haig spent two hours daily conversing and learning French with his French

⁵⁷ R. Holmes, *The Little Field Marshal*, p.143.

⁵⁸ *Ibid.*

⁵⁹ W. J. Philpott, 'Gone Fishing? Sir John French's Meeting with General Lanrezac in August 1914,' *Journal of the Society for Army Historical Research*, Vol. 84, No.339 (Autumn 2006): pp. 254 – 259; R. Holmes, *The Little Field Marshal*, pp.208 – 209.

⁶⁰ R. Holmes, *The Little Field Marshal*, p.217.

⁶¹ E. Greenhalgh, *Foch in Command: The Forging of a First World War General* (Cambridge: Cambridge University Press, 2011), p.81 and p.89.

liaison officer.⁶² During the planning for the Battle of the Somme, Haig was able to hold his own in conferences with senior French Generals and politicians without the aid of an interpreter.⁶³ More generally, the change of command of the BEF also helped to spur on closer working relations with the French. Whilst Greenhalgh is generally critical of British command efforts in relation to the Somme, she does concede that improvements were forthcoming in British liaison with the French during this period. Even with such improvements, based on improved language skills and better personal relations, the high command of the BEF were somewhat distrustful of their French allies. Haig's diary contains several references to his negative feelings towards the French, including their Air Service.⁶⁴ This seems to support Greenhalgh's conclusions that, whilst practical cooperation and liaison improved during the conflict, there was an absence of genuine 'binding,' as both the British and the French continued to possess significant strategic and doctrinal autonomy. The result of this autonomy was at least some level of distrust, often manifesting itself in somewhat xenophobic sentiments. As Prete argues, knowing the language and culture of one's ally allows one to avoid drawing on existing stereotypes.⁶⁵ The case of relations between the RFC and the French Army's Air Service were quite different, and, at a strategic, operational, and tactical level, there was a process of 'binding.' As Dye suggests, this was the result of the fusion of 'theory, experience and

⁶² E. Greenhalgh, 'Why the British were on the Somme in 1916,' p.155; E. Greenhalgh, *Victory through Coalition*, pp.83 – 84.

⁶³ E. Greenhalgh, *Victory through Coalition*, pp.83 – 84.

⁶⁴ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 18 and 20 Aug 1917, p.318 and p.320.

⁶⁵ R. A. Prete, *Strategy and Command*, pp.71 – 72.

analysis.⁶⁶ This was in addition to the practical and material cooperation that was a more common feature of the coalition.

The RFC and the Control of the Air before Verdun

As the official history records, during the autumn of 1915, Trenchard met with Commandant Paul du Peuty.⁶⁷ Commandant du Peuty, who would rise to command the French Army's Air Service, had been appointed to command the air assets of the French Tenth Army, and it was in this capacity that his association with Trenchard began.⁶⁸ It is not clear if records were kept of their meetings, although, as H. A. Jones suggests, the nature of their discussions appears to have been largely informal at this stage.⁶⁹ As Jones continues, it was during such meetings that the policy of the offensive and strategic use of fighting aircraft was 'thrashed out.'⁷⁰ Trenchard brought with him to these meetings a set of ideas that were based on a combination of factors, including the RFC's own experiences during 1915.

It is important to restate that, in the *Training Manual*, the RFC possessed clear, if underdeveloped, doctrine that stressed the need to fight to establish the control of the air.⁷¹ In line with such doctrine, the RFC was infused with an offensive spirit that resulted in its pilots and commanders cultivating an aggressive attitude in the air. Such sentiment was captured in Sykes's report

⁶⁶ P. Dye, 'France and the Development of British Military Aviation,' p.8.

⁶⁷ H. A. Jones, *WIA, Vol.II*, pp.164 – 166.

⁶⁸ P. Dye, 'France and the Development of British Military Aviation,' p.8.

⁶⁹ H. A. Jones, *WIA, Vol.II*, p.165.

⁷⁰ *Ibid.*

⁷¹ General Staff, AP 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914), p.47.

of February 1915, in which the principle of an active aerial offensive against the German Air Service was recorded.⁷² In line with the wider doctrinal principles of the British Army, which shaped the manner in which RFC doctrine was produced, the broad ideas contained within the *Training Manual* could be supplemented with more specialised reports and pamphlets distilled from the experiences of the conflict. This mirrored the doctrinal relationship between *FSR* and the *S.S.* series of pamphlets.⁷³ For example, in February 1915, Brooke-Popham produced a report that summarised the limited experiences of aerial combat up to that point.⁷⁴ The paper, disseminated to the level of flight commander, offered tactical advice that focused on the importance of the concentrated and efficient use of firepower, the significance of manoeuvre (both offensive and defensive), and the difficulties of command and control once airborne.⁷⁵ By codifying the early lessons of aerial combat, Brooke-Popham's report served as a supplement to the *Training Manual*.

As noted in the previous chapter, it was with Trenchard's arrival as Commander of First Wing that aerial fighting became a formalised element of the RFC's tactical itinerary. The first operational order of this kind was issued in late March 1915, and the words '[p]atrol ... to attack any hostile aircraft' appeared with increasing frequency during April and May.⁷⁶ Again, as noted, during April 1915, a squadron was moved into the Neuve Chapelle region with

⁷² AIR 1/1176/204/1/2595 – Sykes to GHQ, 2 Feb 1915. p.2.

⁷³ G. Sheffield, 'Doctrine and Command in the British Army,' E.11; P. Griffith, *Battle Tactics of the Western Front*.

⁷⁴ AIR 1/746/204/3/22 – Report, Brooke-Popham, 'Fighting Hostile Aeroplanes in the Air,' 1 Feb 1915.

⁷⁵ *Ibid.*

⁷⁶ AIR 1/1252/204/8/7 – First Wing, RFC Operation Orders, Jan – Jun 1915. See orders of 29 Mar, 1, 7, 12 Apr, and 7 May 1915.

the specific task of establishing control of the air over a specific locality.⁷⁷ The appearance of the Fokker monoplane, the first operational fighter with an efficient interrupter gear (allowing bullets to pass safely through a spinning propeller), brought into sharp relief the importance of the control of the air.⁷⁸ The reputation of this aircraft, a significant feature of pilot memoirs, belies its operational effectiveness.⁷⁹ As Cuneo notes, the Fokker was a 'tricky' machine to fly, whilst its introduction to the front was a slow process. By mid-July 1915, only eleven of the type had reached the Western Front.⁸⁰ This is supported by H. A. Jones, who observes that the successful use of the Fokker depended almost entirely on the skill and experience of its pilot.⁸¹ Once a pilot had gained a good technical and tactical understanding of the use of the Fokker, it could be an effective weapon, yet its limited numbers severely curtailed its material impact.⁸² However, it was still possible to survive encounters with the Fokker, even in the RFC's much derided BE2.⁸³

Other than the important technical innovation of being able to attain accurate fire by aiming the synchronised machine gun with the whole plane, the major impact of the Fokker was in the realm of morale.⁸⁴ The confidence it provided to German fighter pilots allowed them to shift from their timid attitude, as recorded by Henderson in January 1915, to a more aggressive approach that

⁷⁷ H. A. Jones, *WIA, Vol.II*, pp.99 – 100.

⁷⁸ C. Duffy, *Through German Eyes*, pp.305 – 306.

⁷⁹ C. Lewis, *Sagittarius Rising* (London: Greenhill, 2007) [1936], pp.53 – 54.

⁸⁰ J. R. Cuneo, *Winged Mars, Vol. II*, pp.172 – 173.

⁸¹ H. A. Jones, *WIA, Vol.II*, p.152.

⁸² J. H. Morrow, *German Air Power*, pp.40 – 41.

⁸³ W. S. Douglas, *Years of Combat: A Personal Story of The First War in the Air* (London: Collins, 1963), pp.117 – 123.

⁸⁴ H. A. Jones, *WIA, Vol.II*, pp.149 – 150; S. F. Wise, *Canadian Airmen in the First World War*, p.355.

made the importance of the control of the air even more relevant.⁸⁵ In a letter of 31 July 1915, Brooke-Popham wrote to E. B. Ashmore, the latter commanding the UK-based Administrative Wing of the RFC, noting that

The German aeroplanes are becoming far more active and are making a regular habit of attacking our machines when on reconnaissance, and we are now having to fight for all our information.⁸⁶

In his memoirs, Douglas suggests that it was the impetus of the superiority of the Fokker that compelled the RFC to engage in discussions regarding the importance of aerial fighting.⁸⁷ However, the RFC was already examining its practices in relation to the control of the air, and Brooke-Popham's paper of February 1915 provides clear evidence of this process. Further evidence is found in the RFC's desire to re-evaluate the contents of the *Training Manual*, a process driven by the accumulation of practical air power experience.⁸⁸ The new edition of the *Manual* saw an expanded section on 'Fighting in the Air,' which absorbed the lessons of 1915. The updated content was lifted almost *verbatim* from Brooke-Popham's report of earlier in the year.⁸⁹ As Parton records, the balance of the *Manual* had shifted, as the role of artillery observation came to oust reconnaissance as the central function of the RFC. That only seven percent of the *Manual* addressed fighting in the air did not represent a lack of interest from the RFC.⁹⁰ On the contrary, the material

⁸⁵ Henderson to unknown, very probably War Office, 31 Jan 1915. Quoted in F. W. Lanchester, 'Author's Review of *Aircraft in Warfare*,' 1940, p.vi.

⁸⁶ W. Raleigh, *WIA, Vol.I*, p.446.

⁸⁷ W. S. Douglas, *Years of Combat*, p.110.

⁸⁸ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.39 – 40.

⁸⁹ AIR 10/180 – General Staff, *Training Manual, Royal Flying Corps, Part II (Military Wing)*, Provisional 1915. Reprinted with amendments 1916, pp.71 – 72.

⁹⁰ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.38.

contained within the 1915 edition of the *Manual* was expanded from the previous version. It also reflected that, up to mid-1915, aerial fighting, whilst increasing in importance and frequency, was still a relatively rare occurrence. It was not until the appearance of the Fokker that losses started to mount, and, even then, they were still relatively slight when compared with wider losses on the ground, or with aerial losses in the latter half of the conflict.⁹¹

As the correspondence relating to the correction of the *Manual* highlights, there was often a significant delay in codifying experience into doctrine. This stemmed from the administrative time necessary to evaluate newly acquired experience and to assimilate the lessons in written form.⁹² As Parton records, this reflects a recurring trend, as updated doctrine manuals were often out of date as soon as they were issued to units.⁹³ It was within this wider context, the accumulation of tactical experience with regard to fighting in the air, coupled with increasing German technical and tactical superiority, that Trenchard and du Peuty came to discuss air power matters during the autumn of 1915.

Trenchard, du Peuty, and Verdun: Liaison and Cooperation

First, it is important to stress that neither Trenchard nor du Peuty were fluent in the native language of the other, thus, Trenchard's multilingual assistant, Maurice Baring, had a vital role to play in facilitating effective communication

⁹¹ AIR 1/758/204/4/119 – RFC Losses, Jun – Dec 1915.

⁹² For example, see AIR 1/530/12/16/84 – Letter, Trenchard to General Staff, 9 Feb 1916.

⁹³ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.39 – 40.

between the two men.⁹⁴ Dye stresses the importance of close personal relations, which is in keeping with the wider historiography on the effective functioning of the Anglo-French coalition.⁹⁵ For H. A. Jones, the result of the meetings between Trenchard and du Peuty was the development of the policy of the 'Strategic Air Offensive,' in which the moral effect of attacking aircraft was to be utilised to protect tactical aircraft engaged in direct support of ground operations.⁹⁶ In practice, fighting aircraft were to undertake distant offensive patrols deep inside enemy territory, occupying enemy air power resources and, in turn, facilitating the safe operation of Corps aircraft in the localised airspace over the battlefield.⁹⁷ From late 1915 to early 1916, and in rudimentary form, it was such an approach that came to dominate control of the air doctrine and policy for the crucial campaigns of Verdun and the Somme. For the British, it was this embryonic approach that shaped their entire understanding of the control of the air for the remainder of the conflict.

As Dye suggests, Boyle overstates the influence of Trenchard upon du Peuty, and upon the conception of the strategic offensive.⁹⁸ The idea was not uniquely Trenchardian, and it was the result of a combination of existing RFC doctrine, the general analysis of air power experience up to this point, and, to an extent, Trenchard's personal experience as an aggressive air power commander, particularly during his time leading First Wing. The German

⁹⁴ P. Dye, 'France and the Development of British Military Aviation,' p.7; M. Baring, *R.F.C. H.Q.*, p. 126 and pp.129 – 130; Trenchard Papers, RAFM, MFC 76/1/61 – Autobiographical Notes, p.75.

⁹⁵ P. Dye, 'France and the Development of British Military Aviation,' p.7.

⁹⁶ H. A. Jones, *WIA, Vol.II*, pp.164 – 165.

⁹⁷ *Ibid.*

⁹⁸ P. Dye, 'France and the Development of British Military Aviation,' p.8; A. Boyle, *Trenchard*, pp.165 – 166.

offensive at Verdun, launched in February 1916, shattered the wider Anglo-French strategy for 1916 and moved the war onto an overtly attritional footing.⁹⁹ As Buckley notes, the shift to attrition on the ground was matched in the air.¹⁰⁰ This campaign also provided the catalyst and opportunity for Trenchard and du Peuty to test and develop the conclusions reached during their informal discussions. The use of German air power at Verdun is derided in the literature, and, after accumulating the highest concentration of fighting aircraft in the conflict to this point, the German Air Service threw away its opportunity to maintain control of the air during the campaign.¹⁰¹

As noted by Christienne and Lissarague, German planning for Verdun had embraced the importance of controlling the air, specifically in terms of limiting the effectiveness of French aerial artillery observation.¹⁰² German planners also recognised the importance of artillery observation to increase the effectiveness of their own guns.¹⁰³ By massing 180 aircraft in the region, the Germans were able to establish localised control of the air.¹⁰⁴ As Cuneo observes, the German approach was unsophisticated, and no real thought had been given to how to seize control, other than by placing large numbers of aircraft in the area.¹⁰⁵ Any advantage to be gained by concentrating such aerial strength was dissipated as the Germans conducted wasteful defensive

⁹⁹ R. T. Foley, *German Strategy and the Path to Verdun: Erich von Falkenhayn and the development of attrition, 1870 – 1916* (Cambridge: Cambridge University Press, 2006); A. Horne, *The Price of Glory: Verdun 1916* (London: Reprint Society, 1964) [1962].

¹⁰⁰ J. Buckley, *Air Power*, pp.52 – 53.

¹⁰¹ J. R. Cuneo, *Winged Mars, Vol. II*, pp.207 – 228; A. Horne, *The Price of Glory*, pp.205 – 209; C. Christienne & P. Lissarague, *A History of French Military Aviation*, pp.95 – 98.

¹⁰² C. Christienne & P. Lissarague, *A History of French Military Aviation*, p.95.

¹⁰³ R. T. Foley, *German Strategy and the Path to Verdun*, p.162.

¹⁰⁴ *Ibid.*

¹⁰⁵ J. R. Cuneo, *Winged Mars, Vol. II*, p.212.

'barrage' patrolling.¹⁰⁶ Nonetheless, the initial shock of the ground assault was mirrored in the air. General Pétain, Commander of the French Second Army, summoned one of his senior aviation officers and instructed him to '... sweep the skies clean for me, I am blind.'¹⁰⁷ Within days, the French had organised their fighter units into a combat group of six squadrons, whilst, on 29 February 1916, orders were issued that instructed the units to 'seek the enemy in order to engage and destroy him.'¹⁰⁸

On the eve of Verdun, du Peuty stationed a liaison officer with Trenchard. During the campaign itself, RFC HQ received regular reports from its own liaison officers; Captains R. A. Cooper and J. P. Sewell.¹⁰⁹ As Baring recorded, the services of the French liaison officer, F. C. La Ferrière,

proved invaluable, ... and he did almost more than anyone to bring about good feelings between the French and English Services.¹¹⁰

This liaison network did much to facilitate the smooth flow of information and cooperation during this period. In keeping with Greenhalgh's two-pronged approach to coalition and liaison, the RFC was able to provide support of a more practical nature. As Boyle records, Trenchard realised that, as part of the coalition, the struggle at Verdun was also his struggle.¹¹¹ Boyle notes that Trenchard provided French units with supplies of guns and ammunition, and

¹⁰⁶ Ibid.

¹⁰⁷ A. Clayton, *Paths of Glory: The French Army, 1914 – 1918* (London: Cassell, 2005) [2003], pp.124 – 127.

¹⁰⁸ J. R. Cuneo, *Winged Mars, Vol. II*, p.226.

¹⁰⁹ AIR 1/1303/204/11/169 – 'Notes by Capt. Sewell, R. F. C. Liaison Officer with the French Armies,' 28 Apr 1916; AIR 1/1283/204/11/14 – Various Reports by Cooper, Apr 1916; M. Baring, *R.F.C. H.Q.*, pp.129 – 130.

¹¹⁰ M. Baring, *R.F.C. H.Q.*, p.129 and p.143.

¹¹¹ A. Boyle, *Trenchard*, p.168.

the Lewis Gun was particularly valued by du Peuty.¹¹² Trenchard also utilised his own air power resources to place pressure on German units facing the British, in an effort to prevent additional German resources from being deployed to the Verdun region.¹¹³ The conclusions of Wise offer much needed context in this regard, and he describes the air operations on the British sector during this period as 'desultory,' particularly in comparison to Verdun.¹¹⁴

From a resource perspective, the information that flowed toward RFC HQ was highly significant. Most important were reports written by du Peuty, supplemented by material from Trenchard's liaison officers. In the first of two reports, du Peuty detailed for the British the manner in which the battle for the control of the air had evolved from mid-March to early April 1916. The French response to the German air threat had been decisive, and, by massing their fighting squadrons into one combat group, they had ensured freedom of operation for their Corps aircraft.¹¹⁵ It was not concentration alone that proved to be decisive, and, as du Peuty was to write,

It is by combat, by constant offensive, by the quasi permanency of offensive patrols that the French Aviation has succeeded in maintaining the undoubted superiority.¹¹⁶

The result, as du Peuty continued, was that German Corps aircraft had to operate in groups in order to improve their chances of survival. Even then, operating from behind their own lines, they were forced to conduct their

¹¹² Ibid.

¹¹³ Ibid.

¹¹⁴ S. F. Wise, *Canadian Airmen in the First World War*, p.361.

¹¹⁵ AIR 1/1585/204/82/41 – 'Report on Employment of Aviation March 19th to April 4th by Commandant Du Peuty.' Issued by RFC HQ, 11 Apr 1916.

¹¹⁶ Ibid.

ground support operations at a disadvantage.¹¹⁷ The second of these reports, which Trenchard forwarded to the War Office in May 1916, was purportedly described by the RFC's Commander as 'the most significant paper on air fighting so far produced.'¹¹⁸ The report reiterated the importance of concentrating fighting aircraft and pursuing a continuous and aggressive offensive, targeting enemy aircraft deep behind their lines. This would occupy the aviation units of the enemy, and allow friendly Corps aircraft to go about their duties over the battlefield free from interference.¹¹⁹

The report was not without stark warnings of the operational realities of this strategy. Operating over enemy territory would result in heavy losses, as friendly aircraft would be exposed to hostile ground fire and would have longer distances to fly and fight. The intensity of constant offensive action was also apparent, and, as du Peuty recorded, 'it is a wearing out method for pilots and observers.'¹²⁰ Yet, du Peuty remained confident that, whilst friendly losses may be heavy, those of the enemy would continue to be heavier. In another section, du Peuty reflected upon the impermanence of air power, the attritional nature of the struggle, and the importance of concentration. As he observed, hostile aviation could not be annihilated, as the struggle for the control of the air was ceaseless and attritional.¹²¹ Even weaker forces could concentrate their aerial resources to establish localised control of the air. A

¹¹⁷ Ibid.

¹¹⁸ AIR 1/1303/204/11/169 – 'Report by Commandant Du Peuty on the Working of Aviation in the Vaux-Douaumont Sector;' See also, letter Trenchard to War Office, 15 May 1916; A. Boyle, *Trenchard*, p.169.

¹¹⁹ AIR 1/1303/204/11/169 – 'Report by Commandant Du Peuty on the Working of Aviation in the Vaux-Douaumont Sector.'

¹²⁰ Ibid.

¹²¹ Ibid.

strategic offensive, as recommended by the report, could never attain absolute control of the air. Determined hostile aircraft could always penetrate friendly airspace.¹²²

There were further lessons available to the British, and, as the BEF's official report summarised, the nature of the control of the air was characterised by measure and counter-measure.¹²³ When one side was under pressure due to superior tactics, technology, doctrine, or organisation, they would take remedial steps to rectify the situation; an example of what Gordon has called the 'historical process of challenge and response.'¹²⁴ Both du Peuty and Cooper record that the Germans reorganised and centralised their fighter forces during the course of the battle.¹²⁵ It was at such a moment that a true contest for the control of the air emerged, as French Corps aircraft found themselves under increased pressure. In turn, this affected the experience of French ground forces, whose air support was not as effective.¹²⁶

As Cuneo records, the offensive orders of late February were now questioned. At the behest of increasingly worried ground commanders, French fighters were dispersed and ordered to provide localised defensive protection to their Corps aircraft.¹²⁷ As du Peuty's report concluded, this

¹²² Ibid.

¹²³ AIR 1283/204/11/10 – GHQ, 'Further notes from Verdun,' 6 May 1916. This report was probably written by Cooper in early April.

¹²⁴ S. L. Gordon, 'Air Superiority in the Israel-Arab Wars,' p.153; J. Buckley, *Air Power*, p.53; Trenchard Papers, RAFM, MFC 76/1/61 – Autobiographical Notes, pp.88 – 89.

¹²⁵ AIR 1283/204/11/10 – GHQ, 'Further notes from Verdun,' 6 May 1916. AIR 1/1303/204/11/169 – 'Report by Commandant Du Peuty on the Working of Aviation in the Vaux-Douaumont Sector.'

¹²⁶ AIR 1/1303/204/11/169 – 'Report by Commandant Du Peuty on the Working of Aviation in the Vaux-Douaumont Sector.'

¹²⁷ J. R. Cuneo, *Winged Mars, Vol. II*, p.227.

allowed a brief resurgence of German air power, demonstrating to the former the importance of maintaining an offensive posture and the need to resist calls for localised defensive measures.¹²⁸ As a riposte, the French regrouped their fighters and regained control at the front. For du Peuty, when both sides adopted an offensive strategy in the air, it would be the side with superior morale that would triumph, and, in spite of heavy losses, French aviation continued to dominate in the Verdun sector until the focus of Anglo-French air power shifted to the Somme.¹²⁹

The RFC, the Somme, and the lessons of Verdun

For Trenchard, du Peuty's conclusions confirmed aspects of existing RFC doctrine, as well as many of his own thoughts. These he developed during his time as Commander of First Wing, and on into his appointment as head of the RFC in France. Many of du Peuty's conclusions were not necessarily original, and their importance lay in being concepts that had been put through the severe test of extended operations at Verdun. For example, the moral benefits to be accrued from the offensive use of air power were a significant feature of pre-war RFC doctrine, and the experience of Verdun served to confirm the validity of such thinking, as did the RFC's own experiences during 1915.¹³⁰ What is more, the need to 'fight for information' was now an established axiom, which featured in Trenchard's letters to GHQ.¹³¹

¹²⁸ AIR 1/1303/204/11/169 – 'Report by Commandant Du Peuty on the Working of Aviation in the Vaux-Douaumont Sector.'

¹²⁹ Ibid.

¹³⁰ General Staff, AP 144, *Training Manual, RFC (Military Wing), Part II* (Jun 1914), p.47.

¹³¹ AIR 1/521/12/12/2 – Letter, Trenchard to GHQ, 9 Mar 1916.

From a tactical standpoint, Verdun had seen the move from individual aerial combat to the use of fighters in formations.¹³² Whilst such moves were designed to improve offensive efficiency, Trenchard had encouraged a similar use of formations in January 1916.¹³³ By insisting on an escort ratio of three aircraft to one reconnaissance / observation machine during operations, Trenchard hoped to overcome the effectiveness of the Fokker, at least until the RFC possessed better fighting aircraft.¹³⁴ Trenchard, often derided for refusing to utilise escort aircraft, was, in fact, following established RFC tactical doctrine that encouraged the use of multiple aircraft to increase the concentration of fire they were able to bring to bear on enemy aircraft.¹³⁵ Trenchard's decision demonstrates the pressure being placed on the RFC during this period, and the use of escorts degraded the operational capability of the Corps.¹³⁶ However, Trenchard was already aware of the benefits of formation flying, and, as the Fokker situation eased, he continued to encourage his squadrons to make use of formations of fighting aircraft.¹³⁷ Again, the experiences of Verdun only confirmed the importance of formation flying.

From an organisational and operational perspective, moves to group fighting aircraft into homogeneous squadrons were favoured by the senior command of the RFC. However, due to the limited number of fighters available, they

¹³² J. R. Cuneo, *Winged Mars, Vol. II*, p.227.

¹³³ H. A. Jones, *WIA, Vol.II*, pp.156 – 157.

¹³⁴ *Ibid.*

¹³⁵ AIR 10/180 – General Staff, *Training Manual, Royal Flying Corps, Part II (Military Wing)*, Provisional 1915. Reprinted with amendments 1916, pp.71 – 72.

¹³⁶ H. A. Jones, *WIA, Vol.II*, pp.156 – 157.

¹³⁷ H. A. Jones, *WIA, Vol.II*, pp.157 – 158.

were dispersed amongst all the RFC's squadrons.¹³⁸ For Hallion, creating single-type fighting squadrons was 'contrary' to British doctrine.¹³⁹ However, the record indicates that, during the pre-war period, discussions in the MW focused on the need to group aircraft into homogenous squadrons based on both their type and function.¹⁴⁰ As H. A. Jones notes, it was for practical and logistical reasons that such a change took time to implement.¹⁴¹ For example, it was only at the beginning of 1916 that significant numbers of genuine fighting aircraft were available to group into specific squadrons, with the first single-type fighting squadron established in January 1916, and the second in February.¹⁴² Before the lessons of Verdun crystallised, Trenchard had already decided to regroup fighting aircraft into specialist squadrons, whilst removing all such squadrons from Corps duties.¹⁴³ The lessons of Verdun served to confirm the validity of such thinking in time for the planning and execution of the Somme offensive.

Greenhalgh asserts that

British planning for the Somme ... ignored the valuable lessons that the French had learned [at Verdun].¹⁴⁴

Citing the example of French interest in the use of the tank during the Somme, she also contends that the French were particularly skilful at learning

¹³⁸ H. A. Jones, *WIA, Vol.II*, pp.139 – 140.

¹³⁹ R. P. Hallion, *Rise of the Fighter*, pp.7 – 8.

¹⁴⁰ AIR 1/119/15/40/69 – Letter, Sykes to DGMA, 30 Oct 1913.

¹⁴¹ H. A. Jones, *WIA, Vol.II*, pp.139 – 140.

¹⁴² H. A. Jones, *WIA, Vol.II*, pp.158 – 159.

¹⁴³ AIR 1/1/4/3 – Organisation of the Royal Flying Corps in the Field, 16 Feb 1916; H. A. Jones, *WIA, Vol.II*, pp.167 – 168.

¹⁴⁴ E. Greenhalgh, 'Why the British were on the Somme in 1916,' p.159.

from the British, whilst, other than some limited initiative at the Corps level, the British did not match these efforts.¹⁴⁵ Revisionist scholars, such as Philpott and Griffith, would take issue with such sentiments, and the latter describes the British as 'assiduous' in their efforts to learn from both their allies and enemies.¹⁴⁶ Moreover, Greenhalgh's assertions do not consider the air power aspects of the battle, which clearly demonstrate a 'binding' of Anglo-French concepts in relation to the control of the air. Philpott's *Bloody Victory* (2010) records that the British learnt lessons from the French, but overstates when highlighting Trenchard's role in 'suggest[ing]' the strategy to the French in the first instance.¹⁴⁷

The planning for the Somme took place during the first half of 1916, and was affected by the German offensive at Verdun. Whilst the debate concerning British intentions on the Somme is outside the scope of this chapter, it is important to note that the RFC was determined to provide effective air support to the British units involved in the battle, whilst, from a 'binding' perspective, French lessons from Verdun had been fully incorporated into the RFC's approach to the campaign. The more practical aspect of coalition was on display throughout this period, and regular liaison meetings took place from mid-1916 onwards with regard to issues of supply and logistics for the RFC and French Air Service.¹⁴⁸

¹⁴⁵ E. Greenhalgh, *Victory through Coalition*, p.66.

¹⁴⁶ P. Griffith, *Battle Tactics of the Western Front*, pp.52 – 56; W. Philpott, *Bloody Victory*.

¹⁴⁷ W. Philpott, *Bloody Victory*, p.268.

¹⁴⁸ AIR 1/877/204/5/576 – RFC HQ, Monthly Conferences between French and British Aviation Services, 17 May – 31 Dec 1916. For a representative example, see the minutes of 17 May 1916.

The RFC's presence on General Rawlinson's Fourth Army front was significant. As Wise records, some 400 aircraft were mustered to support operations for the Somme. This included 76 of the latest generation of fighting aircraft; assets that were more than capable of besting the Fokker.¹⁴⁹ Absorbing the lessons of aerial fighting up to this point, including those gained from close liaison with the French, these fighters were grouped into specialist squadrons with the objective of patrolling aggressively over and behind the German lines.¹⁵⁰ Faced with overwhelming numerical inferiority, and an enemy with superior aircraft, organisation, and doctrine, the situation for the German Air Service was made worse by their own organisational deficiencies and their wasteful tactics based on defensive patrolling.¹⁵¹

By the opening of the battle, the RFC was dominant in the air, facilitating the opportunity to provide effective ground support for the BEF, whilst denying the benefits of such support to German forces.¹⁵² This was a golden period for the RFC as its morale soared in direct correlation with its effectiveness and dominance.¹⁵³ Tactical evolution was ongoing during this period, and the British developed effective methods for formation flying.¹⁵⁴ Excellent morale also characterised relations between British and French aviators. Capturing the confident and relaxed atmosphere resulting from overwhelming superiority, Trenchard and his French counterparts felt able to place a friendly

¹⁴⁹ S. F. Wise, *Canadian Airmen in the First World War*, p.364. J. H. Morrow, *German Air Power*, pp.59 – 60.

¹⁵⁰ H. A. Jones, *WIA, Vol.II*, p.199.

¹⁵¹ H. A. Jones, *WIA, Vol.II*, pp.464 – 470, Appendix VII: Some Notes on the German Air Service at the Somme (1916); C. Duffy, *Through German Eyes*, p.309.

¹⁵² H. A. Jones, *WIA, Vol.II*, pp.235 – 236; S. F. Wise, *Canadian Airmen in the First World War*, p.373.

¹⁵³ Trenchard Papers, RAFM, MFC 76/1/61 – Autobiographical Notes, pp.83 – 84.

¹⁵⁴ AIR 1/126/15/40/191 – 'Notes on Formation Flying and Fighting in the Air,' 31 Aug 1916.

wager concerning the destruction of German observation balloons during the opening of the battle.¹⁵⁵ Captured in Haig's diary, the difficulties experienced in connection with the ground campaign could not overshadow the RFC's achievements during this period.¹⁵⁶

Another strand of the RFC's strategy for controlling the air over the Somme, also highlighted in Haig's diary, involved the use of bombing aircraft to attack targets in the German rear.¹⁵⁷ Directed initially at communications and HQ targets, such operations polarise opinion. Jones offers evidence for their effectiveness, whilst Edmonds suggests otherwise.¹⁵⁸ The primary objective was to inflict material damage, but it was hoped that bombing targets in the German rear would also divert German air power resources to defensive tasks. This would assist in keeping the localised airspace over the battle free for use by friendly Corps aircraft.¹⁵⁹ However, as was a recurring theme of the control of the air during this conflict, dominance produces a riposte that sees the balance of power change hands.¹⁶⁰ As Jones suggests, by September 1916, the RFC was under significant pressure in the air.¹⁶¹ Several factors explain the slow decline of the RFC and the rise of the German Air Service, and Duffy makes an important distinction in this regard. He notes that, whilst German dominance seemed the product of rapid improvement, it was the

¹⁵⁵ E. Greenhalgh, *Foch in Command*, p.148.

¹⁵⁶ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 31 Jul 1916, p.212.

¹⁵⁷ *Ibid.* For a typical operations order from this period, which included bombing of this nature, see AIR 1/1184/204/5/2592 – Operation Order No.419, 13 July 1916. Trenchard to O.C. 9 Wing; H. A. Jones, *WIA*, Vol.II, p.251.

¹⁵⁸ H. A. Jones, *WIA*, Vol.II, pp.216 – 217 and p.221 – 222; J. E. Edmonds, *OH*, 1916, Vol. I, p.478.

¹⁵⁹ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 31 Jul 1916, p.212; S. F. Wise, *Canadian Airmen in the First World War*, p.376.

¹⁶⁰ J. Buckley, *Air Power*, p.53.

¹⁶¹ H. A. Jones, *WIA*, Vol.II, pp.281 – 284.

culmination of various developments, including new fighting aircraft and the reorganisation of the German Air Service.¹⁶²

The Somme became the new focal point in the West as the German high command re-oriented its strategy. In the air, this saw large numbers of fighting aircraft redeployed to the region.¹⁶³ Now under the command of a single General Officer, the fighting squadrons of the German Air Service were also reorganised, and the RFC's control of the air was to be targeted in a deliberate fashion.¹⁶⁴ Isolated defensive patrolling was stopped, and large formations of fighters were to be used to seize localised control of the air from the British.¹⁶⁵ Confirmed by Trenchard's meetings with Haig during the late summer of 1916, German air power was starting to 'show more activity.'¹⁶⁶ By September 1916, RFC bombing operations were being directed at the German air threat. Given the increasing scale of the threat, Trenchard's rhetoric was more subdued when in meetings with Haig.¹⁶⁷ As with du Peuty, Trenchard felt the importance of moral superiority only increased when the opponents fighting for the control of the air became more closely matched in terms of equipment, tactics, numbers, and organisation. It was at this point that the force with the greatest offensive spirit and determination would prevail. For operations on 15 September 1916, Trenchard briefed his aviators

¹⁶² C. Duffy, *Through German Eyes*, pp.310 – 312.

¹⁶³ H. A. Jones, *WIA, Vol.II*, pp.464 – 470, Appendix VII: Some Notes on the German Air Service at the Somme (1916).

¹⁶⁴ *Ibid.*

¹⁶⁵ *Ibid.*

¹⁶⁶ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 23 Aug 1916, p.222.

¹⁶⁷ G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 4 Sep 1916, p.226; S. F. Wise, *Canadian Airmen in the First World War*, p.377.

with 'aggressive fire.' Characterised by Wise as a 'day of maximum effort,' operations were to place an even greater emphasis on moral superiority.¹⁶⁸

Even with Trenchard's overwhelming emphasis on the moral battlefield, it is telling to note that pressure was being brought to bear on the RNAS during this period. The RNAS, whose fighting aircraft were of the latest type, were directed to assist the RFC on the Somme.¹⁶⁹ As Henderson was to record in a letter to Haig, the demands from the RFC on the front were seemingly insatiable, and the production capability of Britain was not unlimited.¹⁷⁰ Henderson went on to question the soundness of Trenchard's offensive policy, noting that

I am not quite sure that some of the casualties are not incurred in enterprises which are not of the first importance with regard to your general operations.¹⁷¹

For Trenchard, Henderson's sentiment was an example of the most vital lesson to emerge from Verdun, and, when the contest for the control of the air entered a more trying period, it was crucial to maintain and increase the RFC's offensive posture. This was particularly important when faced with calls at the local level for defensive sorties to protect Corps aircraft. In an early draft of GHQ's official report on air power at Verdun, part of the following section was marked in red pencil:

¹⁶⁸ S. F. Wise, *Canadian Airmen in the First World War*, pp.381 – 383.

¹⁶⁹ AIR 1/2265/209/70/1 – Letter, Henderson to Haig, 8 Sep 1916.

¹⁷⁰ Ibid.

¹⁷¹ Ibid.

The unity of command of fighting squadrons and their offensive tactics gave the French a clear ascendancy in the air over the German and *save in exceptional circumstances Corps Squadron machines now do their work singly and without local support* [emphasis in original].¹⁷²

In particular, it was the efficient use of unescorted Corps aircraft that interested the reader of the document. Whether applied by the hand of Trenchard or not, the highlighting was done with his vision of air power in mind. As his biographer records, the greatest mistake made by the French during Verdun was to allow local ground commanders to dictate terms to fighting aircraft and to insist on localised defensive patrols at the expense of offensive operations.¹⁷³ For Trenchard, the defensive application of air power was the great evil. Calls for localised protection had to be resisted, whilst the pressure on the enemy had to be increased via more intensive offensive operations.

The German Air Service was able to reassert its influence when French air power began heeding requests for defensive sorties. In contrast, when the French returned to an offensive strategy, they returned to a dominant position in the air.¹⁷⁴ Thus, whilst ensuring effective support for the BEF during the Battle of the Somme, Trenchard's other task was to persuade those around him of the soundness of his offensive strategy. It was with such a task in mind that the RFC's Commander began what was an information offensive directed

¹⁷² AIR 1/1585/204/82/41 – Early draft of 'Further Notes from Verdun,' dated 4 Apr 1916. It is very likely that Cooper was the author of this report, it being contained in a file full of his reports from this period.

¹⁷³ A. Boyle, *Trenchard*, p.170.

¹⁷⁴ AIR 1/1303/204/11/169 – 'Report by Commandant Du Peuty on the Working of Aviation in the Vaux-Douaumont Sector.'

toward the BEF, War Office, and anyone else that would care to listen. As Baring questioned,

would the RFC be strong enough to resist the pressure of other arms which was certain to be exercised in asking for defensive measures?¹⁷⁵

Such thinking influenced the evolving nature of RFC doctrine that, as Parton suggests, now attempted to explain why 'the RFC was perhaps not doing quite what the rest of the Army expected.'¹⁷⁶

The RFC and Information: Collating and Disseminating

Information has always been used to help armies fight, and the RFC was an efficient collator and disseminator of a range of information. Tactical thoughts and material were distributed regularly, whilst the activities of hostile air services were monitored and analysed. Reports from frontline pilots were of great interest, and intelligence was gathered on German aerial capabilities from the earliest days of combat in the air.¹⁷⁷ The sophistication of such material improved over time, and, by 1917, reports on German aircraft types, including those captured during operations, were produced in great numbers.¹⁷⁸ Unsurprisingly, such activities featured a wider coalition context, and the views of allies were sought. For example, French thinking on the

¹⁷⁵ M. Baring, *R.F.C. H.Q.*, p.170.

¹⁷⁶ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.43 – 45.

¹⁷⁷ AIR 1/746/204/3/19 – Particulars and sketches of three new types of German Aeroplane seen during period 6 – 13 Jul 1915.

¹⁷⁸ AIR 1/1/4/26/5 – Notes on Captured German Aeroplanes, Sep 1915 – Nov 1917; AIR 1/1/4/26/6 – German Aeroplanes, Reports and Texts, Mar 1916 to Nov 1917; AIR 1/1585/204/82/39 – Report on Albatross scout, 1 May 1917.

development of fighting aircraft was circulated via the translation of a report that analysed French aircraft needs in relation to current German types.¹⁷⁹ Reports giving details of German aircraft captured by the French were also made available. This was particularly helpful when the Fokker monoplane was in the ascendancy, and French reports helped demonstrate the very limited capabilities of the type, aiding the restoration of British morale.¹⁸⁰ Copies of French operations orders were also provided to the RFC, and made available to study, whilst statistics were kept on the nature of French aerial operations.¹⁸¹

Training, an aspect of RFC policy criticised widely in the literature, also featured an information context that was enhanced by cooperation with the French. As with most features of the BEF's war effort, RFC training improved during the duration of the conflict, reflecting another aspect of the wider 'learning processes' experienced by the British. The inadequacies in the training regime had been highlighted during 1915 and 1916, whilst calls for improved aerial combat training began in late 1915.¹⁸² This culminated in the establishment of the Smith-Barry regime at Gosport.¹⁸³ This scheme not only provided specialised and advanced instruction for recruits, it also improved the standard of training received by instructors.¹⁸⁴ Trenchard must accept at least partial responsibility for pushing the RFC in an unrelenting manner from

¹⁷⁹ AIR 1/1/4/25 – Report by Commandant Brocard, 10 Mar 1917.

¹⁸⁰ AIR 1/910/204/5/825 – French Report on Captured German Aircraft, March 1916.

¹⁸¹ AIR 1/881/204/5/593 – French Operation Orders, 1 Jul to 1 Nov 1917; AIR 1/881/204/5/596, 598, 599, 600 – French Resumé of Operations, Apr 1917 to Mar 1918.

¹⁸² AIR 1/138/15/40/281 – Letter, Trenchard to Directorate of Military Aeronautics, 27 Oct 1915.

¹⁸³ D. Jordan, 'Army Co-operation Missions,' p46, pp. 64 – 65, pp.66 – 69, pp.69 – 70, and p.74.

¹⁸⁴ AIR 1/2126/207/77/3 – 'General Methods of Teaching Scout Pilots.'

late 1916 until mid-1917, but, by 1918, the quality of pilots arriving with the RFC had improved significantly. Trenchard must be given considerable credit for this improvement, particularly via his support of Smith-Barry.¹⁸⁵ Always seeking to enhance the system of training on offer, and by taking advantage of the coalition context, Smith-Barry was sent to France to report on the French training regime.

Smith-Barry's report, produced in November 1917, commented favourably on various aspects of the French system, including their efficient use of aircraft and the centralised nature of their training establishments.¹⁸⁶ However, Smith-Barry did not shy away from criticising specific instances of poor instruction or the low morale of cadets.¹⁸⁷ In addition, Smith-Barry recommended sending additional officers to make specific studies of the administration of the French system, as well as establishing a team of officers to keep abreast of the latest French ideas relating to training.¹⁸⁸ Whilst noting some degree of difficulty in obtaining the fullest cooperation, Smith-Barry was able to make important comparisons with his advanced air school at Gosport, and the rate of accidents amongst RFC pilots under training was significantly less than their French counterparts.¹⁸⁹ After some slightly tense administrative wrangling (smoothed over by the polished pen of a French liaison officer), Smith-Barry made the findings of his report available to the French, whilst he also produced an extra memorandum that made more explicit comparisons

¹⁸⁵ D. Jordan, 'Army Co-operation Missions,' pp.68 – 69 and p.74; A. Boyle, *Trenchard*, pp.202 – 203.

¹⁸⁶ AIR 20/598 – 'Report on the French Flying Schools,' 9 Nov 1917.

¹⁸⁷ *Ibid.*

¹⁸⁸ *Ibid.*

¹⁸⁹ *Ibid.*

between the British and French systems.¹⁹⁰ In a letter to the Air Ministry, the French made a request for a temporary exchange of four Smith-Barry trained instructors, whilst they were more than willing to provide four of their own instructors in return. As was noted in the letter, it was not only the exchange of skills that was important. By spending time with their allies, the British and French would only multiply the good feelings that both Armies had for one another.¹⁹¹ Training, again, demonstrates the RFC's progressive attitude toward information and the coalition, which embraced both aspects of the 'binding' process.

The RFC's efforts also extended to the translation and distribution of captured German material, which included pamphlets and reports on a range of air power topics.¹⁹² Copies of captured German Sixth Army standing orders relating to fighting in the air were amongst the most valuable finds, whilst *Der Rote Kampfflieger* (1917), a book written by Germany's most successful fighter pilot, Manfred von Richthofen, was translated in September 1917, some months before a commercial translation was available in English.¹⁹³ Brooke-Popham, an officer whose role in the information war was vital, particularly with regard to early RFC doctrine, understood the multifaceted nature of the air war. His abilities as a pilot were limited, as were his qualities as an operational squadron leader. However, he was a graduate of Camberley, and had an excellent grasp of logistics, an ability to write in

¹⁹⁰ AIR 20/598 – Smith Barry to Air Ministry, 22 Jan 1918. Lt-Col. J. Balsan (French Liaison officer) to Air Ministry, 16 Jan 1918.

¹⁹¹ AIR 20/598 – Lt-Col. J. Balsan (French Liaison officer) to Air Ministry, 16 Jan 1918.

¹⁹² AIR 1/2251/209/54/9 – Translation of German pamphlets, notes and reports, 1915 – 1917. These include wireless and artillery practices and cooperation.

¹⁹³ AIR 1/1/4/26/3 – Extract from translation of Sixth Army Standing Orders, 20 Jan 1917; AIR 1/1/4/26/4 – Translation of Richtofen's Book, *Der Rote Kampfflieger*, 20 Sep 1917.

coherent and accessible English, and a strong belief in the importance of producing informational material. Take, for example, his report on the latest German aircraft types, written in May 1917.¹⁹⁴ More important than its content was the intention behind its production. As Brooke-Popham noted in a covering letter to the Technical Department of the Air Board,

I have been wasting a few hours compiling some general notes on German aeroplanes. I think something of this nature, amplified and corrected where necessary, would be worth while getting out.¹⁹⁵

By expanding and developing his notes, Brooke-Popham felt that 'we might get something worth printing.'¹⁹⁶ Brooke-Popham's activities were clearly not wasteful, and his intention was to disseminate helpful information widely within the RFC and BEF. This was not merely an abstract administrative exercise, and he hoped to ensure that those concerned with fighting for the control of the air were as well informed as possible with regard to the technical capabilities of the hostile air forces opposing them. Such activities, including studying both friend and foe, were progressive and sophisticated, and provide further context to the generally critical historiography on the RFC.

Trenchard and his Information Offensive

There was a different strand of the RFC's information war that was directed at its own side. Here, the goal was to 'market' a very specific vision for the 'correct' application of air power. This goal became even more vital as

¹⁹⁴ AIR 1/1/4/16 – Brooke-Popham, Report on German aeroplanes, 26 May 1917.

¹⁹⁵ AIR 1/1/4/16 – Letter, Brooke-Popham to Pitcher, 29 May 1917.

¹⁹⁶ Ibid.

German air power at the front grew in strength and effectiveness and opinions at home began to question the soundness of the offensive strategy in the air.¹⁹⁷ Trenchard did not have to worry about the opinion of Haig, who, as the last chapter established, shared the former's belief in the offensive use of military power.¹⁹⁸ Haig's letters to the WO of September and November 1916, followed up vehemently in February 1917, offer clear evidence that Haig and Trenchard were of one mind when it came to air policy.¹⁹⁹ Yet, for those with the ability to influence the conduct of the RFC, either those with greater strategic power than Haig, those who controlled the supply of men and equipment, or those at the lower levels who could bring cumulative pressure to bear, Trenchard had to ensure that the 'correct' use of air power was well understood. It was with such an objective in mind that Trenchard launched a textual assault that would be a continuous feature of RFC policy until the war's conclusion.²⁰⁰ As Ash writes,

Trenchard's forte was in repeating and enforcing strategic concepts expressed by others, and then fighting tenaciously and successfully for them.²⁰¹

Given its most clear form to date in a paper of September 1916 entitled 'Future Policy in the Air,' Trenchard drew heavily on du Peuty's lessons from Verdun, stressing the importance of offensive air power and the ineffectual nature of purely defensive measures, particularly given the expansive nature

¹⁹⁷ AIR 1/2265/209/70/1 – Letter, Henderson to Haig, 8 Sep 1916.

¹⁹⁸ WO 158/34 – Summary of Operations, Royal Flying Corps, reports, 3, 5 Aug, and 7 Oct 1916.

¹⁹⁹ AIR 1/520/16/12/1 – Haig to WO, 16 Nov 1916; AIR 1/503/16/3/17 – Haig to CIGS, 13 Feb 1917.

²⁰⁰ A. Boyle, *Trenchard*, pp.240 – 241.

²⁰¹ E. Ash, 'Air Power Leadership,' p.167.

of the air.²⁰² Evidentially, the French experience from Verdun was cited as an unquestionable example of the importance of maintaining an offensive posture, even when faced with significant pressure from local commanders to provide direct support to their Corps aircraft.²⁰³ In an important concluding section, Trenchard speculated as to the most appropriate course of action if the German Air Service were to adopt an offensive posture similar to the RFC. The answer was not to switch to defensive measures, but to 'increase our offensive.'²⁰⁴ As Trenchard predicted, the German Air Service did adopt a more aggressive policy in the air, and Trenchard could cite his September 1916 paper to demonstrate his foresight and his deep understanding of the application of air power.²⁰⁵ Whilst the experience of Verdun did offer clear evidence for the importance of offensive air power, Trenchard's foresight was not as clairvoyant as it appeared. By September 1916, the German air strategy at the Somme had already undergone a shift, by which defensive patrolling was abandoned in favour of a more aggressive stance. On the day after Trenchard's paper was produced, the former highlighted the growing offensive potential of German air power in a letter to Henderson.²⁰⁶

Cooper notes that Trenchard's paper offers clear evidence of the latter's intuitive approach.²⁰⁷ For example, Trenchard asserted that, because of its defensive strategy, Germany's use of air power was less effective than that of

²⁰² AIR 1/718/29/1 – Future Policy in the Air, 22 Sep 1916.

²⁰³ Ibid.

²⁰⁴ Ibid.

²⁰⁵ Ibid.

²⁰⁶ Trenchard Papers, RAFM, MFC 76/1/76 – Correspondence with David Henderson. Letter, Trenchard to Henderson, 23 Sep 1916.

²⁰⁷ M. Cooper, *The Birth of Independent Air Power*, pp.71 – 72.

the British by a ratio of '4 to 100.' Such conclusions had no empirical basis.²⁰⁸ As with much material produced by Trenchard during this period, the intuitive approach was designed to appeal to the dominant trends within the British Army. When faced with a superior enemy, or one of equal standing, the key was to establish moral superiority. Trenchard did not discount the importance of equipment, tactics, organisation, or weight of numbers, yet the deciding factor would always be moral conviction and the desire to attack the enemy. This was in keeping with the doctrine of the British Army, as found in *FSR*, and continued to shape RAF doctrine in the post-war period.²⁰⁹

The RFC's position in the air, eroded during September 1916, continued to diminish as the war moved into 1917. For the success of offensive operations during the spring and summer, air power came to be viewed as a vital factor for increasing the efficiency of the BEF's artillery.²¹⁰ The French were reaching similar conclusions, and, in a letter to Joffre, Foch was to write that

Superiority in *aviation* alone allows the necessary superiority in *artillery* to give superiority in the present-day *battle* [emphasis in original].²¹¹

With largely inferior aircraft, and the growing effectiveness of German air power, Trenchard's offensive strategy was vulnerable to criticism. Haig's letter of February 1917, which detailed the problems facing the RFC with some alarm, was evaluated by Henderson as being overstated. This characterisation was also endorsed by Robertson in a letter to the Secretary

²⁰⁸ AIR 1/718/29/1 – Future Policy in the Air, 22 Sep 1916.

²⁰⁹ J. C. Slessor, *Air Power and Armies*, p.10.

²¹⁰ AIR 1/520/16/12/1 – Haig to War Office, 18 May 1917.

²¹¹ Foch quoted in E. Greenhalgh, *Foch in Command*, p.236.

of State for War.²¹² It is probable that Henderson's advice to Robertson, not included as part of the letter, continued in the critical vein put forth by the former in his letter to Haig of September 1916.²¹³ Such criticism was no doubt influenced by the letters Trenchard was sending to Henderson during early 1917, which adopted an increasingly urgent tone.²¹⁴ As Boyle notes, such letters strained the relationship between Trenchard and Henderson.²¹⁵

The period that was to follow, often described as 'Bloody April,' was the RFC's lowest point of the conflict, and Trenchard's own recollections do not shirk the difficulties faced by his Corps.²¹⁶ In his letters to Henderson, he stressed the hard fighting and heavy losses that were a common feature of RFC operations during April 1917. However, he noted consistently that such a strategy facilitated the activities of Corps aircraft.²¹⁷ In Trenchard's opinion, it was whilst under the greatest pressure that moral superiority and the importance of vigorous offensive action were at their most vital. Conversely, it was during such periods that the greatest pressure would be brought to bear on the RFC with regards to adopting a more defensive policy, resulting in calls for direct protection to Corps aircraft. As Wise notes, April 1917 saw an increase in requests from Corps and Divisional commanders for protection for their Corps aircraft.²¹⁸

²¹² AIR 1/503/16/3/17 – CIGS to Secretary of State for War, 16 Feb 1917.

²¹³ AIR 1/2265/209/70/1 – Letter, Henderson to Haig, 8 Sep 1916.

²¹⁴ Trenchard Papers, RAFM, MFC 76/1/76 – Correspondence with David Henderson. Letters, Trenchard to Henderson, 12 Feb, 7 and 9 March 1917.

²¹⁵ A. Boyle, *Trenchard*, p.210.

²¹⁶ Trenchard Papers, RAFM, MFC 76/1/61 – Autobiographical Notes, p.89 – 90.

²¹⁷ Trenchard Papers, RAFM, MFC 76/1/76 – Correspondence with David Henderson. Letters, Trenchard to Henderson, 6, 8 and 9 Apr 1917.

²¹⁸ S. F. Wise, *Canadian Airmen in the First World War*, pp.404 – 405.

In many respects, moral superiority was required to best the enemy in the air, but also to counter the 'misunderstanding' that was prevalent amongst ground commanders in relation to the most 'effective' use of air power. In what became a trend during this difficult period, Haig's Chief of Staff issued guidance notes to the BEF's Army commanders concerning the RFC's policy in the air.²¹⁹ The first of these letters was clearly based upon material provided to GHQ by Trenchard and his staff. Take, for example, a similar letter written in August 1917, located in a file with an almost identical paper submitted to Haig's staff some three days before.²²⁰ This earlier paper emanated from Trenchard's staff, and both the April and August letters reiterated the RFC's policy statement of September 1916. Adopting the standard line, the French example of Verdun was cited in order to highlight the importance of offensive action. As the German Air Service had now adopted more aggressive tactics, the correct response was to 'pursue an even more vigorous offensive.'²²¹ This included the use of offensive fighting patrols and the employment of bombing aircraft to force the enemy to divert air power resources to defensive duties.²²²

The objectives Trenchard established for his information offensive were largely successful, and, during this most difficult period for the RFC, his offensive policy was maintained with little challenge. When legitimate criticisms were put forth, Trenchard continued to cite the experience of the French at Verdun, and the British successes at the Somme, to demonstrate

²¹⁹ AIR 1/522/16/12/5 – 'Policy in the Air,' GHQ, BEF to Army commanders, 9 Apr 1917.

²²⁰ AIR 1/524/16/12/20 – Trenchard to GHQ, BEF, 2 Aug 1917. GHQ, BEF to Army commanders, 5 Aug 1917.

²²¹ AIR 1/522/16/12/5 – 'Policy in the Air,' GHQ, BEF to Army commanders, 9 Apr 1917.

²²² Ibid.

the correctness of his policy. When faced with challenges to the RFC's vision for the control of the air, Trenchard made efficient use of his staff, who he termed his 'English Merchants'.²²³ To craft his ideas into lucid prose, he could draw upon the expertise of individuals such as Baring. On the heels of GHQ's paper of early August 1917, Trenchard reviewed the situation in the air since the Somme campaign.²²⁴ For Trenchard, arguing his case with consistency and conviction was another element of the wider offensive strategy with which his Corps fought. Importantly, his citation of evidence, and his ability to point to his foresight, did little to hamper the appeal of his conclusions. As his review stated, one of the vital aspects to winning the war in the air was

a more widely spread education with regard to the functions of the newer weapon [air power].²²⁵

This was an overt reference to the RFC's information offensive. Those calling for a more defensive aerial policy, including close protection for Corps aircraft, did not fully grasp the 'true' nature and functions of air power. Trenchard was also willing to criticise his coalition partners, and his decision to do so can be viewed as an attempt to demonstrate that even the French, co-creators of the strategic air offensive, had deviated from the 'correct' use of air power.²²⁶ The delicate nature of reporting on one's allies was highlighted by Trenchard, who noted that

²²³ A. Boyle, *Trenchard*, p.350.

²²⁴ AIR 1/718/29/1 – A Review of the Principles adopted by the Royal Flying Corps since the Battle of the Somme, 23 Aug 1917.

²²⁵ *Ibid.*

²²⁶ AIR 1/522/16/12/5 – 'Secret Memorandum on the French Air Service,' Trenchard to GHQ, BEF. 28 Aug 1917.

My relations with the French have been of the closest and I think it important that these relations should be maintained, and I am uneasy that if this report became known it might strain them.²²⁷

Trenchard praised the French for the material support they offered to their allies, whilst he noted their proficiency at conceptualising air power. The specific example of aerial fighting was cited, with Trenchard noting the intellectual debt owed to the French in this regard.²²⁸ However, Trenchard questioned the discipline of the French Air Service, and, whilst French operational orders stressed the importance of the offensive, in practice, French pilots were rarely 'bold,' and attacks were only made under the most favourable of circumstances.²²⁹ As if to drive home this lack of aggressive zeal, Trenchard included statistics at the end of the report to demonstrate that, comparatively speaking, the French made much less effort in the air than the RFC.²³⁰

The RFC's tactical pamphlets of this period also took advantage of the opportunity to reiterate the 'facts' about air power. In bridging the gap between the *Training Manual* and tactical material such as Brooke-Popham's paper of February 1915, the pamphlet, 'Fighting in the Air,' was produced by the General Staff in March 1917.²³¹ Parton ascribes great significance to this publication, suggesting that its decision to emphasise aerial fighting at the expense of other tasks was a marked shift from previous examples of

²²⁷ AIR 1/522/16/12/5 – Letter, Trenchard to GHQ, BEF. 29 Aug 1917.

²²⁸ AIR 1/522/16/12/5 – 'Secret Memorandum on the French Air Service,' Trenchard to GHQ, BEF. 28 Aug 1917.

²²⁹ Ibid.

²³⁰ Ibid.

²³¹ LHCMA, BP 8/3/1 – General Staff, 'Fighting in the Air,' Mar 1917.

doctrine.²³² In a more general sense, there was nothing extraordinary about the pamphlet's emphasis on offensive air power, and it was in keeping with Trenchard's wider 'educational' efforts of this period. For Parton, such efforts had the clear objective of keeping the RFC on the offensive, whilst ensuring that Trenchard maintained centralised control of the strategic elements of his Corps.²³³

Trenchard's efforts during 1917 also mirrored Haig's struggle to maintain control over wider British strategy.²³⁴ For Haig and Trenchard, the war could only be won on the Western Front. As Haig stated,

our military policy in aerial, as in other respects, must be based on the principle that a successful end of the war can be brought about only by a decisive victory over the enemy's forces in the field.²³⁵

The redeployment of strength to other theatres, or a shift to a more conservative strategy, played into German hands. In many respects, Trenchard's policy papers of 1917 served as an integral element of Haig's wider efforts during the year. For example, at the height of the Passchendaele campaign, a Trenchardian pamphlet, produced under the auspices of the General Staff, continued to emphasise the importance of maintaining an offensive strategy in the air.²³⁶ With the introduction of fighting types such as the SE5a, the Sopwith Camel, and the Bristol Fighter, the RFC possessed the

²³² N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.43 – 45.

²³³ Ibid.

²³⁴ D. French, *The Strategy of the Lloyd George Coalition, 1916 – 1918* (Oxford: Clarendon Press, 1995), chapters one to five.

²³⁵ ADM 1/8449/39A – Letter, Haig to Army Council, 1 Nov 1916.

²³⁶ LHCMA, BP 8/3/4 – General Staff, 'Offence versus Defence in the Air,' Oct 1917.

equipment necessary to overturn German superiority.²³⁷ Increased tactical flexibility, a focus on large-scale formation flying, and improvements in the RFC's command and control network, which increased operational responsiveness, were important factors that saw a swing in the balance of power.²³⁸ However, with the RFC's position growing in strength, it was vital to maintain the force of the information offensive. If anything, this period saw a marked increase in its intensity.

In the wider context of the conflict, the RFC was faced with pressure to divert resources to defensive duties, other theatres, and strategic raiding against Germany. Haig and Trenchard had managed to resist such pressure during 1916, and the information offensive had been successful. Air defence schemes put forward between March and May 1916 were reduced in scale during July 1916, with the vast majority of resources forwarded to squadrons operating at the front.²³⁹ For example, on 22 July 1916, No.39 (Home Defence) Squadron was informed that its strength would be reduced, as engines were to be removed from some of its aircraft and sent to squadrons operating with the BEF in France. An optimistic closing sentence noted that

New engines will be available shortly, and will be issued to No.39 Squadron so as to bring them up to establishment.²⁴⁰

²³⁷ R. P. Hallion, *Rise of the Fighter*, pp.97 – 98.

²³⁸ J. Ferris, ed., *The British Army and Signals Intelligence during the First World War* (London: Army Records Society, 1992), chapter three.

²³⁹ AIR 1/511/16/3/60 – Air Defence Instructions, Mar – Jul 1916.

²⁴⁰ AIR 1/511/16/3/60 – Letter, Director of Air Operations, General Staff, to GHQ, HF, 22 Jul 1916.

However, strategic raiding by German 'Gotha' bombers during the summer of 1917 threatened to undermine the efforts of both Haig and Trenchard.²⁴¹ In response to frenzied criticism in the press, the government discussed air power matters with Haig at a meeting of the War Cabinet on 20 June.²⁴² In providing feedback to the government on the air defence situation, Haig based his arguments on a paper drawn up by Trenchard, which noted the importance of maintaining an offensive posture and the need to avoid wasting resources on purely defensive measures.²⁴³ This built upon the arguments of Robertson, who, in addressing the War Cabinet on 14 June, noted the difficulties of providing effective localised air defence against fast moving German aircraft.²⁴⁴

As Philpott notes, Haig, Robertson, and Trenchard used the occasion to press most vigorously for an offensive in Belgium, which would achieve several objectives, including denying Germany air bases close to the UK.²⁴⁵ In many respects, Haig presented his offensive plans for the late summer of 1917 as the solution to a range of strategic difficulties facing the British, including the German submarine threat.²⁴⁶ Even in the face of extreme political and public pressure, particularly in the aftermath of the 7 July 1917 raid against London, the force of Haig's and Trenchard's arguments did not abate, and they

²⁴¹ AIR 1/2319/223/30/14 – Air Raids, 1917, Report IA, 25 May – 13 June. Intelligence Section, GHQ, HF, Sep 1917; AIR 1/2319/223/30/15 – Air Raids, 1917, Report II, July. Intelligence Section, GHQ, HF, Sep 1917; AIR 1/2319/223/30/17 – Air Raids, 1917, Report III & IIIA, August. Intelligence Section, GHQ, HF, October 1917.

²⁴² *The Daily Mail*, 28 May, 14, 15, 18 Jun, and 8 Jul 1917; H. A. Jones, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force (WIA)*, Vol.V (Oxford: Clarendon Press, 1935), pp.29 – 32.

²⁴³ H. A. Jones, *WIA*, Vol.V, pp.479 – 482, Appendix IV.

²⁴⁴ CAB 23/3 – War Cabinet Minutes, 14 Jun 1916.

²⁴⁵ W. J. Philpott, *Anglo-French Relations*, pp.145 – 146.

²⁴⁶ For the naval aspects of the Passchendaele campaign, see A. Wiest, *Passchendaele and the Royal Navy* (Westport, CT: Greenwood Press, 1995).

managed to reduce the number of RFC squadrons diverted to defensive duties to the bare minimum, resulting in the redeployment of the extremely inexperienced No.46 Squadron.²⁴⁷

Nonetheless, they could not prevent all redeployments or the creation of the RAF. The creation of an independent air force was another factor that, in the eyes of both Haig and Trenchard, threatened to undermine the efforts of the BEF on the Western Front.²⁴⁸ With such pressures in mind, Trenchard continued to stress the primacy of his offensive policy in support of the BEF.²⁴⁹ When the War Cabinet gave Trenchard direct instructions to undertake strategic raiding against Germany, Trenchard did not miss the opportunity to utilise such endeavours to stress the continued importance of a Western Front first strategy.²⁵⁰ As Parton observes, Trenchard's paper of October 1917 utilised subtle tactics by which 'facts' about the use of air power were, in reality, based on inherent assumptions that served to validate and rationalise the existing offensive strategy of the RFC.²⁵¹ The section providing an historical overview of aerial fighting during the conflict is characterised by this approach.²⁵² Such pamphlets were supplemented with regular updates from the front, and Trenchard would often forward evidence of the operational

²⁴⁷ CAB 23/3 - War Cabinet Minutes, 9 Jul 1917; A. G. Lee, *No Parachute*, pp.24 – 28 and p.90.

²⁴⁸ CAB 24/22 – G.T. 1658 – 'Committee on Air Organisation and Home Defence against Air Raids. Second Report,' 17 Aug 1917; CAB 21/27 – Air Defence, Aerial Operations and Organisation of the Air Services, Jul – Aug 1917; CAB 24/20 – G.T.1451, 'Committee on Air Organisation and Home Defence against Air Raids. First Report,' 19 Jul 1917; M. Cooper, *The Birth of Independent Air Power*, pp.97 – 108; G. Sheffield & J. Bourne, eds., *Douglas Haig*, Haig Diary, 2 Nov 1917, p.337.

²⁴⁹ H. A. Jones, *WIA*, Vol.V, pp.29 – 32; G. K. Williams, *Biplanes and Bombsights*, p.37.

²⁵⁰ AIR 1/725/97/7 – 'Long Distance Bombing,' Trenchard, 26 Nov 1917; G. K. Williams, *Biplanes and Bombsights*, pp.49 – 50.

²⁵¹ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.46 – 47.

²⁵² LHCMA, BP 8/3/4 – General Staff, 'Offence versus Defence in the Air,' Oct 1917, pp.3 – 5.

effectiveness of his offensive strategy. His update of October 1917 used the example of the previous month to demonstrate the frenzied activity of his Corps, including some '9,209 [individual] offensive patrols.'²⁵³ In a cover note to Haig, he urged that the report be forwarded to Robertson for submission to the War Cabinet.²⁵⁴ The result of the RFC's efforts during September had been to push the German Air Service onto the defensive, securing control of the air for Corps artillery aircraft.²⁵⁵

Moving into the Final Year of the Conflict

The RFC was but a small cog in the BEF, and, as British strategy shifted to a more conservative position during the winter of 1917 / 1918, Trenchard was asked to reflect upon RFC policy. In particular, the build up of German forces in the West during early 1918 gave clear indication that Britain and France would be compelled to act defensively for a significant period. Trenchard was tasked with examining the role of the RFC during such operations, and produced a sophisticated paper that, whilst reemphasising the standard position on the value of the offensive, made concessions with regard to the value of purely defensive operations.²⁵⁶ Trenchard also noted that, if the German Air Service was to seize control of the air, the RFC would be able to ensure the continued work of Corps aircraft at the most crucial times, by

²⁵³ AIR 1/522/16/12/5 – 'Memorandum of the Results Obtained by the Royal Flying Corps during September with some notes of the work of the German Flying Corps,' 5 Oct 1917.

²⁵⁴ AIR 1/522/16/12/5 – letter, Trenchard to Haig, 5 Oct 1917.

²⁵⁵ Ibid.

²⁵⁶ AIR 1/526/16/12/36 – 'Co-operation of the RFC in Defence and counter attack,' 16 Jan 1918.

massing forces and seizing control of the relevant local airspace.²⁵⁷ This demonstrates that, whilst Trenchard still believed strongly in the importance of offensive air power, he was willing to embrace tactical and operational nuances based on accumulated experience.

In fact, the main historiographical criticism of Trenchard's offensive policy focuses not on the principles upon which it was based, but rather its operational and tactical execution.²⁵⁸ Such criticism, in rather gentle form, is even found in the generally positive official histories, and Jones reflects upon the lack of imagination displayed by the RFC.²⁵⁹ However, Jones is quick to insert the caveat that such criticism is based on 'details,' and that the 'principle' of offensive air power 'was and is sound.'²⁶⁰ Yet, 1917 and 1918 evidenced significant evolution in this regard, a process often clouded by the consistency with which Trenchard enumerated the principles of offensive air power.

It was not that Trenchard was opposed to modifying the execution of the strategic offensive. The 'Fighting in the Air' pamphlet of March 1917 contained clear tactical evolution from previous publications, stressing the importance of formation flying, whilst concessions were made with regard to the use of escorts for bombers.²⁶¹ Moreover, tactical evolution was a feature of operations during 1917. The example of the attack on Hill 70 in August of that year, a diversionary operation launched as part of the Passchendaele

²⁵⁷ Ibid.

²⁵⁸ J. C. Slessor, *Air Power and Armies*, p.42.

²⁵⁹ H. A. Jones, *WIA, Vol. VI*, p.555

²⁶⁰ Ibid.

²⁶¹ LHCMA, BP 8/3/1 – General Staff, 'Fighting in the Air,' Mar 1917.

campaign, demonstrates the RFC's growing sophistication when controlling the air. High level offensive patrols were supplemented with aircraft kept at forward airfields designed to counter the low-flying operations of the German Air Service.²⁶² Patrols now also penetrated German airspace to varying depths, and at varying altitudes, with close and medium altitude patrols offering greater protection to Corps aircraft. In addition, low-flying patrols ensured coverage against penetrations made at ground level.²⁶³

In seeking to improve techniques and practices, Trenchard was not afraid to ask for advice from operational level commanders. In a paper of December 1917, Trenchard concluded with a series of questions that sought to provoke debate on the tactical use of large formations.²⁶⁴ In attempting to make suggestions to modify RFC policy or practice, a degree of diplomacy was required. Thus, in characterising Trenchard's policy of offensive patrolling as 'feeble,' the Commander of the RFC's Fourteenth Wing missed a valuable opportunity to utilise the experience of his unit to attempt to modify RFC policy in a positive manner.²⁶⁵ Understandably, Trenchard's response was not receptive, and, whilst being remarkably constrained given the tactlessness of the Wing Commander, he highlighted genuine concerns regarding the command and control of increasingly large aerial formations.²⁶⁶

As Cooper highlights, Trenchard's strategy often misread an offensive posture as evidence of domination over the enemy, while ignoring the important

²⁶² S. F. Wise, *Canadian Airmen in the First World War*, p.422.

²⁶³ H. A. Jones, *WIA, Vol.IV*, p.176.

²⁶⁴ AIR 1/522/16/12/5 – 'Development of Aerial Fighting,' 18 Dec 1917.

²⁶⁵ AIR 1/971/204/5/1111 – Fourteenth Wing to Fourth Brigade HQ, 5 Jun 1917.

²⁶⁶ AIR 1/971/204/5/1111 – Trenchard to BEF, HQ, 13 Jun 1917.

principle of concentration.²⁶⁷ However, Trenchard's paper on defensive operations demonstrates that his conception of air power evolved, and he grasped that concentration at certain localities, and at specific times, was a viable tactic that could overwhelm a more powerful enemy.²⁶⁸ Such thinking was not new, and du Peuty had reached similar conclusions in his reports from Verdun.

With the birth of the RAF, Trenchard was appointed as the first CAS, leaving the RFC / RAF units in France in search of a new commander. This was found in the guise of John Salmond, who had been a close ally of Trenchard throughout the conflict. They kept up continuous correspondence, both official and unofficial, until the close of the war.²⁶⁹ A change of command did not see a change of the principles governing the use of the RFC / RAF. The final edition of 'Fighting in the Air,' produced just as Trenchard resigned as CAS, made clear the continuation of policy from one command regime to the next.²⁷⁰ As Parton suggests, the April 1918 edition of this pamphlet continued to stress old principles.²⁷¹

However, there was a clear evolution of practical concepts in this last edition, and distance offensive patrols, once described as the 'backbone' of the offensive strategy, were now to be supplemented with close patrols directed

²⁶⁷ M. Cooper, *The Birth of Independent Air Power*, p.75.

²⁶⁸ AIR 1/526/16/12/36 – 'Co-operation of the RFC in Defence and counter attack,' 16 Jan 1918.

²⁶⁹ Trenchard Papers, RAFM, MFC 76/1/92 – Trenchard and John Salmond, Correspondence, 1918.

²⁷⁰ LHCMA, BP 8/3/5 – General Staff, 'Fighting in the Air,' Apr 1918.

²⁷¹ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' p.48.

at contesting the airspace over the battlefield.²⁷² This demonstrates marked sophistication, and the 'blunt' instrument of the RFC / RAF was being refined to include a multi-layered approach to controlling the air. Moreover, it must be remembered that pamphlets such as these were, as Parton observes, generally out of date as soon as they were produced.²⁷³ They were a snapshot of approved policy and practices, and they often followed developments at the front. The process of measure and counter-measure was a fluid part of the battle for the control of the air, and its nuances could not be captured fully in written form.

Such evolutionary concepts did not abandon the principle of offensive air power, and, in a paper written after April 1918, the RAF continued to fight the information offensive in keeping with Trenchardian tenets. As the paper noted, a trend had developed where German aircraft were refusing combat with the offensive patrols of the British.²⁷⁴ This reflected the more general aerial strategy pursued by the German Air Service during this period. German air power remained a threat until the end of the war, but it could not match British and French numerical superiority. As such, it was forced to pick and choose its fights carefully.²⁷⁵ As the paper suggested, a specific objective should be selected for the offensive patrols to attack, and a counter air offensive against German aerodromes was recommended. By utilising such tactics, it was hoped that the German Air Service would be compelled to give battle under

²⁷² LHCMA, BP 8/3/5 – General Staff, 'Fighting in the Air,' Apr 1918. AIR 1/725/97/4 – 'Principles of the Action of Army Wings for fighting purpose.'

²⁷³ N. Parton, 'The Evolution and Impact of Royal Air Force Doctrine,' pp.39 – 40.

²⁷⁴ AIR 1/725/97/8 – Paper, untitled, undated but post-April 1918.

²⁷⁵ J. Boff, 'Air/Land integration in the 100 Days: The Case of Third Army,' *Air Power Review*, Vol. 12, No.3 (Autumn 2009), pp.80 – 81.

tactically unfavourable circumstances, thus returning the initiative to the attacking forces. However, if battle was refused, 'considerable damage both material and moral will be inflicted.'²⁷⁶

The sentiment behind this document was hugely significant. Compelling an enemy to fight under tactically unfavourable circumstances was a vital element of controlling the air, and continued to be so during the Second World War. Strange's command of 80 Wing during the closing months of the war demonstrates such thinking in practice, and sophisticated attacks on German airfields became a speciality of this Wing.²⁷⁷ Contrasting examples from the Second World War include the successful use of long-range fighter aircraft by US forces as part of the Combined Bomber Offensive. British fighter sweeps launched against targets in France during 1941 and 1942 demonstrate the converse, as German fighters could not be compelled to join battle on anything but their own terms.²⁷⁸

A final factor affecting the conduct of the RFC / RAF was the development of the ground attack role for fighting aircraft. Whilst ground strafing had been a feature of RFC operations from as early as the Somme, it took on real significance during the latter half of 1917. Operations at Cambrai featured the extensive use of British fighter aircraft, utilising their machine guns against

²⁷⁶ AIR 1/725/97/8 – Paper, untitled, undated but post-April 1918.

²⁷⁷ P. Hearn, *Flying Rebel*, pp.67 – 69.

²⁷⁸ S. L. McFarland & W. Phillips Newton, *To Command the Sky*; AIR 41/18 – AHB Narrative, *The Air Defence of Great Britain, Vol.IV: The Beginning of the Fighter Offensive, 1940 – 1941*; AIR 41/49 – AHB Narrative, *The Air Defence of Great Britain, Vol.V: The Struggle for Air Supremacy Jan 1942 – May 1945*.

German troops, trench lines, and other ground targets.²⁷⁹ Losses during such operations were extremely high, even for the RFC, and, as Jones records, they averaged 30 percent of the aircraft used.²⁸⁰ Whilst Jones cites evidence to demonstrate that the ground components of the BEF placed high value on the RFC's direct intervention against enemy infantry and defensive positions, he is also at pains to emphasise that such operations placed great strain on fighting squadrons. Not only did it keep them from their primary function of controlling the air, but it also subjected units to a significant degree of attrition, which could cripple an experienced and highly valuable asset in as few as four days.²⁸¹ As Jones continues, such a rate of wastage could only be justified in an 'extreme emergency,' or if the ground operations during which they took place were of a 'decisive kind.'²⁸² It was just such conditions that were present during the massive German offensives of the spring of 1918, and Haig's infamous 'backs to the wall' order applied with equal validity to the BEF's aerial contingent.²⁸³

On the day the RAF came into formal existence, 1 April 1918, Foch issued orders to coordinate the efforts of British and French aerial resources. He noted that the prime function of fighting aircraft was now direct assault against enemy ground troops. Fighting against enemy aircraft was 'not to be sought

²⁷⁹ H. A. Jones, *WIA, Vol.IV*, pp.226 – 259; B. Hammond, *Cambrai 1917: The Myth of the First Great Tank Battle* (London: Weidenfeld & Nicolson, 2009).

²⁸⁰ H. A. Jones, *WIA, Vol.IV*, p.257.

²⁸¹ H. A. Jones, *WIA, Vol.IV*, pp.257 – 259.

²⁸² H. A. Jones, *WIA, Vol.IV*, p.257.

²⁸³ D. T. Zabecki, *The German 1918 Offensives: A case study in the operational level of war* (London: Routledge, 2006); J. E. Edmonds, *Military Operations: France and Belgium (OH), 1918, Vol. II* (London: Macmillan & Co., 1934), Appendix 10, Haig, 'Special Order of the Day,' p.512.

except so far as necessary for the fulfilment of this duty.²⁸⁴ As Jones observes, operational orders issued to RAF units had to interpret Foch's instructions in line with the active fighting patrols launched by the German Air Service during this period. For example, Ninth Wing orders for 4 April instructed its fighting squadrons to patrol offensively, with the sole object being to 'seek out and destroy enemy formations.'²⁸⁵ Whilst it was difficult to resist the ground attack role when faced with critical conditions at the front, the RAF did not wish for such duties to distract from their prime function of controlling the air. Such sentiment was clearly a motivating factor in the production of an RAF policy paper that appeared post-April 1918.²⁸⁶ As the paper stated,

A conflict of interest thus arises between the requirements in the air and the requirements on the ground, but the latter being dependent on the former, it stands to reason that the primary task of the R.A.F. must be to gain and maintain superiority in the air, as without such superiority the effective cooperation of aircraft with the other arms is hindered, and the Army may be deprived of all assistance from the air at a time it is most needed.²⁸⁷

In many respects, this was another strand of the information offensive that the RFC / RAF had been fighting since it encountered its first serious difficulties in September 1916. Boff sides with the RAF's interpretation, noting the importance of maintaining control of the air as the BEF moved to the offensive in the summer of 1918.²⁸⁸ Of course, it is entirely possible that such documentation was issued with an eye to maintaining the independence of

²⁸⁴ H. A. Jones, *WIA*, Vol.IV, pp.456 – 458, Appendix XVIII, 'Orders of General Foch,' 1 Apr 1918.

²⁸⁵ H. A. Jones, *WIA*, Vol.IV, pp.348 – 351.

²⁸⁶ AIR 1/725/97/8 – Paper, untitled, undated but post-April 1918.

²⁸⁷ *Ibid.*

²⁸⁸ J. Boff, 'Air/Land integration in the 100 Days: The Case of Third Army.'

the new service. Stressing the importance of the control of the air gave the RAF a strategic role on the battlefield that was outside of the purely auxiliary roles of ground attack, reconnaissance, and artillery observation. As Parton records, such an assumption was at the core of the RAF's first post-war doctrinal publication.²⁸⁹

Conclusion

This chapter has offered some different perspectives on the RFC and the control of the air over the Western Front. In the first instance, the coalition context was highlighted, and, by using Greenhalgh's analytical framework, it was suggested that Anglo-French relations in the field of air power were some of the closest of the coalition, embracing the notion of genuine intellectual, philosophical 'binding.' Second, by examining the RFC's attitude to information, a further strand of the Corps's progressive attitude was illustrated. This included learning from both friend and foe, whilst ensuring that the BEF was fully informed about the functions and capabilities of its air power component.

Trenchard was an extremely shrewd operator during this period, and he possessed a sophisticated understanding of the importance of information. During his time as Commander of the RFC, his personal and unrelenting battle to 'educate' all those with an interest in aerial policy mimicked the incessant operational conduct of his Corps. If moral superiority was the crucial

²⁸⁹ N.Parton, 'The development of Early RAF Doctrine.'

factor in the success of warfare during this period, then Trenchard was not to be found wanting, and he commanded his Corps with zeal and determination. The criticism of the Corps that focuses on the execution of control of the air policy is not dismissed, but the tangible tactical and operational nuances that developed are often over-shadowed by the consistency and force of the Trenchardian rhetoric of the offensive.

CHAPTER SIX

THE ROYAL NAVAL AIR SERVICE AND THE CONTROL OF THE AIR DURING THE FIRST WORLD WAR

Introduction

In the pre-war era, naval aviators had engaged with the concept of the control of the air, focusing on its strategic implications. During this period of experimentation and transition, a failure to produce coherent doctrine and policy saw the RNAS diversify its activities to a significant degree. The feelings of strategic vulnerability, present in pre-war naval hypothesising, continued to manifest themselves during the conflict, and, for senior operational commanders of the Royal Navy, the control of the air over the Grand Fleet was a serious concern. Successive commanders of the Grand Fleet came to see the RNAS as an obstacle to the successful application of naval air power. In the words of Grove, the RNAS was an increasingly autonomous service that became 'a law unto itself.'¹ With Churchill as First Lord, such attitudes and initiative were encouraged. In the aftermath of the Dardanelles / Gallipoli campaign, Balfour, as First Lord, brought the Admiralty to heel. As Roskill records,

If the whole Navy suffered from the change, it was its youngest branch, the Air Service, that was to be the worst afflicted.²

¹ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.27.

² S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.167.

By emphasising the 'naval' at the expense of the 'aerial,' the RNAS was more closely controlled by the Admiralty.³ Yet, in spite of Balfour's attempts to discipline the unruly crew of the RNAS, the Grand Fleet felt so poorly served by its aerial branch, particularly in terms of controlling the air over the fleet, that, when the creation of an independent air service was mooted with increasing seriousness during mid- to late-1917, its Commander-in-Chief was an enthusiastic supporter of the idea; a move the Navy would come to regret.⁴ On 8 January 1914, a meeting was convened at the Admiralty, under the Chairmanship of the Fourth Sea Lord, Captain Cecil Lewis.⁵ In opening proceedings, Lewis remarked that

... there appeared to be some lack of definition at present as to the functions of the Naval Wing. The time had come when it must pass from the experimental stage to take a definite place in the Naval organisation ...⁶

Some three and a half years later, the RNAS still lacked a sense of clarity as to its wider purpose and functions. In August 1917, Admiral Sir David Beatty, then Commander of the Grand Fleet, noted that, 'as far as he knew, no air policy existed.'⁷ An absence of effective leadership and direction was the most significant factor contributing to the RNAS's lack of clarity and purpose during the conflict. The result was a sustained lack of focus and the diversification of RNAS activities. Such activities included: a farsighted interest in strategic

³ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.209. Letter, M. Bonham-Carter, PM's Private Secretary to M. Hankey, Secretary of CID, 6 Jun 1915.

⁴ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.499 – 501. Letter and Memorandum from Beatty to Sir Eric Geddes, First Lord, 15 Aug 1917.

⁵ NMM, LP, MS 51/012 – ADL/2/1/5 – 8, Minutes of Air Department Conference, 8 Jan 1914.

⁶ *Ibid.*

⁷ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.534 – 535. Extracts from Minutes of a Conference between Admiral Sir David Beatty, C-in-C, Grand Fleet, and Rear-Admiral Lionel Halsey, Third Sea Lord, Aug 1917.

bombing; the highly effective use of aircraft in the anti-submarine role; the troublesome task of localised air defence; and the involvement of naval aviators in the development and use of armoured cars and tanks. Whilst the utilisation of air power in conjunction with the fleet represented a massive challenge, the RNAS did not devote enough energy to the task between 1914 and 1918.⁸ The RNAS did not possess officers of the reputation and standing of Trenchard and Henderson, nor did a close relationship exist between naval aviators and their parent service. There was no equivalent of the Trenchard-Haig relationship, or of the wider cooperation between the BEF and the RFC. When faced with the coherent vision of air power, articulated with clarity and consistency by Trenchard and Haig, the RNAS was regularly outmanoeuvred by their military colleagues, particularly when serious issues arose over the development and execution of aerial policy.⁹

This did not mean that the senior leadership of the Navy was uninterested in aviation. On the contrary, in Sir John Jellicoe and Sir David Beatty, both wartime commanders of the Grand Fleet, the Navy possessed two powerful supporters of naval aviation. Their interest was driven by genuine concerns regarding the control of the air and the superior position of the German Navy and its fleet of rigid airships, capable of operating in support of the High Seas Fleet. In many respects, means became confused with ends, and the Navy's 'material ethic' continued to affect the conduct of the RNAS during the First World War. Moreover, the failure to produce doctrine in the pre-war period continued into the conflict. The RNAS may have been the most progressive

⁸ J. C. Slessor, *Air Power and Armies*, p.71.

⁹ AIR 1/2311/221/18 – First Report of the Curzon Air Board, 23 Oct 1916.

innovators in the field of aviation, both technically and conceptually, yet they did not 'market' their vision of air power to their service users.

Armoured Adventures: The RNAS and Churchill as First Lord

Marder suggests that Sueter had greatest claim to the title "Father" of British naval aviation.¹⁰ However, without the whole-hearted support of Churchill, naval aviation in the UK would not have progressed as rapidly as it did during his tenure as First Lord.¹¹ Churchill's involvement in the development of the RNAS saw the First Lord in his element, both positively and negatively. Gilbert has labelled Churchill an 'aerial overlord,' and, as Grove notes, Churchill had a tendency to see the RNAS as his private air force. His decision to encourage free-thinking and innovation within the service came at the expense of establishing a coherent vision for naval air power.¹² Churchill understood the need to control the air, but this was affected by his inability to manage his adventurous nature, and by his constant desire to tinker and innovate.¹³

Perhaps the most positive characteristics possessed by Churchill throughout his time in political office, but particularly during his first spell as First Lord of the Admiralty, were his dynamism and ceaseless energy.¹⁴ During wartime,

¹⁰ A. J. Marder, *From the Dreadnought to Scapa Flow: The Royal Navy in the Fisher Era, 1904 – 1919. Vol.IV: 1917: The Year of Crisis* (Oxford: Oxford University Press, 1969), p.20.

¹¹ NAL, CGG, File 7. Letter, Sueter to Grey, 9 Dec 1918.

¹² M. Gilbert, *Winston S. Churchill, Vol.III, 1914 – 1916* (London: Heinemann, 1971), p.66; E. Grove, 'Seamen or Airmen?' p.22.

¹³ G. Best, *Churchill and War*, p.47; J. Charmley, *Churchill: The End of Glory*, chapters eight and nine.

¹⁴ C. D'Este, *Warlord*, pp.233 – 234 and pp.258 – 259.

governments require from their political elites a drive and determination to face the most difficult situations. Moreover, an ability to think creatively, and to challenge the established orthodoxies, is useful. In this regard, Churchill was a highly valuable member of the British government, as he served in various posts during the First World War. However, it was these very traits that were Churchill's greatest weaknesses. During his time at the Admiralty, such traits manifested themselves in three potentially damaging ways: his fascination with small technical details; the value he attached to an aggressive and offensive posture; and finally, his desire to embroil himself in naval strategy and operations.¹⁵ Jellicoe lamented that Churchill had a tendency to force his views on the Board of the Admiralty, overriding the genuine wealth of experience and expertise possessed by the professional leadership of the Royal Navy.¹⁶ In a later conflict, Field Marshal Alan Brooke was to note of Churchill that his incessant desire to launch offensive action was 'a regular disease.'¹⁷

Gilbert suggests that Churchill was at his happiest when attempting to assert a positive influence over a crisis.¹⁸ A darker aspect of Churchill's desire for action and influence was in evidence when, in discussion with Asquith's wife, he was heard to remark that

¹⁵ J. Charmley, *Churchill: The End of Glory*, chapters eight and nine; G. Best, *Churchill and War*, pp.53 – 54; J. Marder, *Dreadnought to Scapa Flow, Vol.I*, pp.254 – 255.

¹⁶ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, pp.26 – 27. 'Extracts from Jellicoe's autobiographical notes.'

¹⁷ A. Danchev & D. Todman, eds., *War Diaries, 1939 – 1945: Field Marshal Lord Alanbrooke* (London: Weidenfeld & Nicolson, 2001), 8 Sep 1942, p.319.

¹⁸ M. Gilbert, *Winston S. Churchill, Vol.III: 1914 – 1916* (London: Heinemann, 1971), p.31.

I would not be out of this glorious delicious war for anything the world could give me.¹⁹

There are mixed evaluations of Churchill's involvement in Britain's decision to declare war on Germany. Charmley argues that Churchill dominated Cabinet discussions, actively encouraging his colleagues to go to war, whilst being the 'only Minister to feel any sense of exultation at the course of events.'²⁰ In contrast, D'Este suggests that Churchill wanted to avoid war, but, once a declaration was made, an occasion during which Churchill wept, he was totally committed to the defeat of Germany.²¹ As Asquith recorded, 'Churchill got on all of his war-paint.'²² In doing so, Churchill struggled to contain his enthusiasm for adventure, and this set a dangerous precedent for his subordinates. Gilbert highlights one of the most illustrative examples, in which Churchill went hunting for spies.²³ The message from Churchill's actions, particularly during the opening months of the war, were threefold. First, as the example of the defence of Antwerp indicates, the front line was the place for leaders.²⁴ Second, small matters of detail were vital, and could be prioritised over higher level matters. In discussing Churchill's involvement in the establishment of the Royal Naval Division, Richmond was to record that 'I really believe Churchill is not sane,' as the latter spent an inordinate amount of time embroiled in the highly technical administration of this process.²⁵ For example, Churchill took time to insist on the importance of a band

¹⁹ M. Gilbert, *Winston S. Churchill, Vol.III*, pp.245 – 246.

²⁰ J. Charmley, *Churchill: The End of Glory*, pp.96 – 97.

²¹ C. D'Este, *Warlord*, pp.238 – 241.

²² M. Brock & E. Brock, eds., *H. H. Asquith, letters to Venetia Stanley* (Oxford: Oxford University Press, 1985) [1982], p.150. Letter, Asquith to Stanley, 4 Aug 1914.

²³ M. Gilbert, *Winston S. Churchill, Vol.III*, pp.82 – 83.

²⁴ M. Gilbert, *Winston S. Churchill, Vol.III*, chapter four.

²⁵ A. J. Marder, ed., *Portrait of an admiral: the life and papers of Sir Herbert Richmond* (London: Jonathan Cape, 1952), p.100.

accompanying the division.²⁶ Finally, Churchill's frequent visits to the front, and his privateering attitude, served to legitimise such behaviour in subordinates. In October 1914, Churchill sent an astonishing telegram to Asquith, noting that he was prepared to resign from the Cabinet so he could personally command the defences of Antwerp.²⁷

By examining the Navy's expedition to Ostend at the end of August 1914, the weakness of Churchill's management of the RNAS is evident. With diversionary and defensive objectives in mind, a force of marines under Brig-Gen Sir George Aston landed in Ostend during 27 – 28 August 1914.²⁸ Churchill's hand is strangely absent from Corbett's account of these operations, yet, in a telling sentence, Corbett notes that the 'scale of the project rapidly developed' as the situation on the ground increased in gravity.²⁹ Gilbert asserts that Churchill wanted to 'influence the crisis' at the front, and could do so by despatching a naval force to Ostend.³⁰ A less generous interpretation would focus on Churchill's desire to embroil the Royal Navy in the thick of the action, and to escalate minor operations to include as many naval resources as he could spare. Such conclusions did not escape Asquith, who showed concern about Churchill's 'little army.'³¹

²⁶ M. Gilbert, *Winston S. Churchill, Vol.III*, p.50.

²⁷ M. Gilbert, *Winston S. Churchill, Vol.III*, pp.111 – 112; J. Charmley, *Churchill: The End of Glory*, pp.102 – 103.

²⁸ J. S. Corbett, *Naval Operations, Vol.I* (London: Longmans, Green & Co., 1920), pp.95 – 97; W. S. Churchill, *The World Crisis, 1911 – 1914*, pp.310 – 311.

²⁹ J. S. Corbett, *Naval Operations, Vol.I*, pp.92 – 98, pp.121 – 125.

³⁰ M. Gilbert, *Winston S. Churchill, Vol.III*, p.56; J. Charmley, *Churchill: The End of Glory*, p.101.

³¹ M. Gilbert, *Winston S. Churchill, Vol.III*, pp.74 – 75.

No.3 Squadron, based at Eastchurch, deployed to the Continent at the end of August 1914. Whilst the orders issued to the unit at the beginning of September captured the importance of controlling the air against the German airship threat, the initial deployment of the squadron was in support of Churchill's scheme for combined sea-land-air operations from Ostend. As Churchill's orders to Aston stated, the marine force was to be supported by a 'squadron of aeroplanes' that would conduct 'an aerial reconnaissance of the country within 30 miles of Ostend.' Once with the force, the aeroplanes would be placed under the direct orders of Aston.³² The squadron was commanded by C. R. Samson, then a Commander with the Navy, and, as his memoirs record, he was instructed by Sueter to proceed to Ostend on 25 August, with the eventual departure of the unit being delayed for two days.³³ The most important task for the squadron was to provide aerial reconnaissance, although it was also vital to secure control of the air. Aston was quick to make use of his RNAS contingent, although not necessarily as anticipated. On 29 August, Aston enquired as to whether Samson could undertake motorcar reconnaissance to assist the operations of the marines.³⁴ With no appreciable front-line, the situation on the ground was extremely fluid. The integral transport that had accompanied Samson's unit to Ostend was the sum total of motorised vehicles available to Aston's force.³⁵ Appealing to Samson's technically driven naval mind, and his piratical instincts, a machine gun armed motorcar (a private vehicle belonging to either Samson or one of his brothers

³² W. S. Churchill, *The World Crisis, 1911 – 1914*, pp.310 – 311.

³³ C. R. Samson, *Fights and Flights*, pp.6 – 7.

³⁴ C. R. Samson, *Fights and Flights*, pp.9 – 10.

³⁵ J. E. Edmonds, *Military Operations: France and Belgium, 1914, Vol. I*. (London: Macmillan & Co., Third Edition, 1937) [1933], p.232, fn.3.

serving with the squadron) was utilised to conduct penetrative reconnaissance operations.³⁶

Whilst operations from Ostend came to an abrupt conclusion at the end of August, a seed had been sown, and Samson now struggled to control his adventurous spirit. His desire to remain at the forefront of the war saw him disobey direct orders from the Admiralty to return to the UK. By utilising bad weather as an excuse, Samson and his unit remained on the Continent and continued their motorised excursions against the advancing German forces.³⁷ Under instruction from Churchill, Sueter issued orders that legitimised Samson's continued presence in France.³⁸ In many respects, by issuing such orders, Churchill was demonstrating his adventurous instincts by proxy. As Best notes,

Leading the world's biggest and best navy into war might have been thought enough to satisfy the most martial ambition, but it wasn't enough for Churchill.³⁹

As Grove records, the loss of Antwerp necessitated a geographic reorientation of RNAS efforts.⁴⁰ The operational guidance provided on 1 September 1914 established Dunkirk as an important centre for the RNAS, and it remained so throughout the conflict.⁴¹ Located on the far left flank of the

³⁶ D. Fletcher, *War Cars: British Armoured Cars in the First World War* (London: HMSO, 1987), p.13.

³⁷ C. R. Samson, *Fights and Flights*, pp.12 – 14.

³⁸ AIR 1/671/17/128/1 – RNAS operational reports, 1 Sep – 31 Oct 1914, pp.2 – 3; W. S. Churchill, *The World Crisis, 1911 – 1914*, p.315.

³⁹ G. Best, *Churchill and War*, p.51.

⁴⁰ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' pp.30 – 31.

⁴¹ AIR 1/671/17/128/1 – RNAS operational reports, 1 Sep – 31 Oct 1914. See pp.2 – 3 for Sueter's memorandum of 1 Sep 1914.

Western Front, the air base at Dunkirk, in conjunction with naval aviation units based in the south-east of the UK, provided the RNAS with pivotal locations from which to launch a coherent strategy for the control of the air. In the first instance, this approach was to be directed primarily at countering the threat posed by German airships. This was an example of Churchill's 'active' approach to the control of the air, derived from the NW's pre-war theorising. As Goulter observes, the RNAS, 'thinking outside the box,' attempted to '[find] a cure, rather than [treat] the symptoms' of the German air threat.⁴² In contrast, Ferris suggests that such thinking, embracing advanced offensive action, was in keeping with an approach to warfare favoured traditionally by the RN.⁴³ In the operational guidance of 1 September, it was noted that counter offensive operations were designed to ensure the 'immunity of Portsmouth, Chatham, and London from dangerous aerial attack.'⁴⁴ The manifestation of such an approach was a series of bold strikes against German airship sheds, which resulted in significant success for the RNAS and the destruction of several Zeppelins as they sat helplessly in their hangers.⁴⁵ The loss of Antwerp did limit the distance at which naval aircraft could strike against German airships, although, as H. A. Jones observes, counter offensive raiding against Zeppelins alarmed the German Naval Staff sufficiently to fear that their force would be squandered before meaningful attacks could be launched against Britain.⁴⁶ In spite of success, the counter

⁴² C. Goulter, 'The Royal Naval Air Service,' pp.56 – 57.

⁴³ J. Ferris, 'Airbandit: C3I and Strategic Air Defence during the First Battle of Britain, 1915 – 18,' in *Strategy and Intelligence: British Policy During the First World War*, eds. M. Dockrill & D. French (London: Hambledon Press, 1996), pp.52 – 53.

⁴⁴ *Ibid.*

⁴⁵ AIR 1/671/17/128/1 – RNAS operational reports, 1 Sep – 31 Oct 1914; AIR 1/671/17/128/2 – RNAS operational reports, 1 Nov – 31 Dec 1914; *The Daily Mail*, 24 Sep 1914; W. Raleigh, *WIA, Vol.I*, pp.389 – 390.

⁴⁶ H. A. Jones, *WIA, Vol.III*, pp.79 – 80; E

offensive did not stop German airships raiding the UK. Importantly, Britain lacked aircraft both in number and with sufficient range to pursue a ruthless counter-air policy against the sources of German air power. As an Air Historical Branch narrative observed,

Such enterprises were too ambitious for the primitive types and scanty numbers of naval aircraft available during the early years of the war.⁴⁷

Zeppelins, being designed for long-range tasks, could withdraw to bases beyond the operational capacity of British aircraft and prepare safely for operations against Britain. As Ferris suggests, the effectiveness of these RNAS operations had the negative consequence of exposing eastern and northern Britain to strategic raiding.⁴⁸ Moreover, rather than developing a clear and purposeful approach to the application of naval air power,

... Dunkirk became an experimental arena for the naval air service and its activities often reflected the most advanced and innovative thinking in the Admiralty Air Department.⁴⁹

This thinking included the continued development of an armoured car capability within the RNAS. As the orders of 1 September noted, to be included as part of the Dunkirk force were

Sixty special motor-cars ... armed with maxims ... and ... protected with armour plating.⁵⁰

⁴⁷ AIR 41/39 – AHB Narrative, *The RAF in the Bomber Offensive Against Germany, Vol I: Pre-war Evolution of Bomber Command, 1917 – 1939*, p.7.

⁴⁸ J. Ferris, 'Airbandit,' pp.51 – 52.

⁴⁹ S. F. Wise, *Canadian Airmen and the First World War*, pp.132 – 133; AIR 1/147/15/73 – Operations Order, A. D. No.15, 21 Jun 1915

As Fletcher observes, this built on the initial efforts of Samson, who made ad-hoc arrangements to fit armour to his cars, whilst making direct requests to the Admiralty for armour, armament, and a detachment of marines.⁵¹ Official orders from the Admiralty could be interpreted to suggest that RNAS armoured cars had a role to play in supporting control of the air operations. By deploying modern 'combined-operations' terminology, Grove provides a more progressive interpretation of the RNAS's interest in armoured cars.⁵² D'Este supports this contention, noting that, whilst such operations were on an insignificant scale, they proved to be the first 'tiny steps' in developing 'three-dimensional warfare.'⁵³ Nonetheless, the use of such taxonomy does not disguise Samson's motivation for developing these vehicles. An examination of the operational reports emanating from Samson's units during this period demonstrates that armoured car operations were influenced by two factors: a fascination with innovation, stemming from the Navy's wider ethic; and a desire for adventure.⁵⁴ As Fletcher notes,

armoured cars made little effective contribution to the outcome of the war. It could have been won without them but it would have been even more grim and perhaps *less inspiring, less adventurous* [emphasis added].⁵⁵

Fletcher's point illustrates the essence and development of armoured car operations. Possibly more than attempting to improve the reconnaissance

⁵⁰ AIR 1/671/17/128/1 – RNAS operational reports, 1 Sep – 31 Oct 1914, pp.2 – 3; W. S. Churchill, *The World Crisis, 1911 – 1914*, p.315.

⁵¹ D. Fletcher, *War Cars*, p.13.

⁵² E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' pp.28 – 29.

⁵³ C. D'Este, *Warlord*, pp.255 – 257.

⁵⁴ AIR 1/671/17/128/1 – RNAS operational reports, 1 Sep – 31 Oct 1914, pp.6 – 7, Report, 4 Sep 1914.

⁵⁵ D. Fletcher, *War Cars*, p.1.

capacity of the RNAS, or providing assistance to control of the air operations, Samson and his men rather enjoyed hurtling round the French / Belgian countryside, dodging the patrols of the enemy and taking pot-shots at like-minded Germans.⁵⁶ As Fletcher notes, because of the popularity of such operations, most cars went on operations heavily overmanned.⁵⁷ Samson's men could tinker with their cars and fully embrace the material ethic that was so dominant in the RN during this period.

Samson was fighting a private war, and this brought out his privateering instincts. As Sueter wrote, '[Samson] practically carried out a small war on his own.'⁵⁸ This spirit was captured in his 6 September 1914 letter to the 'Authorities of the City of Lille,' in which he noted that he had 'this day occupied Lille with an armed English and French Force.'⁵⁹ It is also telling that, of the reports submitted to the Admiralty during this period, those concerning aerial reconnaissance were invariably shorter in length and more perfunctory in tone, whilst those detailing motor car operations were more extended and written with a greater sense of excitement.⁶⁰ It is quite possible to imagine Churchill devouring the thrilling prose, wishing he was sat at Samson's side as they motored around the French / Belgian countryside.

In many respects, Samson was undertaking the role that Churchill himself so desperately craved. As Churchill was to note after resigning as First Lord, 'I

⁵⁶ D. Fletcher, *War Cars*, p.22.

⁵⁷ *Ibid.*

⁵⁸ M. F. Sueter, *Airmen or Noahs*, p.181.

⁵⁹ AIR 1/671/17/128/1 – RNAS operational reports, 1 Sep – 31 Oct 1914, pp.9 – 10. Report, 6 Sep 1914.

⁶⁰ AIR 1/671/17/128/1 – RNAS operational reports, 1 Sep – 31 Oct 1914.

find it v[er]y painful to be deprived of direct means of action.⁶¹ His conduct during the opening months of the conflict indicates that this sentiment could be taken literally. The control of the air was acknowledged as a central task in No.3 Squadron operational orders. These embraced legitimate air power related roles governing the use of armoured cars, which included the need to protect airfields and rescue downed pilots. However, it appears that an inordinate amount of effort and resources were being devoted to non-air power and non-naval air power tasks. To ensure that the Navy was provided with effective aerial support, the senior leadership of the RNAS needed to assert a tight grip on the 'centrifugal tendency' of the service.⁶² However, it was from the senior command trio of Churchill, Sueter, and Samson that much of this centrifugal force emanated.

Rather than stressing the importance of controlling the air, and devoting time and resources to improving the RNAS's capacity in this regard, Sueter, at the behest of Churchill, was ordered to begin measures for the creation of a vastly expanded armoured car force within the RNAS.⁶³ Sueter's paper of 11 September 1914 recommended the creation of a force of 50 armoured cars, whilst Churchill responded with instructions to double its size.⁶⁴ At the front, Samson busied himself with further innovation. He converted his heavy lorries into armoured transports capable of mounting a quick-firing 3-pounder naval

⁶¹ M. Gilbert, *Winston S. Churchill, Vol.III*, p.501.

⁶² W. Raleigh, *WIA, Vol.I*, p.207.

⁶³ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.216 – 218. Report of a Meeting held in the First Lord's Room, 3 Aug 1915.

⁶⁴ J. P. Harris, *Men, Ideas and Tanks: British military thought and armoured forces, 1903 – 1939* (Manchester: Manchester University Press, 1995), pp.11 – 12; D. Fletcher, *War Cars*, p.14; M. F. Sueter, *Airmen or Noahs*, pp.183 – 184, letter, Sueter to Churchill 4 Sep 1914.

gun.⁶⁵ A shortage of vehicles was no obstacle to Samson, and Fletcher alleges that the former stole unattended lorries from BEF units operating in the area.⁶⁶ From reading Sampson's memoirs, it is easy to forget that his prime concern was supposed to be the conduct of aerial operations.⁶⁷ On 26 September 1914, Aston, not known for discouraging enterprising and adventurous subordinates, felt compelled to order Samson, who had been conducting combined infantry and armoured car operations with the French, to return to Dunkirk, as his

services are urgently needed for organisation of air reconnaissance and the conduct of his command which is increasing in strength daily.⁶⁸

In observing these developments, the *Daily Mail* urged Churchill to avoid the 'dispersal of his activities in fields which do not concern him.'⁶⁹ A similar case was put forward by the *Morning Post*, and Churchill was condemned for

using the resources of the Admiralty as if he were personally responsible for the naval operations.⁷⁰

The expansive instincts of the RNAS did not escape the attentions of the press. In a private letter to the editor of the *Aeroplane*, a vehement critic of various aspects of British air policy and practice, Samson wrote that

⁶⁵ D. Fletcher, *War Cars*, pp.16 – 17.

⁶⁶ *Ibid.*

⁶⁷ C. R. Samson, *Fights and Flights*, pp.20 – 23.

⁶⁸ AIR 1/671/17/128/1 – RNAS operational reports, 1 Sep – 31 Oct 1914, pp.19 – 21. Aston to Churchill, 26 Sep 1914.

⁶⁹ The *Daily Mail*, 14 Oct 1914.

⁷⁰ The *Morning Post*, 13 Oct 1914, quoted in M. Brock & E. Brock, eds., *H. H. Asquith*, pp.276 – 277.

I wish you would stop writing all the beastly innuendos you do about me ... I do as much flying and have done as much as anybody in this war (RFC and RNAS).⁷¹

By December 1914, an elaborate infrastructure had been created in the UK. This included an armoured car centre and the creation of an armoured division within the RNAS. After devoting significant resources to expanding the armoured car strength of the RNAS, the appearance of entrenched infantry and static warfare 'rendered its employment practically impossible.'⁷² This was reflected in the orders issued to Samson's units in November 1914, in which the previously central role of the armoured car force was reduced in scale.⁷³ Samson persisted in commanding ground patrols, whilst, on 30 November 1914, he made further requests to the Admiralty for additional 'touring cars.'⁷⁴ Even when conditions of static warfare prevented the effective use of armoured cars, Samson continued to forward material to the Admiralty concerning their construction and the improvements that could be made to the type.⁷⁵ In spite of Samson's enthusiasm for armoured adventures, endorsed by Churchill's keen interest, the operational reports of the RNAS during the winter of 1914 show an increase in aerial operations at the expense of ground work.⁷⁶ However, rather than gripping the service during this period and reemphasising the importance of developing a coherent policy for controlling the air, Churchill actually increased the autonomy of the Air Department. The Admiralty's weekly order (No.166) of 5 February 1915, which commented on the growth and development of the RNAS, stated that

⁷¹ NAL, CGG, File 7. Letter, Samson to Grey, undated but from either late 1914 or early 1915.

⁷² W. S. Churchill, *The World Crisis, 1911 – 1914*, p.319.

⁷³ AIR 1/671/17/128/2 – RNAS operational reports, 1 Nov – 31 Dec 1914, p.10.

⁷⁴ AIR 1/671/17/128/2 – RNAS operational reports, 1 Nov – 31 Dec 1914, p.14 and p.36.

⁷⁵ AIR 1/671/17/128/2 – RNAS operational reports, 1 Nov – 31 Dec 1914, p.39.

⁷⁶ AIR 1/671/17/128/2 – RNAS operational reports, 1 Nov – 31 Dec 1914.

the whole of the Naval Air Service ... [shall] ... be placed under the orders of the [DAD], who will be solely responsible to the Board of the Admiralty for its proper administration.⁷⁷

As Grove observes, 'Sueter was now effectively monarch of all he surveyed.'⁷⁸

Of course, the further Churchill removed the RNAS from the control of conservative forces in the Navy, the greater the creative influence he could assert on the service. Under the leadership of Churchill and Sueter, the RNAS continued to diversify its activities. Rather than cut their losses, Churchill and Sueter's interest in the development of armoured vehicles continued unabated. The new static conditions at the front prompted Churchill to turn his attention toward the utilisation of armoured vehicles to help break the deadlock.⁷⁹ As Harris records,

Though it was really no business of the Admiralty's, Churchill was soon asking Sueter to devise means of helping the infantry to cross No Man's Land and attack trench systems.⁸⁰

This was also a contemporary assessment, and Asquith was to note that he hoped Churchill would

hand over to the military authorities the little circus which he is still running 'on his own' at Dunkirk – Oxfordshire Yeomen, motor-busses ... armoured cars ... They have really nothing to do with the Admiralty which ought to confine its activities to the sea & the air.⁸¹

⁷⁷ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.193 – 194. Extracts from Admiralty Weekly Order No.166 of 5 Feb 1915, 'Naval Air Service-Reorganisation.'

⁷⁸ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.33.

⁷⁹ W. S. Churchill, *The World Crisis, 1911 – 1914*, p.319.

⁸⁰ J. P. Harris, *Men, Ideas and Tanks*, p.13; W. S. Churchill, *The World Crisis, 1911 – 1914*, p.319.

⁸¹ M. Brock & E. Brock, eds., *H. H. Asquith*, p.276.

Sueter's memoirs observe that Churchill viewed the Air Department as a creative hub to which he could turn with his latest schemes. Whilst praising his drive and inventiveness, Sueter was to note that Churchill's decision to utilise the Air Department as his own personal technical staff placed significant pressure on the DAD, limiting Sueter's ability to focus on his primary concern of air power.⁸² The nature of this arrangement is perhaps best captured in Sueter's recollections of 16 February 1915, in which, some two weeks after being given even greater responsibility for the development of naval air power, both Sueter and Churchill spent part of the day pushing a steam-powered tractor around Horse Guard's Parade.⁸³

As Sueter was to record,

naval airmen were out ... to do their utmost in many new fields, spread over wide areas, to help win the war.⁸⁴

The energy, creativity, and dynamism of the Churchill-Sueter combination is unquestionable, yet an already strained Air Department, faced with a multiplicity of tasks, including air defence (both localised and forward) and operations on the Continent, not to mention operations in support of the fleet, had only a finite amount of time and resources. The result was a neglect of the genuinely naval functions of the service. The RNAS was unable to control the air in any of the operational theatres for which it had responsibility, and it could not project a bubble of aerial control over the Grand Fleet. To a greater or lesser extent, and with its focus on armoured vehicles, the Air Department

⁸² M. F. Sueter, *Airmen or Noahs*, pp.190 – 195.

⁸³ M. F. Sueter, *Airmen or Noahs*, pp.195 – 197.

⁸⁴ M. F. Sueter, *Airmen or Noahs*, pp.229 – 230.

even neglected its aerial functions. As Beatty noted, Churchill had a tendency of 'putting his fingers into pies which ... [did] ... not concern him.' Such an approach was 'bound to lead to disaster.'⁸⁵

As the situation at the front stabilised, limiting the opportunities for Churchill to deploy his innovative and adventurous tendencies, his management of the RNAS continued to provide the First Lord with a creative outlet. When the opportunity to discuss procurement policy for the service arose in April 1915, Churchill seized the opportunity to expand the strategic horizons and functions of the RNAS. In a conference of 3 April 1915, Churchill shifted the focus of the service to the offensive use of air power, including the development of a

heavy bomb-dropping type, capable of carrying upwards of 500lb. of explosives for a 150-mile journey there and back ... [with the purpose of] ... attacking ... on the largest possible scale of military points on enemy territory⁸⁶

The strategic goal of such operations was to

harass the enemy and destroy his works as to effect very materially his ability to continue the war.⁸⁷

Churchill wished for bombing of this kind to be prioritised over both 'reconnaissance and patrolling.' Samson's units at Dunkirk had displayed an innate interest in bombing operations, and these missions, which included the

⁸⁵ Quoted in M. Gilbert, *Winston S. Churchill, Vol.III*, p.134.

⁸⁶ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.200. Minute to the War Council by Mr. Churchill, First Lord, dated 3 Apr 1915.

⁸⁷ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.199. Extracts from Minutes of a Conference held in the Admiralty on 3 Apr 1915.

raids against German airship sheds and more localised sorties against German airfields, embraced an overt function in relation to the control of the air.⁸⁸ Whilst the rhetoric of controlling the air was present in Churchill's thinking, it is difficult not to conclude that the First Lord was searching for further channels through which to develop the offensive outlook of the Navy.

This desire saw significant resources, including RNAS units, diverted to operations in conjunction with the Dardanelles offensive.⁸⁹ As Jones observed, the result was that aerial operations from Dunkirk 'could be little more than a demonstration.'⁹⁰ Air operations at Gallipoli, outside the geographical scope of this thesis, are examined in some detail by the official history.⁹¹ It will suffice to note that very real challenges faced naval aviators in this theatre. Nonetheless, the failure of the campaign caused a backlash in the direction of Churchill and Fisher (as his First Sea Lord).⁹² Not only did the failure result in a change of senior leadership at the Admiralty, but, more specifically, the RNAS, closely associated with Churchill, was finally without its protector, and was thus open to critical scrutiny.

Putting the 'Naval' in RNAS: The Admiralty and Sueter

The diverse range of deployments and activities of the RNAS during this period were undertaken against the backdrop of what became the prime

⁸⁸ AIR 1/671/17/128/1 – RNAS operational reports, 1 Sep – 31 Oct 1914; AIR 1/671/17/128/2 – RNAS operational reports, 1 Nov – 31 Dec 1914.

⁸⁹ W. S. Churchill, *The World Crisis, 1915* (London: Thornton Butterworth, 1923), chapter two.

⁹⁰ H. A. Jones, *WIA, Vol.II*, p.342.

⁹¹ H. A. Jones, *WIA, Vol.II*, pp.1 – 77.

⁹² S. F. Wise, *Canadian Airmen and the First World War*, p.137; E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' pp.33 – 34.

function of the service for the opening year of the conflict: air defence. Controlling the airspace over Britain was a challenge beyond both the RNAS and the RFC at this stage. However, the tendency of the RNAS to diversify its activities made it an inviting target for criticism, and, as such, the new First Lord, Arthur Balfour, sought to bring the RNAS under closer control. Sueter may well have sensed his wings, flippers, tracks, and wheels were about to be clipped, and sent a report to Churchill (now Chancellor of the Duchy of Lancaster) calling for the creation of an independent air service.⁹³ This paper found its way to Hankey via the hand of Maurice Bonham-Carter, Private Secretary to the Prime Minister. In an unflattering cover letter, which reflected Whitehall's impressions of the RNAS, Bonham-Carter was to write that

the naval wing [RNAS] is a failure because it has not been designed for naval objects with the result that it has degenerated into a crowd of highly skilled but ill-disciplined privateersmen. What is wanted is to make the naval wing more 'naval,' not more 'aerial.'⁹⁴

In what was a balanced response to Bonham-Carter's letter and Sueter's paper, Hankey could not shy away from at least some criticism of the RNAS. He noted that

The progress of the Naval Wing on the whole has been less definitely naval than that of the Army has been military.⁹⁵

⁹³ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.207 – 209. 'Notes on the Formation of an Air Department.' Unsigned Memorandum, dated 10 [12?] Jun 1915.

⁹⁴ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.209. Letter, M. Bonham-Carter, PM's Private Secretary to M. Hankey, Secretary of CID, 6 Jun 1915.

⁹⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.209 – 211. Memorandum by Colonel M. P. A. Hankey, Secretary of the Committee of Imperial Defence, dated 12 Jun 1915.

In essence, Hankey's paper reflected on the failure of the concept of a national 'corps of aviators,' in whose spirit the combined military-naval RFC had been conceived. The division of the Military and Naval Wings was now so pronounced that rekindling the concept was no longer an option. Whilst some criticism was directed at the RFC during this period, its command and leadership team, itself facing difficulties with personality clashes, was a picture of efficiency and unity compared to the RNAS. By this stage, the RFC was becoming a fully integrated component of the BEF, and its activities, particularly in relation to the control of the air, were viewed with increasing importance. The generally positive attitude of the BEF to its aerial component was only enhanced by the clarity and consistency with which the RFC put forth its vision for the application of air power. This set in further relief the troubling perceptions and reputation that characterised the performance of the RNAS. As First Lord, Balfour saw that it was now crucial to grip the service and focus its energies on more legitimate 'naval' activities. For Jellicoe and the Grand Fleet, such intentions were welcome. Up to this point, he felt that the Grand Fleet had been poorly served by the RNAS. In a letter to Beatty, Jellicoe noted that he would press the Admiralty for improved aerial resources for the Fleet and the Navy as a whole:

The moment is ripe, because, with the change of First Lords we are now going to get the Air Service on a satisfactory footing.⁹⁶

This reflected the strong criticism that Jellicoe had made of the RNAS in March 1915:

⁹⁶ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, p.166. Letter, Jellicoe to Beatty, 4 Jun 1915; H. A. Jones, *WIA, Vol.II*, p.355.

Picked midshipmen are sent to the RNAS where they are overpaid and insufficiently looked after. They spend their time in the Empire Theatre, or riding around in Rolls-Royce Motor-cars!⁹⁷

The process of gripping began on 29 July 1915. Admiralty orders removed RNAS air stations from the control of the Air Department, and placed them under the command of the senior naval officer in whose area of operational responsibility they resided.⁹⁸ The role of DAD was limited to inspecting these stations, and specific instructions were issued to Sueter during July, which formalised these changes.⁹⁹ These instructions were the tip of the iceberg, and Sueter was to be the sacrificial lamb for RNAS failures during the opening year of the conflict. Admiral Jackson, who had replaced Fisher as First Sea Lord, held a meeting on 3 August 1915, which developed into a sustained and heated cross-examination of Sueter.¹⁰⁰ As a result of this meeting, the RNAS was to be commanded by a Flag-ranked officer, who would assume the post of the newly created Director of Air Services (DAS).¹⁰¹ The post of DAD was abolished, and Sueter was appointed Superintendent of Aircraft Production. In softening the blow of this very obvious demotion, Sueter was promoted to Commodore First Class. However, it is telling that this was not a substantive rank in the Navy, and Sueter was being put firmly in his place.¹⁰²

⁹⁷ P. Joubert de la Ferté, *Birds and Fishes: The Story of Coastal Command* (London: Hutchinson, 1960), p.41.

⁹⁸ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.212 – 213. Admiralty Weekly Order No.1204/15, 29 Jul 1915.

⁹⁹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.214 – 215. Instructions for Director of the Air Department, Jul 1915.

¹⁰⁰ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.216 – 218. Report of a Meeting held in the First Lord's Room, 3 Aug 1915.

¹⁰¹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.224 – 226. Admiralty Letter CE.8423, 1 Sep 1915 on the Organisation of the R. N. Air Service.

¹⁰² *Ibid.*

In making a brief comparison with the RFC, it is instructive to note that, up to this point, the RNAS lacked an officer with the equivalent rank and authority of Henderson. By this stage, Henderson was a Major-General, and would rise to the rank of Lieutenant-General by the conclusion of the war. Samson, who served as a Commander with the RNAS (the equivalent to a Major in the British Army), retained this rank for much of the conflict. Even Godfrey Paine, a more trusted officer, who would rise to the most senior position within the RNAS, did not attain flag rank during the course of the war. It is telling that RFC personnel seemed to ascend their respective rank structure more swiftly than their naval colleagues. Trenchard, for example, was promoted rapidly during the war, whilst Sykes also managed to attain the rank of Major-General by 1918.¹⁰³ This hints at the differing attitudes held by the Army and Navy toward those manning their aerial components. However, further research is required in this field before more steadfast conclusions can be drawn.

Sueter was well aware of the snub, and wrote privately to the editor of the *Aeroplane*. Sueter conceded that the air service had got 'too large for one man,' yet he felt he was the subject of rather 'shabby treatment.' Moreover, he had not been given the credit he deserved: '[a] fine reward for 6 years (this November) pioneer work isn't it?'¹⁰⁴ Sueter *had* undertaken pioneering work, and he made a positive contribution to shaping the Navy's understanding of the control of the air.¹⁰⁵ He was driven by a creative desire to innovate, and was a disciple of the Navy's material ethic. He had also been placed in a

¹⁰³ H. Probert, *High Commanders of the Royal Air Force* (London: HMSO, 1991), pp.100 – 102.

¹⁰⁴ NAL, CGG, File 5. Letter, Sueter to Grey, 6 Sep 1915.

¹⁰⁵ See chapter three.

difficult position by Churchill's management of the Air Department. However, he was also motivated by a desire to secure personal reward and acclaim. His private papers, held in part at the RAF Museum, Hendon, concern themselves primarily with his patents and inventor's claims for the development of a torpedo carrying aircraft.¹⁰⁶ An example from September 1916 provides some clarity in this regard. During this month, Trenchard, in stressing the primacy of controlling the air, launched his information offensive, 'selling' his vision of air power far and wide. In contrast, Sueter spent time writing a detailed memorandum, which established his role in the development of the tank and armoured car. This paper was very probably written with one eye on post-war settlements, both financial and otherwise.¹⁰⁷ In writing of Rear-Admiral Charles Vaughan-Lee, the newly appointed DAS, Sueter was to note that he was

A very nice fellow but he doesn't know an aeroplane from a Radiator. It is an insult to every air man in the Kingdom.¹⁰⁸

An insult it may have been, but the decision to appoint a non-airman to the post of DAS was an overt attempt to win back the wider trust of the Navy, which the triumvirate of Churchill, Sueter, and Samson had undermined. Rather than air his grievances in a constructive manner, Sueter wrote an (anonymous) article for the *Globe*, which expounded upon his vision for an

¹⁰⁶ Sueter Papers, RAFM, AC74/21/2/1 – Collection of legal documents, correspondence and minutes all relating to the torpedo carrying seaplane, 1913 – 1917.

¹⁰⁷ M. F. Sueter, *Airmen or Noahs*, pp.203 – 207 and pp.213 – 214. Paper, Sueter, 'History of Armoured Cars, Juggernauts, Land Battleships, Tanks.' 20 Sep 1916.

¹⁰⁸ NAL, CGG, File 5. Letter, Sueter to Grey, 6 Sep 1915.

independent air service.¹⁰⁹ As Roskill observes, such a decision was 'not calculated to enhance the Board's confidence in him.'¹¹⁰ In 1917, Sueter was posted to the distant Adriatic theatre, before being relieved of his command for writing directly to King George V seeking acknowledgment for his role in the development of the tank. Sueter may have suggested that the Admiralty took the 'little view' when it came to air power, but he could be accused, with equal measure, of taking the 'little view' when it came to his desire for personal glory.¹¹¹ His attitude is all the more puzzling given that, as an air power innovator, Sueter had much to offer. He clearly understood the importance of controlling the air, but, after Churchill's departure, he seemed unable to win the support of influential figures in the Navy. This highlights marked differences between the senior commanders of the RNAS and RFC. Trenchard and Sykes skilfully utilised the press, whilst providing digestible and appealing visions of air power to their professional and political seniors. Sueter made little or no use of the press, and failed to articulate a coherent vision of naval air power to the Board and other senior naval officers. When faced with criticism, he sought to emphasise that he had been treated 'very badly' by the Admiralty. He also continued to assert his claims for rewards and acknowledgement.¹¹²

¹⁰⁹ *The Globe*, 13 Oct 1915. Copy found in S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.230 – 233.

¹¹⁰ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.230.

¹¹¹ M. F. Sueter, *Airmen or Noahs*, pp.400 – 401.

¹¹² NAL, CGG, File 7. Letter, Sueter to Grey, 9 Dec 1918; M. F. Sueter, *Airmen or Noahs*, p.190.

The Control of the Air and the Grand Fleet during 1915

The Balfour-Jackson Board had much work to do, particularly with providing support to the Grand Fleet. Above all, Jellicoe and Beatty were concerned by the threat posed to their operations by German airships scouting for the High Seas Fleet. In an exchange of letters during the summer of 1915, the issue of the control of the air over the fleet provided the focus for discussions. On 19 June 1915, Beatty was to write to Jellicoe, noting the advantage the High Seas Fleet would possess by using its airships for long-range reconnaissance.¹¹³ In forwarding such concerns to the Admiralty, Jellicoe was to spell out his case:

The German airships will be of the greatest possible advantage to their fleet as scouts. On the day of the fleet action they will be able to give the German Admiral full information as to my dispositions, whilst I am entirely ignorant of those of his fleet.¹¹⁴

As Jellicoe noted in a paper of 23 July 1915, German airships provided an advantage to the High Seas Fleet in terms of tactical reconnaissance. They could assist the gunnery of the German ships, unopposed by the British from either sea or air.¹¹⁵ On the day orders were issued that were to result in the abolition of the post of DAD, Jellicoe wrote again to the Admiralty stressing the gravity of the situation facing the Grand Fleet. In the presence of German airships, his fleet would be 'powerless,' and he urged 'Their Lordships' earnest

¹¹³ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, pp.167 – 168. Letter, Beatty to Jellicoe, 19 Jun 1915.

¹¹⁴ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, p.172. Letter, Jellicoe to Balfour, 10 Jul 1915.

¹¹⁵ H. A. Jones, *WIA, Vol.II*, p.364.

attention' to be given to the matter.¹¹⁶ For Jellicoe, there was no simple solution to controlling the air over the fleet. His own experiences utilising seaplanes whilst on operations had highlighted significant problems with the type.¹¹⁷ Criticism of the Admiralty for failing to develop an effective force of rigid airships to counter the German aerial fleet did little to close the gap.¹¹⁸ As Jellicoe suggested, the long-term solution was to develop the ability to launch aircraft from the decks of ships.¹¹⁹

As the Grand Fleet continued to ready itself for 'the day of the fleet action,' exercises were conducted to ensure the efficiency of the various squadrons and their commanders. In reflecting upon war games held at the beginning of August 1915, Beatty continued to worry about the German airship fleet placing the British in an inferior position with regard to tactical reconnaissance.¹²⁰ Whilst the results of the war game were of concern to Jellicoe, the Admiral appeared in a more pragmatic mood, stressing to Beatty the factors that would limit the effectiveness of German airships operating over the North Sea.¹²¹ As Marder observes, the effectiveness of the airship in conjunction with fleet operations was severely overplayed during the conflict. However, such perceptions served as a spur to keep the Navy's senior operational commanders focused on the control of the air.¹²²

¹¹⁶ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, pp.173 – 174. Letter, Jellicoe to Secretary of the Admiralty, 29 Jul 1915.

¹¹⁷ Ibid; H. A. Jones, *WIA, Vol.II*, pp.363 – 364.

¹¹⁸ B. Ranft, ed., *The Beatty Papers, Vol.I*, p.302. Letter, Jellicoe to Beatty, 11 Apr 1916.

¹¹⁹ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, pp.173 – 174. Letter, Jellicoe to Secretary of the Admiralty, 29 Jul 1915.

¹²⁰ B. Ranft, ed., *The Beatty Papers, Vol.I*, pp.279 – 280. Letter, Beatty to Jellicoe, 12 Aug 1915.

¹²¹ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, p.175. Letter, Jellicoe to Beatty, 7 Aug 1915.

¹²² A. J. Marder, *Dreadnought to Scapa Flow, Vol.IV*, pp.9 – 10.

The Grand Fleet and Air Power during 1916

The opening of 1916 saw two important developments: first, the appointment of Admiral Scheer to command the High Seas Fleet; and second, the creative use of naval air power to attempt to draw Scheer into a decisive fleet encounter. Operations during the opening half of 1916 indicated the potential of utilising aerial resources to force an encounter between the two fleets. They also highlighted the very limited capability of the Grand Fleet's aerial support. Scheer's appointment saw the more aggressive use of the High Seas Fleet, which made a decisive encounter between the two fleets more likely.¹²³ Beatty and Jellicoe were still without adequate aerial resources to support the operations of their units, which seemed only to increase the importance of controlling the air over the fleet.

In writing to Jellicoe regarding combined air and sea operations, Beatty concluded that they would not lead to the German fleet being drawn into a decisive encounter.¹²⁴ During such operations in early May 1916, Beatty noted that the performance of his seaplanes was, 'as usual[,] ... disappointing.'¹²⁵ The occasion also provided Beatty with an opportunity to question the competence of naval aviators. In attempting to alight from heavy seas with a significant bomb-load, many of the RNAS seaplanes were disabled as their propellers crashed against the waves on take-off. As Beatty was to comment,

¹²³ H. A. Jones, *WIA, Vol.II*, p.397.

¹²⁴ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, p.236. Letter, Beatty to Jellicoe, 4 Apr 1916.

¹²⁵ B. Ranft, ed., *The Beatty Papers, Vol.I*, p.307. Letter, Beatty to Jellicoe, 7 May 1916; J. S. Corbett, *Naval Operations, Vol.III* (London: Longmans, Green & Co., 1923), pp.319 – 320.

They evidently have not paid attention to trim which is part of a Naval Officer's training and thought that what went well in a landlocked harbour with smooth water would meet all cases.¹²⁶

Balfour and Jackson had now been at the Admiralty for nearly twelve months, and the senior operational commanders of the Navy still had significant reason to feel aggrieved at their lack of aerial support. As Jones comments, 1916 saw new horizons open for the RNAS, as its commitments in the cause of Home Defence and the Dardanelles were reduced in scale.¹²⁷ In the guise of the reconstituted pre-war AC, reformed in early 1916 as the Joint War Air Committee (JWAC), an opportunity was presented to establish a more coherent vision for the RNAS. This could stress the importance of the control of the air, and devote significant resources to assisting the operations of the fleet. The proceedings of JWAC, discussed in detail by Cooper, demonstrate that, whilst the Balfour-Jackson Board had the RNAS under closer control, they had no intention of reining in its centrifugal instincts.¹²⁸

Vaughan-Lee submitted a paper to JWAC in March 1916, which attempted to present a more coherent vision for the RNAS.¹²⁹ For an individual who was appointed for his conservatism and non-technical expertise, a reputation that survives in the historiography, his paper did little to curb the progressive instincts of his charge.¹³⁰ Whilst stressing a range of objectives for the service, the focus on 'long-range bombing,' articulated by Churchill in April

¹²⁶ B. Ranft, ed., *The Beatty Papers, Vol.I*, p.307. Letter, Beatty to Jellicoe, 7 May 1916

¹²⁷ H. A. Jones, *WIA, Vol.II*, p.380.

¹²⁸ M. Cooper, *The Birth of Independent Air Power*, pp.45 – 53.

¹²⁹ AIR 1/2319/223/26 – Papers and Minutes of JWAC. 'Policy of the R.N.A.S,' Mar 1916.

¹³⁰ M. Cooper, *The Birth of Independent Air Power*, p.37.

1915, continued to be given prominence.¹³¹ Vaughan-Lee's paper was given *de facto* approval by Balfour at the end of March 1916. The First Lord affirmed the service's commitment to the pursuit of long-range bombing operations, including the development of suitable aircraft and engines.¹³² The development of improved seaplanes and aircraft, as well as the desire to build new and improved carriers for use with the Fleet, were also strands of naval air policy, but the clear priority was given to developing the offensive capacity of the service via long-range bombing.

It is telling that, when the long-awaited day of fleet action arrived, Jellicoe and Beatty could muster only two seaplane carriers between them. This was the Battle of Jutland, and *Campania*, which was due to support Jellicoe, did not receive orders to sail in time.¹³³ It had been overhauled in November 1915, but, so little did Jellicoe think of its abilities, he did not insist on the carrier making a late sailing to join the fleet.¹³⁴ This did not reflect his feelings for the value of air power in support of the fleet. More accurately, this decision made clear that, even after an overhaul, the stop gap solution provided by converting former merchant ships into seaplane carriers was insufficient. Moreover, as his experience of the previous year had shown, seaplanes operating in the rough waters of the North Sea were of very limited value. They possessed limited utility in terms of providing reconnaissance and gunnery spotting, and could not drive off German airships or seize control of the air over the fleet. The carrier supporting Beatty's force was able to make a

¹³¹ AIR 1/2319/223/26 – Papers and Minutes of JWAC. 'Policy of the R.N.A.S.,' Mar 1916.

¹³² S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.335 – 336. Memorandum of Meeting held by Mr A. J. Balfour, First Lord, 31 Mar 1916.

¹³³ For Jutland, see A. Gordon, *Rules of the Game*.

¹³⁴ H. A. Jones, *WIA, Vol.II*, pp.364 – 365.

successful launch, and a seaplane made a detailed tactical reconnaissance of at least part of the German High Seas Fleet.¹³⁵ As Grove observes, these reports were not forwarded to Beatty, reflecting the inexperience of cooperation between aerial resources and the fleet.¹³⁶

The failure to achieve a decisive material victory sent shock waves through the Admiralty. In the aftermath of the battle, aerial support was pin-pointed as a factor that, for future engagements, could improve the chances of inflicting a decisive defeat on the German fleet. Beatty's report recommended

immediate use ... of existing aircraft with the B.C.F. [Battle Cruiser Fleet] to practise passing information as to the movements of enemy ships for the use of the Control Officer.¹³⁷

This was an interesting development, and both Beatty and Jellicoe began to view controlling the air in a more offensive manner. Prior to Jutland, their understanding of the concept had been driven by a desire to negate the effects of German air power. In the post-Jutland period, they began to see that, by establishing control of the air over the fleet, air power could provide direct assistance in defeating enemy forces. This could include both tactical reconnaissance and spotting the fall of shot for friendly capital ships. The effectiveness of German air power at Jutland was severely limited. Moreover, poor signals discipline by German airships actually provided significant

¹³⁵ H. A. Jones, *WIA, Vol.II*, pp.407 – 408.

¹³⁶ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.42.

¹³⁷ B. Ranft, ed., *The Beatty Papers, Vol.I*, p.363. 'Additional Report of Gunnery Committee,' 24 Jun 1916.

intelligence on the movements of the High Seas Fleet.¹³⁸ However, the press highlighted the Grand Fleet's lack of aerial resources as another factor in the failure to bring decisive victory to the British. As an article in the *Weekly Despatch* was to comment, '... the Germans can see where we are blind.'¹³⁹ Such publicity troubled Jellicoe, and he wrote to both the Admiralty and the First Sea Lord in the aftermath of the battle to complain about the press.¹⁴⁰

At the beginning of May 1916, Jellicoe had written to the Admiralty noting the need for a fast seaplane carrier to operate with the Grand Fleet.¹⁴¹ In many respects, this captured his experience of working with *Campania*, a converted seaplane carrier, with which he had little success. In reply, the Admiralty noted that to build a special carrier was a question '... of relative urgency.'¹⁴² This was a clear reference to the pressure placed on Britain's ship building capacity in the face of the growing potency of the German submarine campaign. Not only did this place significant strain on seaborne resources, it also continued to exert a drain on the resources of the RNAS itself.¹⁴³ Given the perceived failure at Jutland, it is interesting to note that the Admiralty were willing to contemplate converting the nearly completed large light cruiser, *Furious*, into a carrier to support Jellicoe.¹⁴⁴ Whilst still short of decisive action

¹³⁸ H. A. Jones, *WIA, Vol.II*, pp.404 – 413; P. Beesley, *Room 40: British Naval Intelligence, 1914 – 1918* (London: Ian Hamilton, 1982).

¹³⁹ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, pp.272 – 273. Article, *Weekly Despatch*, 4 Jun 1916.

¹⁴⁰ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.I*, pp.272 – 274. Letter, Jellicoe to Admiralty and Jellicoe to Jackson, 6 Jun 1916.

¹⁴¹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.360. Letter, Jellicoe to the Admiralty, 8 May 1916.

¹⁴² S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.360. Letter, Admiralty to Jellicoe, 14 Jul 1916.

¹⁴³ J. J. Abbatiello, 'British Naval Aviation.'

¹⁴⁴ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.360. Letter, Admiralty to Jellicoe, 14 Jul 1916.

by the Board, it is clear that controlling the air over the fleet was being considered in a more urgent manner.

The Admiralty and Air Policy Bodies

In the wider sphere of air policy, the Admiralty's involvement in JWAC had been disastrous. As Cooper records, JWAC failed because, ultimately, it lacked executive power to settle grievances between the RFC and RNAS.¹⁴⁵ Able to speak directly on behalf of the Army Council, Henderson's contribution to JWAC made the Admiralty's attitude to the Committee appear hap-hazard and disinterested. Vaughan-Lee and the Third Sea Lord, Rear Admiral Charles Tudor, did not possess authority to speak for the Board of the Admiralty. As Lord Curzon was to note, by not appointing members that could speak for the Board, the Admiralty made it so the Committee 'was sterilised from the start.'¹⁴⁶ In many respects, the uncooperative attitude of the Admiralty toward JWAC reflected that the RNAS had nothing to gain, as the RFC, fighting a brutal attritional struggle at the front, sought to claim greater resources to ease its insatiable appetite for aircraft and aero-engines.¹⁴⁷ This, again, reflected the RFC's progressive attitude to the use of information.

Trenchard 'sold' his vision of air power to influential political figures, including Lords Derby and Curzon. In contrast, Balfour and the command of the RNAS failed to provide effective cooperation with the Committee. Cooper notes that the dispute between the RFC and RNAS centred on two issues: the allocation

¹⁴⁵ M. Cooper, *The Birth of Independent Air Power*, p.48.

¹⁴⁶ AIR 1/2311/221/10 – Report, Lord Curzon, 'Air Service in the War (II),' 16 Apr 1916.

¹⁴⁷ M. Cooper, *The Birth of Independent Air Power*, p.48.

of high-powered aero-engines; and the responsibility for conducting long-range bombing operations.¹⁴⁸ The nature of this quarrel is outside the scope of the thesis, other than to emphasise that, as the senior operational commanders of the Grand Fleet were pressing desperately for additional resources, assimilating the lessons of Jutland to give further emphasis to controlling the air, Balfour and the leadership of the RNAS prioritised arrangements to begin a bombing campaign against Germany.¹⁴⁹ The focus of naval aviators on the strategic uses of air power, present in pre-war debates, continued during the war, and came at the expense of providing tactical support to the fleet. This was particularly pronounced in terms of controlling the air, and the Navy's most important units, its capital ships, lacked adequate aerial support until the close of the conflict.

Already strained relations with the War Office were aggravated further when the RNAS began to make arrangements with the French to establish a bombing wing in France.¹⁵⁰ As Vaughan-Lee noted, such operations had several objectives, including helping RFC operations at the front by forcing Germany to devote resources to defensive duties.¹⁵¹ To develop a more offensive and strategic posture, the Admiralty seemed willing to put forth any justification, including rhetoric that focused on controlling the air. With pressure on the RFC reaching new heights as the Somme campaign opened, the RNAS bombing force expanded only slowly, as resources were diverted to

¹⁴⁸ M. Cooper, *The Birth of Independent Air Power*, pp.49 – 51.

¹⁴⁹ G. K. Williams, *Biplanes and Bombsights*, chapter one.

¹⁵⁰ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.335 – 336. Memorandum of Meeting held by Mr A. J. Balfour, First Lord, 31 Mar 1916.

¹⁵¹ ADM 1/8449/39A – Memorandum, Vaughan-Lee, 4 Apr 1916.

assist the RFC.¹⁵² Relations between the services reached an all-time low as Derby's Air Committee collapsed, to be replaced by a new Air Board under Lord Curzon. This culminated, toward the end of year, in a feisty exchange, as Haig questioned the Admiralty's decision to base its bombers hundreds of miles from the French coast without consulting the War Office or the BEF.¹⁵³ After devoting so much time and energy to massing resources and developing equipment, it was with little fight that RNAS bombing units were transferred to the Army in March 1917.¹⁵⁴ In many respects, this mirrored the development of RNAS armoured cars. Much effort was put into the expansion and development of the armoured car capability of the RNAS, yet, after negotiations during August 1915, the force was given to the BEF.¹⁵⁵ In both instances, it is not obvious whether the British Army was interested in either pursuit. Whilst the accumulation of additional resources was welcome, both affairs seem to provide opportunities for the Army to quash naval encroachment into 'military' areas.

Curzon, whose experience with JWAC made him aware of the intransigent attitude of the Admiralty, restated his belief that the Admiralty needed to appoint a member to the proceedings of the equivalent standing and power of Henderson.¹⁵⁶ Curzon's pressure on the Admiralty to create a Fifth Sea Lord, who would be able to speak with the authority of the Board on air policy and air power matters, was discussed by Jellicoe and Balfour in the aftermath of

¹⁵² AIR 41/39 – *Bombing Offensive Vol I*, pp.7 – 8; G. K. Williams, *Biplanes and Bombsights*, passim.

¹⁵³ ADM 1/8449/39A – Letter, Haig to WO, 1 Nov 1916. Forwarded to Admiralty, 10 Nov 1916. For the Admiralty response see letter of 13 Nov 1916.

¹⁵⁴ G. K. Williams, *Biplanes and Bombsights*, p.6.

¹⁵⁵ D. Fletcher, *War Cars*, pp.29 – 31.

¹⁵⁶ AIR 1/2311/ 221/18 – First Report of the Curzon Air Board, 23 Oct 1916.

Jutland.¹⁵⁷ This exchange of letters saw Balfour set out his progress over the last year, whilst Jellicoe was quick to defend criticism which suggested that

aircraft were considered by most sailors as little more than ingenious toys of no great naval value.¹⁵⁸

Both men agreed that an independent air service was not the solution to the Navy's needs. Whilst commenting favourably on the creation of a Fifth Sea Lord, there was further agreement that it would be difficult to find a suitable candidate.¹⁵⁹ Grove argues that Curzon was "got at" unofficially by Sueter and other unhappy airmen.¹⁶⁰ For Curzon, the Admiralty's attitude to the RNAS was

deficient both in understanding and imagination ... The Air Service is, in its eyes, or was until recently, the last and the least efficient of the Service of the Navy.¹⁶¹

Above all, it was a convoluted command and administrative structure that prevented the RNAS from attaining a higher degree of efficiency and providing effective support to the wider Navy.¹⁶² As Sueter was to write, '[y]ou have no idea what it is like to work under about 40 bosses.'¹⁶³ As a result of these deficiencies, Curzon cited the Battle of Jutland to demonstrate that, due to

¹⁵⁷ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.II*, pp.66 – 70. Letters, Balfour to Jellicoe, Jellicoe to Balfour, 26 and 28 Aug 1916.

¹⁵⁸ Ibid.

¹⁵⁹ Ibid.

¹⁶⁰ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.41; M. F. Sueter, *Airmen or Noahs*, p.231 and p.239.

¹⁶¹ AIR 1/2311/ 221/18 – First Report of the Curzon Air Board, 23 Oct 1916.

¹⁶² Ibid.

¹⁶³ NAL, CGG, File 7. Letter, Sueter to Grey, 9 Dec 1918.

a lack of policy ... in the twentieth month of the war during which the Board of the Admiralty had had before them in the Zeppelins of the enemy the most striking evidence of the value of aircraft for reconnaissance, the British Fleet sent up a single seaplane.¹⁶⁴

In effect, senior political figures in Britain were beseeching the Admiralty to take the issue of controlling the air more seriously. However, it is telling that, in the face of such criticism, Vaughan-Lee, appointed to assert a cautious and navalising influence over the RNAS, continued to press for the diversification of its activities. Long-range bombing, as advocated by the 'imaginative' Churchill, was pushed with equal vigour by the 'conservative' non-airman, Vaughan-Lee. When under the control of visionaries such as Sueter, the RNAS had failed to provide adequate support to the Grand Fleet, particularly in terms of controlling the air against German airships. Such a policy continued under the Balfour-Jackson regime. As was the case in the pre-war era, the RNAS failed to successfully articulate air power roles to internal and external audiences, and, when it did so, in the case of JWAC and the Curzon Board, the convoluted administrative structure of the Admiralty seemed to demonstrate an intransigent or disinterested attitude toward its own aerial arm.

In the post-war battle of memoirs, Sueter continued to strike a blow for the RNAS, suggesting that anti-air-minded officers had stifled the development of the RNAS.¹⁶⁵ Such accusations were enough to persuade Marder of the merits of Sueter's case, yet, during 1916, as Trenchard 'marketed' his vision for air power with clarity, consistency, and energy, naval airmen failed to do

¹⁶⁴ Ibid.

¹⁶⁵ M. F. Sueter, *Airmen or Noahs*, p.231.

the same.¹⁶⁶ At the forefront of this vision was the importance of controlling the air. There was no naval equivalent to Trenchard's 'Future Policy in the Air,' or to his papers to senior BEF commanders explaining the functions and purpose of the RFC.¹⁶⁷ The RFC amended its *Training Manual*, whilst providing regular updates in the form of tactical manuals or memos detailing Trenchard's vision for the RFC. The RFC also possessed a progressive attitude to information and doctrine, and this was reflected in the wide support it received amongst the senior command of the BEF. It was more than capable of warding off challenges at the political level, and Trenchard's vision shaped military air policy until the conclusion of the conflict. Even the Admiralty could not resist direct calls for support, and units of the RNAS were placed at the disposal of the RFC during the difficult winter of 1916 / 1917. These instructions, issued by the Air Board, demonstrate the effectiveness of Trenchard's information offensive, and the RNAS's failings in that regard.¹⁶⁸

For example, RNAS publications continued to focus on inherently technical matters. In July 1916, the *Handbook of Aircraft Armament* was published. Written under the auspices of Vaughan-Lee and the Air Department, the manual offered some thoughts on RNAS policy, yet these were articulated via the lens of technical innovation and the use of weapons.¹⁶⁹ This may have appealed to the naval mind, but it did not assuage the fears of those who felt the RNAS lacked a coherent policy. Of the little policy contained in the

¹⁶⁶ A. J. Marder, *Dreadnought to Scapa Flow*, Vol.IV, pp.23 – 24.

¹⁶⁷ AIR 1/718/29/1 – Future Policy in the Air, 22 Sep 1916; AIR 1/522/16/12/5 – 'Policy in the Air,' GHQ, BEF to Army commanders, 9 Apr 1917.

¹⁶⁸ AIR 1/637/16717/122/142 – Letter, Air Board to Admiralty, 12 Dec 1916.

¹⁶⁹ ADM 186/165 – Admiralty Air Department, *Handbook of Aircraft Armament*, Jul 1916. Section B. Policy.

manual, it is telling that the control of the air featured as the most important task of the RNAS. This reflected its experience in defending British airspace, as well as capturing the thoughts of senior commanders such as Jellicoe and Beatty in relation to controlling the air over the fleet.¹⁷⁰

Progress and Frustration: Naval Air Power in 1917

Late 1916 saw the fall of the Asquith government and its replacement with Lloyd George's coalition. The Admiralty did not escape change, and Jellicoe took up the post as First Sea Lord. He was replaced as C-in-C of the Grand Fleet by the dynamic Beatty. Both had first-hand experience of fleet-versus-fleet combat, and both felt that a lack of aerial resources had, at least in part, cheated them out of a decisive victory. As a result of Curzon's report, the Admiralty was compelled to create the position of Fifth Sea Lord.¹⁷¹ Grove hints that Sueter was angling for the post, but it was Godfrey Paine, former Commandant of the CFS, who was appointed in early 1917.¹⁷² By providing a voice on the Board with sole responsibility for air power, coupled with the voices of Jellicoe and Beatty, the RNAS now possessed a clearer command structure, and powerful backers that were finally in a position to take firm hold of naval air policy and to provide the fleet with effective aerial support.¹⁷³

¹⁷⁰ Ibid.

¹⁷¹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.455 – 456. Memorandum for Board of Admiralty 'As to the Functions of the First Sea Lord and Director of Air Services,' unsigned and undated, but probably written in Jan 1917 by Sir Oswyn Murray.

¹⁷² E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.44.

¹⁷³ H. A. Jones, *WIA, Vol.IV*, p.4.

As Jellicoe entered the Admiralty, the resources available to the Grand Fleet had grown little since Jutland. As was revealed during a conference in mid-October 1916, it was still only the carriers *Campania* and *Engadine* that were available for operations with the fleet.¹⁷⁴ Beatty had been in post for little over a month when he wrote to the Admiralty in early January 1917, referencing the above.¹⁷⁵ Since October 1916, an additional carrier, *Manxman*, was in service, but it had 'proved totally unfit for service with the Battle-Cruiser Fleet.'¹⁷⁶ Beatty pressed the Admiralty again, and his letter of 21 January 1917 enquired as to the development of RNAS policy.¹⁷⁷ Beatty contrasted the threat facing his fleet from German air power, a threat highlighted in earnest since the summer of 1915, with the 'insufficient' provision of aerial resources for the Grand Fleet.¹⁷⁸ He continued by criticising the priorities of the air service, as 'only a small portion of the R.N.A.S. ... [was] ... employed upon naval air service.'¹⁷⁹ Beatty took another opportunity to criticise the personnel of the RNAS, noting that, in future, their training should be

exclusively naval, and the officers should have a common training with other naval officers until the necessary standard of naval education is reached.¹⁸⁰

¹⁷⁴ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.388. Extract from Minutes of Conference held Onboard *H.M.S. Iron Duke* on 12 Oct 1916 between Admiral Sir John Jellicoe, C-in-C Grand Fleet and Rear-Admiral F. C. T. Tudor, 3rd Sea Lord.

¹⁷⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.458 – 459. Letter No.90/H.F.0022 from Admiral Sir David Beatty, C-in-C, Grand Fleet, to the Admiralty, dated 11 Jan 1917 from *H.M.S. Iron Duke*.

¹⁷⁶ *Ibid.*

¹⁷⁷ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.460 – 461. Extract from Letter No.164/H.F. 0036 Admiral Sir David Beatty, C-in-C, Grand Fleet, to the Admiralty, from *H.M.S. Iron Duke*, dated 21 Jan 1917.

¹⁷⁸ *Ibid.*

¹⁷⁹ *Ibid.*

¹⁸⁰ *Ibid.*

Beatty's criticism reflected his feelings that the RNAS was considered something of an anomaly, operating outside of the Navy proper.¹⁸¹ It was not an integrated part of the Royal Navy, and, until such a time as the officers of the RNAS considered themselves to be naval officers first and foremost, the provision of aerial support to the Grand Fleet would suffer. This provides a clear contrast with the position of the RFC and BEF. The former may have operated in a new and strange medium, and some aspects of its craft may have puzzled the BEF, yet those on the ground knew two facts: the RFC played an integral role in land operations; and its pilots would risk all to assist their comrades on the ground. The RFC sold its vision of air power to the BEF, whilst the RNAS did not achieve the same feat with the Navy. Beatty continued by urging the Board that

Every effort should be made ... to develop the use of naval aircraft for fleet purposes in every respect possible.¹⁸²

Roskill, in detailing the Admiralty's reply, noted that it 'must have brought somewhat cold comfort to the C-in-C [Beatty],' as the Board highlighted its large-scale commitment to strategic bombing.¹⁸³ It may have been the Admiralty's delayed response to Beatty's letter of 21 January that prompted the latter to commission his own investigations into the aerial policy of the Grand Fleet. On 26 January, Beatty established the Grand Fleet Committee of Air Requirements, chaired by Rear-Admiral Sir Hugh Evan-Thomas.¹⁸⁴ This

¹⁸¹ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.27.

¹⁸² Ibid.

¹⁸³ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.453. For the Admiralty's reply, see pp.461 – 463. Admiralty reply, M.0812, dated 14 Feb 1917.

¹⁸⁴ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.469 – 473. Extracts from Report by the Grand Fleet Committee on Air Requirements, dated 5 Feb 1915. See

body reported on 5 February 1917, and Beatty forwarded the paper to the Admiralty two days later. The report stressed that heavier-than-air-craft were required to operate with the fleet, and, as the Committee recorded, it was 'essential that the Grand Fleet should be in a position to attack Zeppelins.'¹⁸⁵ Controlling the air over the fleet was vital, for it robbed the Germans of any advantage to be gained via tactical reconnaissance or gunnery spotting from the air. With the German aerial threat eliminated, the RNAS could provide tactical reconnaissance and assist with gunnery without fear of opposition. The suggestion to convert *Furious* into a carrier was again stated, and, after expressing unease at the potential loss of a fighting ship, Beatty concluded that the rapid provision of adequate aerial resources outweighed such concerns.¹⁸⁶ Importantly, this report accepted the limited abilities of seaplanes, and made the suggestion of utilising modern fighting aircraft, which could be launched from the decks of carriers.¹⁸⁷

The decision to modify *Furious* was taken in March 1917, and shows something of the impact of Jellicoe and Beatty.¹⁸⁸ As Jones notes, Paine also played his part, and was quick to grasp the importance of providing the fleet with sufficient numbers of carriers.¹⁸⁹ The air power concerns of the fleet were finally being given serious consideration, and the Admiralty was now willing to

p.469 for Beatty's cover letter to the Admiralty, 7 Feb 1917. On Evan-Thomas, see A. Gordon, *Rules of the Game*.

¹⁸⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.469 – 473. Extracts from Report by the Grand Fleet Committee on Air Requirements, dated 5 Feb 1915

¹⁸⁶ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.469. Letter, Beatty to Admiralty, 7 Feb 1917.

¹⁸⁷ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.469 – 473. Extracts from Report by the Grand Fleet Committee on Air Requirements, dated 5 Feb 1915

¹⁸⁸ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.475 – 476. Memorandum by Rear-Admiral F. C. T. Tudor, 3rd Sea Lord, on the Conversion of H.M.S. *Furious* to Carry and Work Seaplanes, dated 14 Mar 1917.

¹⁸⁹ H. A. Jones, *WIA*, Vol.IV, pp.13 – 14.

sacrifice a modern fighting ship to provide the fleet with adequate support. The result, a hybrid large light cruiser / aircraft carrier, was not wholly satisfactory, but it improved the provision of aerial support available to the fleet.¹⁹⁰

As Jones records, an additional recommendation of the Evan-Thomas Committee was the provision of aircraft in light cruisers, if a viable method could be found of launching the aircraft.¹⁹¹ Experiments in 1915 had been undertaken, but it was not until 1917 that successful trials were conducted from the light cruiser *Yarmouth*.¹⁹² A platform was fitted between the conning tower and forecastle turret, which provided a short deck to launch an aircraft. The first successful flight was made by a Sopwith Pup in June 1917, with the destruction of a Zeppelin achieved in August 1917.¹⁹³ Whilst a pronounced success, the experimental *Yarmouth* was just such, and Beatty continued to press the Admiralty for the allocation of greater resources and a firmer commitment with regard to the development of an aerial policy for the RNAS.¹⁹⁴ In producing notes on his visit to the Grand Fleet, Rear-Admiral Halsey, then Third Sea Lord, recorded that Beatty was 'very disturbed on the subject of the lack of efficient and fast seaplane carriers.'¹⁹⁵

¹⁹⁰ H. A. Jones, *WIA, Vol.IV*, pp.11 – 12, pp.26 – 27; J. Moore ed., *Jane's Fighting Ships of World War I* (London: Studio Editions, 1990) [1919], pp.83 – 84; G. Till, *Air Power and the Royal Navy*, p.62.

¹⁹¹ H. A. Jones, *WIA, Vol.IV*, pp.23 – 24.

¹⁹² H. A. Jones, *WIA, Vol.IV*, p.24; A. Longmore, *From Sea to Sky*, p.70.

¹⁹³ H. A. Jones, *WIA, Vol.IV*, pp.24 – 25.

¹⁹⁴ B. Ranft, ed., *The Beatty Papers, Vol.I*, pp.439 – 440. Notes by Halsey on Beatty's Views on Construction Policy, 18 Jun 1917.

¹⁹⁵ *Ibid.*

The subject was discussed again in August, and Beatty pressed Halsey for the formulation of a clear carrier policy, the absence of which left the Grand Fleet lacking in aerial support.¹⁹⁶ Light cruisers were to be modified to the *Yarmouth* model, which would serve to assist in securing control of the air in advance of the fleet.¹⁹⁷ In a letter to the Admiralty of 20 August 1917, Beatty was to stress that a clear air policy was 'vital ... to our air supremacy at sea during the year 1918.'¹⁹⁸ In responding with formal naval air policy guidelines, Jellicoe and the Admiralty highlighted three roles for air power in conjunction with the fleet: the use of torpedo aircraft in an offensive role against enemy shipping; reconnaissance, including the observation of gunnery; and finally, to facilitate these activities, the use of fighting aircraft to secure control of the air over the fleet.¹⁹⁹ To discuss the above, a conference was held on board Beatty's flagship, the *Queen Elizabeth*.²⁰⁰ With Jellicoe in attendance, and reflecting the experience of both Admirals, the decision was taken to favour the use of aircraft on carriers rather than seaplanes. Such thinking also captured the successful operational trials with the *Yarmouth* and its turret launching platform.²⁰¹ It is telling that, when finally presenting Beatty with a more tangible aviation policy, the Board was careful to insert caveats, noting the difference between laying down policy and carrying it out.²⁰²

¹⁹⁶ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.534 – 535. Extracts from Minutes of a Conference between Admiral Sir David Beatty, C-in-C, Grand Fleet, and Rear-Admiral Lionel Halsey, 3rd Sea Lord, in Aug 1917. Jones dates the Conference as 17 Aug 1917. H. A. Jones, *WIA, Vol.IV*, p.28.

¹⁹⁷ Ibid.

¹⁹⁸ H. A. Jones, *WIA, Vol.IV*, p.29.

¹⁹⁹ H. A. Jones, *WIA, Vol.IV*, p.407: 'Appendix I – Admiralty Memorandum on Naval Air Policy, 23 Aug 1917.'

²⁰⁰ A. Temple Patterson, ed., *The Jellicoe Papers, Vol.II*, pp.201 – 202. 'Notes of conference held on board H.M.S. *Queen Elizabeth*,' 24 Aug 1917.

²⁰¹ Ibid.

²⁰² H. A. Jones, *WIA, Vol.IV*, p.407: 'Appendix I – Admiralty Memorandum on Naval Air Policy, 23 Aug 1917.'

As Beatty attempted to drive naval aviation policy forwards, the wider sphere of British air policy was affected by the production of the Smuts reports. The Admiralty's reaction to the proposed creation of an independent air service is well documented in Roskill.²⁰³ As Grove suggests, the Board's opposition to an Air Ministry was 'half-hearted at best.'²⁰⁴ Beatty's reaction to the First Lord's cautionary introduction to Smuts was instructive, and Beatty again seized the opportunity to note the lack of clarity regarding the functions of the RNAS.²⁰⁵ As Beatty wrote,

No military operation *is* complete without the co-operation of aircraft. No naval operation *should* be complete without the co-operation of aircraft ... [emphasis in original]²⁰⁶

After digesting the Smuts report, Beatty forwarded his reply to the First Lord. As Roskill suggests, the Board may have been surprised to discover that Beatty approved the conclusions of Smuts.²⁰⁷ In doing so, Beatty again stressed the lack of a coherent air policy for the Navy, and contrasted the development of military aviation with the

little progress [that] has been made in air work with the Fleet since the beginning of the war.²⁰⁸

²⁰³ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.494 – 496. Memorandum by Sir Eric Geddes, First Lord, addressed to Members of the Board, dated 10 Aug 1917. See also pp.497 – 499 for Jellicoe's comments.

²⁰⁴ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.48.

²⁰⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.497. Letter, Beatty to Geddes (First Lord), 12 Aug 1917.

²⁰⁶ *Ibid.*

²⁰⁷ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, p.454. For Beatty's reply see, pp.499 – 501.

²⁰⁸ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.499 – 501.

Attempts to persuade Beatty of the Admiralty's case met with little success, and he rebuffed a staff paper forwarded to him in mid-August.²⁰⁹ Beatty's position was simple, and reflected his dealings with the RNAS since his time with the BCF. For Beatty, the RNAS was not a service that emphasised its naval duties. It suffered for its lack of policy, and the result was a diversification of activity, with only 'a very small proportion of the R.N.A.S.' working with the fleet.²¹⁰ Wise's analysis of the RNAS during 1916 supports this claim, and a significant number of RNAS personnel were occupied with long-range bombing and home defence duties.²¹¹ In other words, Beatty felt the matter of naval aviation policy was too important to be trusted to the RNAS or the Admiralty.²¹² Slow progress, and a somewhat evasive attitude toward his correspondence, pushed Beatty to side with Smuts and other air power reformers such as Henderson.

For the Admiralty, the notion of an independent air service threatened the control it was able to exercise over its air power assets. Its great fear, very probably inspired by its dealings with centralised air policy bodies, was that air power resources would be prioritised to support the BEF.²¹³ For the Navy, Beatty's decision was delivered at the most inopportune moment. As Jones records, the efforts and pressure applied by Beatty during the summer of

²⁰⁹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.520 – 522. Letter from Admiral Sir David Beatty, C-in-C, Grand Fleet, to Sir Eric Geddes, First Lord, dated from H.M.S. *Queen Elizabeth*, 22 Aug 1917.

²¹⁰ *Ibid.*

²¹¹ S. F. Wise, *Canadian Airmen and the First World War*, pp.142 – 144.

²¹² G. Till, *Air Power and the Royal Navy*, p.115.

²¹³ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.494 – 496. Memorandum by Sir Eric Geddes, First Lord, addressed to Members of the Board, dated 10 Aug 1917.

1917 were starting to deliver positive results for the fleet.²¹⁴ Although not as far-reaching as Beatty desired, an Admiralty policy statement of September 1917 placed significant emphasis on controlling the air over the fleet. It noted that purpose built carriers would take time to come into service, so short-term arrangements would be made to fit flying-off decks on as many cruisers and light cruisers as possible.²¹⁵

That the Admiralty was taking matters seriously is captured in their proposals to convert the sister ships of *Furious*, the large light cruisers *Courageous* and *Glorious*, into carriers. In addition, *Furious* was to have further work carried out that would result in the extension of her flight deck at the expense of her remaining 18-inch gun.²¹⁶ Whilst such measures were limited, and did not seriously impair the capacity of the Grand Fleet, these were the first gentle hints that the future capability of a navy may depend more on its capacity to launch aircraft than on the number of large calibre guns it could bring to bear. Beatty continued to press for greater resources, which were to include fighting aircraft, reconnaissance planes, and, as particularly desired by the Admiral, a force of torpedo bombers.²¹⁷ As both Grove and Jones record, by early 1918, the Grand Fleet, due largely to the efforts of Beatty, was in a much improved position. Most importantly, it was able to project a bubble of aerial control over its ships whilst on operations.²¹⁸ It was at such a moment, when the control of

²¹⁴ H. A. Jones, *WIA, Vol.IV*, pp.43 – 44.

²¹⁵ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.549 – 554. Admiralty Letter M.00219 of 25 Sep 1917 to Admiral Sir David Beatty, C-in-C, Grand Fleet.

²¹⁶ *Ibid.*

²¹⁷ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.546 – 547. Letter No.2353/H. F. of 24 Sep 1917 from Admiral Sir David Beatty, C-in-C, Grand Fleet, to the Admiralty entitled 'Aircraft Requirements of the Grand Fleet.'

²¹⁸ H. A. Jones, *WIA, Vol.IV*, pp.43 – 44; E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.51.

the air over the fleet was being treated as a prime concern, that further change and disruption occurred at the Admiralty, driven by the creation of the Air Ministry.

Conclusion: Naval Air Power in 1918 – Promise and Regrets

The close of 1917 saw Jellicoe dismissed from his post as First Sea Lord.²¹⁹ A general reading of the second volume of Jellicoe's papers gives the impression of a man under significant pressure. By late 1917, Geddes was alleging that a certain lack of energy was to be found in the First Sea Lord.²²⁰ However, Beatty's drive for a more efficient aerial service had now gathered significant momentum. The RN-RNAS command structure was brought in line with the BEF-RFC. A proposal by Beatty to appoint an 'Admiral of the Air' was approved by the Board in January 1918.²²¹ The Navy's prized Grand Fleet Battle Orders, by this stage known as Grand Fleet Battle Instructions, were also updated in January 1918 to include a fully integrated section on the use of aircraft.²²² March 1918 saw the Naval Staff create a specialised Air Division that drew upon the wealth of experience possessed by RNAS and Air Department personnel.²²³ 'By the end of the war,' as Grove records, 'the Grand Fleet was awash with aircraft.'²²⁴ These aircraft were found not only in specialised carriers, but on every type of ship. All battle cruisers were

²¹⁹ S. W. Roskill, 'The Dismissal of Admiral Jellicoe,' *Journal of Contemporary History*, Vol.1, No.4 (Oct 1966): pp.69 – 93.

²²⁰ S. W. Roskill, *Hankey: Man of Secrets*, Vol. I, p.447.

²²¹ S. W. Roskill, ed., *Documents Relating to the Naval Air Service*, pp.586 – 587. Letter from Sir David Beatty, C-in-C, Grand Fleet No.2851/H. F. 957 of 19 Nov 1917, entitled 'Appointment of Flag Officer for Command of Seaplane Carriers etc. of the Grand Fleet.'

²²² B. Ranft, ed., *The Beatty Papers*, Vol.I, pp.456 – 506, especially pp.481 – 488. 'Selections from Grand Fleet Battle Instructions,' in effect from 1 Jan 1918 to 4 Dec 1918.

²²³ N. Black, 'The Admiralty War Staff,' pp.215 – 216.

²²⁴ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.51.

equipped with aircraft, as were fifteen battleships and 22 light cruisers. These included the latest generation of fighting aircraft, and, as Jones notes, the navalised Sopwith Camel, launched from the turret platforms of a range of RN ships, could best most aircraft utilised by the Germans, and was a grave threat to German airships.²²⁵

There were more aircraft with the Grand Fleet in 1918 than there were with the Home Fleet at the outbreak of the Second World War.²²⁶

In fact, criticism of the RNAS for not providing the Grand Fleet with effective support until 1918 must be tempered by noting that, in line with Till's analysis, the development of shipborne aviation was a significant technological challenge.²²⁷ For example, aircraft had to be fitted with folding wings (for stowage on ships), which degraded their performance.²²⁸ Such challenges, coupled with a naturally diffuse set of operational requirements, made the conduct of core naval air operations extremely difficult.²²⁹ Moreover, on some levels, their colleagues in the RFC had a more straightforward task, given that they did not have to operate over water, and that their operational objectives and tasks were more limited and extremely clear. However, what the RNAS required was a greater degree of centralised policy and doctrine to help ensure that the service's great abilities – conceptualising air power roles and developing advanced aeronautical technologies – were used to provide a genuinely useful service to the RN and Britain's wider war effort. As

²²⁵ H. A. Jones, *WIA, Vol.IV*, pp.43 – 44.

²²⁶ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.51.

²²⁷ G. Till, *Air Power and the Royal Navy*, pp.60 – 63.

²²⁸ A. Longmore, *From Sea to Sky*, p.69.

²²⁹ H. A. Jones, *WIA, Vol.II*, pp.335 – 337; A. J. Marder, *Dreadnought to Scapa Flow, Vol.IV*, pp.12 – 13 and pp.23 – 24.

Abbatiello's study indicates, the RNAS's role in defeating the U-boat threat, a campaign directed with great care and attention, demonstrates that air power could be used effectively in a specialised naval context.²³⁰ Conversely, the example of the RNAS's role in the development and use of armoured cars demonstrates the logical extreme of an unchecked and unguided fascination with technology. Gordon's study of naval command indicates the negative implications of stifling initiative, which, amongst other things, resulted in missed opportunities at the Battle of Jutland.²³¹ However, whilst the Grand Fleet needed less of the 'book,' the Naval Air Service required a great deal more. Had a clear vision for the application of naval air power existed, it would have provided naval aviators with a focal point (or focal points) toward which to direct their conceptual and technological efforts.

Beatty's incessant drive for improved aviation resources, a process started under the tenure of Jellicoe, saw the concept of the control of the air given primacy by the end of the conflict. Such progress was tempered by the knowledge that the Admiralty no longer retained control of its air power assets. Beatty, who had shown support for an independent Air Ministry, came to regret the ease with which the Navy lost its indigenous aerial resources. Assuming the post of First Sea Lord during the early post-war period, a time of stringent economies, Beatty found his service embroiled in a bitter struggle with the RAF to regain control of naval air assets.²³² Naval aviation continued to assume even greater importance during the interwar years, and both Beatty

²³⁰ J. J. Abbatiello, 'British Naval Aviation.'

²³¹ A. Gordon, *Rules of the Game*, passim.

²³² H. Montgomery Hyde, *British Air Policy*; G. Till 'Competing Visions: The Admiralty, the Air Ministry and the Role of Air Power,' in *British Naval Aviation: The First 100 Years*, ed. T. Benbow (Farnham: Ashgate, 2011), pp.57 – 78.

and Jellicoe had been correct to emphasise the importance of controlling the air over the fleet. As noted, using air power in a naval context presented many obstacles; obstacles that the creative and innovative abilities of the RNAS were ideally suited to overcome. However, by choosing to pursue an unnecessarily diverse range of activities, the RNAS earned a poor reputation with the wider Navy, captured in the Admiralty's post-war assessments.²³³ Churchill, Sueter, and Sampson, and their command of the RNAS during 1914 – 1915, played a significant part in this process.

²³³ G. Till, *Air Power and the Royal Navy*, p.30.

CHAPTER SEVEN

CONCLUSION

This thesis has sought to explore the conceptual origins of the control of the air in Britain, setting this examination in the context of the creation of a national 'corps of aviators' and the use of air power during the First World War. Some historians assert that ideas relating to the control of the air developed only during the course of the 1914 – 1918 conflict, yet the evidence seems to suggest that, in keeping with, and possibly going beyond, Buckley's contention, those concerned with the development of air power theory and doctrine in the pre-war period understood, in more than 'vague' terms, that there would be a need to control airspace.¹ In moving into the First World War, it is difficult to disagree with the conclusions of Morrow, who argues that the '[c]ontrol of the airspace over the battlefield became essential to victory in World War I.'² As McFarland and Newton suggest, an important aspect of air power doctrine that emerged from the First World War was the need to fight for the control of the air.³ This was reflected in the composition of air forces at the conclusion of the conflict. For example, by August 1918, the RAF devoted some 55 percent of its strength to aircraft that could fight for the control of the air.⁴

¹ J. Buckley, *Air Power*, pp.50 – 51.

² J. H. Morrow, 'The First World War,' p.24

³ S. L. McFarland & W. Phillips Newton, *To Command the Sky*, p.15.

⁴ J. Morrow, *The Great War in the Air*, p.346.

In the case of military aviation, the unique operating characteristics of aircraft drew initial theorising in the direction of reconnaissance. However, this was accompanied by an innate understanding of the need to control the air in order to facilitate friendly aerial reconnaissance, and to prevent the reconnaissance activities of enemy air services. As Sir John French's thoughts on the subject suggest, this may have stemmed from an understanding of air power shaped via the prism of cavalry operations or via the reconnaissance / intelligence expertise of early air power specialists such as David Henderson.⁵

The links between pre-1911 theorising on the control of the air and the creation of the RFC offers evidence of a robust cause and effect chain, in which the work of J. E. Capper and other military aviators – Brooke-Popham and Burke, to name but two more – was translated almost *verbatim* into early air power policy. Having their fingers on the pulse of contemporary thought relating to the control of the air, Henderson and Sykes played an important role in this process. In the case of Sykes, his Staff College experience saw him become fluent in the language of the British Army and inculcated in the dominant paradigm of the organisation: the importance of offensive action to seize moral superiority. Moreover, Sykes was taught that the route to decisive victory lay in the defeat of the enemy's armed forces in the field; an approach that could be attributed to a subjective interpretation of the theories of Mahanian and Clausewitz. As such, when he came to craft air power doctrine between 1912 and 1914, it embraced these core ideals, and the control of the

⁵ F. H. Sykes, 'Military Aviation,' pp.138 – 139.

air would be established via an aggressive and offensive approach designed to achieve moral superiority. Importantly, such doctrine utilised a taxonomy and philosophy that was reassuringly familiar to the British Army; a result, at least partially, of the high concentration of Staff College graduates that were to be found in the senior command team of the RFC. In many respects, the focus on the moral battlefield, as highlighted by Travers, tends to obscure the genuinely progressive fashion in which both the British Army and its aerial component conceptualised their understanding of warfare.⁶ In line with the wider doctrinal culture of the British Army, and the precedent set by *FSR*, the RFC was able to articulate a concept for the control of the air that was clear and concise, but open to evolution. At its core, the RFC's vision for the control of the air remained remarkably consistent throughout the First World War, but, as with the wider BEF, served as a basis upon which to build tactical and operational practices.

Of course, by embracing the organisational culture in which they found themselves, and by crafting doctrine in line with such factors, military aviators did much to win sponsorship from senior figures within the British Army. Of these figures, both French and Haig played a pivotal role. To take but one example, Sir John French emerges from this study with his reputation enhanced. He was a noted supporter and sponsor of military aviation in the pre-war period, and he made effective use of his air power resources during his time as Commander of the BEF. He took a keen interest in the activities of the RFC, and established an excellent relationship between GHQ and the

⁶ T. Travers, *The Killing Ground*, pp.76 – 78.

Corps. Moreover, he laid the groundwork for the rapid and large-scale expansion of the RFC; a decision influenced by the need to control the air over the battlefield. At the lower level, it was the energy and drive of Sykes that created the stable base – including the doctrinal foundations – upon which future commanders of the RFC could build. In this regard, Haig and Trenchard owe a significant debt to their predecessors in the BEF and RFC.

Trenchard was not an original air power theorist, and, whilst a hugely significant figure in the RFC, he built upon pre-war air power doctrine that had been crafted by Sykes in the first instance. However, much like Haig, Trenchard possessed the strength of character and conviction to see his command through a conflict unprecedented in scale and complexity. This included his forceful and consistent articulation of a specific concept for the control of the air. Trenchard was particularly successful at working the 'interfaces' that existed between the RFC and the other organisations with which it came into contact, and, as a result, he, with the support of Haig, retained close control of the policies and practices of the RFC. Again, the nature of this approach to command, seemingly inflexible and dogmatic, conceals some of the more positive aspects of Trenchard's command. For example, he possessed a sufficiently sophisticated understanding of the nature of coalition warfare, which allowed him to establish a close relationship with his French allies. This relationship demonstrates a rare example of the process of intellectual 'binding.'⁷

⁷ E. Greenhalgh, *Victory through Coalition*, p.75.

In terms of the development of military air power, 1916 continues to be highlighted as the turning point, particularly in terms of the control of the air, as fighting aircraft became available in significant numbers for the first time; a conclusion supported by this thesis. However, this thesis also demonstrates that 1915 was a highly significant year for the development of ideas relating to the control of the air. Not only did this include the RFC's first efforts to codify their early experiences of the conflict, building on the foundations of the pre-war doctrine and serving as a basis for the first amendments to the *Training Manual*, it also included the issuing of orders for offensive patrols; the first operational orders in which the RFC were instructed to fight for control of the air. Moreover, 1915 saw the rise of effective fighting aircraft, in the guise of the Fokker Monoplane, and it was also the year in which Trenchard began to assert a tangible influence over the direction of the RFC: first, in terms of his operations in conjunction with the Neuve Chapelle offensive; and second, when taking command of the RFC in France. In serving to reinforce the importance of the coalition context, 1915 also saw the first meetings between Trenchard and du Peuty, in which the collective Anglo-French air power experience to that point was distilled. This did not see the development of a new air power doctrine, but served to confirm the theories and ideas that were framed in the pre-war era and captured in the first edition of the *Training Manual*. The importance of 1915 was recognised by 'Billy' Mitchell, who wrote in 1921 that,

during the year 1915 pursuit aviation, or that which goes out and fights the enemy aviation for control of the air, was established definitely as a special branch of Aviation. From that time on,

primary consideration was given to the fighting of airplane against airplane as a principle as a prelude to any other air work.⁸

In a more general sense, these conclusions seem to resonate with the work of Krause, who, in a recent study of the Second Battle of Artois, emphasises the importance of 1915 in terms of the development of doctrine in the French Army.⁹ Thus, it is hoped that the historiographical 'black hole' that is 1915 will continue to receive scholarly attention.¹⁰

If a single word sums up the First World War, it is attrition. The fluid and semi-fluid campaigns, which served as book-ends to the conflict, were vital. Yet, in many respects, it was during the grinding middle years of 1916 – 1917 that the outcome of the conflict was shaped. Given the sheer scale of the First World War, which saw the accumulation of significant air power assets on both sides, the control of the air was never established in a decisive fashion. The air could never be controlled in the same fashion as the ground, demonstrating the impermanence of air power. The vast and intricate system of trenches that characterised the Western Front had no equal in the air. To control the air during the First World War required unceasing effort. Control had to be re-established daily, and the process was intrinsically attritional in nature. As Hallion notes with reference to air superiority, 'like democracy itself, [it] must be constantly secured and renewed.'¹¹ This is supported by

⁸ W. Mitchell, *Our Air Force*, p.5.

⁹ J. Krause, *Early Trench Tactics*, passim.

¹⁰ J. Bourne, 'Series Editor's Foreword,' in J. Krause, *Early Trench Tactics*, no page number.

¹¹ R. P. Hallion, 'Foreword,' p.iv.

McFarland and Newton, who, with reference to the Second World War, note the attritional qualities of establishing control of the air.¹²

The nature of the RFC's rhetoric, forceful and indefatigable, suggests a static quality to the manner in which military aviators approached the concept of the control of the air. This has done much to shape subsequent analysis of the RFC's concept of the control of the air in a negative fashion. As this thesis has demonstrated, a clear focus on the offensive provided the RFC with drive and momentum, crucial factors in attaining control of the air, particularly when undertaking air power operations of the unprecedented scale and complexity as those experienced on the Western Front. Moreover, operational and tactical nuances were a feature, and, by the conclusion of the conflict, the RFC embraced a multifaceted, multilayered approach to securing the control of the air that recognised the impermanence of air power and the importance of concentration. The RFC's conceptualisation of the control of the air, influenced by the organisational ideals stressed by the BEF, and conducted at a tempo that was in keeping with the wider policy of the British Army, resulted in the defeat of the German Air Service and assisted directly in the defeat of the Germany Army in the field. However, this is not to suggest that criticism of the RFC is unfounded. Even the overwhelmingly positive official histories are compelled to note that, at times, the RFC's approach to the control of the air was 'not always sufficiently characterized by an alert imagination,' reflecting the 'routine' nature of offensive patrols.¹³ However, the RFC was an integral aspect of the BEF, and, in keeping with the increasingly nuanced

¹² S. L. McFarland & W. Phillips Newton, *To Command the Sky*, p.9.

¹³ H. A. Jones, *WIA*, Vol. VI, p.555.

historiographical treatment of the British Army during this period, its reputation as a blunt instrument deserves revision.

The naval conception of the control of the air reflected a sense of strategic vulnerability that served to focus attention on the need to protect the Navy's capital ships and onshore facilities against air attack. The challenges facing naval aviators, in terms of the conceptualisation of air power roles, were pronounced. These challenges were two-fold: first, the technological and operational factors that made operating air power at and over the sea extremely difficult; and second, the varied operational roles of the Navy and the accompanying demand placed upon naval aviators to support such operations.¹⁴ In many respects, these challenges explain, at least to an extent, one of the themes highlighted during the course of this thesis: that naval aviators had an experimental focus, whilst naval air policy was shaped by a certain 'lack of definition.'¹⁵ Moreover, they go some way to explaining the disconnect between pre-war theorising and the policy that came to shape the creation of the RFC.

However, the wider organisational context in which naval aviators came to think about the control of the air also had a significant effect on the development of naval air power. Unlike military aviators, whose conceptualisation of the control of the air was affected by the Army's wider focus on moral superiority, naval aviators possessed an inherently technical understanding of warfare, affected by the 'material ethic' that was prevalent in

¹⁴ G. Till 'Competing Visions,' pp.60 – 65; A. J. Marder, *Dreadnought to Scapa Flow, Vol.IV*, pp.12 – 13 and pp.23 – 24.

¹⁵ NMM, LP, MS 51/012 – ADL/2/1/5 – 8, Minutes of Air Department Conference, 8 Jan 1914.

the Navy of the Fisher Era.¹⁶ This ethic, driven home by the technical education provided to the recruits of the service, resulted in a Naval Air Service that emphasised the material and technical aspects of its profession. Given that air power was still in its earliest developmental stage, a focus on experimentation was, in many respects, appropriate, as the application of air power in a naval context was severely limited by technological considerations. Only by developing its technological capabilities could the Naval Air Service hope to provide genuine support to the RN. However, in order to persuade the wider Navy of the value of aviation, naval aviators, like their colleagues in the military, needed to undertake a proactive campaign to earn such support. As part of this process, it was vital that doctrinal material was created that, at the very least, demonstrated to the wider RN that the RNAS was thinking carefully about the application of air power – particularly the control of the air, so as to assuage the feelings of vulnerability present in the Navy – and that it was attempting to integrate aviation into the wider organisational and operational context of the RN. Of course, in criticising the RNAS for not producing doctrine, it must be noted that, in keeping with Gordon's analysis of naval doctrine during this period, which highlights the focus on experience rather than theory, RN personnel lacked experience of producing doctrine in the vein of *FSR*.¹⁷ Moreover, the complex operational roles and technological challenges facing naval aviators, coupled with a lack of experience, meant that attempting to codify ideas relating to the development of naval air power was extremely difficult.

¹⁶ B. D. Hunt, *Sailor-Scholar*, p.3.

¹⁷ A. Gordon, *Rules of the Game*, passim.

Nonetheless, without the guidance provided by *FSR*-like doctrine, naval aviators were free to pursue the dominant material ethic to its logical extremes. The result was the development of some of the most advanced aviation technology and techniques seen during the course of the First World War, laying the foundations for the deployment of strategic air power during the Second World War.¹⁸ Moreover, when directed with sufficient care and attention, naval air power made a significant contribution to the outcome of the conflict, particularly in its role in the defeat of the German submarine campaign.¹⁹ However, this does not disguise the fact that, throughout the course of the war, naval aviators were viewed as something of an anomaly in the RN, and senior operational commanders, particularly Jellicoe and Beatty, spent the majority of the conflict harassing the Admiralty, stressing their displeasure with the RNAS, particularly in relation to the control of the air. As Till records, attempts to navalise the RNAS were done in such a manner as to alienate naval aviators and reinforce the poor relations that existed between the RN and its aerial component.²⁰ The development of naval air power doctrine, however simple, could have helped smooth the process of integrating aviation into a naval context. The importance of military aviation doctrine was not in its detail, but came via its deployment of language that helped the Army understand the functions, limitations, and potential of air power. As such, the RFC's doctrinal model was worthy of emulation by their naval colleagues. Sueter's argument, that senior figures within the Navy did not understand the abilities of air power, a further attempt to condemn the

¹⁸ C. Goulter, 'The Royal Naval Air Service.'

¹⁹ J. J. Abbatiello, 'British Naval Aviation.'

²⁰ G. Till, *Air Power and the Royal Navy*, p.30.

Admiralty, serves to highlight the very obvious doctrinal gap present in the RNAS.²¹

Of course, the RNAS's fascination with technology was aggravated by Churchill's role. Sponsorship of air power within the Navy owed much to Churchill during his tenure as First Lord. He supported the creation of a national 'corps of aviators,' and proved to be a powerful overlord for the Admiralty's Air Department. However, Churchill's drive for action, and his enthusiasm for diversification and distraction, seemed to synthesise with the wider organisational ethos of the Navy. As such, the RNAS was a natural outlet for Churchill, and, supported by Sueter, the First Lord directed his passion for air power in a manner that spread discord and disharmony. For example, an interest in strategic bombing, praised in the literature, served to siphon air power resources away from more conventional naval air power tasks.²² The roles of Churchill, Sueter, and the Air Department in the development of armoured forces within the RNAS further illustrate this phenomenon. Again, whilst the use of air power to support the operations of the Grand Fleet was a significant challenge, operationally and technologically, the efforts and resources directed toward the development of armoured cars or the development of a strategic bombing force could have been channelled more productively. As Grove notes, one result of the troubled relations between the RN and RNAS was that naval opposition to the creation of an

²¹ M. F. Sueter, *Airmen or Noahs*, pp.16 – 17.

²² A. J. Marder, *Dreadnought to Scapa Flow*, Vol.IV, pp.23 – 24.

independent air service was half-hearted; leaving the Admiralty to spend the post-war years fighting to regain control of any meaningful air power assets.²³

Military aviators may have needed to be less dogmatic in their approach to the conceptualisation of the control of the air, but, in many respects, their naval colleagues possibly needed to be a little less expansive. It is interesting to reflect upon the notion that, had the original concept for a combined Army-Navy RFC been successful, it would have presented Britain with the opportunity to develop air power by fusing together the strengths of Britain's two defence departments: the Navy's understanding of technology and sophisticated operational techniques; and the Army's ability to craft flexible and persuasive doctrine. However, in reality, the control of the air was conceptualised within the differing organisational contexts of the British Army and Royal Navy. The differences that existed between the services, and the manner in which they pursued their understanding of the control of the air, do not detract from the importance that was attached to controlling airspace during the First World War. The importance of the control of the air has left a lasting legacy, and, as Hallion concludes, such considerations remain '*the most enduring requirement of air power forces* [emphasis in original].²⁴

²³ E. Grove, 'Air Force, Fleet Air Arm – or Armoured Corps?' p.55.

²⁴ R. Hallion, 'Air and Space Power,' p.379.

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