

UNDERSTANDING OPTIMISM
WINSTON CHURCHILL AND THE EVOLUTION OF BRITISH STRATEGIC
BOMBING WARFARE AGAINST GERMANY, 1914-1941

by

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To Christopher Bell

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ABSTRACT

This thesis examines the origins, evolution and early effectiveness of British strategic bombing warfare against Germany from 1914 to 1941. It traces the intellectual and institutional foundations of air power, from the creation of the Royal Air Force, which included the Independent Force and later Bomber Command. The treatise situates British air policy within the broader framework of interwar grand strategy, highlighting the expectations that bombers could deter enemies and deliver decisive results. Particular emphasis is placed on Winston Churchill, whose support for strategic bombing reflected both strategic calculation and personal inclination towards offensive actions. The work evaluates the limited effectiveness of strategic bombing from both British and German perspectives. Although early results fell short of expectations, British optimism and continued investment were not irrational given contemporary theoretical and technological constraints. Ultimately, effective inter-service cooperation is more important than over reliance on single magic weapon in winning a war.

LIST OF ABBREVIATIONS USED

AASF	Advanced Air Striking Force
ADGB	Air Defence of Great Britain
AOC-in-C	Air Officer Commanding in Chief
ARP	Air Raid Precautions
BBSU	British Bombing Survey Unit
BEF	British Expeditionary Force
CBS	Columbia Broadcasting System
CBO	Combined Bomber Offensive
CAS	Chief of the Air Staff
CID	Committee of Imperial Defence
FDR	Franklin Roosevelt
GOC	General-Officer-Commanding
IF	Independent Force
IIC	Industrial Intelligence Centre
MEW	Ministry of Economic Warfare
RAF	Royal Air Force
RFC	Royal Flying Corps
RN	Royal Navy
RNAS	Royal Naval Air Service
USAAF	United States Army Air Force

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CHAPTER 1 INTRODUCTION

On the night of May 15, 1940, over ninety British bombers, comprised of Wellingtons, Hampdens and Whitleys, covered by the darkness, flew across the Rhine River. Their mission, as ordered by the newly appointed Prime Minister, Winston Churchill, was to seek and destroy sixteen targets, including German petroleum refineries, silos, railways and factories located in the Ruhr industrial zone.¹ The mission, however, was not successful as only twenty-four out of the ninety-six airplanes claimed to have found the targets,² and sixteen bombers did not drop a single bomb. As a result, only one out of nine oil refineries was damaged.³ This marked the beginning of British strategic air offensive which continued until Nazi Germany's surrender, one of the most continuous and grueling operations of the war ever carried out.⁴ Nonetheless, the early strategic bombing campaign yielded little success despite the high expectations. The first mission on 15 May 1940 was merely the beginning of a series of largely ineffective air raids until Arthur Harris took over Bomber Command in February 1942. Consequently, many historians questioned the effectiveness of the early strategic bombing and then criticized Churchill's insistence on pursuing a bombing strategy that consumed vast resources and inflicted heavy, often unnecessary casualties on the air crews and British civilians.

¹ Martin Middlebrook and Chris Everitt, *The Bomber Command War Diaries: An Operational Reference Book, 1939-1945* (Leicester: Midland Publishing Limited, 1996), 43.

² Denis Richards, *Royal Air Force 1939-1945, vol. 1, The Fight at Odds* (London: Her Majesty's Stationery Office, 1953), 124.

³ Frederick Taylor, *Dresden: Tuesday, February 13, 1945* (New York: Harper Collins, 2004), 97.

⁴ Charles Webster and Noble Frankland, *The Strategic Air Offensive Against Germany, 1939-1945, vol. 1, Preparation* (London: Her Majesty's Stationery Office, 1961), 144.

Strategic bombing has been a contentious topic since the Second World War, full of controversies and contradictions. As a military campaign in World War II Europe, its highlight was the period between late 1942 and early 1945, when the combined air offensive, joined by Bomber Command of the Royal Air Force (RAF) and the United States Army Air Force (USAAF), built momentum against Nazi Germany. The very well-known episodes included the destruction of Dresden, Berlin, Hamburg, Cologne, and the German oil industries, actions that inflicted countless civilian casualties, especially in 1944 and 1945. Among most discussions, scholars tended to focus primarily on the results of the bombing campaign, namely the tonnage dropped, the accuracy rate, the destruction caused, and ponder the question “was it worth it?” They usually analyzed this issue from military, statistical and moral perspectives. Few historians, however, studied strategic bombing prior to 1942, when the RAF was launching solo operations in the air without the US assistance, in great depth.

This thesis, therefore, aims to reinterpret the origins and nature of strategic bombing by first providing an overview of strategic bombing from the very beginning, including its origin, the formation of the military theory that justified it, and the role it played in the British politicians’ grand strategy. Secondly, the thesis conducts a comprehensive and systematic analysis of Winston Churchill’s role in conceptualizing air power since he became a politician from 1900; particularly his motivation to launch and insist on strategic bombing since he became Prime Minister in 1940. Third, the thesis examines the performance of RAF’s bombing arm in real combat, particularly during the late stage of the First World War (1917 to 1918) and

early Second World War (1939 to 1941) and discusses the difference between pre-war expectations and real combat practices.

Essentially, there are two main problems regarding the academic research about strategic bombing. The first one is the lack of research for the years from 1917 to 1941. Scholars have tended to gloss over this early period and treated it as an extended footnote; the discussion about early strategic bombing usually served as a background story for the upcoming combined air offensive during the Second World War, shadowed by the climax years towards the end of the war. This topic usually formed a short section of a chapter, if not one chapter of a longer book. In contrast, there were multiple monographs dedicated to the bombing of Dresden in February 1945.⁵ The second problem is that, in the existing discussions, historians have tended to provide an overly simplistic explanation for British decision making, especially Winston Churchill's rationale for initiating and insisting on strategic bombing in the first place. Most historians attributed Churchill's decision to commence the bombing to either his early enthusiasm over air power, or, more realistically, discussed this as the only weapon left in the British arsenal to take the initiative to attack Nazi Germany and thus boost British morale and gain American sympathies. Allegedly, Churchill's unfounded optimism fueled Bomber Command's operations. In hindsight, it is very easy to conclude that the early strategic bombing was based on rootless optimism when the historians already had its results on hand, while neglecting Churchill's mindset and the dynamics of such a long campaign. Indeed, Churchill was one of most air-minded politicians at his time, and his passion for aviation began

⁵ See Taylor, *Dresden* and Alan Cooper, *Target Dresden* (Bromley: Independent Books, 1995).

almost as early as the invention of the first airplanes.⁶ Therefore, to truly understand his optimism towards airpower, one must go back to the very beginning, to the origins of airplanes and air warfare, as well as the origin of Churchill's enthusiasm towards airpower, as both an amateur pilot and as a strategist.

This thesis therefore serves as a case study of Winston Churchill, an attempt to understand the reasoning of this complicated, controversial, yet very influential man from the angle of his optimism towards early strategic air offensives against Germany. It should be noted that, although Winston Churchill made significant contributions to the shaping of British air policy, his role was not exclusive, and this treatise neither seeks to absolutize his influence nor contribute to a Churchill cult. Moreover, understanding Churchill's optimism and politics requires an analysis of his personality and character. While personal traits alone cannot provide a comprehensive explanation, they nonetheless constitute an important factor.

To achieve these goals, this thesis proposes to answer a central question: Why did Britain initiate and persist in strategic bombing campaigns that, in hindsight, delivered such limited results from the late stages of the First World War to the early years of the Second World War?

This core question can be further divided into the following sub-questions:

1. Why were the British political and military leadership attracted to strategic bombing in the first place?
2. What roles did strategic bombing play in the British decision makers' grand strategy?

⁶ Ian White, *If You Want Peace, Prepare for War: A History of No. 604 (County of Middlesex) Squadron Royal Auxiliary Air Force* (Northolt: 604 Squadron Association, 2005), 1.

3. What did they, especially Winston Churchill, expect heavy bombers and strategic bombing to achieve, and how did such expectation change over time from the late First World War to the early Second World War?
4. Why were many of their expectations ultimately at odds with reality?

The thesis is divided into the following chapters: Chapter One is introduction which contains the main research questions, a brief discussion of the primary sources to be used and a literature review. Chapter Two reviews the origin and developments of bombers and strategic bombing till the outbreak of the Second World War, including the role it played in British leaders' grand strategy in the 1930s. Chapter Three studies the role of aviation played in Churchill's early years, and his attitudes towards airpower as a politician and strategist prior to becoming Prime Minister in May 1940. Chapter Four focuses on Churchill's role in shaping British strategic air offensives against Nazi Germany as Prime Minister up until he received the Butt Report, a document which revealed the inaccuracy and ineffectiveness of bombing. Chapter Five is conclusion which highlights and integrates the overarching research findings of the entire treatise.

Sources

I consulted many primary sources during the research for this thesis. The main unpublished primary sources were from the British National Archives of Kew. These were mostly British Cabinet and War Cabinet papers, including minutes, memoranda and weekly résumés. Some files were from the Air Ministry, such as the Butt Report drafted by a civil servant Bensusan-David Butt in 1941 to assess Bomber Command's accuracy rate. In addition, when conducting research about Winston Churchill,

especially when refining Churchill's biographical information, I drew upon sources from the Churchill Archive Centre in Cambridge. The young Churchill's correspondence with his parents was particularly helpful for this thesis. The main published primary sources came from contemporary diaries, newspaper articles and governmental reports. The report of the British Bombing Survey Unit (BBSU, original name Air 10/3866), published in 1998, played a vital role in my evaluation of the RAF's bombing results. As for Churchill and the British military aviation, I used extensive evidence from *Winston Churchill: His Complete Speeches*, volume V and VI (1928 – 1942), *The Churchill War Papers*, volume I to III (1939 – 1941), *Churchill and Roosevelt: The Complete Correspondence*, volume I. I also used Churchill's autobiography, his Second World War memoirs and some of his other writings.

History is always a study of perspectives. The dictum “one man's terrorist is another man's freedom fighter,”⁷ still holds true. Although this thesis is all about British strategic bombing and the country's grand strategy, it also needed a voice and evidence from the other perspective, namely, that of Nazi Germany, to provide a more comprehensive picture about the historical events and to verify the validity of British claim. To some degree, I might be able to moderate the effects of this source bias. The challenge, however, was that I could not read German at an academic level. So, I read German documents captured by the Allied forces during the war and translated by the Air Historical Branch in the Royal Air Force to achieve this goal. The other obstacle was the limited availability of original German archival documents, especially

⁷ Khaled Beydoun, “On Terrorists and Freedom Fighters,” *Harvard Law Review Forum* 136, no. 1 (2022): 1.

regarding damage reports caused by Bomber Command prior to 1942. Various German archives might hold physical copies, but I did not have the opportunity to visit these archives.

There were pros and cons when using archival evidence to conduct research. The greatest benefit was that archives provided me with time-sensitive information, and this was particularly important when analyzing strategic bombing and grand strategy, because strategy making was a very dynamic process. Many different, or even contradictory decisions could be made in a short period of time given how fast the situation was evolving. The cabinet minutes and correspondence might accurately reflect this process: specifically, the information that the highest-level British decision-makers received and their first responses and reactions. More importantly, these decisions were made before knowing the future, so using these sources helps to avoid presentism. On the other hand, the sources' strength might also be their weaknesses. Although they reflect the politicians' initial reactions, these might also reflect premature and underdeveloped thinking. After all, politicians were humans too, and they shared the same emotions as other people, such as fear, depression and anxiety. Especially for the British decision makers in 1940, when facing overwhelming Nazi superiority on the continent, they naturally displayed fear and hesitation.⁸ They were not cowards by any means, because courage is not the total absence of fear but the ability to attend to more important matters despite being afraid. Weekly résumés were weekly reports prepared by the Chiefs of Staff for the

⁸ David Reynolds, "Churchill and the British 'Decision' to fight on in 1940: right policy, wrong reasons," in *From World War to Cold War: Churchill, Roosevelt and the International History of the 1940s* (Oxford: Oxford University Press, 2006), 154, 165-166.

War Cabinet to provide the latter with concise updates of the war, including important operations launched and their results. These reports had similar issues, although they could provide very time-sensitive information, the information might not be accurate or verified. Especially for the damage inflicted by bombing, at the beginning of the Second World War, damage reports relied heavily on the visual observations of pilots, who tended to exaggerate the results. Finally, I could only use archival documents available online because unfortunately I could not visit the United Kingdom and access the Air Ministry files that are not digitized.

Aside from Churchill's memoirs, I also consulted multiple diaries. One was written by William Shirer, a Columbia Broadcasting System (CBS) correspondent who was covering the European war from Germany in 1940. The other one was Churchill's private secretary, John Colville's diaries. Diaries and memoirs were quite useful when analyzing the author's personal stances, reflections and observations on certain historical events. Their shortcomings were obvious as these writings were inherently subjective and biased. Many authors put what they want the audience to read in their memoir, and Churchill's memoir was particularly notorious in this regard. Diaries, on the other hand, tend to be limited by the authors' angle of observation. Even if they intend to objectively record an event they saw (rather than just hearsay), they could only be at one place at one time, and their observations might not represent the full picture of the story. Speeches, correspondences and newspaper articles could be even more prone to bias and prejudice than diaries and memoirs because they sought to gain the audience's attention in a short period of time. Therefore, rhetoric stood above reality in these texts.

Literature Review

Throughout the decades, a large amount of ink has been spilled on strategic bombing. Interestingly, these different scholarly works, whether supporting the strategic bombing or against it, almost unanimously acknowledged the limitations of its early, if not all its operations, and admitted the gap between the prewar assumptions and the wartime results. As Richard Overy, a leading scholar on British airpower, concisely summarized “No one would argue with the view that for much of the war the bombing forces exaggerated the degree of direct physical destruction they were inflicting on German industry.”⁹ A part of this thesis aims to reexamine this claim. Before this, however, this section provides a brief literature review about strategic bombing.

Although agreeing in principle that the bombing offensive was “one of the decisive elements in Allied victory,”¹⁰ Overy denounced the early strategic bombing. He claimed that little had been achieved by bombing from May 1940 to March 1942 and argued that Churchill’s uncritical enthusiasm of bombing in 1940 stemmed from his fantasy of a rapid “knock-out blow,” which was hardly a basis for military strategy. The British Bomber Command was in crisis from 1941 to 1942, low on political stock and in a state of limbo. This was largely because the results of these bombings were nebulous, inconsistent and indecisive. His praise of the air offensive only focused on 1943 and 1944, after the Combined Bomber Offensive (CBO) was launched.¹¹ Historian Sir Basil

⁹ Richard Overy, *Why the Allies Won* (New York: W. W. Norton & Company, 1997), 130.

¹⁰ *Ibid.*, 133.

¹¹ See Richard Overy, “Bombers and Bombing,” in *Why the Allies Won* (New York: W. W. Norton & Company, 1997); Richard Overy, “The Sorcerer’s Apprentice,” in *The Bombing War: Europe 1939-1945* (London: Allen Lane, 2013).

Henry Liddell Hart shared similar views with Overy and indicated that Churchill's pressure on the Air Staff to bomb German oil targets in 1940 and 1941 manifested an excess of optimism. It was not until late 1941 that Churchill became skeptical about the effectiveness of bombing and started questioning the Air Staff's optimism after reading the Butt Report, which revealed the inaccuracy of the bombs dropped.¹² In sum, the Bomber Command's performance in the first two years of the war was very disappointing. Although the British bombing campaign revived after Sir Arthur Harris took the lead of Bomber Command in February 1942, the sky did not belong to the Allied bombers until October 1944, when the bombers became a real danger instead of just an inconvenience to the Nazi regime's economy and morale. In this regard, Overy and Hart agreed with the official historians such as Sir Charles Webster and Noble Frankland who focused more on the gradual degradation effect of the strategic bombing on Germany. Namely, slow and indirect at the beginning, immediate and direct later, the British bomber aviation cumulatively wore down German defense and morale, and eventually made a decisive contribution to the Allied victory.¹³

Tami Davis Biddle took one step further and challenged the effectiveness of the entire strategic bombing campaign. She asserted that "in Europe, strategic bombing did not prove the case of its most outspoken advocates,"¹⁴ such as Sir Hugh

¹² B. H. Liddell Hart, "The Crescendo of Bombing," in *History of the Second World War* (New York: G.P. Putnam's Sons, 1971).

¹³ See Charles Webster and Noble Frankland, *The Strategic Air Offensive Against Germany, 1939-1945, 4 vols*, (London: Her Majesty's Stationary Office, 1961); Henry Probert, "Assessment" in *Bomber Harris His Life and Times: The Biography of Marshal of the Royal Air Force Sir Arthur Harris, the Wartime Chief of Bomber Command* (London: Greenhill Books; Pennsylvania: Stackpole Books, 2003).

¹⁴ Tami Davis Biddle, *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas About Strategic Bombing, 1914-1945* (Princeton: Princeton University Press, 2002), 292.

Trenchard and Lord Tiverton who believed that heavy bombing could quell enemies by both terrorizing their morale and paralyzing their key industries. In reality, the British were forced into night bombing quickly due to the heavy losses caused by the German air defense, which further decreased their accuracy rate. Even after the Combined Bomber Offensive had begun, the Americans, who were originally confident in precision bombing, fully switched to area bombing in 1945 after the destruction of Berlin and Dresden. Biddle claimed that although it is hard to specify the contribution of bombing to the Allied victory without mixing in other factors, one thing is certain: that the modern societies and economies “had proven far more resilient than the advocates of strategic bombing had predicted they would be.”¹⁵ So, strategic bombing was not a shortcut to victory.

Anthony Clifford Grayling, additionally, condemned the strategic bombing from a moral perspective. He argued that the British bombing campaign was “a violation of humanitarian attitudes and civilised standards of treatment of human beings.”¹⁶ Particularly, due to the influence of the Trenchard-Douhet thesis, a doctrine developed by Hugh Trenchard from Britain and Giulio Douhet from Italy which advocated for very aggressive use of airpower to defeat the enemy. The British theorists were obsessed with terror bombing, in other words, deliberately dropping bombs over urban centers to cause maximum damage, shock, panic and fear among the enemy civilians, thus destroying their will to fight on. Grayling asserted that strategic bombing was inherently inaccurate, which inevitably led to mass slaughter

¹⁵ Biddle, *Rhetoric and Reality in Air Warfare*, 286-287.

¹⁶ A. C. Grayling, *Among the Dead Cities: Is the Targeting of Civilians in War Ever Justified?* (London: Bloomsbury, 2006), 196.

of men, women and children in the enemy country. According to Grayling, such operation was not only militarily ineffective, but also ruthless and barbaric, lowering the moral standard of societies: an extreme form of callous cruelty of which the political and military leaders deliberately allowed themselves to become afflicted.¹⁷ The criticism against strategic bombing is best summarized by historian Max Hastings: “the cost in life, treasure and moral superiority over the enemy tragically outstripped the results it achieved.”¹⁸

Other scholars, especially ex-military writers, showed their support for the strategic air offensive. Sir Arthur Harris, who was Air Officer Commander-in-Chief of RAF Bomber Command from 1942 to 1945, staunchly defended the strategic bombing campaign. In his *Bomber Offensive*, Harris praised Bomber Command in the early stage of the Second World War. While other nations reduced the function of bombers as merely “long-range artillery for the army,” Britain was the only one “at that time convinced [of] the possibility of using an air force in this way, to fight a war by itself and, within certain limits, win a war outright.”¹⁹ Especially after the Battle of Dunkirk and the defeat of France, Britain was deep into the war and entirely on its own. With the absence of a continental army, a massive bombing campaign was the only way Britain could bring the war to the enemy. Meanwhile, Harris admitted that Bomber Command in 1940 and 1941 faced a challenging and steep learning curve as it adapted to the demands of more sophisticated air combat, and the operations were largely unsuccessful. Nevertheless, he firmly opposed the argument to conserve

¹⁷ A. C. Grayling, “Judgment,” in *Among the Dead Cities: Is the Targeting of Civilians in War Ever Justified?* (London: Bloomsbury, 2006).

¹⁸ Max Hastings, *Bomber Command* (Minneapolis: Zenith Press, 2013), 310.

¹⁹ Arthur Harris, *Bomber Offensive* (London: Collins, 1947), 53.

strength for a possible invasion in the future because a policy of saving frontline strength would mean the RAF “should have no chance of keeping pace with the enemy’s counter-measures.”²⁰ The Air Chief Marshal’s goal to build a huge air armada of 4000 heavy bombers to sufficiently weaken Nazidom to pave the way for a ground invasion, was, however, never attained.²¹ Moreover, although Harris recognized the grim reality of collateral damage, he vigorously argued that the strategic bombing campaign was morally defensible, emphasizing the right of retaliation and the necessity to bomb German civilians to shorten the war to preserve the lives of Allied soldiers, especially after the German air raids on Rotterdam, London and Coventry. In a letter to Norman Bottomley in April 1945, he wrote, rather controversially:

Attacks on cities, like any other act of war, are intolerable unless they are strategically justified. But they are strategically justified in so far as they tend to shorten the war and so preserve the lives of Allied soldiers. To my mind we have absolutely no right to give them up unless it is certain that they will not have this effect. I do not personally regard the whole of the remaining war cities of Germany as worth the bones of one British Grenadier.²²

Later historians, such as Robin Neillands and Henry Probert, were sympathetic to Arthur Harris and his RAF Bomber Command. Neillands, a former Commando of Royal Marine before he became a military historian, liked to challenge the revisionist view of history. He debunked the trendy demonization of Bomber Command and Arthur Harris, arguing that the Air Chief Marshal and his air crew had been unfairly vilified due to one operation to bomb Dresden in 1945, which overshadowed their vital contributions during this “long, costly and ultimately

²⁰ Harris, *Bomber Offensive*, 47.

²¹ *Ibid.*, 52-54, 93, 278.

²² Cooper, *Target Dresden*, 196.

successful war.”²³ In his work, Neillands agreed with many of Harris’ stances, and contended that despite the heavy civilian casualties, Britain must hit Nazi Germany hard to deprive it of the means to keep waging war. Strategic bombing, especially the combined air offensive from 1943 to 45, played a gradual yet decisive role to wear down the enemies’ will and resources to resist, and eventually led to the Nazi surrender.²⁴ As for the early bombing in 1940, Neillands asserted that they brought the reality of war to the heart of the Reich, and reminded “the people of Germany and their hapless victims in other countries that, even with most of the Continent in his grasp, Hitler had yet to win the war.”²⁵ In this regard, Neillands also considered the early strategic bombing as one of the few ways to strike the enemy and to boost the morale of the homefront, despite the limited material damage that the bombing inflicted.

Henry Probert was a former Air Commodore of the RAF who became a historian and biographer after retirement. In his apologia, *Bomber Harris: His Life and Times*, Probert aimed to restore the reputation of Arthur Harris, who was almost demonized as a war criminal by scholars such as A. C. Grayling and Jörg Friedrich.²⁶ In his diary, the former Nazi Minister of Armaments and War Production, Albert Speer, contended:

²³ Robin Neillands, *The Bomber War: Arthur Harris and the Allied Bomber Offensive 1939-1945* (London: Lume Books, 2018), 5.

²⁴ Robin Neillands, “Moral Issues and the Bomber War: 1999 – 2000,” in *The Bomber War: Arthur Harris and the Allied Bomber Offensive 1939-1945* (London: Lume Books, 2018).

²⁵ Robin, *The Bomber War*, 666-667.

²⁶ See A. C. Grayling, “The Case Against the Bombing,” in *Among the Dead Cities: Is the Targeting of Civilians in War Ever Justified?* (London: Bloomsbury, 2006); Jörg Friedrich, “Strategy” in *The Fire: The Bombing of Germany*, trans. Allison Brown (New York: Columbia University Press, 2006). Notice neither the two scholars used the term “war criminal” in strict legal context, but definitely a moral crime.

The real importance of the air war consisted in the fact that it opened a second front long before the invasion of Europe. That front was the skies over Germany. The fleet of bombers might appear at any time over any large German city or important factory. The unpredictability of the attacks made this front gigantic; every square meter of the territory we controlled was a kind of front line. Defence against air attacks required the protection of thousands of antiaircraft guns, the stockpiling of tremendous quantities of ammunition all over the country, and holding in readiness hundreds of thousands of soldiers, who in addition had to stay in position by their guns, often totally inactive, for months at a time. [...] this was the greatest lost battle on the German side. The losses from the retreats in Russia or from the surrender of Stalingrad were considerably less.²⁷

Probert believed Speer's comment was strong evidence to support Harris' contribution in winning the war. In 1943, for example, Allied bombing costed Germany ten thousand heavy artillery pieces and six thousand medium and heavy panzers in terms of production.²⁸ Historians Overy and Adam Tooze both agreed with Speer's claim. Overy asserted German forces had lost half of the equipment needed for the front, millions of workers absented themselves from their positions and the German economy ultimately cracked due to bombing.²⁹ Tooze argued that British and American bombing had halted Speer's armaments miracle in its tracks and the German homefront was racked by "a serious crisis of morale," thus marking the defeat of the Third Reich as early as July 1943.³⁰ In addition, Probert challenged the prevalent perspective that area bombing did not shatter German morale and added more nuance into this question. Namely, a distinction existed between private morale and war morale. The German peoples' will to live in the challenging situation caused

²⁷ Albert Speer, *Spandau: The Secret Diaries*, trans, Richard Winston and Clara Winston (New York: Pocket Books, 1977), 375.

²⁸ Speer, *Spandau*, 375.

²⁹ Overy, *Why the Allies Won*, 133.

³⁰ Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York: Viking, 2006), 671.

by the bombing was never broken, but their faith in the future and final victory had been gradually exhausted after relentless bombing.

In fact, by the end of the Second World War, the Americans formed a Morale Division and conducted research about the effects of strategic bombing on German morale as part of the *United States Strategic Bombing Survey*. The report admitted that neither the Germans nor the Allies had “accurate, quantitative data on the effect of bombing on the morale of their civilian population.”³¹ Nevertheless, the Americans attempted to understand the effect by interviewing (oral and questionnaires) different groups of people, including German civilians, foreign workers and French escapes who suffered from the Allied bombing campaign. In addition, the Morale Division analyzed 2,200 German civilian mail captured during the war.³² The overarching finding was that the strategic bombing campaign induced defeatism, fear, hopelessness, fatalism and apathy. The bombed population was more prone to show war weariness, willingness to surrender, loss of hope of German victory and distrust of leaders.³³ Meanwhile, the report acknowledged that serious morale decline did not come until 1944.³⁴ Although quantifying the bombing effects on morale remained a difficult task, it appeared that these effects were “substantially more worthwhile than was previously thought.”³⁵ This issue ultimately requires more research because

³¹ Morale Division, *The United States Strategic Bombing Survey: The Effects of Strategic Bombing on German Morale*, vol. 1 (Washington D.C.: U.S. Government Printing Office, 1947), 2.

³² *Ibid.*, 2-3.

³³ *Ibid.*, 1.

³⁴ *Ibid.*

³⁵ Henry Probert, *Bomber Harris His Life and Times: The Biography of Marshal of the Royal Air Force Sir Arthur Harris, the Wartime Chief of Bomber Command* (London: Greenhill Books; Pennsylvania: Stackpole Books, 2003), 337-338.

something being unquantifiable does not necessarily indicate that it does not exist or is not impactful.

CHAPTER 2 THE ORIGINS OF STRATEGIC BOMBING AND BOMBERS

I think it is well for the man in the street to realize that there is no power on earth that can protect him from being bombed. Whatever people may tell him, the bomber will always get through.

- *Stanley Baldwin, 1932*

2.1 British Bombing Warfare Before 1939

Before diving into the dynamics of the connections between strategic bombing and British politicians' grand strategy, it is necessary to briefly review the history of strategic bombing and give it a proper definition. A short definition of a strategic air offensive given by official military historians is as follows: "[It] is a means of direct attack on the enemy state with the object of depriving it of the means or the will to continue the war."¹ In other words, strategic bombing targets the enemy's heartland, the sources of enemy's war capacity, including raw materials, the factories that produce ammunition, the shipyards that manufacture warships, the workers who produce these war machines, and even the civilians who form the bulk of the enemy populace. The other form of air warfare is called tactical air operation (bombing). It aims to provide direct aerial support for the friendly forces in the immediate vicinity, such as bombing hostile combatants and ships, intercepting enemy warplanes, blocking ways of enemy communication and escorting friendly airplanes and ships.² In short, strategic bombing is a tool to win an entire war while tactical bombing is a tool to win a battle in the sense that warplanes play an independent role when fulfilling their strategic goal and an auxiliary role when executing tactical operations. Notice that, in practice, the line between strategic and tactical operations can be

¹ Webster and Frankland, *The Strategic Air Offensive Against Germany*, 6.

² *Ibid.*, 7, 43.

blurry under certain circumstances. Among various aircraft, fighters and light bombers are suitable for tactical operations and heavy bombers are the most important instruments to achieve the strategic objectives. Ideally, they possess the advantage of high mobility while ignoring the effects of various terrains to unleash destruction upon enemy territories by dropping bombs. Through the two world wars, bombers became heavier, faster and could fly longer voyages, and was ultimately deemed an indispensable weapon in the belligerents' arsenals.

There was, however, a long way to the idea of strategic bombing and the innovation and development of bombers. It began with the human ambition to harness the sky to wage war. Indeed, the Homo sapiens, as a bellicose species, were tirelessly seeking new means to crush each other throughout millennia, and they certainly did not overlook the sky. The idea to rain havoc directly on enemy heads by an "Aerial Ship" can be traced back as early as 1670 by a Jesuit monk named Francesco Lana.³ Nevertheless, due to the technological, operational and theoretical limitations, the use of air as a medium of warfare mostly remained conceptual rather than practical until the end of the 18th century, when General Jourdan employed air balloons to recon the Austrian positions during the Battle of Fleurus in 1794.⁴ During the Franco-Prussian War, the besieged garrison in Paris dispatched messengers and mail via balloons to call for reinforcement in 1871.⁵ So far, the exploitation of air power was only restricted to reconnaissance and communication instead of aggression or

³ Biddle, *Rhetoric and Reality in Air Warfare*, 12.

⁴ Victor Cesar Eugene Dupuis, *Les Opérations Militaires sur la Sambre en 1794 : Bataille de Fleurus* (Paris : Librairie Militaire R. Chapelot et Cie, 1907), 374-379.

⁵ Karl Blind, "The Siege of Paris and the Air-Ships," *The North American Review* 166, no. 497 (1898): 482-483.

transportation, and the performance of air balloons was highly unreliable as they were prone to suffer from stormy weather and sudden change of wind. In 1852, French engineer Henri Giffard installed propellers on an elongated balloon powered by a steam engine. His innovation marked the dawn of the airship era. Thirty-one years later, Gaston and Albert Tissandier replaced the steam engine by a powerful electric motor, thus making the balloons more resilient against wind.⁶

In 1900, Count von Zeppelin once again revolutionized airships by adding internal framework and significantly increasing their size, impetus and altitude. The prototype rigid airship was 120 meters long with two Daimler internal combustion engines which could provide thirty-two horsepower, sufficient for executing multiple duties, including transporting passengers and carrying cargos. The Imperial German government immediately realized the military potential of such rigid airships as they possessed hitherto greatest capacity to carry and drop bombs (2000 kg bombs in 1914).⁷ In fact, two German naval Zeppelins launched the first ever strategic air offensive against Britain on January 9th, 1915. It was initially aimed at the Humber area but erroneously hit towns King's Lynn and Great Yarmouth, in the hope to break the stalemate on the western front. In total, the Germans launched 51 airship raids over Britain, the most extensive use among other belligerents.⁸

⁶ Bill Gunston, ed., *Aviation, The Complete Story of Man's Conquest of the Air* (London, Octopus Books, 1978), 22-23.

⁷ Gunston, *Aviation*, 106.

⁸ The National Archives of the UK (TNA): Report of the raid by Major General Ferrier, Commander Humber Defences, 1915, AIR 1/569/16/15/142/A; Earl H. Tilford, Jr. "Air Warfare: Strategic Bombing," in *The European Powers in the First World War: An Encyclopedia*, ed. Spencer R. Tucker (New York; Routledge, 2013), 13-14.

The sky was then dominated by airships, but their leading role was gradually challenged by airplanes. Some of the airships' flaws rendered them inferior to the airplanes. For instance, an airship must be lighter than air to fly so it must be constructed of a light material, such as aluminum, which decreased its defensive capability. Moreover, the lifting gas in the envelope was usually highly inflammable hydrogen, and thus the hazard of fire rendered it deficient for military or even civilian use. In total, Germany employed 125 Zeppelins during the Great War. The force lost 50% of the airships and sustained 40% attrition rate of the crews, the highest among German service branches.⁹ Overall, the Zeppelin airship ushered in the era of strategic air warfare, but it was an “inauspicious debut.”¹⁰ Finally, the destruction of Zeppelin *Hindenburg* by fire in 1937 marked the end of the airship era.¹¹ The sky was soon to be ruled by airplanes in the 1930s and 40s, both as a civilian means of transportation and important military apparatus.

If the development of lighter-than-air aircraft was fast, then the evolution of heavier-than-air aircraft, especially bombers, proceeded at an astonishing speed, and it usually grew in tandem with the development of strategy and doctrine of bombing warfare. Just like historian Webster described:

It was as though, in naval terms, the development from the stage of the primitive Viking ship to that of the Super Dreadnought, or, in military terms, from that of the chariot to the tank, had been compressed into the lifetime of a young man.¹²

⁹ Tilford, “Air Warfare: Strategic Bombing,” 14-15.

¹⁰ Richard R. Muller, “Zeppelins,” in *The European Powers in the First World War: An Encyclopedia*, ed. Spencer R. Tucker (New York: Routledge, 2013), 767.

¹¹ William W. Lacey, *Great Historic Disaster: The Hindenburg Disaster of 1937* (New York: Infobase Publishing, 2008), 102.

¹² Webster and Frankland, *The Strategic Air Offensive Against Germany*, 6-7.

Indeed, the advent of bomber aircraft came much later than military airships, but at a much faster developing rate. It took about 63 years (1852 to 1915) to transform a prototype airship into a military one suitable for strategic offensive; a bomber aircraft underwent the similar transformation in only about 10 years. In 1903, the Wright Brothers designed and manufactured the first airplane in the world; Italian pilot Giulio Gavotti dropped the first bomb (grenade) from his airplane in the autumn of 1911 on Libya during the Italo-Turkish War.¹³ The first purposefully designed bombers came only two years later in 1913, and they were the Italian *Caproni Ca 30* and the British Bristol T.B.8.¹⁴ Total war is always a catalyst of technological development, which provided the means for the strategists and decision makers to (hopefully) systemically quell their foe from air.

During the First World War, major belligerents, Britain, France and Germany expected the bombers to be an offensive weapon and accomplish two goals. The first was to inflict significant material damage, preferably military-related targets, namely key industries, petroleum refineries and important docks to weaken the enemies war efforts via direct material loss. Second, overwhelming bomber forces ought to make enemy ground troops to feel trapped and vulnerable, while also inducing panic among the civilian population, thus inciting civil unrest and compelling the government to sue for terms.¹⁵ Nevertheless, due to the poor aiming mechanism (pilots often needed to drop bombs by hand), short range and small payloads the early warplanes could

¹³ R.G. Grant, *Flight: The Complete History* (London: Dorling Kindersley Limited, 2010), 59.

¹⁴ David Cenciotti, "The Caproni Ca.3, The World's Only Airworthy WWI Bomber Replica, Returns to Flight," *The Aviationist*, last modified June 10, 2023. <https://theaviationist.com/2023/06/10/the-caproni-ca-3r-the-worlds-only-airworthy-wwi-bomber-replica-returns-to-flight/>; Francis Mason, *The British Bomber Since 1914* (London: Putnam Aeronautical Books, 1994), 16-17.

¹⁵ Biddle, *Rhetoric and Reality in Air Warfare*, 19-20.

carry, they never achieved the ideal material damage as expected. For example, on August 2 and 14, 1914, German pilots dropped small bombs on the town of *Luneville* and a suburb of Paris. The French retaliated by bombing a Zeppelin hanger near Metz on August 14 as well, neither side causing significant damage.¹⁶ Even with the more advanced Gotha, Giant and Handley Page O/400 bombers which were technological marvels at the time, they could not accurately strike the targets to deprive the enemy of its war-waging capabilities. Therefore, strategists started to place emphasis more on the psychological damage to the enemy by the bombing campaign, known as the “moral effect.”¹⁷ The concept of moral in military conflicts was formally introduced by Prussian military theorist Carl von Clausewitz.

Clausewitz’s *On War* became very popular after the Franco-Prussian War, especially after Helmuth von Moltke the Elder claimed his military thinking was influenced by this book. In it, Clausewitz asserted the significance of military virtues in an army, including patriotism, courage, discipline, *élan* (enthusiasm) and *esprit de corps* (corporate spirit).¹⁸ He wrote:

The moral elements are the most important in war. [...] The spirit and other moral qualities of an army, a general or a government, the temper of the population of the theatre of war, the moral effects of victory or defeat, all these vary greatly.”¹⁹

This argument was favored by the upper-middle class of the Victorian and Edwardian society, who also valued traits such as courage, initiative, resourcefulness, tenacity

¹⁶ Barry D. Powers, *Strategy without Slide Rule: British Air Strategy 1914-1939* (New York: Routledge, 2021), 24.

¹⁷ Biddle, *Rhetoric and Reality in Air Warfare*, 13.

¹⁸ Carl von Clausewitz, *On War*, trans. Michael Howard and Peter Paret (Oxford: Oxford University Press, 2007), 144.

¹⁹ *Ibid.*, 141.

and willpower the most. Ironically, psychological factors can be a double-edged sword: an army's greatest strength can also become its greatest weakness. Namely, an army which is courageous and enthusiastic can overpower its adversary but can also be easily defeated if the adversary knows how to harness the same psychological factors. As Clausewitz himself admitted the moral factors cannot be "classified or counted" but "have to be seen or felt."²⁰ The same principle is even more applicable for the society as a whole. As Tami Biddle put the question "how might untrained, undisciplined civilians hold up under the pressures of a war fought directly over their heads (bombing campaign)?"²¹ Indeed, the decision makers of major European powers were facing the Clausewitz dilemma in World War I. On one hand, they held the firm faith that the poor urban dwellers who were living in heavily polluted, crowded districts were not steadfast when facing overwhelming social psychological pressure because they did not possess the moral characteristics the middle upper class treasured. Therefore, warplanes which rain fire from a clear blue sky were the prime weapons to destroy the willpower of the mass thus shortening the duration of the war. On the other hand, however, the strategists were deeply concerned about the loyalty and reliability of their own urban population when being bombed by the enemies' warplanes.

In particular, the British became increasingly anxious about the future of their empire after the rise of the German Reich in the 1870s. The Edwardian ruling class enjoyed the fruits of the Industrial Revolution, such as electric power, telephones and automobiles while struggling to cope with the dynamic society full of conflicts. The

²⁰ Clausewitz, *On War*, 141.

²¹ Biddle, *Rhetoric and Reality in Air Warfare*, 14.

fast-growing urban industrial population in the view of the upper-middle class were becoming a “mysterious and frightening new force” who were discontent with the status quo.²² This unstable factor may easily be taken advantage of by the enemy by utilizing the might of bombers. The pessimistic presumption was that the urban centers, which were also the economic centers full of the urban poor, were too vulnerable to resist the havoc from the sky. They would either succumb to fear, flee in disorder and spread the panic in the city or even worse, a few dissidents may find an ample opportunity to incite social unrest in such turmoil, a prelude to revolution to cripple the homefront. This fear became extreme after the Russian October Revolution and several successful German Giant air raids in early 1918, where the British government developed the so-called Emergency Scheme L, to maintain eight divisions in the British Isles and replace civil authority with military control in case of domestic emergency to counter the revolutionary dissent.²³

The allocation of the nation’s air assets was then a very important and challenging task for the British military planners to achieve a proper balance between offence and home defense. Initially, the Royal Naval Air Service (RNAS, founded in 1914) was responsible for defending homeland against German air raids, but the result was not ideal when zeppelins repeatedly dropped bombs on London and killed many civilians, including women and children. Despite limited material damage, the horror of hostile airships, lack of early warning and the incompetence of the British defenders were greatly amplified through the press coverage, causing widespread

²² Samuel Hynes, *The Edwardian Turn of Mind* (Princeton: Princeton University Press, 1968), 63.

²³ Brock Millman, “British Home Defence Planning and Civil Dissent, 1917-1918,” *War in History* 5, no. 2 (1998): 219, 223; Biddle, *Rhetoric and Reality in Air Warfare*, 29-35.

frustration and anger.²⁴ The German Gotha long-range bombers' shocking raids over London in summer 1917 were a turning point for the British air force. On 13 June and 7 July, dozens of German Gotha heavy bombers flew over the capital of the island nation in broad daylight, catching its inhabitants by complete surprise, hit many targets, including an infant school. All German bombers remained intact despite the efforts of ninety-two British fighters to intercept them on 13 June; on 7 July, ninety-five fighters shot down only one Gotha.²⁵ The catastrophe in summer spurred the creation of an independent air force. On 11 July 1917, Prime Minister David Lloyd George and General Jan Christian Smuts formed a committee to seriously consider the creation of an independent air arm for home defense and retaliation efforts through long-range bombing.²⁶ In less than a month, Smuts drafted two reports by himself. The first Smuts Report dealt exclusively with home defense measures, recommended a unified command for different fighter squadrons, observation posts, searchlights and anti-aircraft guns.²⁷ This report led to the establishment of London defense area with a total 150 state-of-the art fighters at its disposal, including Sopwith Camel and Bristol F2b.²⁸

In the second Smuts Report produced on 17 August, General Smuts urged the creation of an Air Ministry and Air Staff as soon as possible. More importantly, the Air Ministry and Staff should arrange for the amalgamation of the RNAS and the

²⁴ Biddle, *Rhetoric and Reality in Air Warfare*, 22-25.

²⁵ Jack Hennis and Bob Pearson, *Aircraft of World War I, 1914-1918* (London: Amber Books, 2024), 66-67.

²⁶ Malcolm Cooper, *The Birth of Independent Air Power, British Air Policy in the First World War* (New York: Routledge, 2021), 99-100, 104.

²⁷ *Ibid*, 99.

²⁸ Cooper, *The Birth of Independent Air Power*, 100.

Royal Flying Corps (RFC, founded in 1912) to form the new Air Service. This proposal was approved by the War Cabinet on 24 August in principle, and this document became a steppingstone towards the birth of an independent air force, the Royal Air Force (RAF), in April 1918. In particular, Smuts took a rather futurist perspective:

Unlike Artillery, an air fleet can conduct extensive operations far from, and independently of, both army and navy. As far as can at present be foreseen, there is absolutely no limit to the scale of its future independent war use. And the day may not be far off when aerial operations with their devastation of enemy lands and destruction of industrial and populous centres on a vast scale may become the principal operations of war, to which the older forms of military and naval operations may become secondary and subordinate. [...] while our Western front may still be moving forward at a snail's pace in Belgium and France, the Air battle front will be far behind on the Rhine, and that its continuous and intense pressure against the chief industrial centres of the enemy as well as on his lines of communication may form an important factor in bringing about peace.²⁹

Although the exact term “strategic bombing” did not appear here, the concept and doctrine Smuts mentioned in his report, namely that the air force was no longer an ancillary arm dependent on the army or the navy, and that Britain must prepare for large scale air campaigns to bring war behind the enemy line to strategically bomb key industrial sites and communication centers, led to the creation of the Independent Force (IF) on 6 June 1918, the world's first dedicated strategic bombing force. It also served as the intellectual foundation for strategic air warfare during the interwar period.

²⁹ The National Archives of the UK (TNA): Second Report of the Committee on Air Organisation and Home Defence against Air Raids, AIR 1/515/16/3/83.

Major Lord Tiverton was a technical liaison officer under the British Aviation Commission in Paris. As the first true analyst of air warfare, he composed a comprehensive doctrine for long range bombing on September 3, 1917. After careful analysis of the potential German target sets and the possible operational challenges, including weather, geography and navigation, he advocated for the highest possible concentration of bombers to achieve highest moral and material effects. Moreover, Tiverton envisioned precise strikes on the bottlenecks of German war industries, especially synthetic nitrates, essential for explosive production.³⁰ Major General Hugh Trenchard, then head of the RFC, was impressed by the potential of early heavy bombers, started contemplating the employment of long-range bombers. Right before accepting the position of Chief of the Air Staff (CAS) for the soon-to-be RAF, he articulated his ideas on the use of bombers in a memorandum on November 26, 1917. First, long range bombers can directly weaken the enemy by inflicting damage on its industrial, transportation and military centers, thus compelling the enemy to divert precious war resources to deal with the menace. Second, bombing offensives can cause discontent among the enemy civilians, especially its industrial population to lower the nation's morale. More importantly, although the material damage may be small due to the technological limitations, the moral impact may still be great.³¹ Trenchard resigned after serving only 100 days as Chief of the Air Staff due to grievances against the inept Secretary of State for Air, Lord Harold Harmsworth. Nonetheless, his passion towards strategic bombing did not end. Soon he was convinced by the new Secretary of State for Air, Sir William Weir, to become the

³⁰ Biddle, *Rhetoric and Reality in Air Warfare*, 38-39.

³¹ *Ibid.*, 37.

General-Officer-Commanding (GOC) of the IF, the embryo strategic bombing force, on June 6, 1918.³²

Trenchard began implementing his vision of strategic bombing, though the obstacles far exceeded what he had anticipated. First, at maximum strength, Trenchard only had 10 squadrons of bombers at his disposal, about 120 aircraft³³, a quarter of originally envisioned. Second, the pilots were usually ill trained to launch long range bombing campaigns. For example, map reading skill was essential to locate the targets, but reading large maps in cramped, windswept and dark cockpits was proven an arduous task. Third, the early bomber sighting and aiming devices were very primitive and needed to be calibrated before taking off; they were however highly sensitive to environmental factors, so a sudden blow of wind might completely ruin their accuracy. Therefore, many bombers only had a random chance of hitting the intended targets. Fourth, the absence of fighter escort and various mechanical problems made the heavy bombers very easy prey. The wastage rate was as high as 81 percent for 11 flying days and 12 flying nights in October. Finally, similar with the German air defense, the unpredictable weather was the IF's other nemesis. In the same month, for instance, the entire bombing force was grounded for half of the time due to extremely unfavorable weather.³⁴ As a pragmatist, Trenchard virtually ended direct bombing on German war industries and instead launched opportunistic attacks, mostly targeting railway junctions and enemy airdromes, thus blurring his IF's distinction between strategic and tactical roles. In fact, only 16% of the IF total raids

³² Biddle, *Rhetoric and Reality in Air Warfare*, 36-37, 41.

³³ Neville Jones, *The Origins of Strategic Bombing: A Study of the Development of British Air Strategic Thought and Practice upto 1918* (London: William Kimber, 1973), 198

³⁴ Biddle, *Rhetoric and Reality in Air Warfare*, 41-42, 44.

were dedicated for German war industries. Lord Tiverton and his colleagues complained about such diversion of targets, and stressed Trenchard had ignored “war against vital German industries which is the real work of the Independent Force.”³⁵ Facing the grim reality and increasing criticism from home, the IF had no choice but exaggerating the moral effect to justify its existence, Trenchard himself asserted multiple times during news releases that “the moral effect of bombing stands undoubtedly to the material effect in a proportion of 20 to 1” and “every unit of the Independent Force immobilizes at least 50 times its fighting value from the ranks of the enemy.” These figures, however, were not based on any mathematical calculation or operational observation.³⁶ In total, Trenchard’s IF dropped 543 tons of explosives on Germany for the remainder of the war,³⁷ which caused material damage worth 15,380,000 reichsmarks, approximately 1/1000 of the German war expenditure.³⁸ General Hugo Grimme estimated the total German war expenditure from 1914 to 1918 was around 147, 000, 000, 000 reichsmarks. In his 1941 work *Der Luftschutz im Weltkrieg*, admitted the difficulty to provide an accurate figure of the property damage, especially when the property owners tended to exaggerate their losses.³⁹ The moral and indirect effect, on the other hand, remained amorphous and ambiguous.

During the Great War, the British Empire alone innovated and manufactured more than 50 different types of bombers.⁴⁰ These airplanes were initially employed by

³⁵ Biddle, *Rhetoric and Reality in Air Warfare*, 47.

³⁶ *Ibid.*, 46.

³⁷ Hastings, *Bomber Command*, 3.

³⁸ Biddle, *Rhetoric and Reality in Air Warfare*, 44.

³⁹ Sydney Wise, *Canadian Airmen and the First World War: The Official History of the Royal Canadian Air Force Vol. I* (Toronto: University of Toronto Press, 1980), 320.

⁴⁰ Mason, *The British Bomber Since 1914*, 5-6.

the RFC and the RNAS and made contributions to the military operations of bombing German units, airfields, emplacements, factories and transport facilities. Winston Churchill, then the First Lord of the Admiralty, authorized the development of heavy bombers in December 1914, and his decision came to be fruitful later.⁴¹ For instance, the Handley Page H.P. 11 O/100 was the first successful British heavy bomber, a masterpiece of technological innovation at that time. It could ascend to the height of 915 meters in 10 minutes with the weight of six 45kg bombs, which quintupled the Bristol T.B.8's 54 kg payload. The first batch of 42 aircraft was produced from late 1915 to early 1916 for training. The first operational sortie took place on the night of March 16-17th, 1917, against a German controlled railway junction near Metz. After its debut, the O/100 bombers kept providing good services, dropped impressive payloads of bombs behind the enemy line and on the German destroyers and U-boats, until it was replaced by the more powerful O/400 in the spring of 1918.⁴² The Handley Page O/400 was a comprehensive upgrade of O/100 with more powerful Rolls-Royce Eagle VIII engines and better fuel consumption to fly longer range and carry more bombs; it was also one of the largest airplanes in the world at that time. Compared to other single engine light bombers, such as Havilland DH4s and DH9s, the twin engine O/400 was much more economical and survivable because it cost less money, fewer crew (thus less casualties) to deliver the same payload. Hence, when the IF came into the play in June 1918, the O/400 was its principal long range heavy bomber. During the last three months of the war, some 110 O/400s were launching intensive bombing raids over German war industries, railways and aerodromes till the

⁴¹ Biddle, *Rhetoric and Reality in Air Warfare*, 21.

⁴² Mason, *The British Bomber Since 1914*, 16, 43-47.

Allied victory.⁴³ The performance of the Handley Page Bombers left lasting impression on Hugh Trenchard, who, as GOC of the IF and later Chief of the Air Staff of the Royal Air Force, developed the ideas known as Trenchardism, thereby laying the foundation for the RAF's doctrine of air supremacy and heavy bombing.⁴⁴

The other pioneer of strategic bombing was the Italian General Giulio Douhet (1869-1930) who was court-martialed for criticizing Italian military planners' incompetence and conservatism on establishing an independent bombing force to relieve Italy from the bloody stalemate with Austria-Hungary.⁴⁵ In his book, *The Command of the Air*, Douhet correctly identified the existence of heavy-than-air aircraft has altered the fundamentals of war, and unequivocally stated "to conquer the command of the air means victory; to be beaten in the air means defeat."⁴⁶ Therefore, a country must use its warplanes as offensive instruments to "put the enemy in a position where he is unable to fly, where preserving for oneself the ability to do so."⁴⁷ In other words, launch preemptive strike to destroy enemy's aircraft on the ground; bomb factories and urban centers to cripple its war production and shatter its civilians' will of resistance. *The Command of the Air* was reprinted several times since its first publish in 1921, and by Douhet's death in 1930, his work has become incredibly influential among politicians, military thinkers and strategists. Although

⁴³ Mason, *The British Bomber Since 1914*, 92-95.

⁴⁴ See Nick Smart, *British Strategy and Politics During the Phoney War: Before the Balloon Went Up* (Westport: Praeger, 2003), 34; Max Hastings, "In the Beginning, Trenchard: British Bomber Policy, 1917-40," in *Bomber Command* (Minneapolis: Zenith Press, 2013).

⁴⁵ Giulio Douhet, *The Command of the Air*, trans. Dino Ferrari (New York: Coward McCann, 1942), vii.

⁴⁶ Douhet, *The Command of the Air*, 28.

⁴⁷ *Ibid.*, 103.

many of the ideas were not original to him, the book was probably the most coherent, systemic and prophetic airpower writing of the era.⁴⁸

During the Roaring Twenties, the Royal Air Force was pushed to the brink of extinction and struggled for its independence under the British governmental guideline of the Ten Year Rule. A doctrine initiated by Winston Churchill, then Secretary of State for War and Air, advocated massive military budget cuts on the assumption that the British Empire would not face any great European war for the next five to ten years, and the only role the RAF needed to play was to police the colonies.⁴⁹ Despite the relatively peaceful environment in the 1920s, the idea of boundless terror from the air steadily intensified, and the threat of bombing offensives against cities and industrial centres gradually occupied the centre of public discussion and debate during the 1920s. Most people were convinced the danger from the sky would be unstoppable. Military theorist and historian Basil Liddell Hart wrote in 1925 to predict the future of warfare:

A modern state is such a complex and interdependent fabric that it offers a target highly sensitive to a sudden and overwhelming blow from the air. [. . .] Imagine for a moment London, Manchester, Birmingham and half a dozen other great centers simultaneously attacked, the business localities and Fleet Street wrecked, Whitehall a heap of ruins, the slum districts maddened into the impulse to break loose and maraud, the railways cut, factories destroyed. Would not the general will to resist vanish, and what use would be the still determined fractions of the nation, without organization and central direction?⁵⁰

The British public had a greatly exaggerated view of the might of the bomber offensive, echoing the late-WWI belief that strategic bombing could rapidly overwhelm an enemy nation's war industries and will to resist, thus offering a

⁴⁸ Douhet, *The Command of the Air*, x.

⁴⁹ John Ferris, "Treasury Control, the Ten Year Rule and British Service Policies, 1919-1924," *Historical Journal* 30, no. 4 (1987): 869.

⁵⁰ B. H. Liddell Hart, *Paris or The Future of War* (New York: E. P. Dutton, 1925), 41-42.

shortcut to victory. This was a very odd phenomenon given the fact that the Great War bomber offensive was more of a nuisance than an actual threat, and it caused more anger and frustration than real panic among the populace.⁵¹ According to the Air Staff's prediction, a full-scale air raid from France against London by a hypothetical enemy in 1925, would kill 1700 people and injure 3300 more in the first twenty-four hours, and this official forecast worsened the public anxiety. The War Office was nevertheless highly skeptical about this estimated casualty, claimed they were nothing but crude extrapolations from the 1917 German Gotha raids. The Weimar Republic was however banned from owning an air force.⁵² Politicians, on the other hand, shared the public concern. Former British Prime Minister Stanley Baldwin, in a speech to the Parliament on November 10, 1932, famously stressed:

I think it is well for the man in the street to realize that there is no power on earth that can protect him from being bombed. Whatever people may tell him, the bomber will always get through. The only defence is in offence, which means that you have to kill more women and children more quickly than the enemy if you want to save yourselves. I just mention that [. . .] so that people may realize what is waiting for them when the next war comes.⁵³

His words precisely highlighted the British public perception towards bombing campaigns, the fear of a “knock-out blow”. Notice that Baldwin was a strong advocate of disarmament and once proclaimed “strong armaments lead inevitably to war.”⁵⁴ Therefore, historians argued that his true intention was to issue a grim warning of the potential danger of bombing instead of endorsing it. Although he tried to explain this

⁵¹ Biddle, *Rhetoric and Reality in Air Warfare*, 23.

⁵² Hastings, *Bomber Command*, 6.

⁵³ *Ibid.*, 7-8.

⁵⁴ Keith Middlemas and John Barnes, *Baldwin: A Biography* (London: Weidenfeld and Nicolson, 1969), 722.

multiple times later, this speech was still taken as defeatism and proved “the futility of rearmament and disarmament alike.”⁵⁵

Trenchard, now Chief of the Air Staff of the RAF for the second time, a position he would keep for over 10 years from 1919 to 1930, would not miss the opportunity to save the RAF from losing its independence. He has become the messiah to save Britain from disasters from sky through his Trenchard Doctrine.⁵⁶ First, Trenchard shared Churchill’s perspective and advocated for air control over the Empire’s colonial possessions, especially the Middle East, as an economic alternative of expensive land expeditions.⁵⁷ More importantly, the doctrine was based on several assumptions. First, bombers could always pass over enemy army, navy and fighter defenses. Second, the civilians who stay behind the professional armies were undisciplined, prone to moral collapse under extreme conditions. Third, in the age of industrialization, it was unrealistic to differentiate frontline combatants from the workers who produce weapons in the factories behind the frontline.⁵⁸ In its essence, the Trenchard Doctrine advocated for the aggressive use of airpower to obtain air supremacy. Notably, heavy bombers should form an independent and self-defending force to strike the hostile heartland, especially factories and workers’ dwellings, so that the will of industrial workers will collapse thus paralyzing the enemy’s war-making capacity.⁵⁹ Therefore, the best way to counter a

⁵⁵ Middlemas and Barnes, *Baldwin*, 736.

⁵⁶ Hastings, *Bomber Command*, 3.

⁵⁷ *Ibid.*, 3-4.

⁵⁸ Hastings, *Bomber Command*, 6, 7, 12; Biddle, *Rhetoric and Reality in Air Warfare*, 95.

⁵⁹ See Hastings, *Bomber Command*, 12; Russell Miller, “Building an Air Force” in *Trenchard: Father of the Royal Air Force, The Biography* (London: Weidenfeld & Nicolson, 2017); Tami Davis Biddle, “Britain in the Interwar Years” in *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas About Strategic Bombing, 1914-1945* (Princeton: Princeton University Press, 2002).

hostile strategic air offensive was the possession of a large long-range bomber force which could inflict comparable damage on an enemy.⁶⁰ In other words, gain air parity to deter any potential enemies from commencing strategic bombing in the first place. This was a classic example of reserving the right and ability of retaliation.

As far as international law is concerned, the Hague Convention of 1907 did not explicitly forbid reprisal.⁶¹ The Convention did, however, limit the methods of retaliation if those must be used. Article 25 of the document clearly stated: “The attack or bombardment, by whatever means, of towns, villages, dwellings or buildings which are undefended is prohibited.”⁶² Moreover, Article 50 asserted: “No general penalty, pecuniary or otherwise, shall be inflicted upon the population on account of the acts of individuals for which they cannot be regarded as jointly and severally responsible.”⁶³ Therefore, when choosing workers' dwellings as one of the targets to attack, Trenchard probably had forgotten that the British Empire was one of the contracting parties of the Convention.

Trenchard thus saved the RAF from extinction, and his blinkered infatuation with bombers allowed the 1920s to become “the heyday of British bomber prototypes,” though with limited production due to the slender budgets imposed by the Treasury.⁶⁴ Although

⁶⁰ Hastings, *Bomber Command*, 6.

⁶¹ See Leslie C. Green, *The Contemporary Law of Armed Conflict*, 3rd ed. (Manchester: Manchester University Press, 2008), 40-47; “What are jus ad bellum and jus in bello?” *ICRC International Committee of the Red Cross*, January 22, 2015, <https://www.icrc.org/en/document/what-are-jus-ad-bellum-and-jus-bello-0>

⁶² “Regulations: Art. 25,” ICRC International Humanitarian Law Databases, accessed February 15, 2026, <https://ihl-databases.icrc.org/en/ihl-treaties/hague-conv-iv-1907/regulations-art-25?activeTab=>

⁶³ “Regulations: Art. 50,” ICRC International Humanitarian Law Databases, accessed February 15, 2026, <https://ihl-databases.icrc.org/en/ihl-treaties/hague-conv-iv-1907/regulations-art-50?activeTab=>

⁶⁴ Mason, *The British Bomber Since 1914*, 117.

59 bomber models were innovated from 1920 to 1930, only 14 of them were manufactured and entered the service, including five heavy, one medium, seven light and one torpedo bomber.⁶⁵ On the Armistice Day (11 November 1918), the RAF possessed 49 bomber squadrons with nine types of bombers, including: 6 squadrons of F. E. 2 single engine, one seater fighter/bomber; 33 squadrons of two single engine, two seater R.E. 8, Airco de Havilland (D.H.) 4 and 9, and 10 squadrons of two twin engine, three seater heavy bomber models, Handley Page V/1500 and O/400 In 1920.⁶⁶ In 1917 and 1918, a typical one seater fighter/bomber squadron had 24 aircraft. A two seater bomber squadron contained 18 aircraft, while a twin engine squadron had 10 aircraft.⁶⁷ Therefore, the RAF possessed a total of 838 bombers, including 100 heavies. In January 1920, this number was sharply reduced to 8 squadrons with 7 types of bombers including 4 heavy bomber models, Airco D. H. 10 Amiens, Vickers Vimy, Handley Page V/1500, and O/400.⁶⁸ Moreover, in the 1920s, the size of a bomber squadron was also reduced to ideally 12 aircraft on average, so the RAF owned only less than one hundred bombers.⁶⁹ By 1925, one heavy bomber model, the Vickers Virginia was added to the RAF bomber squadrons. Trenchard was succeeded by John Salmond as CAS in January 1930. In the same year, two additional heavy bomber models, Handley Page Hyderabad and Hinaidi, entered

⁶⁵ Mason, *The British Bomber Since 1914*, 5-6, 115, 129, 161, 208.

⁶⁶ *Ibid.*, 115.

⁶⁷ H. A. Jones, *The War in the Air: Being the Story of the Part Played in the Great War by the Royal Air Force*, vol. 6 (Oxford: Clarendon Press, 1937), 92

⁶⁸ Mason, *The British Bomber Since 1914*, 106-111, 129. Notice that Vickers Vimy was a late WWI prototype but did not enter service before the end of the war.

⁶⁹ David Omissi, *Air Power and Colonial Control: The Royal Air Force 1919 – 1939* (Manchester: Manchester University Press, 1990), 143.

service with the RAF, expanding its arsenal to 35 bomber squadrons, about 420 bombers, up from 100 mentioned before.⁷⁰

The 1930s saw the stagnation then expansion of the British bomber force, especially after the creation of Bomber Command as a vital part of the British rearmament program in 1936. The British economy fell into deep crisis following the onset of the Great Depression in 1929. With a worsening international environment due to the rise of Fascism, some British politicians and senior officers initiated the process to reassess the requirements for imperial defense and abolished the Ten Year Rule, the previous guideline that Britain would not face any major European war for a rough period of a decade after the Great War, on 23 March 1932. Nevertheless, the severe financial strain made the rearming process full of challenges, as the cabinet asserted that the abolition of the Rule “must not be taken to justify an expanding expenditure by the Defence Services without regard to the very serious financial and economic situation which still obtains.”⁷¹ Unlike Trenchard’s persistence in bombers, Salmond wished to embrace a more balanced air force with more focus on fighters, especially interceptors to strengthen the defense of the imperial sky. Under a stringent economic climate, however, the RAF only received a very limited budget to implement Salmond’s plan. The Hawker Hart single-engine light bomber, which entered service in 1930, reflected a compromise between the priority of expanding fighter forces and the limitations imposed by tight financial constraints. Hawker Hart was a very successful design thanks to its affordability, versatility and outstanding performance. Its 176 mile per hour (mph) speed and improved design of fuselage and

⁷⁰ Mason, *The British Bomber Since 1914*, 116-209.

⁷¹ The National Archives of the UK (TNA): Cabinet minutes on March 23rd, 1932, CAB 23/70/19, 391.

wings surpassed the speed and agility of most purposefully built fighters in the early 1930s. Hence, it could be easily converted to a fighter, known as Hawker Demon with even a higher speed of 182-mph. These advantages made the Hawker Hart one of the most popular airplanes in the RAF in the 1930s.⁷² The development of heavy bombers, on the other hand, fell into stagnation. Not a single new bomber model entered service with the RAF in the first half of the 1930s.⁷³ Despite these attempts, Trenchard's successors, including CAS John Salmond, Geoffrey Salmond and Edward Ellington, struggled to build a more balanced RAF (more fighters and fewer bombers) due to dogmatism (the strong influence of the Trenchard Doctrine in the RAF), the Great Depression and budget restraints. By 1934, four years after Trenchard's retirement, the number of RAF's bomber squadrons still doubled the fighter squadrons.⁷⁴

Germany withdrew from the League of Nations and the Geneva Disarmament Conference in 1933. The subsequent official establishment and rapid expansion of the Nazi *Luftwaffe* began in early 1935 undoubtedly accelerating the British pace of rearmament. In 1936, the Air Ministry received reports from Malcolm Grahame Christie, a former Group Captain of the RAF and air attaché in Berlin who maintained excellent contacts with Herrman Göring and his deputy Erhard Milch. Sir Robert Vansittart praised him as “the best judge of Germany that we shall ever get.”⁷⁵ According to his reports, the *Luftwaffe* aimed to build the largest air force in the

⁷² Mason, *The British Bomber Since 1914*, 204-207.

⁷³ *Ibid.*, 262.

⁷⁴ Hastings, *Bomber Command*, 6.

⁷⁵ Wesley Wark, *The Ultimate Enemy: British Intelligence and Nazi Germany, 1933-1939* (New York: Cornell University Press, 1985), 52.

world, regardless of parity or efficiency, and the Nazis' speed far exceeded what the British originally anticipated. Milch's master plan was to have an arsenal of 11,800 aircraft in total by 1938. The number was extremely close to the real *Luftwaffe* plan of 11,732 airplanes, thanks to Christie's vital informant X, who was likely to be a member of the inner circle of the German Air Ministry.⁷⁶ Despite initial skepticism, the Christie-X reports were eventually accepted with other confirmatory evidence by the British military planners, and this revelation shattered the predominated British doctrine of heavy bombers as both offensive weapons and deterrent tools against any enemies. The RAF could never attain parity with the *Luftwaffe* based on the existing industrial base in 1939.⁷⁷ This revolutionary assumption had several lasting impacts. First, when the British government received the first Christie-X Report in February 1936, although not fully convinced, the RAF started to update its original expansion plans for homeland defense, from Scheme A, 1252 frontline aircraft in 1934, to Scheme F, 1736 airplanes in 1936.⁷⁸ The rapid expansion catalyzed the reorganization of the RAF structure. Three operational commands, RAF Fighter Command, RAF Bomber Command and RAF Coastal Command, were established under the RAF in 1936 to replace the old Air Defence of Great Britain (ADGB) and to streamline the administrative tasks and combat duties.⁷⁹ Second, the RAF completely shifted its production priority from bombers to fighters for homeland defense. This decision proved to be quite fruitful because it gave birth to the famous Supermarine Spitfire

⁷⁶ Wark, *The Ultimate Enemy*, 54.

⁷⁷ *Ibid.*, 56.

⁷⁸ *Ibid.*, 57.

⁷⁹ Denis Richards, "La Drôle de Guerre: Bomber Command" and "La Drôle de Guerre: Fighter and Coastal Commands. Training" in *Royal Air Force 1939-1945, vol. 1, The Fight at Odds* (London: Her Majesty's Stationery Office, 1953).

and Hawker Hurricane monoplane fighters, which later became the backbone of the RAF during the Battle of Britain.⁸⁰

Compared to the well-known Spitfire and Hurricane, the development of British bombers in the late 1930s was relatively quiet and modest. As the name suggests, a monoplane has one pair of wings while a biplane has two pair of wings. A monoplane is more technologically advanced than a biplane because it has greater aerodynamic efficiency, resulting in higher speed and lower fuel consumption. By the 1930s, monoplane fighters and bombers were gradually replacing biplanes in many major powers. Nevertheless, the British Empire was lagging. In January 1935, not even one monoplane bomber was in service with the RAF. The existing heavy bombers were designed at least five years ago, and most were near twelve years old; all medium and light bombers were at least six years old. Most fatally, none of these airplanes could drop a 500 lb. bomb on Germany and return to Britain.⁸¹ These facts coincided with the grim picture of an alarming lack of armed forces to defend the Empire.⁸² While Supermarine and Hawker were developing new monoplane fighters under the new Scheme F, other aviation manufacturers including Bristol, Vickers, Handley Page and Armstrong Whitworth were also working tirelessly to innovate the new generation of twin engine monoplane bombers. Their hard work gave birth to the trio of long-range heavy and medium bombers, the Armstrong Whitworth Whitley, the Vickers Wellington and the Handley Page Hampden in the late 1930s.⁸³ These

⁸⁰ Wark, *The Ultimate Enemy*, 73.

⁸¹ Mason, *The British Bomber Since 1914*, 263.

⁸² Paul Kennedy, *The Rise and Fall of British Naval Mastery* (London: The Macmillan Press, 1983), 284.

⁸³ Mason, *The British Bomber Since 1914*, 264, 288, 292.

bombers were the principal means by which Britain carried out strategic air offensive against Germany in early World War II.

The Whitley was the first monoplane heavy bomber that entered service with the RAF in 1937 after phasing out the biplane heavy bombers, though its mediocre performance represented more of a learning curve for the British bomber designers during this quick transitional period. The airplane's operational speed was lower than the contemporary heavy monoplane bombers due to its unreliable 795 hp Tiger IX engines. Although the bomber could carry four 1000 lb. bombs, the small-cross section of its bomb bay prevented it from carrying a single 4000 lb. Blockbuster bomb, which reduced its bombing capacity. Modifications were made later to improve its overall capabilities, and by September 1939, most early Whitley Mk I and II have been replaced by the more advanced Mk III and IV. Notably, the Whitley was the RAF's only dedicated night bomber at the outbreak of the war.⁸⁴ The Wellington, on the other hand, was a more successful model designed by Rex Pierson in 1936. The bomber's lightweight and resilient geodetic airframe was powered by two 915 hp Bristol Pegasus X engines, which gave it a maximum speed of 245 mph and a range of 1500 miles with 4500 lb. bomb load. The Wellington entered service with the RAF in October 1938, and by the contemporary standard, it was an outstanding daytime heavy bomber. However, the Wellington suffered some design flaws from the Frazer-Nash turrets which weakened its defensive capability, rendering it an easy prey for the *Lufftwaffe* interceptor pilots.⁸⁵ The Hampden joined the RAF in September 1938, a much smaller and lighter bomber than the Whitley and Wellington, which made it

⁸⁴ Mason, *The British Bomber Since 1914*, 288-292.

⁸⁵ *Ibid.*, 292-295.

much more agile. Equipped with two Bristol Mercury VI engines, it could reach a speed of 230 mph and a range of 1960 miles with two 2000 lb. bombs. The airplane's most distinctive feature was its twin fin and rudders mounted on a very slender rear fuselage boom, but its overly narrow fuselage posed major challenges in fitting gun mountings within the gunners' stations. In addition, the aircraft was criticized for heavy elevator control and poor means of communication between crew members.⁸⁶ Despite all the flaws, the British made great efforts to rearm and enhance the fighting capacity of Bomber Command in a rather short time span. In January 1938, only 3 out of 17 heavy bomber squadrons were advanced Whitley squadrons in the home bases; two years later, all 18 heavy bomber squadrons were equipped with the Whitley and the state-of-the-art Wellington bombers, plus 9 Hampden squadrons.⁸⁷ These three bombers became the core of Bomber Command in September 1939. On September 30, 1938, the RAF had a total of 1982 first line aircraft. When British declared war on September 3, 1939, the RAF possessed 1911 first line airplanes, the decline was the result of the withdrawal of obsolete airplanes. Note that within these 1911 airplanes, 480 were bombers.⁸⁸

2.2 Bombers and the British Grand Strategy in the 1930s

What role did the hundreds of bombers play in the British politicians' grand strategy in the 1930s, when the threat to peace became increasingly obvious? To truly answer this question, one must first understand how British grand strategy evolved.

Throughout the 1930s, the British Empire was experiencing the most unprecedented

⁸⁶ Mason, *The British Bomber Since 1914*, 302-306.

⁸⁷ *Ibid.*, 310, 334-335.

⁸⁸ Richards, *Royal Air Force 1939-1945, vol. I*, 41, 410. The report of the BBSU suggested 515 bombers in September 1939.

turbulence in global affairs since the Great War. As a declining global power, the British leadership had to consistently shift the country's grand strategy to cope with escalating domestic challenges and foreign threats. Despite its rapid shifting nature, the grand strategy always aimed at two core elements, the security of British Isles and the defense of British imperial possessions.⁸⁹ Homeland security was also deemed more important than that of the colonies. Chronologically, British grand strategy underwent the following stages: business as usual (1930-1932), balance of power and deterrence (1932-1937), appeasement (1938), and defense (1939).⁹⁰ These different stages reflected the various ways the British decision makers handled different crises under multiple political, financial and diplomatic constraints.

Facing the growing Japanese threat against the British interests in the Far East, the business-as-usual approach was abandoned with the abolition of the Ten-Year Rule in the spring of 1932, thus ending the Locarno era, a period of improved international relations and relative stability marked by the signing of the Locarno Treaties in 1925.⁹¹ However, Imperial Japan was not the only enemy who was challenging the British Empire. Trading routes and colonies were vital for a maritime empire like Britain, but Australia, New Zealand and other colonies in the Pacific region were endangered by the powerful Japanese Imperial Navy. The British lines of

⁸⁹ B. J. C. McKercher, "National Security and Imperial Defence: British Grand Strategy and Appeasement, 1930 to 1939," *Diplomacy and Statecraft* 19, no.3 (2008): 393.

⁹⁰ See Steven Lobell, "Britain's Grand Strategy during the 1930s: From Balance of Power to Components of Power" in *The Challenge of Grand Strategy: The Great Powers and the Broken Balance between the World Wars*, ed. Jeffery Taliaferro, Norrin Ripsman and Steven Lobell (New York: Cambridge University Press, 2012); Norrin Ripsman and Jack Levy, "British Grand Strategy and the Rise of Germany, 1933-1936" in *The Challenge of Grand Strategy: The Great Powers and the Broken Balance between the World Wars*, ed. Jeffery Taliaferro, Norrin Ripsman and Steven Lobell (New York: Cambridge University Press, 2012); McKercher, "National Security and Imperial Defence."

⁹¹ TNA: CAB 23/70/19, 384, 393; McKercher, "National Security and Imperial Defence," 403-404.

communication through the Mediterranean and Suez Canal were threatened by Fascist Italy. More importantly, an ascendant Germany, through its air force and navy, could pose a direct threat to the British Isles (Italy, although a European country, was deemed a lesser power by the British strategists).⁹² Simultaneously, Britain was struggling to recover from the Great Depression, and pacifism still influenced its political atmosphere. The huge empire was very expensive to maintain, and Britain simply did not have enough resources to counter different threats from multiple directions at the same time. Therefore, in addition to initiating the rearmament process to attain the balance of power, which was a very challenging task, British leaders used diplomacy to reduce the burden of rearmament. For example, to avoid a naval arms race with Japan, Britain was determined to adhere to the Washington and London Naval Treaties until they legally expired in December, 1936.⁹³ In addition, the 1935 Anglo-German Naval Agreement, which capped the size of the *Kriegsmarine* to 35% of the Royal Navy (RN), allowed Britain access to the resources needed to more efficiently attain naval parity with Japan in the Far East.⁹⁴ In Europe, Britain's main focus was on the RAF to counter the threat from *Luftwaffe* against the British Islands. Scholar Steven Lobell defined this grand strategy as "components of power." Contrasted with the traditional balance of aggregate power, it was a more targeted approach to attain balance of power with specific elements of

⁹² Lobell, "Britain's Grand Strategy during the 1930s," 151.

⁹³ *Ibid.*, 164. The Washington Naval Treaty of 1922 limited the overall size of navies among the US, UK, Japan, France and Italy by establishing a fixed ratio for total capital ship (battleships and battlecruisers) tonnage, 5:5:3:1.75:1.75, respectively. The London Naval Treaty of 1930 aimed to extend the terms of Washington Naval Treaty. In addition, it limited the tonnage of auxiliary ships (destroyers and submarines) among the US, UK and Japan by a ratio of 10:10:7, respectively.

⁹⁴ Lobell, "Britain's Grand Strategy during the 1930s," 152.

countries over specific regions,⁹⁵ namely, the Japanese navy in the Far East and the German air force in Europe. It was a rational strategy to handle threats, when facing severe financial and political challenges.

The RAF, particularly its bomber arm, occupied a very special place in the British grand strategy in the 1930s. Generally speaking, the British leadership was advocating for a defensive strategy to protect the home islands and the colonies, instead of taking more. Due to Baldwin's "bombers will always get through" and the popular (mis)conception of "knock-out blow" effects of a hostile bombing force, the British were intimidated by the *Luftwaffe* bombing, which might rapidly overwhelm the home islands. Believing in the Trenchard doctrine, which asserted that passive defense was useless and the best defense was offence, the RAF was designed to be an offensive branch of service, to either destroy the enemy first before it was too late, or to deter the enemy from initiating any form of bombing in the first place. Britain had no interest in launching any pre-emptive strike, but the RAF should ideally possess sufficient bombers capable of delivering a "devastating retaliatory blow" against Germany.⁹⁶ In fact, rather than building up a massive air force to deter Germany, Britain attempted to resolve this issue through diplomatic talks. While preparing for the Anglo-German Naval Agreement, Ramsay MacDonald's cabinet seriously contemplated the possibility of signing an Air Pact with Germany, France and Italy to limit each nation's air forces on the basis of air parity in May 1935, but it was eventually deemed inadvisable due to a lack of French and Italian participation.⁹⁷

⁹⁵ Lobell, "Britain's Grand Strategy during the 1930s," 152.

⁹⁶ *Ibid.*

⁹⁷ The National Archives of the UK (TNA): Cabinet minutes on May 1st, 1935, CAB 23/81/24, 349-350.

Notice that the belief that “defence is useless” changed in September 1936, when Britain realized the chance to attain air parity with the *Luftwaffe* in 1939 was lost, and deterrence would ultimately fail.⁹⁸ Neville Chamberlain, who initially favored bombers, switched to fighters. Similar with other British politicians at that time, Chamberlain advocated to build as many bombers as possible to deter Germany from competing with the RAF by accepting “a permanent inferiority in the air.”⁹⁹ In late 1936, after realizing German air rearmament pace was much faster than anticipated, the new goal was to build more bombers and fighters to convince Hitler that he could not win a quick war with a “knockout blow,” and once Britain survived, Bomber Command would assume a more offensive role to launch retaliatory attacks. In 1937, with the advent of radar, which allowed fighters to locate and confront enemy bombers, Chamberlain’s cabinet started to favor cheaper fighters instead of more expensive bombers.¹⁰⁰ Even at the peak of appeasement, the British fighter program was not delayed or cut, because the policy of appeasement, in its essence, was a time-buying strategy to allow Britain more time to rearm for a future conflict, if the conflict would be inevitable.¹⁰¹ Admittedly, the interests of small states, such as Czechoslovakia, were sacrificed during this process.

In addition to the deterrent effect, bombers could achieve other strategic goals. The Industrial Intelligence Centre (IIC) under Desmond Morton was established in

⁹⁸ Wark, *The Ultimate Enemy*, 56.

⁹⁹ Lobell, “Britain’s Grand Strategy during the 1930s,” 164.

¹⁰⁰ *Ibid.*

¹⁰¹ Norrin Ripsman and Jack Levy, “Wishful Thinking or Buying Time? The Logic of British Appeasement in the 1930s,” *International Security* 33, no. 2 (2008): 156-158, 180. Some scholars, such as R.A.C. Parker, argue that time buying was an accidental benefit of appeasement. Regardless, it allowed Britain more time to rearm.

1931 as part of the British intelligence machinery. This agency received the mandate to assess foreign countries' economic strength and weakness, including their industrial potential for a prolonged war and armaments capacity and vulnerability.¹⁰² The IIC had a few important impacts on shaping the British air policy. Morton made several assumptions about the German economy: first, it was a highly efficient, centralized command economy because of the nature of Nazi dictatorship. On one hand, Germany could mobilize and concentrate more resources in a short period of time thus gaining advantages over Britain; on the other hand, this economy could be easily "over-heated" and would not be sustainable.¹⁰³ Moreover, Germany could not afford a long war of attrition due to the shortage of raw materials including manganese, non-ferrous metals, pyrites and liquid fuels.¹⁰⁴ These claims underpinned the British strategy of long war. Namely, if the deterrence and appeasement failed, and a war was inevitable, Britain's chance to defeat Germany would be high if it could cooperate with France and withstand the initial German onslaught. The Third Reich would gradually feel the economic pressure and eventually would collapse like the Second Reich in the Great War.¹⁰⁵

The traditional way to exert economic pressure was through the control of sea communications, or economic blockade via the superior Royal Navy and French navy. Nevertheless, with the advent of the air force, bombers could exploit the

¹⁰² Paul Kennedy, "British 'Net Assessment' and the Coming of the Second World War" in *Net Assessments in the 1930s*, ed. Allan Millett and Williamson Murray (Defence Supply Service, 1990), 54.

¹⁰³ *Ibid.*, 55.

¹⁰⁴ "Appendix 3: Excerpt from European Appreciation, 1939-1940," in *Net Assessments in the 1930s*, ed. Allan Millett and Williamson Murray (Defence Supply Service, 1990), 761.

¹⁰⁵ *Ibid.*, 769.

German economic vulnerability even further by hitting key German industries and wearing down its economic potential. British politicians believed that the economic difficulties of Nazi Germany “would be increased in proportion to the success of action taken to reduce the output of the industrial area of the Ruhr.”¹⁰⁶ Winston Churchill was a keen advocate for this strategy, and his faith in strategic bombing grew even stronger after the fall of Norway and France, when economic blockade was deemed impossible.¹⁰⁷ Moreover, British strategists put heavy emphasis on psychological warfare and claimed “propaganda, for home, enemy, and neutral consumption, would be of an utmost importance, particularly in the opening stages of a war, and the passage of our aircraft over enemy country will offer the opportunity of disseminating propaganda.”¹⁰⁸ The only suitable airplanes to execute these leaflet raids were heavy bombers because they had long enough range to reach the heart of Germany. To summarize, heavy bombers bulked large in the British politicians’ eyes as they were deemed the magic weapon to win both the economic and psychological warfare thus shortening the duration of the upcoming conflict.

The third task the RAF would perform was to provide air support for the Allied forces in exchange for a heavy continental commitment. In Chamberlain’s mind, the British Army should perform duties such as garrison, imperial policing and fighting small wars rather than continental wars. A continental army was expensive and would cause economic dislocation to divert resources and manpower from civilian industries for the RAF and the RN. While France would carry the

¹⁰⁶ “Appendix 3,” 761.

¹⁰⁷ Reynolds, “Churchill and the British ‘Decision’ to Fight on in 1940,” 156.

¹⁰⁸ “Appendix 3,” 768.

responsibility to resist initial German onslaught on large scale ground warfare, Britain would produce equipment at the back and provide air support.¹⁰⁹ In other words, British leaders expected the French, who owned “one of the best armies in Europe and the Maginot Line of defence” to re-fight the bloodbath of the Great War, only this time the RAF fighters and bombers would be there to cover their allies. The French sarcastically called this “The British would fight to the last Frenchman.”¹¹⁰ After the Munich Conference in 1938 and the German occupation of Czechoslovakia in early 1939, the policy of appeasement was bankrupted. War was on the horizon, France reappraised its army and feared it could not withstand the stronger *Wehrmacht* alone, thus demanding a heavier continental commitment from Britain. Facing this dire situation, London also feared that “the much-vaunted Maginot Line might be over-run or turned and that the United Kingdom might be confronted with the German land, air and naval forces securely established across the Channel.”¹¹¹ Finally, in May 1939, the British government approved the plan to introduce conscription for a full-scale continental army of thirty-two divisions as a precautionary measurement.¹¹² Politically, this was also an important gesture to demonstrate the British willingness to suffer with the French. Militarily, however, Britain still relied on the cooperation between the French ground forces and the RAF to counter the German threat, as the 1939 British war plan clearly described:

Although the French fortifications and the physical features of the frontier would be of great assistance against land attack, they are no bar to air attack.

¹⁰⁹ Lobell, “Britain’s Grand Strategy during the 1930s,” 165-166.

¹¹⁰ Reynolds, “Churchill and the British ‘Decision’ to Fight on in 1940,” 155.

¹¹¹ Lobell, “Britain’s Grand Strategy during the 1930s,” 166.

¹¹² *Ibid.*

In this event we should have to render all possible assistance, especially in the air, to France.¹¹³

The Advanced Air Striking Force (AASF) was hence established on 24 August 1939 to provide air support for the French ground forces once the war broke out, but this force was only equipped with short-range light bombers (8 squadrons of Battle and 2 squadrons of Blenheim IV, over 160 bombers) from the No. 1 group of Bomber Command. The true strength of the British bombing force remained in the homebase.¹¹⁴ Therefore, on the eve of the Second World War, the British grand strategy envisaged that the splendid French army and a token British Expeditionary Force (BEF) would resist the initial German aggression. Then the German economy and morale would be consistently undermined by economic blockade, supplemented by strategic bombing of industrial centres and intensive propaganda campaigns, until the “time was ripe for the final offensive.”¹¹⁵

Based on the above reasons, British decision makers prioritized the rearmament needs for RAF over navy and army. This was made obvious by the military budget. In 1938, the RAF expenditure was 66 million pounds, the RN was 63.2 million pounds, and the Army was 44.3 million pounds. In 1939, the RAF was 109.9 million pounds, the RF was 82.9 million pounds, and the Army 67.6 million pounds.¹¹⁶ The Japanese navy, although strong, only threatened the British colonies on the other side of the globe. When the war became imminent, only two capital ships were allowed to defend Singapore, the rest of the fleet was relocated to defend the

¹¹³ “Appendix 3,” 770.

¹¹⁴ Robert Jackson, “The Road to Disaster: August 1939” in *Air War over France: 1939-40* (London: Ian Allan, 1974), 136.

¹¹⁵ Reynolds, “Churchill and the British ‘Decision’ to Fight on in 1940,” 155.

¹¹⁶ Lobell, “Britain’s Grand Strategy during the 1930s,” 163.

home islands.¹¹⁷ As for the army, British strategists did not approve a full-scale continental army until the spring of 1939. In hindsight, the British grand strategy did not work well, and the war did not evolve according to British strategists' prediction. Among other things, Britain miscalculated two elements. The first was the *blitzkrieg* style of war and the second one was the endurance of the German economy. Germany invaded France through the Ardennes instead of the Maginot Line and the Low Countries, which caught both Britain and France off-guard. The quick movement of German panzers, paired with overwhelming air support from the *Luftwaffe*, smashed through the Allied defensive lines from its weakest point and distorted all their prewar planning.¹¹⁸

Moreover, the IIC assumption that the German economy was vulnerable was fundamentally wrong. As late as 1938, the annual budget of the British Secret Service was equivalent to the annual cost of running a destroyer. Economics were only comprehended by a few specialists.¹¹⁹ Although the IIC was an independent agency under the Committee of Imperial Defence (CID), it had to divert its limited resources to study the arms-related industries in foreign countries. Desmond Morton simply did not have sufficient funding or manpower to conduct comprehensive research about the broad industrial potential of the German economy based on reliable sources.¹²⁰ Indeed, many of the IIC's intelligence was from either the words of businessmen who worked or travelled in Germany, or oil industry newspapers.¹²¹ These sources were

¹¹⁷ Lobell, "Britain's Grand Strategy during the 1930s," 165.

¹¹⁸ Evan Mawdsley, *World War II: A New History* (New York: Cambridge University Press, 2009), 122-126.

¹¹⁹ Hastings, *Bomber Command*, 9.

¹²⁰ *Ibid.*

¹²¹ Kennedy, "British 'Net Assessment' and the Coming of the Second World War," 55.

subjective, prone to bias or even purposefully deceptive. In fact, the Nazi leadership was not determined to fully mobilize the German economy for total war until 1942/1943, and its war production did not reach maximum efficiency until the summer of 1944.¹²² After the IIC was absorbed into the Ministry of Economic Warfare (MEW) at the outbreak of the Second World War,¹²³ Morton became Winston Churchill's personal assistant in 1940, a member of the new prime minister's inner circle.¹²⁴

This chapter traced the origin of strategic bombing and the development of bombers from 1914 to 1939, including the performance of the Independent Force in 1918. Furthermore, this chapter reviewed the evolution of British grand strategy in the 1930s and outlined the British politicians' expectations of bombers for a future conflict. Among all politicians in 20th century Britain, Winston Churchill was undoubtedly a very important one, and a discussion of the development of his perspective towards air power is crucial. Churchill's fascination with military aviation made him the driving force behind British air policy for the better part of the century. Therefore, it is necessary to review Churchill's early years and trace the origins of his enthusiasm towards air power, and more importantly, how did such enthusiasm ultimately become a cornerstone of his statecraft. Next chapter, therefore, focuses on Winston Churchill.

¹²² Tooze, *The Wages of Destruction*, 550-554, 637-638, 687-688.

¹²³ Michael Seibold, "The Demise of an Industrious Intelligence Centre: The Re-Organisation of Economic Intelligence at the End of the Second World War, 1943-1945," *Journal of Intelligence History* 12, no. 2 (2013): 157.

¹²⁴ Gill Bennett, "The Morton Myth: Downing Street, May 1940-July 1945," in *Churchill's Man of Mystery: Desmond Morton and the World of Intelligence* (Abingdon: Routledge, 2007).

CHAPTER 3 WINSTON CHURCHILL AND EARLY MILITARY AVIATION

Now our machines are frail. One day they will be robust, and of value to our country.

- *Winston Churchill, 1913*

Before diving into a detailed discussion of Churchill and British military aviation, however, it is imperative to acknowledge that although Churchill played a vital role in shaping British air policy, he cannot be regarded as the sole architect of British air warfare doctrines. The evolution of air strategies was the product of a broader intellectual and institutional milieu. Politicians and strategists such as Trenchard, Chamberlain, Tiverton and others each left their mark on the evolution of British air policy. In other words, British air policy emerged from a complex interplay of strategic theory, technological development, foreign relations and governmental decision-making. Churchill operated as a prominent, yet non-exclusive, part in this system.

Winston Leonard Spencer Churchill was born on November 30, 1874, as the eldest son by Lord Randolph Churchill and Jennie Jerome. His father, an important Victorian politician and a direct descendant of John Churchill, the First Duke of Marlborough, eventually held the position of the Chancellor of the Exchequer under the Robert Gascoyne-Cecil's Conservative Government in 1886. His mother was an American born British socialite, the second daughter of a wealthy American financier and speculator Leonard Jerome.¹ Despite being born into an elite family at the top of

¹ Winston Churchill, "Childhood," in *My Early Life: A Roving Commission* (London: Collins, 1969); Randolph Churchill, "Birth," in *Winston S. Churchill, vol. 1, Youth, 1874-1900* (Hillsdale: Hillsdale College Press, 2015).

the Victorian society and having enjoyed a relatively affluent lifestyle, Churchill had a rather lonely and unpleasant childhood. As he himself claimed:

It is said famous men are usually the product of unhappy childhood. The stern compassion of circumstances, the twinges of adversity, the spur of slights and taunts in early years, are needed to evoke that ruthless fixity of purpose and tenacious mother-wit without which great actions are seldom accomplished.²

Indeed, Churchill's father was a "controversial, mercurial, opportunistic and politically ruthless" man, who was "aloof, distant and reproachful" at home.³ Jennie indulged herself into busy social life and spared little time for her son. There were many occasions little Winston implored his mother to visit him at school, in naïve handwriting, "My dear mamma, I hope you will come and see me soon. Did Furest give you my flour I sent you. Give my love to my ant, and tell not to forget to come down. I am comeinge home in a month. Kisses,"⁴ but was often ignored. Churchill's nanny Elizabeth Everest, who affectionately called him Winny, became his confidant and mother-surrogate. In fact, young Churchill's naughtiness and disobedience at school was largely due to his desire to draw attention to himself to compensate the neglect he suffered from his parents.⁵

After entering adolescence, Churchill started believing he was destined to save Britain from a foreign invasion, and his childhood disobedience gradually metamorphosed into an adventurous, and sometimes reckless character.⁶ For example,

² Winston Churchill, *Marlborough: His Life and Times*, vol. 1 (London: George G. Harrap, 1958), 33.

³ Andrew Roberts, *Churchill: Walking with Destiny* (New York: Penguin Random House, 2018), 27, 1340.

⁴ Churchill Archive Centre (CAC): Letter from WSC to "Mamma" on 17 June 1883, CHAR 28/13/17, description; Winston Churchill, *Letters for the Ages Winston Churchill: the Private and Personal Letters*, eds., James Drake and Allen Packwood (London: Bloomsbury, 2023), 20.

⁵ Roberts, *Churchill*, 35-36.

⁶ *Ibid.*, 23.

as a student in the Harrow School, he liked playing games of chase with others. On one occasion, he jumped off a footbridge and fell almost thirty feet on the hard ground, which caused serious injuries, including one ruptured kidney, one broken bone and a concussed brain for three days. He was confined to bed for three months.⁷ Churchill was apparently not deterred by physical injuries and joined the Royal Military College at Sandhurst in 1893 to fulfill his plan to distinguish himself first as a soldier before furthering his father's Tory Democrat legacy in the House of Commons.⁸ Nevertheless, Lord Randolph, the father Churchill always wanted to idolize and impress, passed away in 1895, when Winston was only twenty years old. This incident was both a tragedy and a blessing for him. On one hand, Churchill's long-standing "dreams of comradeship with him, of entering Parliament at his side and in his support"⁹ vanished; on the other hand, the harsh father who called Churchill "a mere social wastrel"¹⁰ and "discerned nothing remarkable, nothing of singular promise in a very remarkable and original boy,"¹¹ also disappeared. Regardless, the early death of Lord Randolph did not extinguish Churchill's determination to become a great man, a man who would possess the traditional Victorian and Edwardian virtues such as patriotism, courage, initiative, resourcefulness, tenacity and willpower to defend the glory of the British Empire.

Such determination, plus the need to earn extra income, motivated him to join a series of British colonial expeditions in Cuba, India and Africa as a junior officer

⁷ Roberts, *Churchill*, 50.

⁸ *Ibid.*

⁹ Churchill, *My Early life*, 70.

¹⁰ Churchill Archive Centre (CAC): Letter from Lord Randolph Churchill to WSC on 9 August 1893, CHAR 1/2/66-68, description.

¹¹ The Earl of Birkenhead, *Contemporary Personalities* (London: Cassell, 1924), 113.

and military journalist. The most notable one was his participation in the Second Boer War, when Transvaal and Orange Free State republics launched surprise attack on Cape Colony and Natal in October 1899, hoped to gain real independence from the British colonial influence.¹² On November 15, Churchill was captured by Boer commandos during an ambush against an armored train he was in, and was interrogated by Jan Christian Smuts, the future author of the two Smuts Reports and at the time the Afrikaner State Attorney.¹³ As Churchill later stressed “I think in most people’s live good and bad luck even out pretty well. Sometimes, what looks bad luck may turn out to be good luck and vice versa.”¹⁴ Indeed, the experience of becoming a prisoner of war became a turning point in his life. First, before being captured, Winston managed to save fifty wounded survivors who gave Churchill much of the credit for their escape. Second, he successfully planned and executed an epic escape from the camp where he was detained. On December 12, 1899, he climbed over the fence of the prison alone. Within ten days, Churchill crossed 300 miles of enemy territory without money, firearm, compass, map or any knowledge of Afrikaans.¹⁵ All Boers’ efforts to hunt him down were futile. When he arrived in Durban on December 23, “his sensational escape had been the sole bright moment in an otherwise disastrous time for the Empire.”¹⁶ The pyrrhic victory of the Second Boer War exposed the British administrative and military weaknesses that were insufficient

¹² G. R. Searle, “The Boer War, 1899-1902,” in *A New England? Peace and War 1886-1918* (Oxford: Oxford University Press, 2004).

¹³ Roberts, *Churchill*, 108

¹⁴ *Ibid.*, 503.

¹⁵ *Ibid.*, 110.

¹⁶ *Ibid.*, 112.

even for a third-class military power.¹⁷ For Churchill, however, these two episodes of courage, adventure and heroism in South Africa laid the foundation for his successful entrance into politics, a career he would stick to for the rest of his life. The war hero was elected a Conservative Member of Parliament in October 1900, by a narrow margin of 238 votes.¹⁸ Churchill attributed his victory to the reputation he gained in the African campaign, stating that “It is clear to me from the figures that nothing but personal popularity arising out of the late South African War carried me in.”¹⁹

Winston Churchill had hitherto seen “as many campaigns as any living general” and “fought in more continents than any soldiers in history save Napoleon.”²⁰ This adventurous spirit may explain his personal enthusiasm towards aviation and airpower, first as a pilot and then a strategist and politician. Aircraft entered human history in December 1903, only three years after Churchill entered politics. This new machine was about to revolutionize the way people travel and wage war against each other, but as a brand-new invention, the technology was not ripe enough so that piloting and travelling in an aircraft was by no means safe. As his early life experience has repeatedly demonstrated, an adventurous and courageous person like Churchill was willing to venture into new realms. His first flying experience was in early 1912 as First Lord of the Admiralty, when he flew in a naval seaplane behind the pilot seat of Commander Spenser Gray, which left a deep impression on him.²¹ He confessed that his imagination supplied him “at every

¹⁷ Searle, *A New England?* 302.

¹⁸ Roberts, *Churchill*, 119.

¹⁹ *Ibid.*

²⁰ A. G. Gardiner, *The Pillars of Society* (London: J. M. Dent & Sons, 1916), 156.

²¹ Christopher Sterling, “Churchill and Air Travel” *Finest Hour* 118, (2013): 24.

moment with the most realistic anticipations of a crash” because the air was “an extremely dangerous, jealous and exciting mistress. Once under the spell most lovers are faithful to the end, which is not always old age.”²² Churchill was another “victim” of the spell, and his initial duty and curiosity driven flight soon evolved into “sheer joy and pleasure.”²³ In 1913, despite being fiercely protested by his instructors due to his old age (32 was regarded as the top age for a novice pilot at that time, and Churchill was 38), Churchill insisted on becoming a pilot himself. He once told one of his instructors Ivon Courtney that “Now our machines are frail. One day they will be robust, and of value to our country.”²⁴ At its height, Churchill practiced flying as often as ten times per day in the Royal Naval Flying school. Hugh Trenchard claimed he was “altogether too impatient for a good pupil,” but Churchill persevered.²⁵ In fact, he was the very first incumbent cabinet minister in Britain to take flying lessons and to assume control of an airplane.²⁶ Sir Philip Joubert de la Ferté, later Air Chief Marshal recalled the First Lord was “a very fair pilot once he was in the air, but more than uncertain in his take-off and landing.”²⁷

In November 1913, Churchill’s flying coach, Captain Gilbert Wildman-Lushington of the Royal Marines, crashed the same airplane he coached Churchill upon landing and was killed. In December, Churchill’s close friend Frederick Edwin

²² Winston S. Churchill, “In the Air,” in *Thoughts and Adventures* (London: Thornton Butterworth Limited, 2013), 182-183.

²³ Churchill, “In the Air,” 183

²⁴ William Manchester, *The Last Lion Winston Spencer Churchill: Visions of Glory 1874 - 1932* (London: Sphere Books Limited, 1985), 363.

²⁵ *Ibid.*

²⁶ “Churchill an Aviator: British Minister Guides a Biplane for Forty-five Minutes,” *The New York Times*, December 2, 1913, <https://www.nytimes.com/1913/12/02/archives/churchill-an-aviator-british-minister-guides-a-biplane-for.html>

²⁷ Manchester, *The Last Lion Winston Spencer Churchill*, 363.

Smith scolded him in a letter “Why do you do such a foolish thing as fly repeatedly? Surely it is unfair to your family your career and your friends.”²⁸ At Easter 1914, Churchill’s beloved wife Clementine was frantic with worry and wrote “I have been seized by a dreadful anxiety that you are making the use of my absence to fly even more often than you do when I am there – I beg of you not to do it at all, at any rate till I can be there.”²⁹ The very day Churchill’s airplane almost crashed due to an engine failure. In June 1914, right before WWI broke out, Churchill nominally renounced flying after receiving a desperate plea from Clementine, now was five months pregnant with their third child, imploring him to abandon his dangerous habit:

Every time I see a telegram now [...] I think it is to announce that you have been killed flying. I had a fright but went to sleep relieved; but this morning after the nightmare I looked it again for consolation and found to my horror it was from Sheerness and not from Dover where I thought you were going first – so you are probably at it again at this very moment. Goodbye my Dear but Cruel One, Your Loving Clementine.³⁰

Churchill did not fully stop piloting until July 18, 1919, when his airplane crashed and injured both him and his instructor pilot, Colonel Scott. This accident could have killed him, and the realization of this dreadful possibility finally quenched his thirst for piloting.³¹ Neither Churchill’s friends nor his families’ sincere pleas could persuade him to abandon this dangerous hobby. Instead, it was his own near-death experience that finally did. It must be concluded that the person who was adventurous in nature can at times be reckless, callous and selfish, which was not out of his

²⁸ Churchill, *Letters for the Ages Winston Churchill*, 95-96.

²⁹ Manchester, *The Last Lion Winston Spencer Churchill*, 364.

³⁰ *Ibid.*, 365.

³¹ Martin Gilbert, *Winston S. Churchill, vol. IV 1916-1922* (London: Heinemann, 1975), 208-210.

character. This emphasis on Churchill's personality was important in understanding his politics. Although personality could not explain everything, it did matter.

As a politician and strategist, however, nothing could quench Churchill's thirst of airpower for the glory of the Empire. In 1908, Churchill received his first ministerial position as President of the Board of Trade under the Asquith Government. Early next year, he suggested the government to cooperate with Orville Wright to jump-start British aviation for the Imperial defense.³² Churchill's first appointment as First Lord of the Admiralty in 1911 marked the beginning of his eleven years' continual control over one or the other branch of the Air Service, except for his brief absence from office in 1916, before he left the Parliament in 1922.³³ His first major action was promoting the creation of the RNAS. Initially, in 1912, the nascent Royal Flying Corps contained a small naval wing with seven biplanes, five monoplanes and eight seaplanes in service.³⁴ After witnessing the worrying development of the Zeppelins, Churchill advocated expanding the wing into a larger Naval Air Service which would be responsible for defending the dockyard facilities. He reported to the CID in December 1912 that "the matter was urgent, both from the point of view of airships as auxiliaries to the Fleet and from that of defense against their attacks."³⁵ His efforts secured more funding for naval air, from 141 000 pounds in 1912 to 321 000 pounds in 1913.³⁶ On July 1, 1914, the Royal Naval Air Service

³² See Victoria Taylor, "Churchill and the Bombing Campaign," in *The Cambridge Companion to Winston Churchill*, ed. Allen Packwood (Cambridge: Cambridge University Press, 2023), 316; Sterling, "Churchill and Air Travel," 24.

³³ Churchill, *Thoughts and Adventures*, 181.

³⁴ Brian Lavery, *Churchill Warrior: How a Military Life Guided Winston's Finest Hours* (Oxford: Casemate, 2017), 126.

³⁵ Lavery, *Churchill Warrior*, 132.

³⁶ *Ibid.*, 134.

was officially established, and was assembled for a Fleet Review at Spithead on the 20th of that month, with some forty airplanes plus other crafts and dirigibles in its arsenal. The Review provided “a wonderfully effective sight” for contemporary observers.³⁷ It was two weeks before Britain declared war on Germany on August 4, and Churchill was confident he had made every preparation for the Royal Navy to face the War.

The RNAS was primarily assigned to protect Allied ships, dockyards, harbors and oil reserves until its amalgamation with RFC in 1917.³⁸ Facing the increasing threat of the Zeppelin raids, Churchill took the initiative, aiming to bring the fight directly to the enemy heartland behind their professional soldiers. He authorized a series of RNAS long-range bombing raids against German airship factories and repairing sheds in autumn 1914, though with very limited results. This was Churchill’s first attempt to launch long range bombing against strategic targets on hostile land, despite the concept of strategic bombing was still in its infancy.³⁹ When Churchill’s enterprise in the Dardanelles was in peril, he proposed to remedy the situation in May 1915 by summoning “seventy aeroplanes and seaplanes” to bomb the enemies by dropping 500-lb bombs.⁴⁰ The plan was infeasible given the fact that the RNAS only had five warplanes to spare on average per month, so Churchill complained later about “a failure on the part of the Air Department to grasp the importance of the aviation services at the Dardanelles.”⁴¹ The Dardanelles debacle,

³⁷ Lavery, *Churchill Warrior*, 136.

³⁸ *Ibid.*, 167.

³⁹ Richard Overy, “Churchill and Airpower,” in *Winston Churchill: Politics, Strategy and Statecraft*, ed. Richard Toye (London: Bloomsbury, 2017), 128.

⁴⁰ Taylor, “Churchill and the Bombing Campaign,” 318.

⁴¹ *Ibid.*

although Churchill was not fully responsible, still forced him out of the Admiralty in May 1915 and he was demoted to Chancellor of the Duchy of Lancaster.⁴² Simultaneously, German Zeppelin raids kept intensifying, and the RNAS was incompetent to block the German attack. In June, despite no longer being responsible for the aerial defense of the country, the press still ridiculed Churchill for breaking his earlier promise that any hostile airplanes would be destroyed by “a swarm of very formidable hornets.” They then questioned his future possibility of becoming an air minister by asserting “the unwisdom of leaving a matter of this kind in the hands of politicians.”⁴³ In November, after being politically disgraced, Churchill resigned all his governmental positions and went to the Western Front to command a battalion to keep serving his nation on the battlefield.⁴⁴ This was the year Churchill lost influence over the British Air Service, until his return as Minister of Munitions in July 1917 under David Lloyd George’s government.

As Minister of Munitions, Churchill was responsible for the design, manufacture and supply of aircraft and other material for RNAS, RFC and later RAF.⁴⁵ In this position, he kept endorsing long range bombing policies. When the German Gotha and Giants raid struck Britain in the summer of 1917, Churchill joined two ad hoc committees, the Aerial Operations Committee and the Air Raids Committee, to investigate the British air defense and retaliation against Germany.⁴⁶ On October 21, 1917, he drafted a memorandum to advocate for an independent air

⁴² Christopher M. Bell, “The Duchy of Lancaster Goes to War!” in *Churchill and the Dardanelles* (Oxford: Oxford University Press, 2017).

⁴³ Taylor, “Churchill and the Bombing Campaign,” 318.

⁴⁴ Roberts, *Churchill*, 329.

⁴⁵ Churchill, *Thoughts and Adventures*, 181.

⁴⁶ Overy, “Churchill and Airpower,” 128.

force to launch long range bombing , later known as strategic bombing, to aid the Allied war efforts. He argued:

We have greatly suffered and are still suffering in the progress of our means of air warfare from the absence of a proper General Staff studying the possibility of air warfare [...] as an independent arm co-operating in the general plan. [...] The supreme and direct object of an air offensive is to deprive the German armies on the Western Front of their capacity for resistance. [...] Air predominance can either paralyse the enemy's military action or compel him to devote to the defence of his bases and communications a share of his straitened resources far greater than what we need in the attack. [...] The primary objective of our air forces became plainly apparent, viz. the air bases of the enemy and the consequent destruction of his air fighting forces. [...] Once this result was achieved and real mastery of the air obtained, all sorts of enterprises which are now not possible would become easy.⁴⁷

Nevertheless, he also admitted:

It is not reasonable to speak of an air offensive as if it were going to finish the war by itself. It is improbable that any terrorization of the civil population which could be achieved by air attack would compel the Government of a great nation to surrender.⁴⁸

Churchill's vision of strategic bombing as an independent offensive weapon, especially the part regarding diverting the enemy's resources for defense, was very similar with Trenchard's idea. Moreover, he argued that the annihilation of the hostile air power was a vital preliminary step before hitting the enemy's war industries and railroads,⁴⁹ and this was similar with Douhet's strategy in the 1920s. However, different from most contemporary advocates of air power, Churchill did not believe in the prevalent "moral effect" of aerial bombardment, which was a very rare stance. It

⁴⁷ Winston S. Churchill, "Munitions Possibilities of 1918" in *The War in the Air: Being the Story of The Part played in the Great War by the Royal Air Force, Appendices*, ed. H.A. Jones (London: Oxford University Press, 1937), 19-21.

⁴⁸ *Ibid.*, 19.

⁴⁹ *Ibid.*, 21.

seemed he was one of the few strategists of the time who could distinguish between the panic and the anger of the British populace, and who emphasized that not only did the German air raids fail to impair national fighting power, they actually roused “the combative spirit of the people,” and the same could be expected from the Germans when facing the British bombing.⁵⁰ In hindsight, his claim was true. It was possible that Churchill was truly demonstrating remarkable foresight and insight. The other possibility was that unlike military commanders Hugh Trenchard and Cyril Newell, who had strong motivations to repeatedly exaggerate that “bombing had a significant moral effect even in the absence of significant material damage,”⁵¹ for either preserving the existence of their forces, securing more funds and munitions, or their commissions. As a cabinet minister who was not directly leading a force, Churchill could be more objective on this matter. Regardless, this was the vision he had before shaping the British air policy as the Secretary of State for War, Air and the Colonies in the early 1920s.

Churchill replaced William Weir as Secretary of State for Air in January 1919, plus accepting the position of Secretary of State for War under the request of Lloyd George. He was responsible for formulating the British air policy and overseeing its disarmament right after the Great War.⁵² 1919 was a vital year for the future of the RAF because the Navy and Army proposed to disband the nascent arm, and in this “greatest inter-service squabble of the century,”⁵³ Churchill firmly endorsed

⁵⁰ Churchill, “Munitions Possibilities of 1918,” 19.

⁵¹ Biddle, *Rhetoric and Reality in Air Warfare*, 36.

⁵² Roberts, *Churchill*, 377-378.

⁵³ Stephen Roskill, *Hankey: Man of Secrets, vol. II, 1919-1931* (London: Collins, 1972), 47.

preserving an independent air force “not necessarily large but highly efficient.”⁵⁴ In February, he reappointed Hugh Trenchard as the RAF’s Chief of Air Staff because they shared the same goal to safeguard the autonomy of the air arm.⁵⁵ Later, although the CAS attempted to resign multiple times due to a Spanish Flu infection that nearly killed him, his requests were repeatedly rejected by the air minister who was eager to work with Trenchard when he recovered.⁵⁶ In November, Churchill successfully presented a white paper drafted by Trenchard to the House of Commons, titled “Permanent Organization of the Royal Air Force,” which guaranteed the future survival of the RAF.⁵⁷ According to this document, the Cabinet granted the RAF’s independence under a yearly budget of 15 million pounds that Churchill installed.⁵⁸ Trenchard initially resented the fiscal restraint, but ultimately compromised. In fact, the funds allocated to the RAF kept decreasing all the way to 9.4 million pounds in 1923 because of the Ten Year Rule that Churchill initiated for disarmament.⁵⁹ If Hugh Trenchard was considered “the Father of the Royal Air Force,” then Winston Churchill certainly deserved the title “Godfather of the Royal Air Force,” who, as scholar Andrew Roberts vividly articulated, “protect[ed] the nascent organization from being smothered at birth by its two much older jealous siblings.”⁶⁰

⁵⁴ Roberts, *Churchill*, 379.

⁵⁵ Taylor, “Churchill and the Bombing Campaign,” 319.

⁵⁶ Biddle, *Rhetoric and Reality in Air Warfare*, 81; Roberts, *Churchill*, 379.

⁵⁷ Overy, “Churchill and Airpower,” 129

⁵⁸ Hugh Trenchard, *Permanent Organization of the Royal Air Force: Note by the Secretary of State for Air on a Scheme Outlined by the Chief of the Air Staff* (London: His Majesty’s Stationery Office, 1919), 2.

⁵⁹ Biddle, *Rhetoric and Reality in Air Warfare*, 81; Matthew Powell, “Capacity for War: Preparing the British Aviation Industry in the 1920s,” *The RUSI Journal* 163, no. 3 (2018): 29.

⁶⁰ *Ibid.*, 380.

As a diehard imperialist, Churchill was lobbied by Trenchard in 1919 that Mesopotamia (Iraq) could be controlled from the air, thus saving 40 million pounds military spending for local garrison per year.⁶¹ Churchill was fascinated by the idea of “air policing” for the Empire’s wilder frontiers and advocated for airpower to replace a heavy ground force commitment. In 1920, for example, the Air Ministry successfully subdued the rebels in British Somaliland by punishing them from the bombs dropped by DH 9 two seater bombers.⁶² The same year, Churchill suggested deploying non-lethal gas (likely tear gas) from the air to project colonial power in the Middle East, but that was never implemented.⁶³ By the time Churchill left the Air Ministry for the Colonial Office in early 1921, deterrence from the air, coupled with a modest military presence on the ground, had become the standard method to handle insurgencies in the colonies.⁶⁴ The RAF hence gained plenty of operational experience from dropping bombs on recalcitrant tribesmen, usually without any resistance.⁶⁵

From February to April 1921, Winston Churchill was both Secretary of State for Air and the Colonies and saw air policing as both an economic and relatively more humane way to control the colonies. He constantly criticized the indiscriminate use of airpower, especially against civilian targets on purpose.⁶⁶ This attitude was consistent with his previous resentment against terror bombing as Minister of Munitions. In June

⁶¹ Roberts, *Churchill*, 379.

⁶² Overy, “Churchill and Airpower,” 129.

⁶³ Taylor, “Churchill and the Bombing Campaign,” 319.

⁶⁴ Overy, “Churchill and Airpower,” 129.

⁶⁵ Hastings, *Bomber Command*, 4.

⁶⁶ Warren Dockett, *Churchill and the Islamic World: Orientalism, Empire and Diplomacy in the Middle East* (London: I.B. Tauris, 2015), 110.

1921, however, two RAF actions in the Middle East enraged him. First, the RAF dispatched warplanes to pressure one tribe on the lower Euphrates to pay their taxes. Churchill wrote to the high commissioner for Iraq, Percy Cox, reasserting that the role of aerial action ought to be providing “legitimate means of quelling disturbances or enforcing maintenance of order” instead of collecting taxes.⁶⁷ Second, Churchill was horrified to learn that another tribe in the same region was attacked by the RAF who reported “the tribesmen and their families ran into the lake, making a good target for the machine guns.”⁶⁸ He directly condemned Trenchard:

I am extremely shocked at the reference to the bombing which I have marked in red. If it were to be published it would be regarded as most dishonouring to the Air Force and prejudicial to our work and use of them. To fire willfully on women and children taking refuge in a lake is a disgraceful act and I am surprised that you do not order the officers responsible for it to be tried for Court Martial. If such a thing became public, it would ruin the air project which you have in view. By doing such things we put ourselves on the lowest level.⁶⁹

The question whether Churchill’s condemnation was sanctimonious as historian Victoria Tylor claimed or if he genuinely felt the abuse of airpower abhorrent as scholar Warren Dockter stressed was a challenging one to answer.⁷⁰ The definition of hypocrisy is “the assuming of a false appearance of virtue or goodness, with dissimulation of real character or inclinations.”⁷¹ In this particular tragedy, the report clearly indicated the pilots were willingly targeting the civilians, and any death could not be deemed collateral damage. Evidently, Churchill paid very close attention to optics, for himself, his policy and his organization’s reputations in the public eyes.

⁶⁷ Dockter, *Churchill and the Islamic World*, 110.

⁶⁸ *Ibid.*, 110.

⁶⁹ *Ibid.*, 110-111.

⁷⁰ Taylor, “Churchill and the Bombing Campaign,” 319; Dockter, *Churchill and the Islamic World*, 111.

⁷¹ Oxford English Dictionary, “hypocrisy (n.),” July 2023, <https://doi.org/10.1093/OED/7747457929>.

Hence, the potential danger to ruin the nascent RAF due to the deliberate killing of civilians, instead of the actual death of the tribesmen caused Churchill to warn and deplore Trenchard. This was ironically a more effective strategy to deter Trenchard, the direct commander of the RAF, to stop killing women and children by implying that such operation may threaten the validity of the RAF again, a result that the CAS longed to avoid.⁷²

It was not to say Churchill was totally indifferent like a cold machine: sympathy and forgiveness were traditional virtues which he cherished. For example, in Sudan in 1899, Churchill openly praised the courage of the Dervish enemy and denounced the British commander Sir Herbert Kitchener for profaning Mahdi's tomb. Right after the Second Boer War, he supported magnanimity after victory and criticized the spirit of revenge as "morally wicked" and "practically foolish."⁷³ Undeniably, as a Eurocentric imperialist who was raised at the top of the Victorian society, Churchill's definition and practice of "virtue and goodness" was rooted in Victorian prejudice, so unsurprisingly, the interest of Air Ministry, an Imperial institution, always took priority over the demand for justice from the people in colonies. Eventually, the airmen who targeted the civilians were not court martialed, so that the scandal could be contained.⁷⁴ Churchill might genuinely feel sad as a person, but his personal feeling tended to make way when protecting his institution as a politician. Whether this rendered him a hypocrite was ultimately a matter of interpretation.

⁷² Dockter, *Churchill and the Islamic World*, 111.

⁷³ Roberts, *Churchill*, 100, 118.

⁷⁴ Dockter, *Churchill and the Islamic World*, 111.

Churchill remained a passionate advocate for airpower, but from 1921 onward, he did not carry any direct responsibility for air matters until he finally became Prime Minister and Minister of Defense in May 1940.⁷⁵ In 1923, abhorred by Liberal support for Labour, Churchill switched his political affiliation again (the first time happened in 1904 because of tariff issues), from Liberal to Stanley Baldwin's Conservative Government in October 1924 and became Chancellor of the Exchequer under the new government, the same post his father held 38 years ago.⁷⁶ The Conservative government was defeated in the 1929 general election. Although Churchill kept his seat in the Parliament, he has become a backbencher and descended into a ten-year long political wilderness (the period when Churchill lacked political power).⁷⁷

In August 1932, Churchill visited the Weimar Republic on the eve of Hitler's rise to power. During a meeting with the Nazi Party publicist Ernst Hanfstaengl, he relayed the following words to Hitler via Hanfstaengl:

Tell your boss from me that anti-Semitism may be a good starter, but it is a bad sticker. Why is your chief so violent about the Jews? I can quite understand being angry with Jews who have done wrong or against the country, and I understand resisting them if they tried to monopolize power in any walk of life; but what is the sense of being against a man simply because of his birth? How can any man help how he is born? [...] Thus Hitler lost his only chance of meeting me.⁷⁸

⁷⁵ Overy, "Churchill and Airpower," 129.

⁷⁶ Roberts, *Churchill*, 431.

⁷⁷ *Ibid.*, 479.

⁷⁸ Roberts, *Churchill*, 506; Winston Churchill, *The Gathering Storm* (New York: RosettaBooks, 2002), 109.

Hanfstaengl also recorded a similar episode in his memoir *Hitler: The Missing Years*, which seemed to validate Churchill's words.⁷⁹ Nevertheless, these memoirs were not the best proof of the authenticity of this anecdote due to the lack of any archival evidence. Regardless, in Germany, Churchill recognized the fanaticism that he was familiar with when fighting in Malakand, British India, 35 years ago. At the age of 23, Churchill condemned fanaticism, insisting that it "increases, instead of lessening, the fury of intolerance. [...] All rational considerations are forgotten. Seizing their weapons, they (the Pathans) become Ghazis – as dangerous and as sensible as mad dogs: fit only to be treated as such."⁸⁰ For all its apparent honesty, Churchill's writing was also situated in the context of British colonial conquest. From his perspective, however, the sheer implacability, contempt for individuality, opposition to liberal values, addiction to violence, demand for absolute loyalty and other extremist ideologies he witnessed in the growing Nazi Party all alarmed him.⁸¹ On November 23, 1932, Churchill delivered his first anti-Nazi speech to the House of Commons, though with little reaction from politicians or the press:

I have respect and admiration for the Germans, and desire that we should live on terms of good feeling and fruitful relations with them, but we must look at the fact that every concession [...] has been followed immediately by a fresh demand [...] Now the demand is that Germany should be allowed to rearm. Do not delude yourselves. Do not let His Majesty's Government believe – I am sure they do not believe – that all that Germany is asking for is equal status [...] That is not what Germany is seeking. All these bands of sturdy Teutonic youths, marching through the streets and roads of Germany, with the light of desire in their eyes to suffer for their Fatherland, are not looking for status. They are looking for weapons, and, when they have the weapons,

⁷⁹ Ernst Hanfstaengl, *Hitler: the Missing Years* (New York: Arcade Publishing, 1994), 185-186.

⁸⁰ Winston L. Spencer Churchill, *The Story of the Malakand Field Force: An Episode of Frontier War* (London: Thomas Nelson & Sons, 1916), 58-59.

⁸¹ Roberts, *Churchill*, 88.

believe me they will then ask for the return of lost territories and lost colonies, and when that demand is made it cannot fail to shake and possibly shatter to their foundations every one of the countries I have mentioned, and some other countries I have not mentioned.⁸²

Many of Churchill's colleagues doubted his sincerity and suspected he issued such warnings merely to draw attention from Parliament to gain political assets. Some even mocked him, "Winston was really moved, although it may have been the emotion of the actress who works herself up into such a passion that she doesn't get over it even in her dressing room."⁸³ Coincidentally, the Ten Year Rule that Churchill commenced had been abolished eight months before, but because of the Fascist Japan's aggression in the Far East instead of the rise of Nazism in Germany.⁸⁴ Adolf Hitler was appointed by President von Hindenburg to become Chancellor of Germany on 30 January 1933, signaling the onset of his Nazi rule over Germany for the next twelve years and the beginning of the biggest human catastrophe in the 20th century.⁸⁵ Nevertheless, in contrast with Hitler's moment of triumph, Churchill was cursed to be Cassandra whose ultimately true prophecies were not believed by others for the next six years. Indeed, despite many errors, Churchill was "the first, most eloquent, best informed and for a very long time the only senior British politician to warn of the threat that Hitler was increasingly posing to peace, civilization and the British Empire."⁸⁶

⁸² Winston Churchill, *Winston S. Churchill: His Complete Speeches, 1897-1963, vol V, 1928 – 1935*, ed. Robert Rhodes James (New York: Chelsea House Publishers, 1974), 5197-5206.

⁸³ Roberts, *Churchill*, 508.

⁸⁴ TNA: CAB 23/70/19, 384, 393.

⁸⁵ Mawdsley, *World War II*, 39, 404.

⁸⁶ Roberts, *Churchill*, 508.

Starting in 1933, Churchill frequently received experts at Chartwell to help him understand the weakness of British national defense, as well as the ambition and military strength of Nazi Germany. Specifically for the airpower, Churchill consulted experts including Desmond Morton, his chief intelligence advisor and an expert on economic warfare; Group Captain Lachlan Maclean and Wing Commander Tor Anderson from the RAF.⁸⁷ On 14 March, Churchill addressed the House of Commons, urging expansion of the RAF for the first time:

I am strongly of opinion that we require to strengthen our armaments in the air and upon the seas in order to make sure that we are still judges of our own fortunes, our own destinies and our own action. [...] Not to have an adequate air force in the present state of the world is to compromise the foundations of national freedom and independence. [...] I regretted very much hear the Under-Secretary state that we were only the fifth air Power [...] and we should be well advised to concentrate upon our air defenses with greater vigour. [...] The sea perhaps is no longer complete security for our island development; it must be the air too. [...] I ask the Government to consider profoundly and urgently the whole position of our air defense. [...] It is absolutely indispensable that the necessary programme of air development should be carried out, and that our defenses in this matter should be adequate to our needs.⁸⁸

Notably, in the same speech, Churchill drew specific reference from Stanley Baldwin's "the bomber will always get through" speech four months ago (10 November 1932), refuted the notion of "the only defense is in offence" and again criticized terror bombing:

This horrible, senseless, brutal method [terror bombing] of warfare, which we are told is the first military step would be taken, the killing of women and children, would not be comparable, as a military measure, to an attack upon the technical centres and air bases of an enemy power. [...] The only defense is an adequate air force, and the possession of an adequate air force will

⁸⁷ Roberts, *Churchill*, 508.

⁸⁸ Churchill, *His Complete Speeches*, vol. V, 5229 – 5234.

relieve the civil population from this danger until that air force is victorious or is beaten.⁸⁹

In Churchill's pragmatic mind, terror against civilians from sky was not only immoral, but more importantly, useless. Therefore, when others asked him about the moral effect on the people, Churchill simply replied "The moral effect would be far greater if it were found the next day that the hostile air forces were incapable of flying at all. That would have not only a moral effect, but a physical effect of very remarkable strength."⁹⁰

For the next four years, Churchill kept warning both Ramsay MacDonald and Stanley Baldwin's governments about the lack of British airpower and the looming danger of the Nazi air force. On 7 February 1934, he dramatically remarked that in terms of aerial defense, "we are vulnerable as we have never been before" and "there is not an hour to lose" to reorganize the civil factories so that they could be converted into military factories when needed.⁹¹ On November 28, Churchill predicted that German air force would achieve parity with Britain in 1935, and he again lobbied the government to strengthen the country's aerial defense:

To urge the preparation of defence is not to assert the imminence of war. On the contrary, if war were imminent preparations for defence would be too late. I do not believe that war is imminent or that war is inevitable, but it seems very difficult to resist the conclusion that, if we do not begin forthwith to put ourselves in a position of security, it will soon be beyond our power to do so.⁹²

He also advised that a week or ten days' intensive bombing, especially incendiary bombs, upon London would cause at least 30,000 to 40,000 casualties, plus 3,000,000 to 4,000,000 refugees without water, food, shelter, sanitation or maintenance of order; this

⁸⁹ Churchill, *His Complete Speeches*, vol. V, 5232.

⁹⁰ *Ibid.*, 5232-5233.

⁹¹ *Ibid.*, 5324.

⁹² *Ibid.*, 5440.

unprecedented catastrophe would paralyze the government's administrative power.⁹³ On 16 March 1935, Hitler declared the official establishment of the *Luftwaffe*, a direct violation of the Treaty of Versailles. Churchill responded to this three days later "from being the least vulnerable of all nations we have, through developments in the air, become the most vulnerable, and yet, even now, we are not taking the measures which would be in true proportion to our needs."⁹⁴ On 2 May, he declared that "It is absolutely certain that we have lost air parity already both in the number of machines and in their quality."⁹⁵ He then pessimistically forecasted that by the end of 1935, the *Luftwaffe* would be three or four times stronger than the RAF.⁹⁶ In July, Baldwin invited Churchill to join the Air Defence Research Sub-Committee of the Committee of Imperial Defence, where Churchill had a chance to work with and support his confidant Professor Frederick Lindemann.⁹⁷ This gesture, however, did not quell Churchill's frustration about the governmental inaction on strengthening British airpower.

The remilitarization of the Rhineland on 7 March 1936 marked the complete violation of the Treaty of Versailles and the Locarno Agreement. Churchill complained "if we had only begun to act three years ago when the danger first made itself apparent, we should possess a reserve power today which could spring at any moment into full preparatory activity."⁹⁸ On 20 July, three days after the Spanish Civil War broke out, Churchill openly criticized the Minister for the Co-ordination of Defence Sir Thomas

⁹³ Churchill, *His Complete Speeches*, vol. V, 5441.

⁹⁴ *Ibid.*, 5551.

⁹⁵ Winston Churchill, *Winston S. Churchill: His Complete Speeches, 1897-1963, vol VI, 1935 – 1942*, ed. Robert Rhodes James (New York: Chelsea House Publishers, 1974), 5595.

⁹⁶ Churchill, *His Complete Speeches*, vol. VI, 5595.

⁹⁷ Roberts, *Churchill*, 543.

⁹⁸ Churchill, *His Complete Speeches*, vol. VI, 5701.

Inskip – a newly established position by Baldwin to handle the increasing threat of Nazi Germany:

I have already referred to the melancholy story of the miscalculations about German air power. [...] If our aircraft factories had been set to work three years ago, albeit on the old type of machines, that would not have prevented the substitution of the new type for the old at the same date which is now operative. On the contrary, the effect would have been exactly the reverse. If the factories had been thrown into activity, if apprentices had been engaged, if plant and staff had been extended and developed, they would have been all the more capable of taking the new types, the transference would have been made with far better facilities and the deliveries would have flowed out in far greater volume at an earlier date.⁹⁹

Hitler dispatched the Condor Legion to Spain to support General Francisco Franco's nationalist faction in July 1936. The *Kampfgeschwader* (combat wing) of the Legion launched indiscriminate bombing on Spanish population centers, especially the complete destruction of Guernica on 26 April 1937, inciting international howls of outrage.

Churchill's son Randolph was working in Spain as a war correspondent in early 1937 and was shocked by the Nazi atrocity.¹⁰⁰ On 27 January 1937, despite his credibility being further eroded by the abdication of Edward VIII, and thus lowering his status in the Baldwin Government,¹⁰¹ Churchill still fiercely censured its ministers for neglecting British airpower, but in a rather melancholy tone:

We have been solemnly promised parity. We have not got parity. Would the right hon. Gentleman rise in his place and say he could contend that we had parity at the present time with this Power which is in striking distance of our shores in first-line strength? I say that we have not got the parity which we were promised. We have not nearly got it, we have not nearly approached it. Nor shall we get it during the whole of 1937, and I doubt whether we shall have it or anything approaching it during 1938. [...] The one kind of aircraft which we required

⁹⁹ Churchill, *His Complete Speeches*, vol. VI, 5782, 5785.

¹⁰⁰ Taylor, "Churchill and the Bombing Campaign," 321.

¹⁰¹ Roberts, *Churchill*, 564-571.

above all others was the long-range bombing machine. If that were to be adopted as the test, then the question of parity would recede to a very remote distance, because there is no branch of our service in which the relative comparison is more unfavorable to us than that which the hon and gallant Gentleman [Wing-Commander Wright] selected as the most important and decisive of all.¹⁰²

He was also impressed by the performance of German anti-aircraft guns in the Spanish Civil War:

I hope the Government are taking what steps they can to ascertain all the information which comes to hand about air fighting in Spain. Very valuable and instructive events are occurring in those scenes of horror. It is said that German anti-aircraft guns in groups, electrically controlled have produced extraordinarily good results upon hostile aviation. [...] I believe that day will come when the ground will decisively master the air and when the raiding aeroplane will be almost certainly clawed down from the skies in flaming ruin. But I fear perhaps ten years, ten critical and fateful years will pass before any such security will come, and that in the interval only minor palliatives will be at our disposal.¹⁰³

Churchill's repeated efforts to alarm and lobby the MacDonald and Baldwin Governments to rapidly rearm, and especially enhance the British airpower, earned himself the nickname "warmonger" under the prevalent belief of pacifism. As he himself admitted in *The Gathering Storm*, "The pacifism of the Labour and Liberal Parties was not affected by the grave event of the German withdrawal from the League of Nations. Both continued in the name of peace to urge British disarmament, and anyone who differed was called 'warmonger' and 'scaremonger'."¹⁰⁴ He subsequently did not occupy any vital position under MacDonald or Baldwin's premiership.

Churchill tried to sensationalize the incompetence and unresponsiveness of the government, and portray himself as the sole voice of wisdom, in both his speeches and

¹⁰² Churchill, *His Complete Speeches*, vol. VI, 5826-5827.

¹⁰³ *Ibid.*, 5827.

¹⁰⁴ Churchill, *The Gathering Storm*, 140.

writings. Nevertheless, his oratory tended to contain wild extravagance of language, sometimes at the expense of strict reason, logic and factual precision, in order to achieve political impact and attract attention.¹⁰⁵ Moreover, as historian David Reynolds indicated “Churchill the historian has shaped our image of Churchill the leader”¹⁰⁶ and one of his greatest achievements was “shaping the content and determining the vocabulary of historical debate.”¹⁰⁷ Therefore, one shall approach Churchill’s words with critical scrutiny. In the case of British airpower, many of his claims and accusations about rearmament from 1932 to 1937 were not factual. The British government in fact perceived the danger of German airpower, which we know in hindsight was under secret preparation in collaboration with the Soviet Union from 1921 to 1933.¹⁰⁸ Stanley Baldwin solemnly pledged in March 1934 that Britain “will not be inferior in air strength at home to any country within striking distance of our shores.”¹⁰⁹ The RAF expansion plan, Scheme A, which called for 1252 first-line warplanes for home defense was subsequently approved by the MacDonald’s cabinet in July 1934 based on the warning issued by the IIC.¹¹⁰ According to the cabinet minutes on 26 November the same year, the cabinet determined to officially announce the German re-armament to the House of Commons:

¹⁰⁵ Roberts, *Churchill*, 84.

¹⁰⁶ David Reynolds, *In Command of History: Churchill Fighting and Writing the Second World War* (New York: Random House, 2005), xix.

¹⁰⁷ *Ibid.*, 143.

¹⁰⁸ Edward Homze, “Versailles to 1926” in *Arming the Luftwaffe: The Reich Air Ministry and the German Aircraft Industry, 1919 – 39* (Lincoln: University of Nebraska Press, 1976); Ina Ona Johnson, “German-Soviet Relations and Military Collaboration in the Inter-war Period” in *The Cambridge Companion to the Nazi Soviet War*, ed. David Stahel (Cambridge: Cambridge University Press, 2026), 18-19.

¹⁰⁹ John Alexander, “‘Despised and Neglected?’ – British Fighter Defence, 1922-1940,” *Air Power Review* 18, no. 2 (2015): 171; The National Archives of the UK (TNA): Cabinet minutes on January 27th, 1937, CAB 23/87/6, 111.

¹¹⁰ Wark, *The Ultimate Enemy*, 57.

The evidence of German re-armament is now so formidable that we feel it can no longer be officially ignored, and that, if the situation in Germany is allowed to develop without let or hindrance on present lines, the German forces may ultimately become a menace to the peace of Europe. [...] Germany is accumulating military forces far in excess of those permitted by the Treaty of Versailles, and are apparently aiming at fulfilling as rapidly as possible the programme which was put forward by them early this year.¹¹¹

The British decision makers also paid close attention to British and German airpower and, recommended notifying the German ambassador about the British awareness of the existence of German Airforce (before Hitler's official proclamation), especially its bombing force.¹¹² They also recommended that "particular importance is attached to making as specific and comprehensive a statement as possible on the Government's air expansion programme."¹¹³ Despite the tight technical and financial constraints, they still approved "22 squadrons for Home Defence and 3 squadrons for the Fleet Air Arm in two years' time" given the gravity of the situation.¹¹⁴ This was two days before Churchill delivered one of his "most important speeches of his Wilderness Years" about German air parity with Britain and the lack of British defense. He sent a script of his speech to Baldwin on 23 November.¹¹⁵ The cabinet hence added special instruction to Baldwin, then the Lord of President of the Council, to "speak in the Debate after Mr. Winston Churchill."¹¹⁶

On 25 March 1935, Hitler informed Anthony Eden that the *Luftwaffe* has attained parity with RAF, which seemed to confirm Churchill's earlier prediction that Germany

¹¹¹ The National Archives of the UK (TNA): Cabinet minutes on November 26th, 1934, CAB 23/80/10, 233.

¹¹² TNA: CAB 23/80/10, 233, 236, 239.

¹¹³ *Ibid.*, 233.

¹¹⁴ *Ibid.*, 239-240.

¹¹⁵ Roberts, *Churchill*, 531.

¹¹⁶ TNA: CAB 23/80/10, 240.

would achieve air parity with Britain in 1935.¹¹⁷ From 1933 to 1937, Germany produced 1049 fighters and 984 bombers, a total of 2033 combat airplanes.¹¹⁸ To contrast, Britain was falling behind. In 1934, for example, the home base only had 42 squadrons, about 500 warplanes. Although the RAF ordered 3729 airframes from 1928 to 1933, only 265 were delivered.¹¹⁹ Churchill was still exaggerating the German production due to his superficial and impressionistic intelligence information from Malcolm Christie. Ralph Wigram, who was working for the Central Department of the Foreign Office, passed on Christie's reports to Churchill in the hope that he would "make the Government push on all the faster with the Air programme."¹²⁰ The Christie-X Reports, although remarkably accurate about the projected total number of German aircraft, misallocated the proportion between combat airplanes and trainers. Milch planned to have 2370 combat airplanes plus 6298 trainers by the end of 1938; Christie reversed the categories, so according to his intelligence, the bulk of German air force would be combat airplanes.¹²¹ This misinformation perhaps caused Churchill's anxiety and made him repeatedly demand for a faster rearmament. Germany was indeed rearming, but not as fast as Churchill anticipated. When writing *The Gathering Storm* after the war, he admitted that "the immediate further expansion of the German air force did not proceed at the same rate as in the period when they gained parity."¹²² Overall, in terms of resources, economy and

¹¹⁷ Roberts, *Churchill*, 539.

¹¹⁸ Richard Overy, "German Air Strength 1933 to 1939: a Note," *The Historical Journal* 27, no. 2 (1984): 469.

¹¹⁹ M. M. Postan, *British War Production* (London: Her Majesty's Stationary Office, 1952), 4-5.

¹²⁰ Overy, "Churchill and Airpower," 130; Churchill Archive Centre (CAC): Letter from Wigram Ralph to Winston Churchill on May 3rd, 1935, CHAR 2/235/67, transcript.

¹²¹ Wark, *The Ultimate Enemy*, 53-54. Notice the first Christie report about German air power reached the Foreign Office in January 1935.

¹²² Churchill, *The Gathering Storm*, 160.

arms production, Nazi Germany was not ready for a prolonged total war even in 1939.¹²³ In the summer of 1938, Hitler's plan to invade Czechoslovakia was opposed by most of the Nazi leadership, including Production Chief of the High Command, former Economics Minister Hjalmar Schacht, on the basis that the *Wehrmacht* was "totally unprepared to withstand a coalition of European powers."¹²⁴ Hitler also told his top generals on August 22, 1939, that "no one is counting on a long war. If Herr von Brauchitsch had said to me, 'I need four years to conquer Poland,' I would have replied: 'Then it's impossible.'"¹²⁵

Regardless, as discussed in the previous chapter, the Christie-X Reports plus other intelligence information (and perhaps Churchill's words) alarmed the British government and made it keep updating the RAF Expansion Schemes. In December 1935, Secretary of State for Foreign Affairs, Sir Samuel Hoare was convinced that Germany was making tremendous preparation on building up the *Luftwaffe* and "there was no time to lose in the preparation and completion of our own defensive arrangements."¹²⁶ To uphold Baldwin's 1934 pledge, the cabinet proposed in January 1937 to "build and maintain a defensive force adequate to meet any anticipated scale of attack" and "a counter-offensive force not inferior in power and efficiency to the offensive force of a foreign power/German offensive force."¹²⁷ Nevertheless, the ministers have also realized the RAF was perhaps a

¹²³ Reynolds, *In Command of History*, 136.

¹²⁴ Burton Klein, "Germany's Preparation for War," *The American Economic Review* 38, no. 1 (1948): 71.

¹²⁵ "Speech by the Führer to the Commanders in Chief on August 22, 1939," German History in Documents and Images, last modified February 6, 2026, <https://germanhistorydocs.org/en/nazi-germany-1933-1945/hitler-s-speech-to-the-commanders-in-chief-august-22-1939>

¹²⁶ The National Archives of the UK (TNA): Cabinet minutes on December 4th, 1935, CAB 23/82/19, 359,363.

¹²⁷ TNA: CAB 23/87/6, 111.

long way behind Germany numerically, so they decided to abandon “the idea of the mere counting of machines as being the interpretation of parity” and focused more on the quality of the machines to be “in a sufficiently strong position strategically to provide our defensive needs.”¹²⁸ After the RAF Expansion Scheme A, the government approved Scheme C (1935), F (1936) and H (1937), which called for 1512, 1736 and 2422 aircraft respectively. Scheme C included 420 fighters and 456 medium/heavy bombers, Scheme F included 420 fighters and 590 medium/heavy bombers, and Scheme H included 476 fighters and 1589 medium/heavy bombers.¹²⁹ In addition, the Baldwin Government approved the Shadow Scheme devised by Lord Swinton in 1936 to enable civilian motor industries to produce aircraft or vital parts of aircraft. These factories were governmentally funded and privately operated. During peaceful times, they would produce civilian goods as normal; when war broke out, they could be easily converted into war industries to meet the urgent needs of aircraft production.¹³⁰

The evidence listed above clearly demonstrated that the MacDonald and Baldwin governments were not as incompetent or unresponsive on strengthening the British airpower as Churchill accused. He was certainly unconventional among his colleagues who were (at least seemed to be) pacifists in the 1930s. As for his intention, Churchill was a politician, and his ambition for power and control was evident. It was possible, as

¹²⁸ TNA: CAB 23/87/6, 112.

¹²⁹ The National Archives of the UK (TNA): Allocation of Air Force, AIR 8/177; German air re-armament: memoranda, AIR 8/186; Royal Air Force expansion scheme “F”, AIR 8/204; Royal Air Force expansion scheme “H”, AIR 8/215. Quoted from “Expansion Schemes – pre World War 2,” *Air of Authority – A History of RAF Organization*, last modified March 17, 2025. <https://www.rafweb.org/Organsation/Expansion1.htm>.

¹³⁰ The National Archives of the UK (TNA): Cabinet minutes on May 27th, 1936, CAB 23/84/10, 229; “Great Britain: Shadow Scheme,” *Time*, November 2, 1936, <https://time.com/archive/6756090/great-britain-shadow-scheme/>.

many of his contemporaries believed, that acting out of line was his strategy to gain attention and political assets in his political wilderness, but that, ironically, he became a proponent of war in the process. At least in 1935, his attitude towards Adolf Hitler was somewhat hesitant. He wrote:

History is replete with examples of men who have risen to power by employing stern, grim and even frightful methods, but who nevertheless, when their life is revealed as a whole, have been regarded as great figures whose lives have enriched the story of mankind. [...] We cannot tell whether Hitler will be the man who will once again let loose upon the world another war in which civilization will irretrievably succumb, or whether he will go down in history as the man who restored honor and peace of mind to the great Germanic nation and brought it back serene, helpful and strong, to the forefront of the European family circle.¹³¹

Notably his attitude towards terror bombing also changed. He used to believe terror bombing was useless because “a good system of dug-outs or shelters, a strong control by police and military authorities, should be sufficient to preserve the national fighting power unimpaired.”¹³² In 1934, he changed his stance and asserted terror bombing could easily produce several million refugees that overwhelm the British capital. Similarly, in 1935, he dramatically claimed “the German air industry is therefore turning out military machines at perhaps ten times the rate at which ours are turned out.”¹³³ The experts Churchill met in Chartwell probably gave him some insights regarding the German war industry, evolution of bombers and the potential destruction they might cause. Or he amended his initial opinions and employed dramatic language to further his political goals in the Parliament. Notice that both remarks occurred before the Condor Legion bombed Spain, before Randolph wrote to his father after inspecting the ruins after air

¹³¹ Winston S. Churchill, *Great Contemporaries* (London: Odhams Press, 1947), 203.

¹³² Churchill, “Munitions Possibilities of 1918,” 19.

¹³³ Churchill, *His Complete Speeches*, vol. VI, 5595.

raids, which might serve as a living example for Churchill of how destructive bombers could be. It is, however, not to suggest Churchill was acting in bad faith. Being flexible on certain issues and stances was not an uncommon trait for politicians before and after Churchill. Furthermore, the general trend of events that he discerned was correct, though not without errors. Therefore, it was highly possible that Churchill truly demonstrated remarkable foresight and sincerely believed Hitler's Nazi Germany was a menace to peace which Britain needed to handle seriously, something that was not obvious for many British people until September 1939.

Neville Chamberlain replaced Stanley Baldwin as Prime Minister in May 1937, and thus began what many would call the "apotheosis of appeasement."¹³⁴ However, Churchill was about to be vindicated as Chamberlain would soon restore him to the post of First Lord of Admiralty, a position he lost almost two and a half decades earlier. With Hitler's ambition becoming increasingly more apparent, Churchill was even more resolved to oppose the policy of appeasement. The German annexation of Austria, known as *Anschluss*, happened on 12 March 1938.¹³⁵ The Sudeten Crisis broke out two months later, and Hitler threatened to invade Czechoslovakia if his territorial demands were not to be satisfied. Chamberlain was determined to preserve peace and met Hitler in Berchtesgaden on 15 September to discuss the "self-determination" of the Sudeten Germans. Half a month later, the Munich Conference, attended by Britain, France, Germany and Italy, sealed the fate of Czechoslovakia.¹³⁶ The first day of October, Chamberlain waved a declaration, signed by Hitler and himself, proclaimed that the

¹³⁴ Roberts, *Churchill*, 549.

¹³⁵ Charles Loch Mowat, *Britain Between the Wars: 1918-1940* (London: Methuen, 1968), 600-601.

¹³⁶ Mowat, *Britain Between the Wars*, 609-619.

Munich Agreement symbolized Britain and Germany were “never to go to war with one another again” and shouted to the cheering crowd at home that “I believe it is peace for our time.”¹³⁷

In the Debate on 5 October, against overwhelming praises towards Chamberlain, Churchill exclaimed “we have sustained a total and unmitigated defeat, and that France has suffered even more than we have. [...] Herr Hitler had gained in this particular leap forward in substance all he set out to gain.”¹³⁸ His speech was repeatedly interrupted by others shouting “Nonsense” and “Is peace.”¹³⁹ This time, Churchill made an accurate prediction that “Czechoslovakia will be engulfed in the Nazi regime [...] in a period of time which may be measured by years, but may be measured only by months.”¹⁴⁰ Hitler broke his promise and annexed the entirety of Czechoslovakia in March 1939.

Nevertheless, until his prophecy was validated, this five-month period was the most desolate period for Churchill because he had to fight his party whips, the press, Conservative Central Office, other backbenchers, his own constituency association and the Prime Minister who thought he was an irrelevant has-been and mocked him lacking judgment.¹⁴¹ Even Hitler accused him of being a warmonger.¹⁴² In the summer of 1939, after Nazi Germany had completed its conquest of Czechoslovakia, the public and press began changing their views towards Churchill. *Daily Telegraph*, *Daily Mail*, *Evening News*, *Observer*, *Star*, *Sunday Graphic*, *Yorkshire Post Mirror*, and even *Communist*

¹³⁷ Mowat, *Britain Between the Wars*, 618-619.

¹³⁸ Churchill, *His Complete Speeches*, vol. VI, 6004-6005.

¹³⁹ *Ibid.*

¹⁴⁰ *Ibid.*, 6008.

¹⁴¹ Roberts, *Churchill*, 606, 609-610.

¹⁴² Churchill, *His Complete Speeches*, vol. VI, 6018.

Daily Worker started imploring the government to let Churchill join its cabinet, but Chamberlain still viewed him as a disruptive force unless war broke out.¹⁴³

Fortunately, the pace of rearmament accelerated despite the policy of appeasement. More shadow factories were established across Britain in 1938. The RAF Expansion Scheme L was also approved in April 1938 which called for 1352 heavy/medium bombers and 608 fighters.¹⁴⁴ Despite the expanding arsenal, Chamberlain still feared the knock-out-blow. The calculation was if the *Luftwaffe* launched unrestricted bombing campaign against British civilians, the RAF would be forced to retaliate with its ill-equipped bombing force, with no guarantee of victory. The Czechoslovak Crisis made the British strategists believe Hitler's plan was to take care of the eastern front prior to engaging the Anglo-French Allies. This belief was a big relief for the British because it indicated that the might of German air force would be directed to the east as well, which purchased precious time for the RAF to expand. Therefore, it would be foolish for the RAF to launch any massive bombing offensive first that might unnecessarily provoke German riposte.¹⁴⁵ On 21 June 1938, Chamberlain announced the following British bombing policies in the House of Commons:

1. It is against international law to bomb civilians as such and to make deliberate attacks upon civilian population.
2. Targets [...] aimed from the air must be legitimate military objectives and must be capable of identification.
3. Reasonable care must be taken in attacking these military objectives so that by carelessness a civilian population in the neighborhood is not bombed.¹⁴⁶

¹⁴³ Roberts, *Churchill*, 627-628.

¹⁴⁴ The National Archives of the UK (TNA): Royal Air Force expansion scheme "L," AIR 8/237. Cited from "Expansion Schemes – pre World War 2," *Air of Authority – A History of RAF Organization*, last modified March 17, 2025. <https://www.rafweb.org/Organsation/Expansion1.htm>.

¹⁴⁵ Richard G. Davis, *Bombing the European Axis Powers: A Historical Digest of the Combined Bomber Offensive 1939-1945* (Montgomery: Air University Press, 2006), 9.

¹⁴⁶ Davis, *Bombing the European Axis Powers*, 9-10.

Other than morality reasons, the directive to avoid bombing civilian targets was obviously driven by the fear of retaliation from a stronger force which might cause unbearable consequences. When the war broke out in September 1939, the RAF was the best equipped among the three arms, though its 1978 first-line aircraft were still dwarfed by the *Luftwaffe's* 3609 aircraft.¹⁴⁷

Hitler invaded Poland on 1 September 1939, and this marked the beginning of the Second World War in Europe. The next day, Chamberlain kept his promise and invited Churchill to join the War Cabinet which he immediately accepted.¹⁴⁸ On 3 September, the day Britain declared war on Germany, Churchill again addressed the House of Commons and praised Chamberlain for his tireless efforts to avoid war: “In this solemn hour it is a consolation to recall and to dwell upon our repeated efforts for peace.”¹⁴⁹ He then delivered a powerful speech:

This is not a question of fighting for Danzig or fighting for Poland. We are fighting to save the whole world from the pestilence of Nazi tyranny and in defense of all that is most sacred to man. This is no war of domination or imperial aggrandizement or material gain; no war to shut any country out of its sunlight and means of progress. It is a war, viewed in its inherent quality, to establish, on impregnable rocks, the rights of the individual, and it is a war to establish and revive the stature of man.¹⁵⁰

Churchill entered the Second World War as First Lord of the Admiralty, a position he had left in humiliation twenty-five years before. This time, he was ready to “draw the sword” and “fight for life and honour against all the might and fury of the valiant, disciplined and ruthless German race.”¹⁵¹

¹⁴⁷ Mowat, *Britain Between the Wars*, 626-627, 631.

¹⁴⁸ Roberts, *Churchill*, 631.

¹⁴⁹ Churchill, *His Complete Speeches*, vol. VI, 6152.

¹⁵⁰ *Ibid.*, 6153.

¹⁵¹ Churchill, *The Gathering Storm*, 474-475.

To Churchill's disappointment, however, the "Phoney War," an eight-month period during which the Allies did not engage the German force on land, began before the fall of Poland. The Allied grand strategy at that time was to strengthen the defense of the Low Countries and northeastern France, to avoid the bloodbath of the First World War. They also adopted a peripheral strategy to fight the Nazis on the ocean and in the air, namely, ocean blockade and limited tactical bombing near Norway and Denmark. The control and denial of raw materials, especially iron ore from Norway, were considered vital to defeat Germany through the economic warfare.¹⁵² Neither Britain nor France was willing to commit to a full-scale strategic bombing campaign due to the lack of suitable bombers and the fear of German retaliation.¹⁵³ They hastened to accept American President Franklin Roosevelt's (FDR) appeal to refrain from bombing civilian targets.¹⁵⁴ Indeed, from 3 September 1939 to 31 March 1940, Bomber Command only dropped a total of 68 tons of bombs on enemy military targets, which was about one tenth of Trenchard's IF (543 tons) from 6 June to 11 November 1918.¹⁵⁵ Moreover, similar with the IF's vulnerability against air defense, Bomber Command also suffered heavy casualties. For example, during the Air Battle of the Heligoland Bight, Bomber Command launched a daylight bombing on 18 December 1939, aimed to bomb German shipments and naval facilities near the Schilling Roads and Wilhelmshaven in the North Sea. The attacking force of twenty-four Wellingtons were decimated by the German

¹⁵² Brain P. Farrell, *The Basis and Making of British Grand Strategy: Was There a Plan? Book 1* (Lewiston: The Edwin Mellen Press, 1998), 21; Graham T. Clews, *Churchill's Phoney War: A Study in Folly and Frustration* (Annapolis: Naval Institute Press, 2019), 106-107; Mawdsley, *World War II*, 106-109.

¹⁵³ Mawdsley, *World War II*, 109; Overly, *Why the Allies Won*, 107.

¹⁵⁴ Hastings, *Bomber Command*, 19.

¹⁵⁵ Davis, *Bombing the European Axis Powers*, Appendix: Bomber Command Losses and Tonnage by Month, September 1939 – May 1941.

defenders, losing nine bombers during the encounter before dropping a few bombs on four large fleet auxiliaries.¹⁵⁶ The demoralizing operation shook the British airmen's faith in daylight bombing and began to switch most bombing operations from daytime to nighttime.¹⁵⁷

Churchill, as an aggressive strategist, was discontent with such passive air strategy and complained "didn't see why the disgusting stentorian slumber of the Boche should remain undisturbed" and mockingly suggested the RAF should drop "roasted chestnuts."¹⁵⁸ Nevertheless, as a part of the government, he had to accept such conservative bombing policies despite his frustration. Like his colleagues, Churchill believed Britain still needed time to prepare its air defense and that provoking Germany could jeopardize British munitions production and threaten its oil storage.¹⁵⁹ In fact, the British AASF has been deployed to France one day before Chamberlain declared war on Germany, but due to its small size (160 expendable Fairey Battle light bombers plus two squadrons of Blenheim twin engine bombers) and the Allied leaders' reluctance to launch strategic bombing, the pilots were mostly carrying out armed reconnaissance missions and propaganda leaflet raids.¹⁶⁰ Before Hitler invaded Norway in April 1940, the Whitley, Wellington and Hampden Bombers reached Vienna, Prague and Warsaw. Together with the AASF, they dropped over sixty-five million leaflets over German territory, and suffered low casualties, mostly from navigational errors and poor weather conditions.¹⁶¹

¹⁵⁶ The National Archives of the UK (TNA): Air Operations and Intelligence: Sixteenth Weekly Report by the Secretary of State for Air on 1st January, 1940, CAB 66/4/31, 271.

¹⁵⁷ Biddle, *Rhetoric and Reality in Air Warfare*, 183-184.

¹⁵⁸ Roberts, *Churchill*, 646.

¹⁵⁹ Clews, *Churchill's Phoney War*, 106-109, 113.

¹⁶⁰ Hastings, *Bomber Command*, 20; Robert Jackson, *Air War Over France: 1939-40* (London: Ian Allan, 1974), 37-38; Biddle, *Rhetoric and Reality in Air Warfare*, 53.

¹⁶¹ Jackson, *Air War Over France*, 183-184,

The CAS Cyril Newall and the Air Officer Commanding in Chief (AOC-in-C) of Bomber Command Edgar Ludlow-Hewitt repeatedly delayed the plan to bomb oil storage and aircraft factories in Ruhr for a so-called “decisive moment” while the bulk of bombing force stayed idle on Britain proper.¹⁶² Churchill showed concern regarding the self-imposed idleness of Bomber Command and purposed to “find strictly military objectives – such as synthetic petrol plants in Germany which were vital to her prosecution of the war [...] – and to attack these even if this were to draw German fire on ourselves.”¹⁶³ His proposal was rejected by the War Cabinet. On 4 April 1940, facing growing discontent from many young staff in the RAF, Charles Portal took over the leadership of Bomber Command from Ludlow-Hewitt, shortly before the Battle of Norway began.¹⁶⁴

When Operation *Weserübung* (Operation Weser, the German code name for the invasion of Denmark and Norway) began on 9 April 1940, the Allies soon lost air superiority, as Fighter Command ironically had “nothing of special interest to report” on the very day Hitler invaded Norway.¹⁶⁵ The RAF launched attacks on the Stavanger airfield and reportedly destroyed one Heinkel and damaged two Junkers 88s on 10 April.¹⁶⁶ Disappointing performance from the RAF plus the slow reaction of the Royal Navy did not prevent the Germans from landing and rapidly overwhelming Norwegian forces.¹⁶⁷ During the Norway debate from 7 to 8 May, which initially aimed to discuss the progress of the Norwegian Campaign, the House of Commons was divided and rapidly

¹⁶² Clews, *Churchill's Phoney War*, 112; Hastings, *Bomber Command*, 20.

¹⁶³ Winston S. Churchill, *The Churchill War Papers, vol. I At the Admiralty: September 1939 – May 1940*, ed. Martin Gilbert (New York: W.W. Norton & Company, 1993), 94

¹⁶⁴ Hastings, *Bomber Command*, 18.

¹⁶⁵ The National Archives of the UK (TNA): War Cabinet: Weekly Résumé (No. 32) of the Naval, Military and Air Situation from 12 noon April 4th to 12 noon April 11th, 1940, CAB 66/7/7, 12.

¹⁶⁶ TNA: CAB 66/7/7, 11.

¹⁶⁷ Clews, *Churchill's Phoney War*, 203, 225-227.

turned into a *de-facto* motion of no confidence for the Chamberlain government.¹⁶⁸ The government eventually won, but by a substantially reduced margin, and the Labour Party under Clement Attlee refused to work in a government led by Chamberlain. After a series of meetings, debates and discussions between different political entities, Chamberlain resigned on 10 May. To many people's surprise, Winston Churchill replaced him as Prime Minister to lead the new National Government which was consisted of the Conservative, Liberal and Labour Parties.¹⁶⁹ He appointed Lord Beaverbrook as Minister of Aircraft Production, the Liberal leader Archie Sinclair to be Secretary of State for Air, and his confidant Professor Frederick Lindemann to be chief scientific advisor.¹⁷⁰ Most importantly, he appointed himself as Minister of Defense to represent the three Service Ministers in the War Cabinet and to direct the conduct of the war. Together with his position as Prime Minister, he could "exercise his general function of superintendence and direction without impinging upon the constitutional responsibilities of the Service Ministers."¹⁷¹ This extremely powerful position earned him the title "Supreme Warlord of the Plutocracy."¹⁷² The Battle of France began the same day as Churchill became Prime Minister and Minister of Defense. Half a century had passed since he told his friend that he would save Britain from a foreign invasion at the age of sixteen. The night after becoming Prime Minister, Churchill recalled:

I felt as if I were walking with destiny, and that all my past life had been but a preparation for this hour and for this trial. Eleven years in the political wilderness

¹⁶⁸ Clews, *Churchill's Phoney War*, 233

¹⁶⁹ Andrew Roberts, "Seizing the Premiership" in *Churchill: Walking with Destiny* (New York: Penguin Random House, 2018). The episode of Churchill becoming Prime Minister after the Norway defeat deserves a monograph itself.

¹⁷⁰ Roberts, *Churchill*, 715-716, 719.

¹⁷¹ Churchill, *His Complete Speeches*, vol. VI, 6332. Notice the Ministry of Defense did not exist until 1964.

¹⁷² Max Hastings, *Finest Years: Churchill as Warlord 1940-1945* (London: Harper Press, 2009), 77.

had freed me from ordinary party antagonisms. My warnings over the last six years had been so numerous, so detailed, and were now so terribly vindicated, that no one could gainsay me. I could not be reproached either for making the war or with want of preparation for it. I thought I knew a good deal about it all, and I was sure I should not fail.¹⁷³

Thirty-one years had passed since he first showed interest in airpower as a politician (1909); Twenty-seven years had passed since he flew an airplane for the first time as an amateur pilot (1913). Finally, he now became the *de-facto* leader of the British Empire and could wield immense power to direct the British air policy and bring the war on the Nazis from sky. Nevertheless, the Third Reich would soon prove to Churchill that it had become a much more frightful enemy than the Second Reich had been.

This chapter focused on Winston Churchill and investigated the connection between his predilection for air power and his strategic choices. The chapter concluded that Churchill was personally attracted to flight and became an amateur pilot because of his adventurous nature. More importantly, as a strategist, strategic bombing aligned with his preference for seizing the initiative and carrying the war directly to the enemy, rather than relying on a defensive posture. Despite these expectations, Churchill and the RAF would face many challenges, endure many hardships and suffer many setbacks during the air campaign against Nazi Germany. Next chapter reviews and analyses the performance of the RAF Bomber Command during the early years (1940 to 1941) of the Second World War.

¹⁷³ Churchill, *The Gathering Storm*, 771.

CHAPTER 4 BOMBER COMMAND IN ACTION

But there is one thing that will bring him [Hitler] back and bring him down, and that is an absolutely devastating, exterminating attack by very heavy bombers from this country upon the Nazi homeland.

- *Winston Churchill, 1940*

4.1 Bomber Command during the Battle of France

The summer of 1940 was a deeply pessimistic moment for the British Empire. The overwhelming Nazi triumph over France in June eradicated Britain's principal ally on the European continent and distorted its long-established strategy to contain the Nazi threat since the late 1930s. The Dyle Plan (Plan D) envisaged close cooperation with the French army to halt the German advance along the Maginot Line and the Low Countries.¹ With the surprisingly quick breakthrough of the German armored group and the subsequent defeat of the French army, Britain was facing its worst nightmare: resisting the whole might of western and central Europe under one authority. Although Operation Dynamo successfully evacuated two thirds of the British Expeditionary Force (BEF) from Dunkirk, they abandoned most of their heavy weapons and equipment, and rapid reequipment proved difficult.²

The Allied pilots, although wholehearted, "failed to influence the outcome of the Battle of France in the slightest."³ Speed is of the essence in warfare, but the RAF was slow to react and fell almost every step behind the Germans. The AASF and Bomber Command received firm instruction from the *Comité de Guerre* (War Committee), a high level French wartime decision making body, and Chamberlain's

¹ Smart, *British Strategy and Politics During the Phony War*, 76-92.

² Mawdsley, *World War II*, 125.

³ Jackson, *Air War Over France*, 109.

War Cabinet that “it is not in the French interests to initiate any actions against factories or other objectives which would affect the civilian population” nor “initiating air attack in advance of an actual invasion.”⁴ Nevertheless, they also worried that the absence of air support might “reduce the chances of the Allied armies reaching the advanced positions in Belgium” according to the Plan D.⁵ Therefore, the Allied air force was restricted to only providing air support for the ground forces after the beginning of German invasion. The mighty *Wehrmacht* and the *Luftwaffe* did not give the Allies room for respite. Within the first forty-eight hours after German invasion, the AASF lost sixty-three bombers, including almost the entirety of its Blenheim twin-engine bombers.⁶

On 14 May, the AASF, reinforced by Bomber Command at home, under the desperate plea from French General Billotte, dispatched all the remaining units to bomb the German panzer divisions crossing the Meuse and Semois River in the Sedan and Bouillon Region. Forty-one Battles and Blenheims were lost among the 102 bombers dispatched.⁷ Thirty-five Battles were shot down over the Meuse River; No. 218 squadron alone lost ten out of eleven airplanes.⁸ The strength of the AASF was quickly exhausted at the onset of German invasion. There was a discrepancy between these losses and the damage these bombers caused. According to the air reconnaissance photos taken the next day, six bridges over the Meuse River had been

⁴ The National Archives of the UK (TNA): Memorandum by the Chiefs of Staff on 19th April, 1940, CAB 66/7/12, 89.

⁵ *Ibid.*, 90.

⁶ Jackson, *Air War Over France*, 56.

⁷ The National Archives of the UK (TNA): War Cabinet: Weekly Résumé (No. 37) of the Naval, Military and Air Situation from 12 noon May 9th to 12 noon May 16th, 1940 on May 17, 1940, CAB 66/7/38, 12.

⁸ Jackson, *Air War Over France*, 57.

destroyed, with only one pontoon remaining.⁹ Later, a historian claimed the attack destroyed two pontoon bridges and damaged two more.¹⁰ One thing was certain: that despite the valiant efforts and tremendous sacrifice of the RAF, the German panzers still penetrated the Ardennes Forest and crossed the Meuse River, flanked the bulk of the Anglo-French force from the south, thus laying the foundation of German victory over France. The performance of the AASF can be best summarized by a German officer's ridicule, "You British are mad. We capture the bridge early Friday morning (May 10). You gave us all Friday and Saturday (May 11) to get our flak guns up in circles all around the bridge, and then on Sunday (May 12), when all is ready, you come along with three aircraft and try to blow the thing up."¹¹

One month before the Battle of France began, the Military Co-ordination Committee, chaired by Winston Churchill, convened many meetings to arrange for the intervention of the metropolitan heavy bomber force in the land battles in case of a German assault on the Western Front. The primary task of the heavy bombers would be impeding the forward movement of German columns which might produce decisive results.¹² This aim was however challenged by the French High Command and the AASF. Their disposition was that only a small proportion of heavy bombers were allowed to attack communications and concentration areas at night between the Rhine and Dutch and Belgian frontiers to avoid heavy casualties.¹³ In addition, The *Comité de Guerre* was firmly against any bombing attack on marshalling yards, petrol

⁹ TNA: CAB 66/7/38, 13.

¹⁰ Jackson, *Air War Over France*, 57.

¹¹ *Ibid.*, 56.

¹² The National Archives of the UK (TNA): War Cabinet: Operation "Alphonse." Memorandum by the Military Co-ordination Committee on April 12th, 1940, CAB 66/7/8, 61.

¹³ TNA: CAB 66/7/12, 93-94.

refineries and factories in the Ruhr area because it was obsessed with the fear of the German bomber force that reportedly outnumbered the Allies by three to four times.¹⁴ The *Luftwaffe* possessed 3824 serviceable aircraft on 10 May, including 1120 bombers plus 342 Stukas. The Allies (including the Belgian and Dutch air force) had a grand total of some 3000 airplanes on the continent.¹⁵ Nevertheless, the *Armée de l'Air* could only muster about 100 bombers, including 25 modern ones, when facing the German invasion. Bomber Command assigned the No. 2 Group, nine bomber squadrons, plus the AASF to the French campaign.¹⁶ Ironically, after seven months' preparation and rearmament since the war broke out, the Allies' bombing force was still so inferior to the Germans that General Gamelin was "obsessed with a fear" of a German knock-out-blow. Some British officers, however, disagreed with the French excessive caution and argued that "the time had now come to decide to take the initiative in spite of our numerically weaker forces" before the Germans established their air bases in Belgium and the Netherlands which might pose a direct threat to Britain proper.¹⁷ As for the specific bombing against valuable targets such as factories and petrol depots which might cause civilian casualties, the Allies decided to initiate strategic bombing only "as a reply to similar action on the part of the enemy."¹⁸ Militarily, this passive strategy surrendered the Allied air control to the Germans and

¹⁴ TNA: CAB 66/7/12, 96.

¹⁵ *A Survey of German Air Operations 1939-1944: A Study Prepared by the German Air Historical Branch, (8th Abteilung), and dated 21st September, 1944*, trans, Air Ministry, 3.

¹⁶ Richards, *Royal Air Force 1939-1945, vol. I*, 109.

¹⁷ TNA: CAB 66/7/12, 96.

¹⁸ *Ibid.*, 94.

was an alternative way of hoping and imagining the *Luftwaffe* would somehow spare vital Allied industries, a total wishful thinking like living in a “fool’s paradise.”¹⁹

Politically, the first one who commenced air operations that killed civilians tended to lose the moral high ground. For democratic countries like Britain and France, losing moral high ground in an armed conflict might cause the government to lose popular support at home and damage its international image. In particular, if the Anglo-French Allies broke their earlier promises to President Roosevelt and bombed civilians, it might sour American attitudes towards Britain and France. Although Britain was not desperate for the US assistance before the French collapse, it was still vital to maintain a positive image on the international stage, because it was reasonable to assume Hitler would harness the civilian casualties as a powerful propaganda tool against the Allies before he himself executed terror bombing. Churchill was a politician who paid close attention to not only his own reputation but also the image of the government he was a part of, as evident in his way of handling the civilian casualties caused by the RAF in the Middle East as Secretary of State for Colonies. Moreover, he longed for the US aid even before becoming Prime Minister. As early as 8 October 1933, Churchill sent Roosevelt the first volume of his *Marlborough: His Life and Times* with his handwritten inscription to endorse the New Deal, “With earnest best wishes for the success of the greatest crusade of modern times.”²⁰ From the onset of the war, the two men were willing to maintain very frequent communications. In a private letter Roosevelt reassured Churchill that “I shall at all

¹⁹ TNA: CAB 66/7/12, 97.

²⁰ Winston S. Churchill and Franklin D. Roosevelt, *Churchill and Roosevelt: The Complete Correspondence, vol I: Alliance Emerging*, ed. Warren F. Kimball (Princeton: Princeton University Press, 1984), 23.

times welcome it if you will keep me in touch personally with anything you want me to know about.”²¹ Roosevelt was eager to work with the British and Churchill wanted to influence the president to borrow the American naval forces for the British cause to blockade Germany in the Atlantic.²² Therefore, Churchill was relatively restrained on employing bombing force. In his proposal of bombing strategic targets to cripple German military production in September 1939, he asserted he did not intend to go “beyond our present [bombing] policy” and the targets had to be “isolated from the civil population.”²³ This was his attempt to uphold the British promise to the Americans for political gain while balancing the military needs for the rapidly changing battlefield, a challenging task indeed.

Hitler soon lifted Churchill from this dilemma. On 14 May 1940, the same day Heinz Guderian’s panzer group penetrated the Sedan region, the *Führer* ordered terror bombing over the port city of Rotterdam to force the Dutch to capitulate, as Douhet had relentlessly advocated two decades before. In a short thirteen-minute bombing, downtown Rotterdam was devastated. Eight hundred and fifty people were killed, 80,000 more rendered homeless, over 11,000 buildings, including many historical architectural landmarks, were destroyed or damaged.²⁴ The Dutch air force, with a strength of 248 first line aircraft, were reduced to ten airplanes in just seventy-two hours.²⁵ The terror bombing paired with the rapid breakthrough of the *Wehrmacht*

²¹ Churchill, *Churchill and Roosevelt*, 24.

²² Warren F. Kimball, *Forged in War: Roosevelt, Churchill and the Second World War* (New York: William Morrow, 1997), 40; Churchill, *Churchill and Roosevelt*, 32.

²³ Churchill, *The Churchill War Papers, vol I*, 94.

²⁴ Antonius Robben, “Metonyms of destruction: Death, ruination and the bombing of Rotterdam in the Second World War,” *Journal of Material Culture* 26, no. 3 (2021): 328-329.

²⁵ TNA: CAB 66/7/38, 15.

worked very effectively, the Dutch government surrendered several hours later. In fact, one day before the Rotterdam Blitz, the War Cabinet had provisionally agreed to strike the oil refineries and marshalling yards in the Ruhr via heavy bombers even with collateral civilian casualties. Nazi Germany “had given ample justification in the eyes of the world for an attack upon the Ruhr” through “many atrocities he had already committed.”²⁶ Nonetheless, they, including the Prime Minister ultimately decided to postpone such action by three to four days to avoid German reprisal and conserve the heavy bomber force, though realizing the delay might make the attack to be carried in “much less favorable conditions.”²⁷

The destruction of the historical centre of Rotterdam was the proverbial last straw that unified the opinions of the British ministers and provided moral and legal grounds that justified the British strategic bombing. The Secretary of State for Air Sinclair, the First Lord of Admiralty Albert Alexander, the Secretary of State for War Anthony Eden and the military chiefs of the three services all agreed striking German marshalling yards and oil refineries would aid Allied ground operations in France.²⁸ The Lord Privy Seal Clement Attlee considered the moment of counterattack had arrived, and German oil refineries and railways were ideal targets. Even the Lord President of the Council, Neville Chamberlain, who was anxious to delay bombing Ruhr, now believed “it would therefore be wrong to stay our hands any longer from the proposed night-bombing operation.”²⁹ Winston Churchill subsequently declared

²⁶ Winston S. Churchill, *The Churchill War Papers, vol. II Never Surrender: May 1940 – December 1940*, ed. Martin Gilbert (New York: W.W. Norton & Company, 1995), 26.

²⁷ *Ibid.*, 27.

²⁸ The National Archives of the UK (TNA): W.M. (40) 123rd Conclusions, Minute 2. Confidential Annex. on 15th May, 1940, CAB 65/13/9, 74-76.

²⁹ *Ibid.*, 76-77.

that it was obvious “the War Cabinet were united in favour of taking immediate action in delivering a hard blow at Germany” and the operation shall be carried out the very evening of the cabinet meeting on 15 May by approximately one hundred heavy bombers.³⁰ Notably, the War Cabinet reiterated the intention was to destroy military objectives, with a line underneath the word “military” in the original document.³¹ Hence, over ninety bombers were dispatched to attack the Ruhr industrial zone that night, which signaled the commencement of the five year long strategic air offensive against Nazi Germany that did not end until its unconditional surrender. The decision to target the Ruhr with long-range bombers was the product of a gradual and complex process, rather than a hasty or single-minded decision by the Prime Minister.

Churchill liked taking the initiative and seizing control both as a person and as a strategist because of his adventurous and aggressive nature. This trait motivated him to push for strategic air offensive against the enemy. Nevertheless, he still chose to defer to his colleagues many times as a minister and a prime minister because he was not dictatorial or irrational. It was not until the War Cabinet universally shared Churchill’s sentiment that he finally declared the beginning of strategic bombing.

Furthermore, they had many reasons to bomb Ruhr other than the moral justification. The British strategists’ rationale could be divided into the following parts. First, the war industries on the British Isles were value objectives that the Germans would undoubtedly bomb once they established bases for the short-range bombers and fighters and secured “depth to their air defences” in the Netherlands and Belgium. Therefore, an attack now would force Germany to retaliate before the

³⁰ Churchill, *The Churchill War Papers*, vol. II, 42, 43.

³¹ TNA: CAB 65/13/9, 78.

Luftwaffe was ready to do so. Second, it would be wise to strike now before the prolonged operations exhausted the strength of Bomber Command.³² Third, bombing attack could dispel French doubts about the British determination to fight on and willingness to suffer. Fourth, it would be a psychological moment to strike Germany proper and convince the German people that the British had both the will and the power to hit them hard.³³ Finally, an attack on Germany would hopefully produce a salutary effect on Italy, which according to Churchill, would likely “hurry in to share the loot of civilization,”³⁴ such as invading France and the Balkans. To ensure the secrecy of the bombing operation and minimize German air defense, Churchill instructed the Minister of Information, Alfred Duff Cooper, to only discreetly report the civilian casualties in France and the Low Countries inflicted by the *Luftwaffe* without mentioning the possibility of British retaliation.³⁵

As for the possible American reaction, Duff Cooper suggested the bombing would have an “admirable effect” on American opinions to urge the British to carry out more similar operations. The Secretary of State for Foreign Affairs Lord Halifax considered the German action as fully justifying the decision to order these attacks without “exciting any comment from America.”³⁶ Despite this optimism, Churchill still took a very cautious approach. He claimed, “American sympathy had recently been veering very much in our favour” but was unsure if the bombing would “produce a revulsion of feeling” or be accepted as “a reasonable and justifiable

³² Churchill, *The Churchill War Papers*, vol. II, 26.

³³ *Ibid.*, 42, 43.

³⁴ Churchill, *The Churchill War Papers*, vol. II, 42; Churchill, *Churchill and Roosevelt*, 37.

³⁵ Churchill, *The Churchill War Papers*, vol. II, 42.

³⁶ TNA: CAB 65/13/9, 76.

retaliation for German methods of warfare.”³⁷ This hesitation might explain why Churchill did not mention the bombing of Ruhr in his correspondence to President Roosevelt, classified as “most secret,” on 15 May at 6 p.m., six hours after the decision had been made.³⁸ He instead implored the Americans to sell him the latest types of aircraft and anti-aircraft equipment to strengthen the British air defense for the rest of May, but no reference of this bombing was ever made to FDR.³⁹

Meanwhile, Sinclair advocated for a more aggressive bombing policy and was unsatisfied with confining the targets only in Ruhr. His list included Leipzig, Hanover and Bremen. These cities were deemed strategically vital because they possessed large oil refineries and large stocks of lubricating oil, important for the Nazi war effort. Moreover, these facilities were considered ideal targets to hit because they were enormous and highly inflammable, thus easily identifiable in the moonlight.⁴⁰ The Prime Minister was quite enthusiastic about these proposals and claimed these operations might “cut Germany at its tap root.”⁴¹ On May 19, Churchill’s voice reached every corner across the country via the BBC broadcast, where he specifically mentioned “our heavy bombers are striking nightly at the tap-root of German mechanized power, and have already inflicted serious damage upon the oil refineries on which on which the Nazi effort to dominate the world directly depends.”⁴²

³⁷ Churchill, *The Churchill War Papers*, vol. II, 43.

³⁸ Churchill, *Churchill and Roosevelt*, 37. The decision to bomb Ruhr was made around noon 15 May 1940.

³⁹ *Ibid.*, 37-41. In fact, there was a leak case while Churchill and FDR were exchanging messages. A code clerk working in the US Embassy in London named Tyler Kent was stealing messages since December 1939, including the reply the President gave to Churchill on 15 May. Kent was arrested after 20 May, but no evidence suggested Churchill was aware of the leak before this date.

⁴⁰ TNA: CAB 65/13/9, 72-73.

⁴¹ *Ibid.*, 77.

⁴² Churchill, *His Complete Speeches*, vol. VI, 6222.

Churchill's optimism probably came from the Weekly Résumé, prepared by the Chiefs of Staff, for his War Cabinet. It clearly stated the heavy bombers encountered "relatively slight opposition" and have struck at "very numerous objectives" including oil plants, railway junctions, marshalling yards, autobahn, blast-furnaces, cooking plants and aerodromes.⁴³ In particular, the attacks on oil plants at Dortmund and Duisburg triggered explosions and fires and "the results appeared to be highly successful."⁴⁴ The reality was however different from Bomber Command's confidence. As mentioned before, only a small portion of the bombers have found the targets, and many of them did not drop a single bomb.⁴⁵

The Command judged the success of the bombing operation solely based on fire and explosions, and this was a simplistic approach. That said, assessing the damage caused by bombers on enemy territories was a challenging task. The immediate result heavily relied on bomber crews' visual and hearing observations, which were not always accurate. The other way was to send reconnaissance airplanes and take photographs under enemy fire thus risking the lives of more pilots.⁴⁶ In late 1944, Sinclair informed Churchill that a comprehensive survey of bomb damage could only be done one and half years after the defeat of Germany.⁴⁷ Therefore, it was forgivable Churchill was fed with inaccurate intelligence. As a politician, he would need something anyway to show the British populace and military personnel they were hitting the heart of the enemy to boost the morale, especially when the situation

⁴³ TNA: CAB 66/7/38, 255.

⁴⁴ *Ibid.*

⁴⁵ Richards, *Royal Air Force 1939-1945*, 124.

⁴⁶ Oliver S. Reading, "Science – Study of Invariables," *American Scientist* 32, no. 1 (1944): 56.

⁴⁷ Sebastian Cox, *The Strategic Air War against Germany 1939-1945: Report of the British Bombing Survey Unit* (London: Frank Cass, 1998), xix.

was dire. Just like he remarked in the same broadcast “I am sure I speak for all when I say we are ready to face it [Nazi aggression]; to ensure it; and to retaliate against it – to any extent that the unwritten laws of war permit.”⁴⁸

The situation in France kept deteriorating so fast that the British leaders were more preoccupied with preparing for a general invasion against the British Isles. On 25 May, the War Cabinet seriously considered the “certain eventuality,” of facing the Nazi threat alone if the French resistance were to collapse completely. The British capacity to resist an invasion depended primarily on the RAF Fighter Command’s ability to reduce the scale of enemy attack to a reasonable level. Namely, to protect aerodromes and aircraft industries by intercepting enemy bombers and fighters. Therefore, the training for fighter pilots and the defense of factories essential for fighter aircraft production took priority.⁴⁹ Simultaneously, Britain could not afford to neglect its bomber force because the country’s survival also relied on the maintenance of an effective air striking force. The War cabinet contended that “we cannot resist invasion by fighter aircraft alone. An air striking force is necessary not only to meet the sea borne expedition, but also to bring direct pressure to bear upon Germany by objectives in that country.”⁵⁰ Advised by the MEW, the British decision makers believed that Germany could still be defeated by a combination of air attack on its economic targets and its people’s morale plus the creation of widespread revolt in the newly conquered territories. Owing to the impending German offensive, however, the pressure Bomber Command could exert on the enemy would be extremely limited

⁴⁸ Churchill, *His Complete Speeches*, vol. VI, 6222.

⁴⁹ The National Archives of the UK (TNA): War Cabinet: British Strategy in a Certain Eventuality, on 25th May, 1940, CAB 66/7/48, 319, 321.

⁵⁰ TNA: CAB 66/7/48, 322.

due to the need to conserve a part of the striking force to handle the contingency of invasion. Hence, the bombers were reserved for operations that were of first importance.⁵¹ According to MEW's forecast, Germany still had insufficient oil even with Romanian supplies, which would be fatal to the Reich's war potential over time. The weight of bombing attack was therefore directed to oil refineries and the focal points in the transport system that carried the petroleum to accelerate the exhaustion of German oil.⁵² In particular, Eergius Hydrogenation synthetic oil plants, oil receiving depots at Regensburg, Passau, Bratislava, and railway bridges over the Danube River near Vienna were given high priorities.⁵³

On 17 May 1940, British home bases possessed 464 operational heavy bombers, including 316 first line aircraft plus 148 aircraft in training squadrons and serviceable aircraft stored. In addition, there were 445 heavy bombers in reserve but not immediately operational, such as repairable aircraft and aircraft short of equipment. 285 Blenheim and Battles were also available for service.⁵⁴ With this force, Bomber Command dropped about 3370 tons of bombs on German targets from mid-May to early July.⁵⁵ As much as 1300 tons were delivered as tactical support for frontline troops, 664 tons against enemy transportation, but only 312 tons against oil targets despite it being one of the priorities. Most of these operations were carried out at night. The other notable target was the Black Forest in Germany. The MEW

⁵¹ TNA: CAB 66/7/48, 319, 320, 324.

⁵² *Ibid.*, 324.

⁵³ The National Archives of the UK (TNA): War Cabinet: German Oil Supplies, on 4th June, 1940, CAB 66/8/21, 108, 111.

⁵⁴ TNA: CAB 66/7/48, 326.

⁵⁵ Davis, *Bombing the European Axis Powers*, Appendix: Bomber Command Losses and Tonnage by Month, September 1939 – May 1941.

informed Churchill that German controlled Europe faced food shortages due to the low harvest forecasted in 1940. Fats and fruits would soon become scarce goods, and the only option was to slaughter immature animals on a massive scale. Within a couple of months, the industrial area with dense population would suffer from “a really acute shortage of food.”⁵⁶ To take full advantage of this weakness, the British Empire needed to cooperate with the French, Belgian and Dutch empires and control all deficiency commodities at source.⁵⁷ Strategically, Bomber Command could play a vital role igniting German woodland and crop fields by dropping incendiary bombs to accelerate the starvation of Germany. Tactically, forests also provided natural concealment of ammunition dumps and troop concentrations. On 11 June 1940, after discussion with the French, the CAS Cyril Newall instructed Bomber Command to burn the Black Forest as soon as possible before rainfall.⁵⁸ Due to poor weather conditions, the planned fire raids were not launched the next day and only 2.4 tons of bombs were dedicated to this purpose in June.⁵⁹ The experiments to ignite forests and crop fields continued till July 1941 but ultimately failed because most firebombs only burnt a few inches around where they landed even under ideal climatic conditions.⁶⁰

Despite the valiant efforts of the Anglo-French alliance, the French government left its capital on 10 June. Its new leader Marshal Pétain declared the war

⁵⁶ TNA: CAB 66/7/48, 319, 320, 324.

⁵⁷ *Ibid.*, 324.

⁵⁸ The National Archives of the UK (TNA): W.M. (40) 161st Conclusions, Minute 3. Confidential Annex. on 11th June, 1940, CAB 65/13/39, 273.

⁵⁹ The National Archives of the UK (TNA): War Cabinet 162 (40) on 12th June, 1940, CAB 65/7/57, 273; Davis, *Bombing the European Axis Powers*, Appendix: Bomber Command Losses and Tonnage by Month, September 1939 – May 1941.

⁶⁰ Richard Overy, *The Bombing War: Europe 1939-1945* (London: Allen Lane, 2013), 252.

was lost a week later. A humiliating armistice was subsequently signed on 22 June 1940, thus concluding the Battle of France with a complete German triumph.⁶¹

4.2 Bomber Command during the Battle of Britain

Four days before the official French surrender, Winston Churchill delivered an immortal speech in the House of Commons, titled “Their Finest Hour,” to dispel the popular perception that the British Empire would follow the French example to capitulate, particularly after the Italian entry into the war on 10 June:

I made it perfectly clear then that whatever happened in France would make no difference to the resolve of Britain and the British Empire to fight on, “if necessary for years, if necessary alone.” [...] Our professional advisers of the three Services unitedly advise that we should carry on the war, and that there are good and reasonable hopes of final victory.⁶²

He concluded his speech with strong and poetic remarks:

What General Weygand called the Battle of France is over. I expect that the Battle of Britain is about to begin. Upon this battle depends the survival of Christian civilization. Upon it depends our own British life, and the long community of our institutions and our Empire. [...] Let us therefore brace ourselves to our duties, and to bear ourselves that, if the British Empire and its Commonwealth last for a thousand years, men will still say, “This was their finest hour.”⁶³

A good part of the speech was about the grim reality Britain was facing and the follies and mistakes they made in the past, but he encouraged the people to “think of the future and not of the past” because “if we open a quarrel between the past and the present, we shall find that we have lost the future.”⁶⁴ Churchill attempted to rekindle hope in people’s hearts by listing the British advantages when resisting the German aggression, including naval superiority over the English Channel and the ascendancy

⁶¹ Mawdsley, *World War II*, 124, 126.

⁶² Churchill, *His Complete Speeches*, vol. VI, 6233, 6236.

⁶³ *Ibid.*, 6238.

⁶⁴ Churchill, *His Complete Speeches*, vol. VI, 6232.

of the RAF Fighter Command over the *Luftwaffe*. Specifically, he emphasized the importance of counterstrike, “It is true that the German bomber force is superior in numbers to ours; but we have a very large bomber force also, which we shall use to strike at military targets in Germany without intermission.”⁶⁵

Small air raids against Britain proper begun in early June, but under the recommendation of the AOC-in-C of Fighter Command, Sir Hugh Dowding, the Battle of Britain officially commenced on 10 July 1940 when the *Luftwaffe* raids over the Channel coast intensified.⁶⁶ On 16 July, Hitler issued the Führer Directive 16 with a detailed plan to invade Britain, codenamed Operation Sea Lion. He declared: “Since England, despite its hopeless military position, still shows no sign of willingness to come to terms, I have decided to prepare a landing operation against England and if necessary to carry it out.”⁶⁷ The preliminary phase of the invasion was to morally and physically break the RAF so that it could not pose major threat to the German crossing.⁶⁸ Therefore, the priority of Bomber Command was to execute tactical bombing against hostile airfields, ports and shipping along the French coast as a part of the anti-invasion operations.

When there was no urgent need to contain enemy threat, the bombers were directed to attack targets of strategic importance, such as oil refineries and storage, communications, aircraft industries and power installations, a wider choice of targets

⁶⁵ Churchill, *His Complete Speeches*, vol. VI, 6236.

⁶⁶ Richard Overy, *The Battle of Britain: The Myth and the Reality* (New York: W. W. Norton, 2001), 67-68.

⁶⁷ Hans-Adolf Jacobsen and Arthur L. Smith Jr., *World War II: Policy and Strategy Selected Documents with Commentary* (Santa Barbara: ABC-Clio, 1979), 82.

⁶⁸ Norman Rich, *Hitler's War Aims: Ideology, the Nazi State, and Course of Expansion* (New York: W. W. Norton, 1973), 159.

and more tactical freedom.⁶⁹ Therefore, although oil targets were still on the top of the bombing list, the total tonnage dropped by bombers was widely distributed among different target systems. From 24 June to 27 August, Bomber Command released a grand total of 3131 tons of bombs on Italy, Germany and German occupied territories. 1248 tons were for the *Luftwaffe* plants and airfields; 246 tons were for docks and ports, and 598 tons were for German communications, sixty-seven percent of the total tonnage.⁷⁰ 678 tons were thrown against oil targets, 161 against chemicals and explosives, 142 against aluminum industry and 58 against power stations. Thirty-three percent of bombs were dedicated for strictly strategic targets, which was about half of the ones for tactical objectives.⁷¹ In a letter to FDR on 31 July, Churchill wrote “The air is holding well. We are hitting that man [Hitler] hard both in repelling attacks and in bombing Germany.”⁷²

Until mid-August, the *Luftwaffe* focused primarily attacking British shipments and ports along the coast of the English Channel at day, a period known as *Kanalkampf* (Channel Battle). At night, the Germans roamed over a large part of England and bombed as far as Cornwall and South Wales, but with relatively low intensity and damage. Their main aim was to probe the defensive shield and test how strong it was.⁷³ The results of these probing attacks convinced German commanders that the RAF could be defeated through a concentrated and sustained offensive to pave way for Operation Sea Lion. On 13 August, the *Adlertag* (Eagle Day), Göring

⁶⁹ Cox, *The Strategic Air War against Germany 1939-1945*, 28-29.

⁷⁰ *Ibid.*, 4.

⁷¹ *Ibid.*

⁷² Churchill, *Churchill and Roosevelt*, 57

⁷³ Overy, *The Battle of Britain*, 72-73.

ordered the *Luftwaffe* to annihilate the RAF in four days by relentless air raids. Bad weather, however, grounded much of his airplanes for the next few days, so the German assault on the entire RAF structure did not escalate until 18 August.⁷⁴ The *Luftwaffe* main targets at this stage were aircraft industries, airfields and radar stations. The British airfields suffered at least fifty-three major attacks, and three of them were rendered unserviceable for some time. For example, the Lympne Airfield's runway was hit by 400 bombs on 13 August alone and required 250 construction workers to repair.⁷⁵ According to a study prepared by the German Air Historical Branch, in August 1940, over one thousand separate attacks were made on the RAF and the aircraft industries.⁷⁶ The RAF Fighter Command was however proven to be much more resilient than the Germans anticipated. From the beginning of July to the end of August, the number of serviceable British fighters increased from 644 to 746 despite heavy attrition; the German strength decreased from 725 to 438 at the same period.⁷⁷ Owing to the shadow factories established since 1936 and the resourcefulness of Lord Beaverbrook, the British aircraft production fully surpassed that of the *Luftwaffe*. From July to August, Britain produced 972 fighters, which dwarfed the German 393 fighters.⁷⁸ Moreover, this aligned with Churchill's prediction that all British pilots would fall "on friendly soil and live to fight another day; whereas all the injured enemy machines and their complements will be total losses as far as the war is concerned."⁷⁹ Two hundred and twenty two new fighter pilots joined

⁷⁴ Overy, *The Battle of Britain*, 75.

⁷⁵ *Ibid.*, 75-77.

⁷⁶ *A Survey of German Air Operations 1939-1944*, 4.

⁷⁷ Richard Overy, *The Air War: 1939 – 1945* (New York: Stein and Day, 1980), 33.

⁷⁸ *Ibid.*

⁷⁹ Churchill, *His Complete Speeches*, vol. VI, 6236.

the RAF from June to August while the *Luftwaffe* lost 171.⁸⁰ The Germans later admitted “It was, however, not possible to achieve the hoped for mastery of the air over the south of England.”⁸¹

Despite the advantage, German bombing campaign still inflicted very heavy civilian casualties on England even before the Blitz began in early September. In July, when the attack was relatively light, 258 civilians were killed. On the Eagle Day, the *Luftwaffe* had 1317 operational bombers including 336 Stukas; over the course of August, their attacks caused the deaths of 1075 civilians, including 392 women and 136 children.⁸² When air raids against the RAF and its ground installations escalated, German bombers ventured further inland and bombs started dropping on the suburbs of London. On the night of 18 August, German bombs hit Croydon, Wimbledon and the Maldens. Four days later, German bombers discharged their ordnance over London proper for the first time.⁸³ These attacks against London enraged Churchill. His private secretary, John “Jock” Colville, wrote in the diary on 22 August, “There is a double sting about air-raids at night,” he continued, “I gather that at No. 10 the PM strode about the house, having been aroused by gunfire in North London, wearing his flowery dressing-gown and a tin hat.”⁸⁴ On the night of 24 August, a formation of German bombers were dispatched to attack aircraft industries and an oil depot east of London but lost their way due to navigational errors. One bomber accidentally flew to downtown London and dropped its bombs, which violated Hitler and Göring’s

⁸⁰ Overy, *The Battle of Britain*, 162.

⁸¹ *A Survey of German Air Operations 1939-1944*, 4.

⁸² *A Survey of German Air Operations 1939-1944*, 3; Overy, *The Battle of Britain*, 91.

⁸³ Overy, *The Battle of Britain*, 91-92.

⁸⁴ Churchill, *The Churchill War Papers*, vol. II, 707.

explicit order to avoid civilian targets.⁸⁵ The bombs damaged St. Giles's Church in Cripplegate, houses in Stepney, Finsbury, Tottenham and Bethnal Green.⁸⁶ Churchill personally telephoned Cyril Newall and expressed his anger, "Now that they have begun to molest the capital. I want you to hit them hard – and Berlin is the place to hit them."⁸⁷ The series of German raids against British conurbations motivated the War Cabinet to launch retaliatory bombings against the emblem of Nazi authority – Berlin.

On the night of 25 August, sixty-seven bombers, mostly Wellingtons and Hampdens, were sent to bomb military targets in Berlin, but the thick clouds over the German capital prevented some aircraft from locating their targets.⁸⁸ Some bombs destroyed a wooden summer house in the suburb of Rosenthal and injured two people; others fell on the *Stadtgüter* farms south of the city, nobody was killed. The German flak tore the sky open and three Hampdens were lost, while three more ran out of oil and crashed in the sea when returning. In addition, twenty-four Whitleys and Wellingtons bombed Bremen, Cologne and Hamm at the same night.⁸⁹ On the night of 28 August, seventy-nine Blenheims, Hampdens, Wellingtons and Whitleys were again sent to bomb targets in Germany and France. The raid on Berlin targets

⁸⁵ Erik Larson, *The Splendid and the Vile: A Saga of Churchill, Family, and Defiance During the Blitz* (New York: Crown, 2020), 187-188.

⁸⁶ Larson, *The Splendid and the Vile*, 188.

⁸⁷ John Colville, *The Fringes of Power: 10 Downing Street Diaries, 1939-1955* (New York: W. W. Norton, 1985), 230.

⁸⁸ The National Archives of the UK (TNA): War Cabinet 324 (40) on August 26, 1940, CAB 65/8/46, 215; Middlebrook, *The Bomber Command War Diaries*, 76-77. The number of bombers despatched against Berlin on the night of 25 August varies according to different sources. Cabinet records simply stated, "a large number of aircraft." Bomber Command records showed "103 aircraft were despatched on operations" and about half of those targeted Berlin, 36 were sent to attack other targets. Sir Colville claimed 89 bombers were sent to attack Berlin in his diary.

⁸⁹ Middlebrook, *The Bomber Command War Diaries*, 77. According to a contemporary journalist, the Berlin proper was also damaged by the British bombers.

was described “most successful” by Newall.⁹⁰ In reality, the British bombers killed ten Berliners, including two women and four men “watching the pyrotechnic battle from door way.” The physical damage on the capital was negligible.⁹¹ From that day onwards, Berlin was included in regular routine raids, and targets were mostly power stations and railway junctions.⁹² On 2 September, Göring ordered the systemic destruction of targets in London as an attempt to reduce British military capability and shatter its people’s morale to resist, an application of Douhet’s precepts in their purest form.⁹³ Two days later, Hitler announced the main weight of German raids would shift to British cities, and London was signaled out as the chief target. Thus began the infamous Blitz on 7 September that did not end until 10 May 1941. The worst period was from early September to early November when London was bombed fifty-six out of fifty-seven consecutive nights by 200 bombers per night on average.⁹⁴ Over 13,000 tons of explosives and one million incendiaries were dropped on the British capital that resulted multiple conflagrations and 33,000 civilian casualties.⁹⁵

Hitler proclaimed he was incensed by the RAF raids on Berlin and reserved the right of retaliation against “military terrorists,” so the Blitz was considered as legitimate attacks against targets in British cities essential for war. The shift of strategy was driven by vengeance and worked in the British favor because the

⁹⁰ Middlebrook, *The Bomber Command War Diaries*, 78; The National Archives of the UK (TNA): War Cabinet 326 (40) on August 29, 1940, CAB 65/8/48, 223.

⁹¹ Overy, *The Battle of Britain*, 91.

⁹² Middlebrook, *The Bomber Command War Diaries*, 78.

⁹³ *Ibid.*, 87.

⁹⁴ Peter Stansky, *The First Day of the Blitz: September 7, 1940* (New Haven: Yale University Press, 2007), 28.

⁹⁵ Richards, *Royal Air Force: 1939-1945, vol I*, 206.

concentration of bombing urban centres gave Fighter Command precious respite to revive and inflict insupportable losses on the *Luftwaffe*, thus laying the foundation of British victory.⁹⁶ Still, when reading Jock's diary entry of 26 August, where he wrote "London has been bombed – by a single aircraft on Saturday night – and in retaliation we sent eighty-nine bombers over Berlin last night,"⁹⁷ one might feel that Churchill's decision to retaliate was triggered by only a few strays, and he overreacted like a proponent of war. The other possibility was that the accidental German attack on London "eased his growing frustration at not being able to go on offensive and bring the war to Germany itself" because it gave him the pretext to finally bomb Berlin.⁹⁸ Regardless, Churchill's decision provided Hitler an excellent excuse to rain havoc over British populace, causing lots of civilian casualties, and in spite of the British victory, Churchill was blameworthy.⁹⁹

This plausible argument was in fact flawed in several ways. First, under the strain of war, the victims of German bombing did not know if they were strays, or if more German sorties would come especially given the previous destruction of Rotterdam and the bombing of other British cities.¹⁰⁰ Second, Churchill did not make an impulsive decision to send his bombers to Berlin under the logic of terror against terror. The bombing against London had in fact started almost three weeks before Hitler's announcement to target British cities on 4 September. On 25 August, while

⁹⁶ Overy, *The Battle of Britain*, 86, 88.

⁹⁷ Colville, *The Fringes of Power*, 229.

⁹⁸ Larson, *The Splendid and the Vile*, 189.

⁹⁹ Zita Ballinger Fletcher and Claire Barrett, "No, the London Blitz wasn't Started by Accident," HistoryNet, last modified April 1, 2023, https://www.historynet.com/no-the-london-blitz-wasnt-started-by-accident/?utm_source=chatgpt.com.

¹⁰⁰ Larson, *The Splendid and the Vile*, 188.

British heavies attacking Berlin, German bombs fell on Banstead, Uxbridge, Lewisham, Croydon, Harrow and Hayes. During the second raid on 28 August, Chigwell, Crayford, Finchley, Hendon, Ilford, Mill Hill, Old Kent Road, Southgate, St. Pancras, Wembley and Wood Green in London area were all attacked by the *Luftwaffe*, and the capital was under red warning for seven hours and five minutes.¹⁰¹ Therefore, British operations were not incited by one accidental attack on 24 August, they were in fact reprisals against many attacks against British civilians, intentional or not, since the Battle of Britain broke out.

Most importantly, Britain occupied a delicate position in Hitler's grand strategy. Initially, the *Führer* considered the British as Nordic cousins, and he was anxious to accord the British Empire as a global power, providing it would not hinder Hitler's real ambition to destroy Bolshevism and gain *lebensraum* in the east. The defeat of Anglo-French Alliance during the Battle of France boosted the *Führer's* confidence that Britain had learnt a heavy lesson and would join the German cause of world domination.¹⁰² Nevertheless, against many odds, Churchill thwarted his plan and was determined to "go on to the end"¹⁰³, which posed a direct threat for Hitler's master plan to invade the Soviet Union. Therefore, the aim of Operation Sea Lion was to eliminate Britain as a base to carry war against the Third Reich.¹⁰⁴ Hitler could achieve this goal by either occupying the islands completely or make Britain sue for peace. When the air raids in July and August failed to neutralize the RAF for the subsequent landing operations, Hitler switched his strategy to deliberately attack

¹⁰¹ Overy, *The Battle of Britain*, 91-92.

¹⁰² Rich, *Hitler's War Aims*, 157.

¹⁰³ Churchill, *His Complete Speeches*, vol. VI, 6231.

¹⁰⁴ Rich, *Hitler's War Aims*, 159.

British cities of political-economic importance, such as the port cities Plymouth and Liverpool, and certainly the centre of the Empire, London.¹⁰⁵ The hope was to weaken its economic base to resist by destroying its military supplies and production centres, a similar strategy the War Cabinet was pursuing simultaneously. Politically, the German leadership hoped to prove to the British public the war was unbearable so that they would soon press the Churchill government to accept the peace offer refused that early summer.¹⁰⁶ Southampton, Coventry, Bristol, Liverpool, Birmingham and many other industrial cities fell victim because of this policy. Joseph Goebbels, the Nazi Minister of Propaganda, wrote in his diary later in the year after reading damaging report on Southampton, “The city is a single ruin [...] and so it must go on until England is on her knees, begging for peace.”¹⁰⁷ For these reasons, the moment Hitler felt the *Luftwaffe* could not gain and retain air superiority over the RAF, the Blitz against London and other British cities would come for certain, with or without the British reprisals against Berlin.

The natural question to ask then, is what did the bombing of Berlin achieve? On 20 August, Churchill addressed the House of Commons, “One of the ways to bring this war to a speedy end is to convince the enemy, not by words, but by deeds, that we have both the will and the means, not only to go on indefinitely, but to strike heavy and unexpected blows.”¹⁰⁸ Militarily speaking, the two bombings against Berlin at the end of August were hardly successful due to the minimum physical damage they inflicted on the German capital. The German joke at that time was “Now

¹⁰⁵ *A Survey of German Air Operations 1939-1944*, 4.

¹⁰⁶ Overy, *The Battle of Britain*, 87.

¹⁰⁷ *Ibid.*, 109.

¹⁰⁸ Churchill, *His Complete Speeches*, vol. VI, 6266.

they [British bombers] are trying to starve us out” after seeing the craters on *Stadtgüter* farms.¹⁰⁹ Psychologically and politically, however, it was a different story.

William Shirer, an American correspondent who was residing in Berlin, wrote on 26 August:

We had our first big air-raid of the war last night. [...] The Berliners were stunned. They did not think it could happen, Göring assured them it couldn't. He boasted that no enemy planes could ever break through the outer and inner rings of the capital's anti-aircraft defence. [...] They believed him. Their disillusionment today therefore is all the greater. [...] from all reports there was a pell-mell, frightened rush to the cellars by the five million people who live in this town.¹¹⁰

Ironically, Shirer was having an argument with a censor from the Ministry of Propaganda a few minutes before who just assured him it was impossible to bomb Berlin because there was too much flak around the capital.¹¹¹ In addition to the summer house destroyed in the suburb, three streets in the city were roped off, according to Shirer, to prevent people from seeing the damage caused by high explosives.¹¹² If the first raid could be portrayed as an accident or bad luck, then the second raid made the Berliners realize, for the first time, the war has been brought to home, brought to them. The populace was shocked by the fact that British bombers could reach the centre of the Reich without trouble twice in a row.¹¹³ Göring was humiliated for not being able to uphold his promise, and Goebbels' tactics to handle the crises revealed the Nazi leadership's diminishing confidence in the Reich's air defense.

¹⁰⁹ Middlebrook, *The Bomber Command War Diaries*, 77.

¹¹⁰ William L. Shirer, *Berlin Diary: The Journal of a Foreign Correspondent, 1934-41* (New York: Alfred A. Knopf, 1941), 486-487.

¹¹¹ Shirer, *Berlin Diary*, 487.

¹¹² *Ibid.*, 489.

¹¹³ *Ibid.*, 490.

When the first British raid happened, Goebbels tried to play the story down. He allowed the local newspapers to only publish a six-line communiqué about it, emphasizing the wooden hut the bombers destroyed without mentioning the damage (if there was any) caused on the city proper.¹¹⁴ The aim was still assuring the Berliners the Reich was able to protect them, and this raid was nothing but an accident that caused no major damage. Similar raids would not happen again. When the second raid came only four days later, Goebbels realized people might question the discrepancies between what they were told and what actually happened. More importantly, the Nazis were no longer confident the capital defense could stop further British bombers from reaching downtown Berlin. According to Shirer's diary:

The concentration of anti-aircraft fire was the greatest I've ever witnessed. It provided a magnificent, a terrible sight. And it was strangely ineffective. Not a plane was brought down; not one was even picked up by the searchlights, which flashed back and forth frantically across the skies throughout the night.¹¹⁵

The Bomber Command accounts showed three Hampdens were lost but did not specify if they were lost over downtown Berlin. Regardless, the fact remained that large formations of British bombers came and flew away, defiled the Nazi pride without sustaining heavy losses. The political symbolism these raids carried was a direct challenge to the Nazi authority. Unlike other forms of military operation, strategic bombing was always a public one which could not be concealed by the government no matter how strict the media censorship was. Every person in the urban centre could see the hostile airplanes approaching, every person could hear the sharp air-raid siren. Continued efforts to hide or downplay the story would not only be futile

¹¹⁴ Shirer, *Berlin Diary*, 489.

¹¹⁵ *Ibid.*, 486.

but also hurt the government's credibility in the public eyes. Therefore, Goebbels switched his strategy from hiding the truth to manipulating the truth. Unaware that the *Luftwaffe* was bombing London, the German people were fed the story that the RAF was tasked to "massacre the population of Berlin" under the "personal orders of Churchill."¹¹⁶ The Nazi government portrayed itself as a hapless victim for the impending "cowardly British attack," allegedly beyond its capacity to prevent, thereby seeking to manage public anxiety and discourage critical questioning.¹¹⁷ The other reason, of course, was to provide a moral high ground for the upcoming Blitz against British cities.

4.3 Road to Area Bombing

Two days before the Battle of Britain officially began, Churchill wrote to Lord Beaverbrook in a secret minute, envisioning a way to secure victory:

But when I look round to see how we can win the war, I see that there is only one sure path. We have no continental army which can defeat the German military power. The blockade is broken and Hitler has Asia and probably Africa to draw from. Should he be repulsed here or not try invasion, he will recoil eastward, and we have nothing to stop him. But there is one thing that will bring him back and bring him down, and that is an absolutely devastating, exterminating attack by very heavy bombers from this country upon the Nazi homeland. We must be able to overwhelm them by this means, without which I do not see a way through. We cannot accept any lower aim than air mastery.¹¹⁸

To achieve this "absolutely devastating, exterminating attack," however, Churchill must change the current British bombing policy. On 31 May 1940, sixteen days after the bombing of Ruhr, the Chiefs of Staff Committee proposed to officially amend the previous bombing policy that aimed to avoid unrestricted air warfare "even in

¹¹⁶ Shirer, *Berlin Diary*, 491.

¹¹⁷ *Ibid.*

¹¹⁸ Churchill, *The Churchill War Papers*, vol. II, 492.

retaliation for indiscriminate action by an enemy.”¹¹⁹ According to the previous policy, bombing was restricted more severely than was required by a reasonable interpretation of existing international law, and only “purely military objectives in the narrowest sense of the word” might be bombed.¹²⁰ The purely military targets included warships, auxiliaries attendant on the fleet, dockyards, army units, fortifications, coast defense works, camps and military aerodromes, troop transports, roads and canals, but not trains without clear military character. Military stores but not factories, fuel installations within the confines of military establishments, but not bulk stocks of fuel outside such establishments.¹²¹ In addition, some general principles of discretion were applied when attacking the military targets. First, intentional raids against civilians were illegal. Second, bombing crews must identify and distinguish the objectives in question. Third, air raids must be carried out within reasonable expectations that the damage would be confined to the target area without hurting the neighborhood through negligence.¹²² In practice, a vital military target, such as an anti-aircraft gun or a detachment of troops in a populous area, was still a forbidden zone for bombers. In other words, the British government aimed to conduct precision bombing risking absolutely no civilian lives.

The revised policy lessened the restrictions a little. Regarding the collateral civilian casualties, for example, the new policy prescribed that an attack must be made with reasonable care to “avoid undue loss of civil life in the vicinity of the

¹¹⁹ The National Archives of the UK (TNA): War Cabinet: Bombardment Policy, on 31th May, 1940, CAB 66/8/16, 79-80.

¹²⁰ TNA: CAB 66/8/16, 80.

¹²¹ *Ibid.*

¹²² *Ibid.*, 81.

target,” in contrast with the earlier formulation: “it is clearly illegal to bombard a populated area in the hope of hitting a legitimate target.”¹²³ In other words, the War Cabinet agreed to launch reasonable precision bombing and accept a certain number of civilian casualties. Factories, military stores, depots outside military establishments and civilian and military aerodromes were all included in the updated bombing list. Nevertheless, identifying targets before attacking remained unchanged, and the pilots must bring their bombs back if they failed to find their primary objectives.¹²⁴ Churchill was still not happy and suggested that “in view of the indiscriminate bombing practised by the Germans,” Bomber Command must in the near future consider “a temporary but marked departure from our policy of bombing only military targets.”¹²⁵ After the Blitz had begun, the RAF still stuck to the military targets, but the bomber pilots were instructed to unload their bombs on secondary targets if they failed to identify the primary ones.¹²⁶

In September 1940, when German bombers were howling over the British cities and raining death, British decision makers made the following recommendations for the future strategy. First, Britain was still on defensive, and the efforts must be devoted primarily to build up strength. Second, the foundation of British strategy should be the wearing down of the Third Reich by an “ever-increasing force of economic pressure,” including a precise strike on its oil supplies, industries and communications by bombers.¹²⁷ As Churchill earlier advocated “Even

¹²³ TNA: CAB 66/8/16, 81, 82.

¹²⁴ TNA: CAB 66/8/16, 82; TNA: CAB 65/8/46, 215.

¹²⁵ TNA: CAB 65/8/48, 223.

¹²⁶ Cox, *The Strategic Air War against Germany 1939-1945*, 4.

¹²⁷ The National Archives of the UK (TNA): War Cabinet: Future Strategy, on September 4, 1940, CAB 66/11/42, 176.

if the Nazi legions stood triumphant [...] it would profit him [Hitler] nothing if at the same time the entire economic and scientific apparatus of German war power lay shattered and pulverized at home.”¹²⁸ Therefore, Bomber Command must develop as fast as possible the scale and intensity of bombing attacks. The target set for the RAF expansion program for Spring 1942 was quite ambitious. For the metropolitan bomber force, the RAF planned to add one hundred heavy bomber squadrons plus twenty-five medium bomber squadrons, including 1600 first line heavies and 400 mediums. For the oversea force, the program aimed to add three heavy squadrons and twenty-six medium squadrons, including 48 first line heavies and 416 first line mediums.¹²⁹ In reality, according to the statistics from the Ministry of Aircraft Production after the war, the British produced 647 heavy bombers and 4106 medium bombers from September 1940 to March 1942.¹³⁰ Within these bombers, on January 1941, 176 Blenheims, 111 Hampdens, 92 Whitleys and 229 Wellingtons were available for operations. One year later, 58 Blenheims, 161 Hampdens, 89 Whitleys and 353 Wellingtons remained in operation, plus 38 Short Stirling and 50 Halifax new four engine bombers. Obviously, the obsolete Whitleys and Blenheims were gradually being phased out, and they would leave service in July 1942 and January 1943 respectively.¹³¹ The introduction of four-engine true heavy bombers marked the trend that favored heavier, longer-range aircraft which would eventually lead to the advent of Avro Lancaster, the most effective British bomber in World War II.¹³² By July

¹²⁸ Churchill, *His Complete Speeches*, vol. VI, 6266.

¹²⁹ TNA: CAB 66/11/42, 177.

¹³⁰ Cox, *The Strategic Air War against Germany 1939-1945*, 36.

¹³¹ *Ibid.*, 41.

¹³² Biddle, *Rhetoric and Reality in Air Warfare*, 113.

1942, the RAF arsenal had 107 Lancasters. These figures increased over 12 times to 1320 when the war in Europe ended in May 1945.

From September to October 1940, when the Blitz was at its height, Bomber Command dropped 4000 tons of bombs on enemy targets, mostly German. In November, when the frequency of German raids started to decrease, the RAF maintained attacks on German industry and armament whenever weather conditions allowed. For example, from 7 to 14 November, Bomber Command flew 481 night and 44 daytime sorties attacking oil plants, iron and steel industries, communication targets and submarine bases in Germany. The attacks on synthetic oil plants in Gelsenkirchen resulted huge explosions and series of fire visible for thirty miles.¹³³ In addition, Bomber Command attacked military targets in Berlin, Mannheim, Dusseldorf, Unna, Cologne, and Hamburg.¹³⁴ From November to December, another 2300 tons of bombs were thrown on the enemy targets.¹³⁵

Mussolini attempted to invade Greece in October 1940 but was stalled, and a Greek counteroffensive pushed Italian forces back into Albania. Germany invaded Yugoslavia and Greece in April 1941 to aid Mussolini with tremendous success. Hungary, Romania and Bulgaria successively joined the Axis Powers. By early June 1941, all Balkan states, including Yugoslavia and Greece were under the Axis control.¹³⁶ The Axis occupation of the Balkan region struck a heavy blow to the

¹³³ The National Archives of the UK (TNA): War Cabinet: Weekly Résumé (No. 63) of the Naval, Military and Air Situation from 12 noon November 7th to 12 noon November 14th, 1940 on November 14, 1940, CAB 66/13/25, 135.

¹³⁴ *Ibid.*, 141.

¹³⁵ Davis, *Bombing the European Axis Powers*, Appendix: Bomber Command Losses and Tonnage by Month, September 1939 – May 1941.

¹³⁶ Mawdsley, *World War II*, 139-140.

British efforts to undermine German war industries via strategic bombing, especially the oil industry. Hitler had long feared a British air or commando attack on the precious Romanian oil fields that the German war machine relied on. The Italian invasion of Greece gave him an excuse to heavily reinforce Romania, and in early 1941, over half million German troops arrived in the country, thus securing direct Nazi control over Romanian oil fields.¹³⁷ Greece might become a British airbase, which was only five hundred kilometers away from the Romanian oil refineries, but the German occupation of Greece thwarted the British plan to bomb the oil targets.¹³⁸ Therefore, when the War Cabinet reassessed the situation in June 1941, they regretfully discovered that the German oil position had considerably improved despite the year-long air campaign against its oil targets.¹³⁹ From 3 September 1939 to 8 July 1941, the RAF Bomber Command dropped a grand total of 31,569 tons of bombs. About eight percent of the bombs were thrown against oil plants and equipment.¹⁴⁰ Given the fact the RAF mostly engaged in leaflet raids from September 1939 to April 1940, almost all of the bomb tonnage above was from May 1940 to July 1941.

On 9 July 1941, seventeen days after the commencement of Operation Barbarossa, British Air Ministry issued a new directive to Bomber Command, switching the bombing priority from oil targets to German railway networks. The bomber crews received the specific instructions to dislocate the German transportation system. Nevertheless, these attacks were restricted to the nine primary and six secondary railway centres in the Ruhr and Rhineland. According to a railway

¹³⁷ Rich, *Hitler's War Aims*, 190.

¹³⁸ *Ibid.*, 196-197.

¹³⁹ Cox, *The Strategic Air War against Germany 1939-1945*, 5.

¹⁴⁰ *Ibid.*, 56.

expert, 15 tons of bombs could paralyse any railway hub and disable its transporting function for at least a week. The resulting disruption to other parts of the German transportation system could last for weeks or even months.¹⁴¹ Therefore, the goal at that time was to isolate the Ruhr and Rhineland industrial centres from the rest of Germany and German occupied territories thus undermining their operations in other theatres.¹⁴² This was the RAF's last attempt to bomb military targets before fully adopting area bombing against German urban centres on 14 February 1942. During this period, Bomber Command dropped 21,575 tons of bombs, about six thousand tons were against railway centres, bridges, viaducts and other transportation targets.¹⁴³ The result these bombs produced, in the words of the BBSU, was however "disappointing in the extreme."¹⁴⁴

The main problems associated with British strategic bombing since May 1940 were its navigational and accuracy issues, especially for night bombing. As Overy concisely summarized:

Bombing by night, [...] though safer for the crews, could only be attempted when it was clear and moonlit. Without the moon it was difficult to locate the area of the target, let alone the target itself, and without the night sky navigation by the stars was impossible. There were no radio navigational aids, no radar, not even effective bomb-sights.¹⁴⁵

The other problem was that until 1941, Bomber Command had no effective method to determine the rate of success of bombing operations other than the crews' words and air reconnaissance photos during or after the attack, which were not very reliable. The

¹⁴¹ Cox, *The Strategic Air War against Germany 1939-1945*, 5.

¹⁴² *Ibid.*

¹⁴³ *Ibid.*, 56

¹⁴⁴ *Ibid.*, 6.

¹⁴⁵ Overy, *Why the Allies Won*, 108.

photos taken during the raids showed few signs of direct hits, but the great fire the bombs ignited was regularly reported.¹⁴⁶ Under these circumstances, Professor Lindemann recommended an independent enquiry to address the accuracy concern in early August. A member of the War Cabinet Secretariat, David Bensusan-Butt undertook this task. Although not an expert on photograph or bomb damage, his Butt Report became a turning point in shaping the British bombing policy.¹⁴⁷ After examining 633 photographs taken during one hundred raids on twenty-eight different targets in forty-eight nights from 2 June to 25 July 1941,¹⁴⁸ Mr. Butt drew the following conclusions:

Of those aircraft recorded as attacking their target, only one in three got within five miles. [...] Over Germany as a whole, the proportion was one in four; over the Ruhr, it was only one in ten. In the full moon, the proportion was two in five; in the new moon it was only one in fifteen. In the absence of haze, the proportion is over one half, whereas over thick haze it is only one in fifteen. An increase in the intensity of A.A fire reduces the number of aircraft getting within 5 miles of their target in the ratio three to two. All these figures relate only to aircraft recorded as attacking the target; the proportion of the total sorties which reached within five miles is less by one third.¹⁴⁹

According to Butt's standard, a bomb dropped within five miles radius, or seventy-five square miles surrounding the aiming point was counted as a hit.¹⁵⁰ To draw an analogy, a bomb aimed at the Parliament in London would be counted as a hit if it has fallen on Streatham or Hammersmith Broadway, which was indeed a very lenient

¹⁴⁶ Norman Longmate, *The Bombers: The RAF Offensive Against Germany, 1939-1945* (London: Hutchinson, 1983), 120.

¹⁴⁷ Longmate, *The Bombers*, 120; The National Archives of the UK (TNA): Offices of the War Cabinet on 18th August, 1941, AIR 14/1218, 1.

¹⁴⁸ Longmate, *The Bombers*, 120; Paul David Theo Stewart, "Medmenham: Anglo-American Photographic Intelligence in the Second World War," PhD diss., (University of Northampton, 2019), 121.

¹⁴⁹ TNA: AIR 14/1218, 1.

¹⁵⁰ *Ibid.*

standard.¹⁵¹ Even with such a permissive standard, however, only one third bombers could reach within the five mile radius on average under the most ideal situation, namely clear night sky with a full moon and low intensity anti-aircraft fire. For the Ruhr, where Bomber Command aimed to concentrate their attack since May 1940, only ten percent of the attacking bombers could fly in the five-mile radius. If including the entire sorties dispatched, the ratio would drop to one over thirty. By this calculation, out of the one hundred bombers sent to bomb Ruhr on 15 May 1940, only three to four would deliver their bombs to the target area. Sir Richard Peirse, head of Bomber Command, left a pencil annotation on the Report: “I don’t think at this rate we could have hoped to produce the damage which is known to have been achieved.”¹⁵²

From 9 to 12 August 1941, Churchill and Roosevelt met each other for the first time on-board ships in Placentia Bay, Newfoundland. This meeting led to the release of Atlantic Charter, a joint statement between the US and British Empire regarding the post war settlement, on 14 August.¹⁵³ After reading the Butt Report released four days later, Churchill was shocked by the revelation, and directed Sir Charles Portal, then CAS, that the Butt Report was “a very serious paper” which “seemed to require your most urgent attention” and “proposals for action.”¹⁵⁴ Churchill once declared on 20 August 1940 that “this process of bombing the military industries and communications of Germany [...] will continue upon an ever-increasing scale until the end of the war, and may in another year attain dimensions

¹⁵¹ Longmate, *The Bombers*, 121.

¹⁵² TNA: AIR 14/1218, 1; Webster and Frankland, *The Strategic Air Offensive Against Germany*, 179.

¹⁵³ Churchill, *Churchill and Roosevelt*, 227-228.

¹⁵⁴ Longmate, *The Bombers*, 121.

hitherto undreamed of.”¹⁵⁵ During the cabinet meeting on 19 August 1941, exactly one year from his statement, facing the disappointing results of the bombing campaign and high casualty rate, the War cabinet concurred that bombing attacks shall not be pressed too hard when the weather condition was not ideal, and the weight of attack shall be directed to less heavily defended areas.¹⁵⁶ This was an effort to conserve the bombing force when the British strategists were no longer confident about the positive results it might produce. During the night raid against Berlin on 7 November 1941, Bomber Command sent 169 aircraft, and twenty-one were lost. Churchill wrote to Sinclair and Portal, asserted “We cannot afford losses on that scale [...] Losses which are acceptable in battle or for some decisive military objective ought not to be incurred merely as a matter of routine.”¹⁵⁷ In mid-November, under Churchill’s repeated requests, the War Cabinet again ruled to conserve the bomber force until spring 1942 due to high attrition rate and unimpressive results. Berlin, for example, would not be bombed until January 1943.¹⁵⁸ An alternative bombing strategy must be found.

In fact, as early as July 1941, when Mr. Butt had yet to receive his mission to assess the bombing accuracy rate, senior staff of the RAF and Bomber Command recognized the challenging nature of strategic bombing at night. The July bombing directive was a compromise between the aim to destroy German war making capacity and technical restraints all bombers were facing, a prelude to area bombing. The

¹⁵⁵ Churchill, *His Complete Speeches*, vol. VI, 6266.

¹⁵⁶ Winston S. Churchill, *The Churchill War Papers*, vol. III *The Ever-Widening War: 1941*, ed. Martin Gilbert (New York: W. W. Norton & Company, 2001), 1082.

¹⁵⁷ Churchill, *The Churchill War Papers*, vol. III, 1436.

¹⁵⁸ Churchill, *The Churchill War Papers*, vol. III, 1436; Cox, *The Strategic Air War against Germany 1939-1945*, 6.

railway centres were ideal target systems not only because they had potential to isolate industrial zones from rest of the country, but also because they were usually inside populous areas, surrounded by workers' houses and dwellings. The calculation was that, in the short summer nights, the window left for bombers to operate was short, and the difficulty to locate and precisely hit a target in darkness was high. Instead of attacking single isolated industrial targets, a wiser option was to attack an area contained many targets, so even if the bombers missed their primary targets, there would be a much better chance to find and hit secondary targets, which were usually workers and their lodgings.¹⁵⁹ The July directive clearly stated the goal of British bombing forces, in addition to dislocate the German transportation system, was "destroying the morale of civilian population as a whole and of the industrial workers in particular."¹⁶⁰ Although the attack was restricted to Ruhr and Rhineland at that time, the view to weaken the enemy morale implied the destruction of large population centres was inherently more efficient and important than striking specific industrial objectives. This assumption was about to dominate the strategy of Bomber Command from early 1942.

Many air officers were unwilling to abandon the objective of striking tangible and valuable industrial targets in favour of the "diffuse concept of the enemy's morale."¹⁶¹ Nevertheless, voices were coming from inside and outside the Air Ministry that the weakening of enemy morale by the destruction of essential services in cities and towns, would be more efficient to lower the industrial output than the

¹⁵⁹ Cox, *The Strategic Air War against Germany 1939-1945*, 5.

¹⁶⁰ *Ibid.*

¹⁶¹ *Ibid.*

destruction of specific factories.¹⁶² Under this guidance, British bombers started to more frequently attack towns and cities. On 10 July 1941, for instance, the RAF bombed the city of Aachen in Rhineland, an operation praised as “one of the most successful attacks yet made upon Germany.”¹⁶³ Unlike previous raids, the bombs were dropped on downtown Aachen, affecting the principal municipal buildings, the business districts and a shopping centre, none of which could be considered military or industrial targets. The damage was however extensive, as the bombs caused conflagrations that covered thirty percent of the city, excluding suburbs. The fire burnt down the warehouses, goods stations and gas works, and caused the rail transportation to the city to be delayed for two hours. The raid reportedly killed 830 people, mostly civilians.¹⁶⁴ The effect of this bombing was very similar with the Blitz against British cities, where the British strategists undoubtedly learnt their lessons because it was relatively efficient and easy to carry out.¹⁶⁵ This was seven months before the RAF officially switched to area bombing against German cities.

Several major events occurred in early 1942 that revolutionized the British strategic air offensive against Nazi Germany. On 14 February 1942, Bomber Command received a new directive to replace the July directive, nominating industrial cities in Ruhr Rhineland as primary bombing targets.¹⁶⁶ Eight days later, Arthur Harris replaced Richard Peirse as AOC in C for Bomber Command, thus beginning his journey to rain havoc on German cities as a fierce advocate of area

¹⁶² Cox, *The Strategic Air War against Germany 1939-1945*, 5.

¹⁶³ The National Archives of the UK (TNA): War Cabinet: Weekly Résumé (No. 99) of the Naval, Military and Air Situation from 12 noon July 17th to 12 noon July 24th, 1941 on July 24, 1941, CAB 66/18/2, 14.

¹⁶⁴ TNA: CAB 66/18/2, 14.

¹⁶⁵ Cox, *The Strategic Air War against Germany 1939-1945*, 5.

¹⁶⁶ *Ibid.*, 6.

bombing.¹⁶⁷ In March, Avro Lancaster Heavy Bombers executed the first bombing task and were ready to carry out more missions given by Bomber Harris.¹⁶⁸

Finally, Major General Carl Spaatz arrived in Britain in early February 1942 as the head of American Army Airforce in Britain (later known as the Eighth Air Force). The RAF wished the US to join its night bombing campaign as a junior partner, but the Americans, according to a report of British Air Staff stationed in Washington, were “very firmly convinced of the inadequacy of the night bombing and consequently of the need to intensify the day bombing effort.”¹⁶⁹ The USAAF initially placed strong faith in daylight, high-altitude precision bombing without fighter escort. This confidence was rooted in the Norden Mark XV bombsight of 1933 which claimed the capability to drop ordnance into a “pickle barrel” from high altitude.¹⁷⁰ In hindsight, however, the Americans would face many of the same operational issues as the British despite investing heavily in advanced bombsight technology in the 1930s. Although the bombsight performed well in controlled test environments in the United States, it proved far less reliable in Europe. Pervasive cloud cover over Northern Europe, formidable German interceptors and intense flak fire significantly increased casualties and reduced bombing accuracy. After repeated failures, the Americans were increasingly forced to divert their bombers to broader area targets in 1943. Different from the RAF though, the USAAF leaders were determined to maintain daylight operations. This eventually developed into a

¹⁶⁷ Biddle, *Rhetoric and Reality in Air Warfare*, 197.

¹⁶⁸ Mason, *The British Bomber Since 1914*, 344.

¹⁶⁹ Biddle, *Rhetoric and Reality in Air Warfare*, 209. This report was dated February 19, 1942, only 5 days after the RAF switched its bombing priority to German urban centres.

¹⁷⁰ *Ibid.*, 160-161, 212. The service ceiling of B-17 Flying Fortress was about 12,000 meters. To compare, Whitley could climb to about 5400 meters, Lancaster 6100 meters.

complementary system in which Nazi Germany was bombed by the American bombers during the day and by the British bombers at night, later known as the Combined Bomber Offensive in 1943.¹⁷¹ Along with ground and naval operations, bombers would play an increasingly important role and ultimately change the face of the war that Winston Churchill had hoped for a long time. This, however, was a different story.

Overall, the performance of the RAF Bomber Command from September 1939 to the end of 1941 was very disappointing to British strategists. This conclusion was supported not only by the British sources but also corroborated by the German sources. According to German historian Jörg Friedrich, the sudden appearance of British bombers over German industrial cities in May 1940 shocked the local population, and “anxiety was the greatest damage.”¹⁷² This indicated that psychological impact caused by Bomber Command, though difficult to quantify, exceeded its physical destruction in 1940. In fact, even in the spring of 1942, British bombers could cause very limited damage to German cities. For instance, on April 17, 1942, twelve bombers were sent to attack Augsburg. Four Lancasters were shot down by German fighters near Paris, the rest reached Augsburg and caused 2.4 million marks worth of damages. In addition, the air raid delayed the delivery of some U-boat engines. As Friedrich rightly asserted, operations like this “was not how Germany lost the war.”¹⁷³ Adam Tooze was a historian partly raised in Germany, and his work *The Wages of Destruction*, an influential monograph about the making and collapse of the

¹⁷¹ Biddle, *Rhetoric and Reality in Air Warfare*, 223-224.

¹⁷² Jörg Friedrich, *The Fire: The Bombing of Germany*, trans. Allison Brown (New York: Columbia University Press, 2006), 173-174.

¹⁷³ Friedrich, *The Fire*, 279.

Nazi economy, used extensive German archival sources. He argued that although the potential threat of British strategic bombing had bulked large in German strategic thinking since 1940, these bombings were, however, “remarkably easy to counter” until early 1943.¹⁷⁴ The RAF simply did not have sufficient heavy bombers nor the technology to inflict sustained damage on the Nazi homefront in the early half of the Second World War.¹⁷⁵ Albert Speer contended that the RAF was not hitting the right target in Ruhr until 1943.¹⁷⁶

It is important to note the lack of German archival sources assessing damage inflicted by the British bombers from 1939 to 1941, even in the works by German scholars. There were two possible reasons for this absence. The first one, as Friedrich claimed, was that about half of German archival records were relocated due to the impact of conflagrations caused by the Allied bombing campaign. The other half remained in the original locations, but eighty percent of them were burnt.¹⁷⁷

Therefore, the lack of German archival sources could simply be because many of the fragile materials were lost in the war. Or, a more probable reason was that the early strategic bombing only inflicted negligible damage to Germany, in which case there were not many records to begin with. In other words, the absence of damage reports demonstrates the minimal damage the Germans suffered from the RAF bombers in the early Second World War. At least, they did not attract enough researchers’ attention to be digitized, translated, and made available online. Indeed, among the

¹⁷⁴ Tooze, *The Wages of Destruction*, 596-597.

¹⁷⁵ *Ibid.*

¹⁷⁶ *Ibid.* 597. Tooze cited this from the Federal Archives, Bundesarchiv Lichterfelde Branch, BAL R3/1737, 23 June 1943.

¹⁷⁷ Friedrich, *The Fire*, 474.

captured German documents, the earliest record about bombing damage to Germany was from 1942. Many more damage reports were available from 1943, 1944 and 1945.¹⁷⁸ According to the *Reports of Physical Damage Resulting from Allied Air Attacks on Germany, 1942*, although the RAF caused some real damage to German cities, the severity varied greatly between different raids.

For example, during the air raid against Hamburg on 8/9 April, the city's air space was penetrated 61 times, but British bombs caused "no damage to war production plants."¹⁷⁹ Similarly, Essen's (an important industrial city in Ruhr) war production was not disrupted despite multiple raids in March and April of 1942.¹⁸⁰ Cities like Bremen suffered some real damage. The air raid on 25/26 June destroyed 572 civilian houses and 10 public buildings, plus 29 industrial facilities. This raid killed and injured 582 people and rendered 2783 more homeless; the city's industrial production was also interrupted.¹⁸¹ A subsequent raid on 13/14 September against the same city destroyed 891 houses, caused 2041 casualties and made 7600 people homeless. It also devastated some local industries: 4 Focke-Wulf plants were severely damaged, Prinz Chemical Factory was burnt down, and Lloyd Dynamo Works lost 100% production for the next three days and 50% for a further two weeks.¹⁸² The most successful RAF raid against German urban centres was the thousand-bomber

¹⁷⁸ *German Captured Documents Collection: A Finding Aid to the Collection in the Library of Congress*, Library of Congress, revised 2012 October, 15, 95, 101; "Translations from Captured German Documents," Air Historical Branch, accessed February 25, 2026, <https://www.raf.mod.uk/what-we-do/our-history/air-historical-branch/ahb-german-translations/>

¹⁷⁹ *Reports of Physical Damage Resulting from Allied Air Attacks on Germany, 1942*, trans, Air Ministry, February 1957, 19.

¹⁸⁰ *Ibid.*, 16, 17.

¹⁸¹ *Ibid.*, 2.

¹⁸² *Ibid.*, 5.

raid against Cologne on 30/31 May 1942. After this one hour and forty-five minute raid, the entire city suffered very serious damage, especially to residential areas, hospitals and churches. As a result, 3330 dwellings were destroyed, 9510 were damaged, the Army Reserve Stores were burnt down. The local industries were paralysed; 1505 factories were destroyed with 1055 more damaged. Three hundred and twenty-eight concerns with factory Air Raid Precautions (ARP) organization were damaged, and 36 of them lost 100% production, 70 lost 50% to 80% production and 222 lost less than 50% production. Cologne suffered 5535 casualties (474 dead, 5061 injured) and 45,132 people lost their home.¹⁸³

Throughout 1942, the RAF bombings inflicted some serious localized damage on German cities and industrial targets, but large-scale destruction remained inconsistent, even as the scale and frequency of raids increased. As Tooze summarized, several British bombing operations in 1942 “gave some indication of what was in store, but they did not develop into a sustained campaign of aerial destruction.”¹⁸⁴ This limitation was notable because by 1942 Bomber Command was substantially better equipped (Avro Lancaster) and operated under a far more aggressive leadership than in the early years of the war. The appointment of Arthur Harris and the adoption of area bombing doctrine in 1942 marked a significant shift away from earlier attempts at precision bombing. Yet even under these more favourable conditions, the results of the British air offensive remained limited and uneven. It therefore made logical sense that the effectiveness of RAF bombing from 1939 to 1941 – when Bomber Command possessed fewer aircraft, inferior

¹⁸³ *Reports of Physical Damage Resulting from Allied Air Attacks on Germany, 1942*, 7-9.

¹⁸⁴ Tooze, *The Wages of Destruction*, 597.

navigational technology, and more moderate bombing doctrines – was likely even more restricted. Given the assessments of numerous British, American, and German historians regarding the early performance of strategic bombing (refer to literature review in Introduction), it is reasonable to conclude that the efficiency of early British bombing operations was quite low, despite the lack of direct evidence from German archives for these years.

CHAPTER 5 CONCLUSION

This thesis has examined the origins, rationale, development and the results of early strategic bombing from the First World War to the early Second World War (1914 to 1941). In addition, this work pays close attention to the connection between British grand strategy and its air policy, with particular emphasis on Winston Churchill's role behind British air power. As a brand-new invention at the beginning of the twentieth century, aircraft fulfilled humans' dream to overcome the obstacles of mountains and oceans to travel faster. Military strategists could not resist the temptation to rain havoc over the enemies' heads by fully exploiting the potential of airplanes. Reconnaissance airplanes, fighters and bombers were born out of such a desire, responding to the needs of the era.

The outbreak of the First World War undoubtedly accelerated the development of military aircraft, particularly bombers, in both technological design and operational doctrine. Strategists such as Smuts, Trenchard, Tiverton, Douhet and Churchill himself were all attracted to the potential of bomber aviation. The progression of bombing doctrine was rapid. Initially, bombers were expected to serve as long range artillery for the army and navy. Then, the strategists expected bombers to form an independent bombing force to achieve several strategic goals. First, they were to divert enemy manpower and resources for air defense thus lessening the pressure on the front. Second, bombers could weaken or even destroy the enemy's war-waging capabilities by hitting valuable economic targets, such as oil refineries and key factories that produced armaments and vital industrial products. Third, bombers might possess strong psychological effects, known as the "moral effect," to paralyze enemies' morale on its homefront by killing more civilians. The core expectation was

that strategic bombing could be an efficient way to defeat the Second Reich and shorten the war. These were the reasons why the British political and military leadership were attracted to strategic bombing in the First World War. The Independent Force, however, did not live up to these expectations as it failed to inflict substantial damage on the enemy.

Essentially, the bombing doctrine did not change much during the interwar period. Notably, the British public and politicians were scared of the “knockout blow,” an overwhelming air strike from the enemy, strong enough to destroy the British Isles and defeat the British Empire. Therefore, as international tensions grew in the 1930s, British politicians, determined to protect the home islands and the British Empire, aimed to build a large bombing force capable of causing equivalent damage to deter enemies from launching any bombing. Once they realized that air parity with Nazi Germany was no longer possible in 1936, they switched their focus to strengthen the British air defense via fighters and radar. In the war planning paper from April 1939, Bomber Command still carried the responsibility to support the French and the BEF at the front, weaken the enemy economy and morale. The difference was, instead of being killing machines, bombers became propaganda machines to drop leaflets to “persuade” the Germans to stop the war.

Winston Churchill played a prominent, yet non-exclusive role in shaping British air policy. He loved exploring new experiences, accepting new challenges and venturing into new realms, and these characters made him an amateur pilot. Moreover, as a politician, air power, particularly strategic bombing, fit into his offensive mind. Namely, bombing satisfied his desire to take the initiative and bring

the war to the enemy instead of passive defense. Different from the contemporary air strategists, who were obsessed with terrorizing civilians through bombings, Churchill did not believe in the so-called “moral effect” of aerial warfare during the Great War and asserted that neither the British nor the German population would be bombed into submission. (This would change later, during the Second World War, though).

Churchill endorsed hitting vital economic targets to reduce the enemy’s industrial potential as a more realistic way to win the war. In addition, together with Trenchard, Churchill convinced the British leadership that air force was a much more economical way to police the vast British colonies, thus preserving the RAF as an independent branch of service.

During his “wilderness years,” although Churchill shared the same core priorities with other British politicians, namely, the defense of the home islands and the preservation of the British colonies, he stood out as a clear “hawk,” adopting a more aggressive stance than most of his colleagues. He detested the mainstream pacifism, inaction and appeasement of the “doves,” and vigorously advocated more rapid rearmament and stronger air defensive systems for the home islands, despite persistent mockery and setbacks. During this process, he exaggerated (purposefully or not) the strength of the *Luftwaffe* to push for a faster British rearmament. Although the British government was not as incompetent as Churchill claimed, the fact remained that Britain was worse equipped than the Nazis at the beginning of the Second World War. Even after he became First Lord of the Admiralty in September 1939, Churchill’s hands were still tied against launching any large-scale bombing against valuable targets in Germany due to the fear of retaliation from the French

government and the Chamberlain's cabinet. The irony was, after more than two decades of preparation since the Great War, the most offensive arm in the British forces remained largely idle when the true challenges came.

After Churchill assumed the premiership in May 1940, despite high expectation and optimism, British bombers performed very poorly and inflicted minimum damage on Germany. The first, and the most important reason was technological deficiency. In fact, Bomber Command faced similar difficulties with Trenchard's Independent Force in 1918. They were all subject to sudden weather changes, and extreme weather conditions could easily cause the bombers to crash before the enemies shot them down (this is still true for many modern airplanes). The intensity of German air defenses and the resulting high casualty rates compelled Bomber Command to adopt night operations. Under such conditions, even dense cloud cover could severely hinder target identification. Despite the technological progression during the interwar period, British bombers simply lacked the necessary navigational or aiming devices to find and hit the intended targets.

The second reason was the rudimentary bombing doctrine. During the Battle of France, the Allied governments' reluctance to authorize bombing operations, combined with slow decision-making caused the AASF to miss numerous opportunities to provide effective air support for ground forces. Already inferior to the *Luftwaffe* in both quality and quantity, the AASF was soon decimated. The heavy bombers from the home base, meanwhile, were launching leaflet raids, which was largely a wasted effort. Although Churchill ordered the bombing of Ruhr industrial targets after the German bombing of Rotterdam in May 1940, the operation was a

failure. The so-called precision bombing was infeasible at that time due to technological constraints. The worst part was, the British leadership did not know, even vaguely, the damage caused by their bombers. In other words, they were directing the strategic bombing campaign in a largely blind manner. The subsequent bombing of Berlin caused some embarrassments to Göring and Goebbels' propaganda machine, but inflicted negligible material damage to the city itself.

German triumph in the Balkans in 1941 strengthened its oil supply chain and rendered the British effort to destroy German oil refineries useless. The new directive to bomb German marshalling yards was proven to be more disappointing. The Butt Report later that year made Churchill reconsider the validity of precision bombing, an impossible task at that time if one took this term seriously. In the absence of a continental army and given Churchill's determination to carry the war directly to the enemy, the strategic logic increasingly favoured a much more aggressive policy of area bombing against workers' dwellings, and later urban centers to weaken German economic potential and morale. In other words, Britain had to lower its standard of morality and kill workers and civilians, first as collateral damage and then purposefully. German workers' houses were deemed as good military targets because they were easier to hit at night. Winston Churchill, who despised the terrorization of population in the First World War, ultimately endorsed terror bombing. The central question, then, was who had the authority to define what constituted "military targets." From the British perspective, one could argue that the German workers, who were constantly aiding the Nazi war efforts from the homefront, were legitimate military targets. From the German perspective, the families of industrial workers,

including children, could also argue that their presence in such households did not render them legitimate targets. Later in the war, the Nazi government used millions of women and slave workers to fill their labor shortage. These people were, in essence, victims of war, although they were aiding the Nazi war efforts. There was always a dilemma to balance the need to hit the enemy hard to shorten the war while upholding the morality standard. This was a profoundly practical issue, one that concerned the lives and deaths of millions of people, particularly civilians, who were most vulnerable in war. Unfortunately, there was no right or wrong answer for this question. As historian Conrad Crane frankly admitted: “I see this idea of killing civilians and targeting civilians being unethical, though the most unethical act in World War II for the Allies would have been allowing themselves to lose.”¹ It was imperative to emphasize that area bombing was never British strategists’ first choice, rather a compromise after the failed attempts of precision bombing.

The final question, then, was: what did strategic bombing achieve during the Second World War? Throughout the war, Bomber Command dropped a grand total of 1,047,472 tons of bombs on German industrial system and urban centers,² about one thousand nine hundred times the tonnage dropped by the IF (543 tons) during the Great War. Together with the USAAF, the Allies dropped over 2.5 million tons of bombs on Germany.³ Strategic bombing forced Germany to divide its economy into too many competing sectors. In 1944, when the Combined Bomber Offensive reached its peak, the direct destruction and the diversion of resources denied the German

¹ “The Bombing of Germany – National Geographic,” YouTube, August 7, 2023, video, 44:59, <https://www.youtube.com/watch?v=vMXdjuqh4RM>

² Cox, *The Strategic Air War against Germany 1939-1945*, 56, 59.

³ Overy, *Why the Allies Won*, 133

forces about half of their battle front weapons and equipment, escalated the Nazi collapse in Europe.⁴

The “moral effect” of bombing, on the other hand, was a trickier issue. The naive expectation that heavy bombing would somehow produce “a tidal wave of panic and disillusionment which would wash away popular support for war, and topple government built on sand” was exposed as wishful thinking.⁵ In fact, as the Allied bombing intensified near the end of the war, the German civilians’ only priority was to survive. They struggled desperately to secure food and water, to cope with prolonged cuts of gas, electricity and lights, and to keep awake days and nights in crowded shelters. The last thing on their mind was resistance, whether against the Allied bombers or against the Nazi regime.⁶ After all, individuals only had one life, and most people prioritized the preservation of their lives above all else, including vengeance and the desire to topple the ruling government. Although the “moral effect” was not easily quantifiable, Americans conducted surveys to assess the effects of bombing on German morale from March to July 1945. The results demonstrated that 36% Germans attributed bombing as the main reason of morale decline. In addition, 91% Germans considered bombing the hardest thing to endure during the war. To contrast, only 2% deemed Nazi injustice intolerable.⁷

More broadly, what was the overall significance of air power? One thing was certain that air force might win or help win a battle, but it could not win a war by itself. Ultimately, the belligerents needed to dispatch ground forces to

⁴ Overy, *Why the Allies Won*, 131.

⁵ *Ibid.*, 132.

⁶ *Ibid.*

⁷ Morale Division, *The Effects of Strategic Bombing on German Morale*, 13-14.

eliminate/capture enemy leaders or to occupy enemy territories. The sufficient and effective air support could however reduce the size of ground forces needed. Kaiser Wilhelm II did not abdicate simply because British bombers flew over Berlin. Nor did Hitler commit suicide merely because his cities had been devastated by Allied bombers; rather, he killed himself only when large parts of the Third Reich, including Berlin, had been occupied by the Allied ground forces. In other words, air force tended to play a vital, but ultimately auxiliary role in defeating the enemy. (The exception to this observation was the two nuclear strikes against Hiroshima and Nagasaki, which forced the Imperial Japan to surrender. Nuclear warfare, however, was a brand-new type of warfare which was beyond the scope of this thesis.)

This observation was not only true in the two world wars, but even more so for other conventional wars in the latter half of the twentieth century. Major technological progression after 1945 significantly enhanced the overall capabilities of air forces around the world. The proliferation of jet aircraft, helicopters and missiles greatly boosted the speed, range, accuracy and lethality of air forces. The advent of satellites provided nations much more effective means of communication, surveillance, damage assessment, navigation and weather prediction during the time of war.⁸ Many conflicts after the Second World War proved that countries that lost their air superiority at the beginning of hostilities, such as Egypt in 1967 and Iraq in 1991, would face tremendous difficulties and would likely to lose the war. Yet, air forces still could not achieve decisive victory on its own.⁹ The obliteration of the

⁸ Martin van Creveld, "The Rise and Fall of Air Power" in *A History of Air Warfare*, ed. John Andreas Olsen (Washington D.C.: Potomac Books, 2010).

⁹ Creveld, "The Rise and Fall of Air Power," 361.

Egyptian air force paved the way for the subsequent Israeli ground invasion in the Six Day War.¹⁰ Despite their absolute air superiority, the United States still needed to dispatch ground forces to search and disable the Iraqi Scud Missile launchers as a part of the Operation Desert Storm.¹¹ Therefore, the role of air force in a war should not be analyzed by itself. Rather, it must be understood within the context of a larger joint warfighting system where the ground, naval, and air forces each play an essential role. Effective cooperation among different services, rather than overreliance on any single “magic weapon” is perhaps the true key to victory.

¹⁰ Kenneth M. Pollack, “Air Power in the Six Day War,” *The Journal of Strategic Studies* 28, no. 3 (2005): 488-489.

¹¹ William Rosenau, *Special Operations Forces and Exclusive Enemy Ground Targets: Lessons from Vietnam and the Persian Gulf War* (Santa Monica: RAND, 2001), 33-35.

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APPENDIX A. Total Bombers Available for Operations

	September, 1939	January, 1940	July, 1940	January, 1941	July, 1941	January, 1942	July, 1942	January, 1943	July, 1943	January, 1944	July, 1944	January, 1945	8 May, 1945
<i>R.A.F. Bomber Command</i>													
Battle	141	118	73	—	—	—	—	—	—	—	—	—	—
Blenheim	123	92	234	176	160	58	39	—	—	—	—	—	—
Boston	—	—	—	—	—	5	47	37	—	—	—	—	—
Ventura	—	—	—	—	—	—	—	36	—	—	—	—	—
Mitchell	—	—	—	—	—	—	—	5	—	—	—	—	—
Mosquito	—	—	—	—	—	—	13	23	51	72	138	206	269
Hampden	85	70	109	111	169	161	37	—	—	—	—	—	—
Whitley	75	68	103	92	105	89	—	—	—	—	—	—	—
Wellington	91	90	148	229	391	353	256	187	124	15	—	—	—
Manchester	—	—	—	—	—	48	—	—	—	—	—	—	—
Stirling	—	—	—	—	22	38	69	104	203	139	37	—	—
Halifax	—	—	—	—	31	50	102	173	331	373	562	521	388
Lancaster	—	—	—	—	—	—	107	274	444	627	864	1,096	1,320
Total	515	438	667	608	878	802	670	839	1,153	1,226	1,601	1,823	1,977

Source: Cox, *The Strategic Air War against Germany 1939-1945*, 41.

APPENDIX B. Annual Tonnage Claimed Dropped by the RAF Bomber Command

Target Systems	1940			1941			1942			1943			1944			1945			Whole War Period			
	Tonnage	Percentage of I.B.	Percentage of Total Effort	Tonnage	Percentage of I.B.	Percentage of Total Effort	Tonnage	Percentage of I.B.	Percentage of Total Effort	Tonnage	Percentage of I.B.	Percentage of Total Effort	Tonnage	Percentage of I.B.	Percentage of Total Effort	Tonnage	Percentage of I.B.	Percentage of Total Effort	Tonnage	Percentage of I.B.	Percentage of Total Effort	
Aircraft factories, etc. . .													2,385		-41							
Airfields													17,081		2-99							
Radar installations . . .													3,057		.54							
All aircraft targets ¹ . . .	2,407	2-16	16-45	1,174	3-32	3-31	1,728	2-37	3-39	1,894	15-21	1-07	22,503	2-10	3-94	1,140	.88	.57	30,846	2-93	2-94	
Docks and port areas . . .	3,274	4-76	22-38	9,909	14-38	27-91	6,029	27-55	11-81	9,841	84-54	5-58	13,185	-03	2-31	17,277	—	8-69	59,515	19-43	5-68	
Military installations . . .	2,090	2-39	14-28	—	—	—	68	27-94	.13	1,688	.47	.96	90,498	.42	15-85	25,330	—	12-74	119,674	.45	11-43	
Long-range weapon installations.	—	—	—	—	—	—	—	—	—	1,941	18-19	1-10	73,146	—	12-81	—	—	—	75,087	.47	7-17	
Oil plants and equipment . .													37,430	6-56	50,766		25-53					
Fuel dumps													10,855	1-90	1,351		.68					
All oil targets ¹	1,925	5-19	13-16	645	.16	1-82	14	14-29	.03	61	1-64	.03	48,285	1-09	8-46	82,117	.07	26-21	103,047	.65	9-84	
Ball-bearing plants													140	.03	—		—					
Ordnance targets													6,744	1-18	—		—					
Powder targets													7	—	381		—	.19				
Steel and coke													911	.16	10		—					
Other industries													5,390	.94	1,578		—	.94				
All industrial targets ¹ . . .	1,215	20-91	8-30	1,493	.47	4-20	1,502	3-53	2-94	7,861	4-72	4-46	13,192	7-94	2-31	2,267	10-23	1-14	27,530	7-13	2-63	
Towns	153	74-51	1-05	13,820	20-78	38-92	39,913	47-00	78-22	147,240	49-53	83-49	204,010	29-71	35-72	73,130	30-65	36-78	478,266	36-49	45-66	
Railway centres													99,003	17-34	20,475		10-30					
Bridges and viaducts													957	.17	2,596		1-30					
Waterways, etc.													5,480	.96	4,271		2-15					
All transportation targets ¹	2,406	.71	16-44	6,909	.28	19-46	151	1-32	.30	3,223	10-39	1-83	105,440	1-11	18-46	27,342	.12	13-75	145,471	1-10	13-89	
Miscellaneous	1,161	—	7-94	1,559	—	4-39	1,623	—	3-18	2,603	—	1-48	798	2-88	.14	232	10-34	.12	7,976	.59	.76	
Totals for periods	14,631	5-08	100	35,509	12-29	100	51,028	40-24	100	176,352	47-04	100	571,057	12-86	100	198,835	14-19	100	1,047,412	20-05	100	

Source: Cox, *The Strategic Air War against Germany 1939-1945*, 59.