The Lord of the Air:
Winston Churchill and the Technocratic British State, 1917-1922

by

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Abstract

This dissertation examines the evolution of Winston Churchill's efforts at technocratic reform within the British military from 1917 to 1922. It seeks to understand the roots of Churchill's technocratic tendencies in the early twentieth century and demonstrate how they coalesced into a cogent and comprehensive vision for a systematized and mechanized British military. This dissertation draws on a raft of previously unpublished sources that present a vision of Churchill at odds with the popular image of the man, as it exists in the early twenty-first century. Churchill is shown to be both a technological enthusiast, and also a consistent advocate of the utilization of science and technology as a solution to almost any challenge to British state authority. This was most dynamically demonstrated in his efforts to realign British military resources towards mechanization in 1917 and 1918, as a means of decisively winning on the Western Front, with as few casualties as possible. In the early postwar period, he imbedded his technocratic framework into the British military as a means of providing a decisive military advantage in future wars and controlling the British Empire with limited financial and human resources. The qualities and flaws in his conceptualization of this system, and the incomplete nature of its implementation, defined the British interwar military and imperial experience, and had a decisive effect on British military performance during the opening years of World War II.

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Introduction

In 1949, Winston Churchill spoke at the Massachusetts Institute of Technology's "Mid-Century Convocation." In his address, he told the assembled faculty and students that "the outstanding feature of the Twentieth Century has been the enormous expansion in the numbers who are given the opportunity to share in the larger and more varied life which in previous periods was reserved for the few and for the very few."[1] He believed that, in the postwar world, "this process must continue and we trust at an increasing rate…if we are to bring the broad masses of the people in every land to the table of abundance."[2] Further, he felt this could only be accomplished by "the tireless improvement of all our means of technical production, and by the diffusion in every form of education of an improved quality to scores of millions of men and women."[3]

Churchill reflected on how Britain had "entered upon the dawn of the Twentieth [Century] in high hope for our country, our Empire and the world," because "the latter and larger part of the Nineteenth Century had been the period of liberal advance," conditions which meant that "in 1900 a sense of moving hopefully forward to brighter, broader and easier days was predominant."[4] He remembered an era when "we thought that with improving transportation nations would get to know each other better," and

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[1] Winston Churchill, "The Twentieth Century: Its Promise and Its Realization," *The Technology Review*, May 1949, 409-13.
[2] Churchill, "The Twentieth Century," 409-13.
[3] Churchill, "The Twentieth Century," 409-13.
[4] Churchill, "The Twentieth Century," 409-13.

"believed that as they got to know each other better they would like each other more, and that national rivalries would fade in a growing international consciousness," which "took it almost for granted that science would confer continual boons and blessings upon us, would give us better meals, better garments and better dwellings for less trouble, and thus steadily shorten the hours of labor and leave more time for play, and culture."[5]

Yet, Churchill also questioned science and technology's capacity to transform society progressively because he believed that "no technical knowledge can outweigh knowledge of the humanities in the gaining of which philosophy and history walk hand in hand."[6] This legacy manifested in "our inheritance of well-founded slowly conceived codes of honor, morals and manners, the passionate convictions which so many hundreds of millions share together of the principles of freedom and justice, [that] are far more precious to us than anything which scientific discoveries could bestow."[7] He argued that "those whose minds are attracted or compelled to rigid and symmetrical systems of government should remember that logic, like science, must be the servant and not the master of man," and that "human beings and human societies are not structures that are built or machines that are forged," but rather "plants that grow and must be tended as such," because "life is a test and this world a place of trial."[8] He believed that science had "placed novel and dangerous facilities in the hands of the most powerful countries," when "humanity was informed that it could make machines that would fly through the air and vessels which could swim beneath the surface of the seas."[9] While he conceded that

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5 Churchill, "The Twentieth Century," 409-13.
6 Churchill, "The Twentieth Century," 409-13.
7 Churchill, "The Twentieth Century," 409-13.
8 Churchill, "The Twentieth Century," 409-13.
9 Churchill, "The Twentieth Century," 409-13.

"the conquest of the air and the perfection of the art of flying fulfilled the dream which for thousands of years had glittered in human imagination," and was certainly "a marvelous and romantic event," he also questioned "whether the bestowal of this gift upon an immature civilization composed of competing nations whose nationalism grew with every advance of democracy and who were as yet devoid of international organization, was a blessing or a curse has yet to be proved."[10]

Churchill's speech was a reflection of the importance technology had gained during the first half of the twentieth century, but also of his power as a political and social commentator in the years after World War II. In 1949, he was one of the most famous and recognizable men, and certainly political leaders, in the world.[11] Three years removed from his famous "Iron Curtain" speech in Fulton, Missouri, and four years removed from his sudden fall from power, he was in the midst of a political resuscitation that presented him as a conservative statesman and historian. Along with his mammoth history of the Second World War and equally ambitious *History of the English Speaking Peoples*, Churchill's postwar speeches, like the one he gave at MIT, were vehicles to promulgate his particular brand of self-serving, sentimental Anglo-American association.[12]

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[10] Churchill, "The Twentieth Century," 409-13.

[11] Peter Clarke, *Mr. Churchill's Profession: The Statesman as Author and the Book That Defined the "Special Relationship"* (New York: Bloomsbury, 2012), 267.

[12] Roy Jenkins, *Churchill: A Biography* (New York: Farrar, Straus, and Giroux, 2001), 809–26; David Reynolds, *In Command of History: Churchill Fighting and Writing the Second World War* (New York: Random House, 2005), 37–49; Clarke, *Mr. Churchill's Profession*, 267–78.

Yet, Churchill's speech was also remarkable because it completely ignored his own profound role in the development of the technologies he disparaged, and his enthusiasm during the first twenty-five years of the century for science and technology's ability to transform Britain's society and empire. Moreover, his paradoxical position toward technology's promise and potential danger, displayed in his 1949 speech, was the hallmark of his relationship and involvement with it, which vacillated between enthusiasm and anxiety throughout his early career. In fact, Churchill more than any other British leader was responsible for the ubiquity of technology in that country's military and political affairs. At almost every turn, when faced with an institutional or imperial challenge, Churchill turned to a technological application, not as a means of transforming Britain's government or society, but as a means of preserving or restoring it to an imagined past glory. These facets of his career did not fit neatly with the popular image he worked so hard to craft and maintain. Churchill's effort to write himself out of the narrative of technological and technocratic development within Britain during the first half of the twentieth century was so effective that his career as a technological visionary and advocate has been ignored.

For example, Churchill described how "in the first half of the Twentieth Century, fanned by the crimson wings of war, the conquest of the air affected profoundly human affairs," because "it made the globe seem much bigger to the mind and much smaller to the body," allowing "the human biped…to travel about far more quickly."[13] The result was that "the whole prospect and outlook of mankind grew immeasurably larger, and the

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[13] Churchill, "The Twentieth Century," 409-13.

multiplication of ideas also proceeded at an incredible rate."[14] Yet, Churchill did not

mention that he himself had been an early and decisive force in the development and

military application of aviation technology. Additionally, while he lamented that "this

vast expansion was unhappily not accompanied by any noticeable advance in the stature

of man, either in his mental faculties, or his moral character," which meant that while

"his brain got no better… it buzzed more," and "the scale of events around him assumed

gigantic proportions while he remained about the same size," Churchill did not

acknowledge that he had built an entire governmental system on the assumption that the

acquisition, development, and deployment of technology would make the world more

perceptible and controllable, not less.[15]

In the early twenty-first century, Winston Churchill remains one of the most

captivating and controversial figures of the twentieth century. Yet, the historical memory

of the man, shaped by film and television portrayals, focuses almost exclusively upon his

premiership during World War II, and treats his political career up to 1939 as merely a

preamble to his "finest hour."[16] Scores of biographical studies have dissected every

aspect of his wartime leadership and reinforced a dominant narrative of Churchill as a

reactionary conservative whose unflinching support of imperialism and capitalism

underpinned his ability to identify singlehandedly the danger of Nazism in the 1930s, led

Britain alone against an existential threat in the early 1940s, and foresaw the emergence

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[14] Churchill, "The Twentieth Century," 409-13.
[15] Churchill, "The Twentieth Century," 409-13.
[16] Richard Loncraine, *The Gathering Storm*, London: BBC, 2002; Thaddeus O'Sullivan, *Into the Storm*, London: BBC, 2009; Quentin Tarantino, *Inglourious Basterds*, New York: The Weinstein Company, 2009; Joe Wright, *Darkest Hour*, Universal City, CA: Focus Features, 2017.

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of the Cold War.[17] This "Churchill Legend" has focused on the twin pillars of his stirring

oratory and his strategic vision to help explain his ability to lead a small band of plucky

aviators and underequipped soldiers against the overwhelming power of a rampaging

Nazi Germany.[18] This mythology was largely Churchill's own creation, something

scholars have begun to recognize and analyze, and this manufactured legacy has been

seized on by conservative political leaders and commentators in the early twenty-first

century as emblematic of their ideological validity.[19]

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[17] Examples include: Robert Rhodes James, *Churchill: A Study in Failure, 1900-39* (London: Littlehampton Book Services Ltd, 1970); Stephen Wentworth Roskill, *Churchill and the Admirals* (London: Collins, 1977); William Manchester, *The Last Lion: Winston Spencer Churchill: Visions of Glory 1874-1932* (Boston: Little, Brown and Company, 1983); Martin Gilbert, *Churchill: A Life* (New York: Henry Holt and Company, 1991); John Lukacs, *Five Days in London, May 1940* (New Haven: Yale University Press, 1999); Geoffrey Best, *Churchill: A Study in Greatness* (Oxford: Bloomsbury Academic, 2001); John Lukacs, *The Duel: The Eighty-Day Struggle Between Churchill and Hitler* (New Haven: Yale University Press, 2001); Jenkins, *Churchill*; John Keegan, *Winston Churchill* (New York: Viking, 2002); Paul Addison, *Churchill: The Unexpected Hero* (Oxford: Oxford University Press, 2005); Geoffrey Best, *Churchill and War* (New York: Bloomsbury, 2005); Carlo D'Este, *Warlord: A Life of Winston Churchill at War, 1874-1945* (New York: Harper, 2008); James C. Humes, *Churchill: The Prophetic Statesman* (Washington, D.C.: Regnery Publishing, 2012); Max Hastings, *Winston's War: Churchill, 1940-1945* (New York: Knopf, 2010); Kenneth Weisbrode, *Churchill and the King: The Wartime Alliance of Winston Churchill and George VI* (New York: Viking, 2013); Jonathan Schneer, *Ministers at War: Winston Churchill and His War Cabinet* (New York: Basic Books, 2015); Anthony McCarten, *Darkest Hour: How Churchill Brought England Back from the Brink* (New York: Harper, 2017); Michael Korda, *Alone: Britain, Churchill, and Dunkirk: Defeat Into Victory* (New York: Liveright, 2017); Lewis E. Lehrman, *Lincoln & Churchill: Statesmen at War* (Guilford, CT: Stackpole Books, 2018).
[18] John Ramsden, *Man of the Century: Winston Churchill and His Legend Since 1945* (New York: Columbia University Press, 2003), xviii–xx; Christopher M. Bell, *Churchill and the Dardanelles* (Oxford: Oxford University Press, 2017), 1–2.
[19] Winston Churchill, *The Second World War*, 6 vols. (New York: Houghton Mifflin Company, 1948); Reynolds, *In Command of History*, xx–xxii; Examples of conservative adulation include: Steven F. Hayward, *Greatness: Reagan, Churchill, and the Making of Extraordinary Leaders* (New York: Crown Forum, 2005); Boris Johnson, *The Churchill Factor: How One Man Made History* (New York: Penguin, 2014); Richard M. Langworth, *Winston Churchill, Myth and Reality: What He Actually Did and Said*

Yet, closer scrutiny of this hagiographic teleology has revealed the flaws in its presentation both of Britain's wartime experience and the nature of Churchill's governance. Unlike older scholarship that drew primarily from published sources, a new wave of authors have reexamined the primary source base and combined it with previously unexamined or unavailable documentation to provide a more nuanced perspective on the "Churchill Legend." For example, Churchill's speeches, long held as the apogee of his leadership and credited with uniting the nation on an unprecedented scale, have been shown to be far less universally appreciated or effective at the time.[20] Even more confounding is the revelation that, not only was Britain far less militarily unprepared when Churchill came to power during the spring of 1940, but also under his leadership was transformed into a highly regulated economy. Britain's war effort drew on vast imperial resources to fuel a technocratic military system that produced a host of novel technological solutions as a means of strategic advantage.[21]

The growing revisionist narrative of Britain's experience in World War II has not ignored Churchill's role in shaping British wartime technocracy, broadly defined as "the institutionalization of technological change for state purposes."[22] Yet, it has failed to

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(Jefferson: McFarland, 2017); Andrew Roberts, *Churchill: Walking with Destiny* (New York: Viking, 2018).

[20] Richard Toye, *The Roar of the Lion: The Untold Story of Churchill's World War II Speeches* (Oxford: Oxford University Press, 2013), 7.

[21] David Edgerton, *Britain's War Machine: Weapons, Resources, and Experts in the Second World War* (Oxford: Oxford University Press, 2011), 2.

[22] Taylor Downing, *Churchill's War Lab: Codebreakers, Scientists, and the Mavericks Churchill Led to Victory* (New York: The Overlook Press, 2011), xv; Walter A. McDougall, *The Heavens and the Earth: A Political History of the Space Age* (New York: Basic Books, 1985), 5; See also: R.V. Jones, "Churchill and Science," in *Churchill*, ed. Robert Blake and Wm. Roger Louis (New York: Norton, 1993), 427–41; Justin D. Lyons, "Strength without Mercy: Winston Churchill on Technology and the Fate of Civilization," *Perspectives on Political Science* 43, no. 2 (April 2014): 102–8; Damien

recognize that Churchill was at the intellectual and institutional roots of the military

technocratic transformation more than twenty years before the outbreak of the Second

World War, and which defined Britain's experience in the conflict. Between 1917 and

1922, his efforts to imagine and install this technocratic apparatus within Britain's

military institutions was his most significant and lasting impact on the British state.

However, Churchill's enthusiasm for technocracy had complex limitations. He was

passionate about the potential for the systematic application of technology to the myriad

challenges facing the British state during the early twentieth-century, but, like other

political leaders from across the ideological spectrum during the period, he was reticent

toward ceding significant authority to "the rule of experts."[23] Rather, he saw technocratic

policy as one tool amongst many, utilized together by Britain's traditional aristocratic

ruling class in its long-term effort at both social reform and the extension of state

control.[24] This ambivalent dichotomy formed the crux of Churchill's advocacy and the

outcome of his policy reforms.

Like the reevaluation of the British state in the twentieth century, a similar

reassessment of Churchill is underway. This new wave of scholarship, which

Lewis, *Ministry of Ungentlemanly Warfare: How Churchill's Secret Warriors Set Europe Ablaze and Gave Birth to Modern Black Ops* (London: Quercus, 2015); Giles Milton, *Churchill's Ministry of Ungentlemanly Warfare: The Mavericks Who Plotted Hitler's Defeat* (New York: Picador, 2016); Graham Farmelo, *Churchill's Bomb: How the United States Overtook Britain in the First Nuclear Arms Race* (New York: Basic Books, 2013).
[23] Loren Graham, *The Ghost of the Executed Engineer: Technology and the Fall of the Soviet Union* (Cambridge, Mass.: Harvard University Press, 1993), 23–48; Thomas P. Hughes, "Technology," in *The Holocaust: Ideology, Bureaucracy, and Genocide*, ed. Henry Friedlander and Sybil Milton (Millwood, NY: Kraus International Publications, 1980), 165–81; Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002), 54–79.
[24] Chris Otter, *The Victorian Eye: A Political History of Light and Vision in Britain, 1800-1910* (Chicago: University Of Chicago Press, 2008), 62–98.

increasingly relies on original archival research, has begun to reexamine Churchill's life

and career thematically and reveal an individual and political leader who does not neatly

conform to the traditional image already discussed. For example, Christopher M. Bell's

analysis of Churchill's relationship with naval warfare reveals an innovative and

insightful strategist whose contributions have largely been ignored or disparaged by

politically-biased historians. Richard Toye demonstrates a Churchill whose entire career

was dominated by a complex, and often contradictory, relationship with the British

Empire.[25] Similarly, Jonathan Rose's examination of Churchill's literary influences and

production shows a man deeply entwined with the complex intellectual milieu of his day,

while Warren Dockter uncovers a "Churchillian perspective" on the Islamic world that

was far more nuanced than some of his xenophobic statements would suggest.[26] Finally,

Brian Lavery's broad examination of Churchill's military experiences demonstrates that

he was far from the amateur strategist that many contemporary military leaders

disparagingly labeled him.[27] Yet, all of these works overlook the one key commonality

between all of these diverse themes throughout Churchill's career: his fascination with

technology and his attempts to promote it as a nearly universal solution to a wide array of

problems in war and peace. Whether it was Churchill's investment in advancements in

naval technology, involvement with futurological writers like H.G. Wells, interest in

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[25] Christopher M. Bell, *Churchill and Sea Power* (Oxford: Oxford University Press, 2013), 4–9; Richard Toye, *Churchill's Empire: The World That Made Him and the World He Made* (New York: Henry Holt, 2010), xiv–xv.
[26] Jonathan Rose, *The Literary Churchill: Author, Reader, Actor* (New Haven: Yale University Press, 2014), x–xii; Warren Dockter, *Churchill and the Islamic World: Orientalism, Empire and Diplomacy in the Middle East* (London: I.B.Tauris, 2015), 2–5.
[27] Brian Lavery, *Churchill Warrior: How a Military Life Guided Winston's Finest Hours* (Oxford: Casemate, 2017), x–xii.

utilizing technological systems to control populations in the Middle East, contributions to the development of theories of mechanized warfare, or leadership during the pivotal early years of World War II, understanding the wide array of his activities and ideas requires an understanding of his relationship to technology and technocracy during the key period of 1917-1922.

Even the most nuanced and original works on Churchill are overwhelmingly reliant on the official biography – and especially the extensive edited document companion volumes – as the foundational source of their archival information and interpretation. These works' scale, running to more than twenty volumes and written and compiled by Churchill's son Randolph and subsequently by Sir Martin Gilbert, seem to provide an authoritative and exhaustive accounting of the most important pieces of documentary evidence surrounding Churchill's personal and political life. Yet, an examination of the original archival sources reveals that, while the biographical companion volumes do contain an overwhelming majority of his correspondence, in certain areas, most notably his memoranda and documents sent to him by others, they are shockingly incomplete. Many of the most compelling documents demonstrating Churchill's technocratic tendencies are not included in the volumes, or are misinterpreted, which has contributed to the ignorance of this pivotal aspect of Churchill's career.

In an effort to address this shortcoming in the scholarship on Churchill, this dissertation, as much as possible, defers to original archival sources as a means not only of escaping the confines of the official biography but also of incorporating newly discovered documents that help to reveal the full scope of Churchill's ideas and activities.

Similarly, this work avoids Churchill's later memoirs and histories, and attempts to focus exclusively on documents crafted contemporaneously with the events in question. Churchill's literary works were as much political documents designed to appeal to specific audiences at the time of their writing as they were objective histories, and were almost all crafted after he had returned to the Tory Party in 1924 and was trying to reestablish his conservative credentials. Consequently, they are unreliable as sources of information about his thoughts or actions while he was aligned with the Liberal Party, and likewise often self-serving in their recollection of key decisions during the war. Understanding the technocratic Churchill demands moving beyond the traditional sources – and the interpretations about his career they encourage – even those he devised himself.

Churchill's technocratic transformation campaign occurred between 1917 and 1922, and was a product of three converging forces. First, it emerged as a policy response to the political and military conditions Britain faced in the autumn of 1917, as the compound human and material losses from three years of futile strategy on the Western Front became increasingly catastrophic. This demanded novel means of decisively winning the war with as few British casualties as possible, an outcome Churchill's technocratic ideas were designed to ensure. Second, Churchill's vision was both a reflection of Churchill's long held interest in technocratic solutions for challenges to the British state and his desire to resuscitate his political career in the wake of his humiliation over the Dardanelles disaster. Finally, Churchill's ambition to imbed his technocratic ideas within the fabric of Britain's military institutions developed as a means of preparing the country's military for a future war that he was convinced was likely, and for pacifying the British Empire with greater financial efficiency. The result was a shift

in the way that Britain's military institutions approached the acquisition and deployment of technology, something that David Edgerton has called the "warfare state."[28]

Yet, it is a mistake to view this transformation through the lens of World War II, no matter how difficult that might be when discussing any aspect of Churchill's career.[29] While it certainly shaped the course of that later conflict, this transformation was a product of his experiences and ambitions during World War I. Additionally, this shift represented a turning point for the British state that affected British policies in the interwar period as much as its later experiences during the Second World War. Additionally, unlike his later leadership that revolved around his identity as a conservative Tory leader, the story of Churchill's efforts at military technocratic transformation was a reflection of his career as a member of the Liberal Party. As such he was also the leading advocate of what David Edgerton calls "liberal militarism," defined as "relying on technology as a substitute for manpower."[30] Churchill was not the only advocate for this institutional transformation, but he was, by far, the most politically high ranking. Finally, and most important, the form of the technocratic British "warfare state" as it evolved after 1917 reflected the development of Churchill's fascination with technology during the first twenty years of his political career.

Understanding Churchill's interest in technology and advocacy of technocracy is complicated by the fact that he did not actually use either term. Like most other

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[28] David Edgerton, *Warfare State: Britain, 1920-1970* (Cambridge: Cambridge University Press, 2006), 1.
[29] Bell, *Churchill and the Dardanelles*, 1.
[30] David Edgerton, *England and the Aeroplane: Militarism, Modernity and Machines*, Revised ed. (London: Penguin, 2013), xxxii.

contemporary technological advocates and commentators he utilized a variety of phrases

and euphemisms to describe the kinds of technological systems he envisioned, writing of

weapons that "science can produce," "novel methods," or "scientific preparedness."[31]

More frequently, he simply referred to specific forms of technology like airplanes, tanks,

poison gases, or radio communications, often in enormous detail.   Even in his speech at

MIT, a place so synonymous with technology that the use of the term is often attributed

to its founding, he only used the word a single time.[32]   Nevertheless, he demonstrated

both a deep interest in the mechanical function of these technologies, and how these

different technological systems would work in conjunction within the technocratic state

structure he envisioned.

The abstract concept of technology has become omnipresent in late twentieth and

early twenty-first century American life, so Churchill's avoidance of the term seems

strange.[33]   This omission is not a reflection of a lack of awareness of the potential or

danger of technology on Churchill's part.   Rather, our early twenty-first century

technological fixation reflects one long-term effect of the efforts of Churchill and others

to make technology an increasingly intrinsic part of everyday life.   Furthermore,

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[31] 93 Parl. Deb. (4th ser.) (1901) 483-579; Winston Churchill, "Munitions Programme, 1919," 5 March 1918, The National Archives, CAB: 24/44/35; Memoranda by Winston Churchill, September 1919, Churchill Papers, CHAR 16/12, Churchill Archive Center (hereafter cited as CHAR); Eric Schatzberg, "Technik Comes to America: Changing Meanings of Technology before 1930," *Technology and Culture* 47, no. 3 (August 7, 2006): 492; Leo Marx, "Technology: The Emergence of a Hazardous Concept," *Technology and Culture* 51, no. 3 (August 15, 2010): 573–75.

[32] Churchill, "The Twentieth Century," 409; Marx, "Technology," 562.

[33] Frank Fischer, *Technocracy and the Politics of Expertise* (Newbury Park, Calif: SAGE Publications, Inc, 1989), 14; David Edgerton, *The Shock of the Old: Technology and Global History since 1900* (Oxford: Oxford University Press, 2006), ix. See also: Jürgen Habermas, *The Lure of Technocracy* (Malden, MA: Polity, 2015).

Churchill's fascination with technology echoed a complex dialogue within Britain, and around the world, both before and after the World War I about technology's role in society, both in the present and in the future.[34]

For the purposes of this dissertation, technology for Churchill is defined as a fusion of scientific and mechanical concepts and appliances with older systems of bureaucratic management. These formed a hybrid designed to retain and magnify the best qualities he perceived in both. This intellectual union between Leo Marx's "machine technology" and Lewis Mumford's "the machine," referring to "the entire technological complex," including both the individual mechanical contrivances and the knowledge of their use, emerged during this time period as nineteenth century continental ideas about "techniks" merged with the growing enthusiasm for technological systems.[35] It was during the interwar period that people began to search for a term to describe the enormous number of mechanical appliances that seemed increasingly omnipresent and that the first significant studies of technology's role in society were published.[36] Churchill embodied this process and it meshed with his other commitments to nineteenth-century ideological and intellectual frameworks like Free Trade and Imperialism.

[34] Peter J. Bowler, *A History of the Future: Prophets of Progress from H. G. Wells to Isaac Asimov* (Cambridge: Cambridge University Press, 2017), 1–2; Bernhard Rieger, *Technology and the Culture of Modernity in Britain and Germany, 1890-1945* (Cambridge: Cambridge University Press, 2005), 10–12; Stephen Kern, *The Culture of Time and Space 1880-1918* (Cambridge, Mass.: Harvard University Press, 1983), 67–108.

[35] Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America*, 35th Anniversary edition (Oxford: Oxford University Press, 2000), 26; Lewis Mumford, *Technics and Civilization*, Reprint edition (Chicago: University of Chicago Press, 2010), 12; Schatzberg, "Technik Comes to America," 494.

[36] Ruth Oldenziel, *Making Technology Masculine : Men, Women, and Modern Machines in America, 1870-1945* (Amsterdam: Amsterdam University Press, 1999), 14; Marx, "Technology," 571–76; Lewis Mumford, *Technics and Civilization* (Harcourt, 1934).

Yet, he also understood the application of technocracy as part of what James Scott calls "the administrative ordering of society," which had a long tradition within the British state and embodied the "sinews of power."[37] This confluence of clerks and ministers, overseeing the "micro-technologies and the micro-operations of power," embodied in forms, files, and ledgers, constituted the British "fiscal-military state," "liberal state," and "technostate," of the eighteenth, nineteenth, and twentieth centuries.[38] For Churchill, this convergence between the old and new came in the form of what Scott calls "high modernist ideology," or "the self confidence about scientific and technical progress, the expansion of production, the growing satisfaction of human needs, the mastery of nature (including human nature), and, above all, the rational design of social order commensurate with the scientific understanding of natural laws."[39] This contradictory jumble of old and new technologies was not limited to Churchill, and reflects how technology developed and was actually utilized across the globe during the nineteenth and twentieth centuries.[40]

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[37] James Scott, *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1999), 4; John Brewer, *The Sinews of Power: War, Money and the English State, 1688-1783* (Cambridge, Mass.: Harvard University Press, 1990), xv–xvi.
[38] Patrick Joyce, *The State of Freedom: A Social History of the British State since 1800* (Cambridge: Cambridge University Press, 2013), 3–11; Brewer, *The Sinews of Power*, xviii–xix.
[39] Scott, *Seeing like a State*, 4.
[40] Edgerton, *The Shock of the Old*, xii–xviii; Thomas P. Hughes, "Technology," in *The Holocaust: Ideology, Bureaucracy, and Genocide*, ed. Henry Friedlander and Sybil Milton (Millwood, NY: Kraus International Publications, 1980), 166–70; Loren Graham, *The Ghost of the Executed Engineer: Technology and the Fall of the Soviet Union* (Cambridge, Mass.: Harvard University Press, 1993), 26–41; Kern, *Culture of Time and Space*, 181–258; Rieger, *Technology and the Culture of Modernity*, 224–75; Modris Eksteins, *Rites of Spring: The Great War and the Birth of the Modern Age* (Boston: Mariner Books, 2000), 241–74; Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002), 80–119.

The study of this discourse about technology within the British state and the larger society as a whole, and especially its proclivity for scientific and technological innovation, has become an area of intense debate. The mainstream narrative of British techno-politics in the twentieth century has focused on conservative leaders, whose classical intellectual background gleaned from education in Britain's Public Schools made them ill-suited for understanding or embracing technology, or worse, anti-technological in their policies and practices. These leaders ignored the advice and expertise of technocrats on the Left, who sought to reframe society through the wholesale application of science and technology.[41]

At its core, this narrative seeks to explain a perceived economic and military decline in Britain in the twentieth century.[42] Yet, the very nature of this declinist narrative has come under increasing criticism, as the validity of Britain's conservative leaders' techno-apathy, the reality of British industrial and military decline, and the "intransigence" of the British state toward embracing scientific and technological experts has come into question.[43] This contradiction is a product of two factors. First, it reflects a conservative political backlash in Britain to a perceived loss of global economic and military dominance in the 1970s and 1980s. This resulted in a nostalgic nationalist

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[41] The origin of this narrative is: C.P. Snow, *The Two Cultures and the Scientific Revolution* (Cambridge: Cambridge University Press, 1959).

[42] The classic example of this "declinist" argument is: Martin J. Wiener, *English Culture and the Decline of the Industrial Spirit, 1850-1980* (Cambridge: Cambridge University Press, 2004).

[43] W. D. Rubinstein, *Capitalism, Culture and Decline in Britain: 1750 -1990* (London: Routledge, 1993), 2–3; David Edgerton, "C. P. Snow as Anti-Historian of British Science: Revisiting the Technocratic Moment, 1959-1964," *History of Science* 43, (June 2005): 187–208; Edgerton, *Warfare State*, 14; Guy Ortolano, *The Two Cultures Controversy: Science, Literature and Cultural Politics in Postwar Britain* (Cambridge: Cambridge University Press, 2009), 11–16.

narrative that memorialized an imagined past as a tool for contemporary political mobilization.[44] Second, and more significantly, it mirrored a cultural dichotomy within British society about the value and danger of technology, the best path forward for British national development, and the future of Britain's role in the world, both before and after World War I.[45] Far from conforming to one of these divergent perspectives, Churchill was the embodiment of all of their contradictions and complexity.

Churchill's view of technology was complex and represented a synthesis of a wide array of technocratic concepts and technological systems, but with one significant qualification. At their core, Churchill's technocratic proposals differed from those of other technocratic advocates and futurologists, like H.G. Wells, in that he did not see technology as a mechanism for fundamentally transforming the nature or character of British society.[46] Rather, he saw technology as a means of restoring or buttressing the British state by increasing the efficiency of existing institutions while reinforcing their traditions and structures in the face of an increasingly fast-paced and challenging global

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[44] Rubinstein, *Capitalism, Culture and Decline in Britain*, 6.
[45] Anna-K. Mayer, "'A Combative Sense of Duty': Englishness and the Scientists," in *Regenerating England: Science, Medicine and Culture in Inter-War Britain* (Amsterdam: Rodopi, 2000), 68; Anna-K. Mayer, "Reluctant Technocrats: Science Promotion in the Neglect-of-Science Debate of 1916-1918," *History of Science* 43, no. 2 (June 2005): 139–59; Rieger, *Technology and the Culture of Modernity*, 4; Peter J. Bowler, *Science for All: The Popularization of Science in Early Twentieth-Century Britain* (Chicago: University of Chicago Press, 2009), 2; Bowler, *A History of the Future*, 10; Martin Pugh, *We Danced All Night: A Social History of Britain Between the Wars* (London: Bodley Head, 2008), 239–346; Richard Overy, *The Twilight Years: The Paradox of Britain Between the Wars* (New York: Penguin, 2010), 50–92.
[46] Bowler, *History of the Future*, 17; "Futurology came into use in the 1950s to denote efforts to predict the future by extrapolating social and economic trends, increasingly via the use of computers to crunch the figures." Bowler repurposes this term to describe a wide range of visionary writers who shared similar predictive aspects in their literary works, but were not necessarily part of ideological groups like the Futurists. See: Bowler, *History of the Future,* 2.

environment.[47] As an aristocratic product of the British Public School system, who also embraced technology, Churchill saw little need to abandon the existing socio-political structures of British state institutions that he saw as representative of the English national character.[48] Instead, Churchill believed that the best means of effecting the institutional transformation he envisioned was through the promotion of technologically-minded leaders who also shared the elite social connections and sensibilities that would ensure the preservation of the core qualities of British institutions.

Like other futurologists, Churchill's technocratic visions were never fully realized. Unlike these visionaries, Churchill's failure was not because the trajectory of human development did not follow the path they envisioned.[49] Instead, his plans were constantly adjusted in response to political conditions, and reflected a distinct pattern that would be repeated again and again. They began with the identification of a discreet logistical or strategic challenge to the British state, which, if remedied, promised greater political and fiscal stability for the government. Churchill then formulated and articulated a grand and elegant technocratic scheme that both incorporated the most recent scientific and technological thought and promised an efficient solution to the issue. As the author of this expected success, Churchill anticipated public acclaim and political promotion, synergistically furthering his own career.

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[47] Adam Tooze, *The Deluge: The Great War, America and the Remaking of the Global Order, 1916-1931* (New York: Viking, 2014), 20; Eksteins, *Rites of Spring*, 67; Geoffrey R. Searle, *A New England?: Peace and War, 1886-1918* (Oxford: Oxford University Press, 2004), 2; Martin Pugh, *State and Society: British Political and Social History 1870-1992* (London: Hodder Arnold, 1994), 122.

[48] Peter Mandler, *The English National Character: The History of an Idea from Edmund Burke to Tony Blair* (New Haven: Yale University Press, 2007), 100; Rose, *Literary Churchill*, 84.

[49] Bowler, *A History of the Future*, 14–15.

Time and again, Churchill presented technocratic proposals that both promised speedy and sophisticated results and created a leadership role for himself with new and expanded powers. Churchill saw no conflict of interest in this simultaneity of action, as he always saw himself as the exemplar of the kind of "scientifically minded" aristocratic political leader destined to guide the British nation in the future, and therefore the logical choice to lead any newly reformed technocratic institution within the British state. These plans inevitably encountered political resistance, either because of the seismic nature of the institutional upheaval they demanded or the naked political ambition evident in Churchill's proposals. In this event, Churchill adjusted the scale and scope of his scheme to make it more politically palatable, while retaining the core concepts that defined his original technocratic vision. The result was the installation of a greatly reduced institutional transformation that often manifested in the vestigial components of much larger technocratic systems that were never realized. The incomplete, and often rivalrous, nature of these politically determined technocratic programs defined British military technology development and procurement both during the last year of World War I and the interwar period.

Churchill's interest in – and advocacy of – technocracy did not spring into existence fully formed in 1917. Rather, it was the product of a long evolution that mirrored his rise through the bureaucratic structure of the British state, beginning with his first days in the House of Commons as a young Tory member in 1901. Chapter one examines these intellectual roots and demonstrates that his technocratic tendencies became increasingly pronounced when he joined the Liberal government of H.H. Asquith. There he transformed into an agent of rapid institutional reform who was

moved from one challenging ministerial position to the next. In each of these wildly

diverse appointments, ranging from the Board of Trade, to the Home Office, to the

Admiralty, he utilized technocratic policy initiatives to achieve the rapid and financially

efficient institutional transformation that his political masters demanded and that fueled

his continued political rise. He also incorporated a wide array of intellectual trends into

his policy making, ranging from Free Trade, to the National Efficiency movement, to

Navalism, but consistently understood all of these through the lens of science and

technology. This rise came to an abrupt halt in the spring of 1915, with the disaster at the

Dardanelles and Churchill's fall from power. This setback in Churchill's political career

had a decisive effect on his role in British military technology development. In its wake,

he revitalized his political prospects by simultaneously criticizing the British

government's technocratic strategy – or lack thereof – and offering a series of alternative

military-technological schemes that promised a decisive victory on the Western Front.

Churchill's critique of the British government's wartime policy was bolstered by

his self-imposed exile on the Western Front, beginning in the fall of 1915. This

experience provided Churchill with two key opportunities. First, it allowed him to

cleanse his public image and begin to resuscitate his political fortunes. Second, and more

significant, it allowed him to witness the nature and challenges of trench warfare

firsthand and begin to articulate a technocratic vision for overcoming the deadlock on the

Western Front. He merged these issues when he returned to the House of Commons in

the spring of 1916 and made a series of increasingly aggressive speeches criticizing the

government's lack of investment in technology for the battlefield. This metamorphosis

into a military technocratic authority culminated with his appointment as Minister of

Munitions in July 1917. His inclusion was spurred by a desire to end his public denigration of the government's strategy and allowed him to install the technocratic military system that he had called for.

In his role as Minister of Munitions during the second half of 1917 Churchill fully articulated his ideas about a British military bolstered through technology. Chapter two demonstrates how, in a series of sweeping memoranda, Churchill laid out a grand vision for a British army and air force that embraced technology while retaining its traditional emphasis on the concept of a singular decisive battle. These technologies, like tanks, aircraft, trench mortars, and poison gas, both protected British soldiers during a decisive final battle while also providing firepower so irresistible and disorienting that it overwhelmed the capacity of the enemy to resist. This blueprint for military reform was a product both of technological enthusiasm and particular political conditions during the latter period of World War I. Specifically, the British nation was rapidly running out of manpower due to the costly offensives of 1916 and 1917, and Prime Minister David Lloyd George's government sought a means of winning on the Western Front without the heavy human costs associated with the more traditional tactics already employed.[50] In this context, Churchill's creative ideas about utilizing a wide variety of technologies in concert were appealing because they promised the decisive land battle that Britain's generals desired, without the enormous casualties they had come to expect. By retaining the strategic paradigm Britain's generals operated within, Churchill's ideas relied on the assumption of relative troop morale as the determinance of victory. However, in his

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[50] David Stevenson, *1917: War, Peace, and Revolution* (Oxford: Oxford University Press, 2017), 184.

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model, new weapons like tanks, planes, and poison gas working in conjunction would bolster British morale, while also destroying German morale by the overwhelming firepower and invulnerability of the final British assault.[51]

These ideas received mixed reactions from civilian and military leaders. Civilian leaders, especially Lloyd George, saw them as a means of mitigating growing popular dissatisfaction with the course of the war by both limiting casualties while regaining the strategic initiative on the Western Front. Additionally, he saw Churchill's ideas as a means of gaining a political advantage over Britain's military leadership, thus ensuring a greater measure of control over military operational decisions.[52] For their part, Britain's generals were far from hostile toward technology, but they viewed the limitations on manpower mobilization for military service that Churchill's ideas demanded as an unnecessary and irresponsible impediment to pursuing victory in Flanders.[53]

In the face of this resistance, Churchill sought to preserve a nucleus of his idea and demonstrate the utility of his technological systems. This strategy began to show progress in the summer of 1918 when tank assaults, aided by overwhelming firepower and gas attacks, led to major advances into German-held territory. This realization was

[51] Tim Travers, *The Killing Ground: The British Army, the Western Front and the Emergence of Modern Warfare, 1900-1918* (London: Allen and Unwin, 1987), 67; Daniel Ussishkin, *Morale: A Modern British History* (Oxford: Oxford University Press, 2017), 3–4.
[52] David R. Woodward, *Lloyd George and the Generals* (Newark: University of Delaware Press, 1983), 116–30; Peter Clarke, *The Locomotive of War: Money, Empire, Power, and Guilt* (New York: Bloomsbury Press, 2017), 224–25.
[53] Robert H. Larson, *The British Army and the Theory of Armored Warfare, 1918-1940* (Newark: University of Delaware Press, 1984), 24–25; Timothy Travers, *How the War Was Won: Command and Technology in the British Army on the Western Front: 1917-1918* (London: Routledge, 1992), 35–36; J. P. Harris, *Men, Ideas, and Tanks: British Military Thought and Armoured Forces, 1903-1939* (Manchester: Manchester University Press, 1995), 159–61.

undercut by the collapse of the German army. This led to a resumption of mobile warfare

and conventional infantry assaults, something the British commander, Sir Douglas Haig,

was much more adept at and which did not require the technological systems that

Churchill had envisioned. Even in the face of this reality, Churchill continued to

campaign aggressively for investment in his technocratic scheme, both of intellectual and

manpower resources, under the assumption that the war would rage on into 1919 or even

1920. This reflected both Churchill's commitment to his technocratic concepts and the

tremendous personal political revival he saw as an outcome to the success of his scheme.

The surprise of the Armistice in November 1918 upended these plans, but, while it left

Churchill's ideas untested and unrealized, it opened the door for his technocratic

proposals to be repurposed in the postwar world.

Aviation technology ran as a continuous thread throughout Churchill's

technocratic machinations before and during the war, and mirrored the long evolution in

his technological thinking, especially in regards to military strategy. Chapter three is a

case study of this involvement. It demonstrates how his early interest and participation in

the technology, from the Wright brothers' first demonstrations in 1908, drove his rise as

the leading expert on aviation within the British government before and during the war,

and informed his technocratic advocacy in 1917 and 1918. Churchill trained as a pilot

before World War I, reflecting his enthusiasm for the technology. This fluency also

provided him with unprecedented authority on aviation matters and acute awareness of

the complexity and capabilities of the technology. As First Lord of the Admiralty, he

oversaw the creation of the most technologically and tactically advanced air force in the

world before World War I, and was on the cusp of creating Britain's first dedicated

bombing force when he was forced out of office. Churchill's fascination with – and connection to – aviation was so powerful that he campaigned unsuccessfully twice in the wake of the Dardanelles disaster to be placed in charge of a reformed British military aviation program. While this did not happen, aviation remained the cornerstone of his technocratic vision when he became Minister of Munitions in 1917.

Chapter four examines how all of these different forces coalesced during his tenure at the Ministry of Munitions. The strategic bombing program that Churchill proposed was the only component of his technocratic scheme that was actually fully realized, and its experience was emblematic of the course of Churchill's ideas during the war. It was conceived as a key component of a much larger technological system, yet when that scheme proved untenable aviation was forced to redefine its role to remain politically viable. Additionally, pressure was heaped upon it to succeed as a standard bearer and bellwether for the rest of Churchill's technocratic schemes. The result was a shift toward bombing civilian populations in an effort to demonstrate tangible results to Britain's elite leadership, despite Churchill's own ambivalence about the value of the operations.[54] This redirection was also necessitated by the limitations of aircraft and bomb aiming technology proved far more unwieldy and unreliable than Churchill or any of the other air power advocates had predicted. Thus, early strategic bombing policy, like the rest of Churchill's technocratic policies, represented a synthesis between technological factors and political factors, rather than more tangible strategic concerns.

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[54] John Howard Morrow, *The Great War in the Air: Military Aviation from 1909 to 1921* (Washington: Smithsonian Institution Press, 1993), 322; 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), 39–40.

In the wake of the armistice, Churchill seized the opportunity to expand the implementation of his technocratic vision presented by his dual appointment as Secretary of State for War and Air, an unprecedented position in the history of the modern British state. It afforded him tremendous latitude in policy making and offered to finally realize his technocratic military ambitions. Ostensibly, Lloyd George moved Churchill into this position in order to utilize him in his prewar role as an agent of rapid reform to mitigate the growing crisis surrounding the demobilization of Britain's armies. Churchill used this new role to endeavor to *institutionally* imbed the technocratic concepts he postulated during the war within the bureaucratic framework of Britain's armies and air forces. His vision, advanced under the auspices of financial savings, relied on "wherever possible, replacing and supplementing man-power by machinery," through "the expenditure of time and brains in experimenting and developing machines both for traction and all kinds of close fighting, of which the tanks are merely the embryos."[55] This effort coalesced into a new grand technocratic reform proposal: the Ministry of Defense. As imagined by Churchill, this new institutional framework would bring together all three of the traditional military services within a single organization that would allow for their development and deployment of technological systems to be magnified and rationalized. The end goal was a highly mobile and flexible military of the future, capable of adapting to any challenge to Britain's security within a fluid global environment. Churchill saw himself as the natural leader of this new vast and powerful organization, and this assumption coupled with institutional and political resistance ultimately doomed the bureaucratic reform he envisioned. Chapter five examines how Churchill conceived of

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[55] Memoranda by Winston Churchill, September 1919, CHAR 16/12.

this new institutional structure, how he marketed his idea to his political superiors, the threats he designed his new technocratic military system to counter, and the political forces that ultimately doomed it to failure.

In the wake of the demise of the Ministry of Defense, Churchill followed the policymaking pattern he had developed and scaled down his plans while retaining their core concepts and adapting them for controlling Britain's imperial territory. This was both an effort to preserve the technocratic concepts he was so invested in, and a response to a new set of challenges to the British state: the dual task of controlling new territories acquired as a result of the war and pacifying growing resistance to British imperial authority in colonies like Mesopotamia and India. Churchill saw this resistance as the product of a combination of a decline in British technological superiority and the corrosive effect of a global Bolshevik conspiracy seeming to undermine British power.[56] In the utilization of technology adapted from his vision for the Western Front, Churchill saw an opportunity to counter both of these threats, while also lowering the financial burden of governing and exploiting Britain's imperial resources. Chapter six examines the evolution of his efforts – first while still in his role at the War Office and Air Ministry and then later as Secretary of State for the Colonies – and how these activities affected the development of interwar British imperial policy.

The outcome of Churchill's postwar efforts at military technocratic institutionalization had profound and lasting effects. First, they successfully created a

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[56] Robert Gerwarth, *The Vanquished: Why the First World War Failed to End* (New York: Farrar, Straus and Giroux, 2016), 98; Priya Satia, *Spies in Arabia: The Great War and the Cultural Foundations of Britain's Covert Empire in the Middle East* (Oxford: Oxford University Press, 2009), 219.

union between research institutions and military services that allowed Britain to remain at the forefront of military technology well into the second half of the twentieth century.[57] Second, Churchill promoted a host of technologically enthusiastic officers and bureaucrats who sustained the technocratic model he envisioned. These officers received the majority of credit for creating the intellectual and institutional frameworks that defined British military development during the interwar period, but, as will be seen, they actually worked as agents of Churchill's much larger and more systematic vision.

Churchill's failure to achieve the cohesive institutional system that he envisioned as the mechanism for a technocratic transformation ensured that these agents and the technological constituencies they represented were left as orphans who were forced to compete against each other for financial resources. An excellent example of this was J.F.C. Fuller, whose innovative theories about mechanized warfare appealed to Churchill and who eventually led the Royal Tank Corps. [58] Fuller was a controversial and tempestuous leader who ultimately derailed his own military career, but his ideas, especially about the concept of morale, became the foundation of mechanized military reform and theory during the interwar period.[59] Yet, Fuller's beliefs were as much a reflection and elaboration of Churchill's key concepts as they were an expression of his own independent mind. An even better exemplar of Churchill's promotion of experts who shared his vision was Hugh Trenchard. Trenchard is often remembered as the guardian of the Royal Air Force during a key moment of its survival, but time and again

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[57] Edgerton, *Warfare State*, 1–14.
[58] Harris, *Men, Ideas, and Tanks*, 82–83.
[59] Ussishkin, *Morale*, 78–84.

acted as an agent of Churchill's larger technocratic vision, of which aviation was only

one component.[60]

In the aftermath of the war, Churchill remained consistent in his commitment to

aviation's integral importance to the future of military strategy, but he also made it clear

that he saw it as one component within a much larger technocratic system. He presented

aviation as a source of financial efficiency that would eliminate many elements of the

traditional military services and replace them with a new and flexible technological

system that would enhance the services' power while reducing costs. As such, he was

adamant that Britain needed to retain a fully independent Air Ministry and Royal Air

Force, although he argued that his scheme would work best within a Ministry of Defense

under his leadership that could perform the kind of institutional rationalization his ideas

demanded. Chapter five examines how aviation fit into Churchill's postwar technocratic

reforms, and shows that while a diminution of the Royal Air Force would have been a

political liability for Churchill, his insistence on preserving an independent air service

was reflective of his continued commitment to the technology, even in the face of the

limitations its wartime performance had revealed. In fact, he imagined his technocratic

system, embodied in the Ministry of Defense, as a means of overcoming these

technological limitations and producing aircraft capable of achieving the battlefield

performance he envisioned.

Similarly, when the Ministry of Defense proved untenable, he reframed his

argument for the value of an independent Royal Air Force by tasking it with patrolling

Britain's imperial hinterlands. He presented aviation as a means of observing, policing,

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[60] Biddle, *Rhetoric and Reality in Air Warfare*, 81.

and connecting imperial territory on an unprecedentedly efficient scale. By focusing on financial savings, he utilized the contemporary political environment's emphasis on austerity to justify the retention and development of a technocratic institution he was particularly politically and intellectually invested in. Chapter six examines how he went about this process, and how, much like with his earlier efforts at the Ministry of Munitions and in lobbying for a Ministry of Defense, his efforts at promoting aviation were only one component of a larger techno-military system designed to solve a challenge to the British state and advance his own political career.

The classic example of this effort was the transfer of responsibility for controlling Britain's newly acquired territories in the Middle East to the Royal Air Force. Traditionally, this has been understood as an innovative idea created either by Hugh Trenchard or T.E. Lawrence, but in actuality it was entirely Churchill's invention.[61] Furthermore, far from relying exclusively on controlling these areas from the air, for Churchill the Royal Air Force was merely a convenient administrative unit that could be molded into the mechanized military system that he had first proposed for the Western Front and then tried unsuccessfully to institutionalize on a grand scale with the Ministry of Defense. He saw the Royal Air Force's efforts in the Middle East as a test case for his technocratic ideas and a means of bolstering his arguments for expanding his mechanized control scheme across the British Empire.

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[61] David E. Omissi, *Air Power and Colonial Control: The Royal Air Force 1919-1939* (Manchester: Manchester University Press, 1990), 21; Biddle, *Rhetoric and Reality in Air Warfare*, 82; Satia, *Spies in Arabia*, 241; Ussishkin, *Morale*, 84–85; Dockter, *Churchill and the Islamic World*, 104–5.

This expansion of Churchill's technocratic scheme of imperial control never came about because Churchill, along with the rest of the Liberal Party, was ejected from office in 1923. When he returned to power, it would be as a member of the conservative Tory Party, and he had no meaningful role in military policy within the British government until he returned to the Admiralty at the outbreak of war in 1939. Yet, it is impossible to understand the "liberal militarism" that David Edgerton describes without acknowledging Churchill's role as a key architect of this institutional change.[62] The technocratic transformations that Churchill pressed through between 1917 and 1922 fundamentally altered the institutional trajectory of the Royal Air Force and the British Army. The incomplete transformation of these organizations into the holistic system that Churchill originally envisioned left them in a rivalrous position and prevented the realization of an intellectual transformation to match the technological innovations they produced. Yet, Churchill's ideas and actions also show a man as in tune with the intellectual and political trends of the world around him as he was toward a vision of the future rooted in an imagined past.

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[62] Edgerton, *Warfare State*, 2.

Chapter 1:

"We must put our brains into it":

The Development of a Churchillian Technocratic Ideology

In February 1901, Winston Churchill sat in the House of Commons for the first time.[63]

He joined a governmental body in transition, a microcosm of the profound social and

economic changes sweeping across Britain and her empire as a new century dawned. A

half century of industrial dominance had given way to increasingly fraught competition

from such new powers in the form of the United States and Germany.[64] Emergent labor

movements complicated efforts at energizing Britain's economy and were already

upsetting the traditional party systems of the British government, as new voters

demanded both a greater voice in politics and greater social and economic security.[65]

Additionally, the resistance of the Boers on the veld of South Africa and the growing

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[63] Randolph S. Churchill, *Winston S. Churchill, Volume II: Young Statesman, 1901-1914* (Boston: Houghton Mifflin, 1967), 1.

[64] There is some disagreement over the reality of this decline, but to contemporary state actors it seemed very real. For more on this see: Martin J. Wiener, *English Culture and the Decline of the Industrial Spirit, 1850-1980* (Cambridge: Cambridge University Press, 2004); W. D. Rubinstein, *Capitalism, Culture and Decline in Britain: 1750 -1990* (London: Routledge, 1993), 2–3; Guy Ortolano, *The Two Cultures Controversy: Science, Literature and Cultural Politics in Postwar Britain* (Cambridge: Cambridge University Press, 2009), 11–16; David Edgerton, *Warfare State: Britain, 1920-1970* (Cambridge: Cambridge University Press, 2006), 14; Geoffrey R. Searle, *A New England?: Peace and War, 1886-1918* (Oxford: Oxford University Press, 2004), 247–48.

[65] Searle, *A New England?*, 229–38; Susan Kingsley Kent, *A New History of Britain since 1688: Four Nations and an Empire* (Oxford: Oxford University Press, 2016), 312–19.

realization that neither Britain's population nor her military institutions were prepared for war had shattered the notion of British imperial invulnerability.[66]

In the short term, the political result of these forces was the restoration of the Liberal Party, which came to power on a platform of social and institutional reform. In the longer term the new century inaugurated an era of political instability in Britain. For Churchill, this atmosphere of crisis offered political possibilities far beyond his position as a junior Tory MP, and would inspire in him a particular brand of policy advocacy that fused aggressive institutional reform with technological enthusiasm. The utilization of this technocratic ideology would drive his rise through British government between 1901 and 1915, culminating with his appointment as First Lord of the Admiralty in 1912, charged with reforming that most prized and protected of British institutions: the Royal Navy.

During the course of this ascent, he would gradually develop and articulate a technocratic ideology that sought to utilize a variety of technologies to reinforce British institutions and social structures. Churchill's ideas incorporated and responded to a wide array of intellectual and ideological trends in both British and Euro-American culture during the period. The leader who emerged was not one mired in the intellectual constraints of the nineteenth century, but one who repurposed and adapted new ideas to old challenges while also recognizing the opportunities presented by the contemporary political, scientific, and intellectual milieu. The technologies and concepts that Churchill embraced correlated to the position within the British government in which he found

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[66] Kent, *New History of Britain*, 304–12; John Darwin, *The Empire Project: The Rise and Fall of the British World System, 1830-1970* (Cambridge: Cambridge University Press, 2009), 217–54.

himself, and his willingness to engage with new and diverse technocratic concepts as frequently as he changed offices speaks to the universal application he saw for technology within the British government. This technocratic flexibility would be the defining characteristic of his leadership from 1901 until 1922. Without understanding the influences and evolution of this Churchillian technocratic ideology from 1901 to 1917, it is impossible to understand the impetus and inspiration of his efforts at military reform during the last years of World War I and the early interwar period.

Britain's wartime tribulations in South Africa brought into stark focus not only the inefficiency of the British Army, but also the poor health of the population, whose lives in industrial centers belied romantic agrarian notions of "Englishness."[67] Of 20,000 recruits for service in South Africa, only 14,000 were physically prepared for immediate service, which was likely more reflective of the British Army's traditional recruiting tactics, which relied on poverty as an inducement for military service, but nonetheless had the effect of challenging British assumptions of national masculine superiority.[68] For many, this was hard evidence that confirmed their assumption that Britain's manhood

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[67] Anna-K. Mayer, "'A Combative Sense of Duty': Englishness and the Scientists," in *Regenerating England: Science, Medicine and Culture in Inter-War Britain* (Amsterdam: Rodopi, 2000), 68; Peter Mandler, *The English National Character: The History of an Idea from Edmund Burke to Tony Blair* (New Haven: Yale University Press, 2007), 100; Darwin, *The Empire Project*, 233–54.

[68] Joanna Bourke, *Dismembering the Male: Men's Bodies, Britain, and the Great War* (Chicago: University Of Chicago Press, 1996), 13; Adrian Gregory, *The Last Great War: British Society and the First World War* (Cambridge: Cambridge University Press, 2008), 74; George L. Mosse, *The Image of Man: The Creation of Modern Masculinity* (Oxford: Oxford University Press, 1996), 15.

was in crisis, brought down through degeneration tied to the *fin de Siècle* and the perception of rapid and uncontrolled societal change.[69]

In the short term, this crisis of confidence in Britain's military as an avatar for her imperial strength resulted in two political events. One was the famous "Khaki Election" of 1900 when a wave of military veterans won seats in the House of Commons.[70] One such veteran was Churchill, whose dual role as military officer and newspaper correspondent in South Africa allowed him to publish self-aggrandizing reports of his own exploits blended with his accounting of British military operations. Churchill's reports, coupled with his other published accounts of British imperial actions, transformed him from a relatively obscure cavalry officer and socialite into a minor celebrity and authority on military affairs. This prominence allowed him to achieve his goal of following in his father's political footsteps and joining the House of Commons. [71]

The other immediate political result of the experience in South Africa was a reform plan from the Tory Secretary of State for War, St. John Broderick, who sought to expand and reorganize the standing professional British Army.[72] Yet, in the longer term, the societal inequalities and degradation that many saw in the experience in South Africa

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[69] Daniel Pick, *Faces of Degeneration: A European Disorder, c.1848-1918* (Cambridge: Cambridge University Press, 1989), 157–59; Mosse, *The Image of Man*, 99; George L. Mosse, *Fallen Soldiers: Reshaping the Memory of the World Wars* (Oxford: Oxford University Press, 1990), 54–55; Adam Tooze, *The Deluge: The Great War, America and the Remaking of the Global Order, 1916-1931* (New York: Viking, 2014), 20; Peter Clarke, *The Locomotive of War: Money, Empire, Power, and Guilt* (New York: Bloomsbury Press, 2017), 141.
[70] Searle, *A New England?*, 281.
[71] Roy Jenkins, *Churchill: A Biography* (New York: Farrar, Straus, and Giroux, 2001), 50–64; Searle, *A New England?*, 284; Geoffrey Best, *Churchill and War* (New York: Bloomsbury, 2005), 17–31.
[72] Lowell J. Satre, "St. John Brodrick and Army Reform, 1901-1903," *Journal of British Studies* 15, (1976): 117–39.

also began a process of renegotiation between the British people and their government. This process redefined the role of the state in the daily lives of British citizens and extended over the next twenty years, causing the rise and fall of a series of Liberal governments bent on social reform.[73] Churchill would immerse himself in both of these processes.

The first hint of Churchill's emerging brand of techno-politics came in May 1901, when the House of Commons debated Broderick's army reform bill. Churchill disparaged the plan's inability to ensure "that an Army of more than two hundred thousand men actively engaged with the enemy lacks nothing that wealth or science can produce."[74] He believed that the War Office should focus on "the provision of better arms and the gradual adoption of new military material and weapons," and wait until after the war in South Africa was over to *thoroughly and systematically* reorganize the British Army.[75] Such a reorganization effort needed to provide "the same efficiency at a reduced cost, or increased efficiency for the same cost."[76] This emphasis on using science and technology to develop and equip a military of the future that was both more powerful and cheaper became a hallmark of Churchill's political advocacy throughout the first quarter of the twentieth century.

In promoting a model of military reform based on the opportunities offered by technological innovation (rather than military expansion), Churchill saw an opportunity for securing Britain's position in the world, both in the short and long term. This was

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[73] Searle, *A New England?*, 284–306.
[74] 93 Parl. Deb. (4th ser.) (1901) 1483-579.
[75] 93 Parl. Deb. (4th ser.) (1901) 1483-579.
[76] 93 Parl. Deb. (4th ser.) (1901) 1483-579.

because he feared that a simple expansion of both the size and cost of Britain's standing army into three corps achieved neither of these goals because "one is quite enough to fight savages, and three are not enough even to begin to fight Europeans."[77] He believed that "the enormous and varied frontiers of the Empire, and our many points of contact with barbarous peoples, will surely in the future, as in the past, draw us into frequent little wars," and that "our military system must therefore be adapted for dealing with these minor emergencies smoothly and conveniently."[78] Churchill was unclear if he saw the conflict in South Africa as just another of these "frequent little wars," but he certainly did not see it as cause for profoundly altering the nature of Britain's imperial relationship. This emphasis on retaining the modes and mechanisms of British imperial power and control, regardless of the changing nature of weaponry and world affairs, was a hallmark of Churchill's technocratic advocacy, and its roots can clearly be seen from his first days in the House of Commons.

At the same time, Churchill also believed that reform on a grand scale was necessary because Britain could "not expect to meet the great civilized Powers in this easy fashion," and "must not regard war with a modern Power as a kind of game in which we may take a hand, and with good luck and good management may play adroitly for an evening and come safe home with our winnings."[79] Rather, he saw a European war as a cataclysmic and "cruel, heartrending struggle, which, if we are ever to enjoy the bitter fruits of victory, must demand, perhaps for several years, the whole manhood of the nation, the entire suspension of peaceful industries, and the concentrating to one end of

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[77] 93 Parl. Deb. (4th ser.) (1901) 1483-579.
[78] 93 Parl. Deb. (4th ser.) (1901) 1483-579.
[79] 93 Parl. Deb. (4th ser.) (1901) 1483-579.

every vital energy in the community."[80]

Churchill believed that industrialization and nationalism had raised the stakes of warfare, because "in former days, when wars arose from individual causes, from the policy of a Minister or the passion of a King," and "when they were fought by small regular armies of professional soldiers, and when their course was retarded by the difficulties of communication and supply, and often suspended by the winter season, it was possible to limit the liabilities of the combatants."[81] In his mind, future warfare would result in "mighty populations…impelled on each other, each individual severely embittered and inflamed—when the resources of science and civilization sweep away everything that might mitigate their fury."[82] Such a European war could "only end in the ruin of the vanquished and the scarcely less fatal commercial dislocation and exhaustion of the conquerors."[83] Churchill feared that democracy would be "more vindictive than Cabinets," and that "the wars of peoples will be more terrible than those of kings."[84]

Churchill was not alone in his belief of the calamitous and metamorphic qualities of warfare in the early twentieth century, but, rather than preparing for such an eventuality through mass procurement of existing technology and mass mobilization of human resources, he fused traditional British strategic principles with the promise of advanced technology.[85] Churchill did not think that it was the enormous standing armies,

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[80] 93 Parl. Deb. (4th ser.) (1901) 1483-579.
[81] 93 Parl. Deb. (4th ser.) (1901) 1483-579.
[82] 93 Parl. Deb. (4th ser.) (1901) 1483-579.
[83] 93 Parl. Deb. (4th ser.) (1901) 1483-579.
[84] 93 Parl. Deb. (4th ser.) (1901) 1483-579.
[85] Alan Kramer, *Dynamic of Destruction: Culture and Mass Killing in the First World War* (Oxford: Oxford University Press, 2007), 31–33; Dirk Bonker, *Militarism in a Global Age: Naval Ambitions in Germany and the United States Before World War I*

but "the lively realization of the awful consequences of war which maintains the peace of Europe," and while Britain "had a glimpse of it in South Africa…even in miniature it is hideous and appalling."[86] Further, he feared that an enlarged British Army, detached from the military consequences that other European powers faced, would meld with emergent populism, and "develop in the country, if they need developing, feelings of pride and power, which will not be founded in actual military superiority, but only on the appearance of it."[87] Churchill anticipated that this dynamic could be exacerbated "in these days, when popular newspapers, appealing with authority to countless readers, are prepared almost every morning to urge us into war against one or other—and sometimes several—of the Great Powers of the earth."[88] Instead, he maintained that "the only weapon with which we can expect to cope with great nations is the Navy," and that "this new distrust of the Navy, a kind of shrinking from our natural element, the blue water on which we have ruled so long, is the most painful symptom of the military hydrophobia with which we are afflicted."[89] This was a response to the political controversy surrounding naval expansion following the passage of the Naval Defence Act in 1889, and the tension between fiscal conservatives and imperial defense advocates on one level and Blue Water naval advocates and those committed to a more traditional strategy of naval blockade on another.[90] Effectively, Churchill sought to retain a small army, but

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(Ithaca: Cornell University Press, 2012), 23–36; Modris Eksteins, *Rites of Spring: The Great War and the Birth of the Modern Age* (Boston: Mariner Books, 2000), 90–94.

[86] 93 Parl. Deb. (4th ser.) (1901) 1483-579.

[87] 93 Parl. Deb. (4th ser.) (1901) 1483-579.

[88] 93 Parl. Deb. (4th ser.) (1901) 1483-579.

[89] 93 Parl. Deb. (4th ser.) (1901) 1483-579.

[90] Searle, *A New England?*, 244–53; Azar Gat, *A History of Military Thought: From the Enlightenment to the Cold War* (Oxford: Oxford University Press, 2001), 441–93.

refine it into the most technologically and operationally advanced force possible, while restoring the Royal Navy to preeminence as the ultimate military deterrent and coercive force in European diplomacy.

The speech perfectly encapsulates Churchill's reflexive retention of tactics and institutions that he perceived as inherently British, and his emphasis on bolstering them through technological development and deployment designed to maximize their effectiveness. When Churchill did come to power, he would draw on these same concepts of technocratic traditionalism in the development of his own plans for institutional reform. The speech likewise was representative of his early political tactics because he used sharp criticism of the existing political leadership, even if they were members of his own party, as a springboard to expand his political influence. He would continue these insurgent political tactics until 1908, when he gained an appointment within the Liberal government. Consequently, all of his activities during the period need to be viewed as both expressions of his ideological evolution and his self-serving political agitation. For example, even in this early speech, he presented the concept of military reform, through the lens of the monumental changes underway in British – and indeed global – society, as a means of criticizing the institutional leadership of a member of his own party. This interchange defined both his political tactics and institutional leadership through the early 1920s. Against the specter of chaotic social and economic upheaval, melded with anxiety about future military conflict, he would repeatedly propose technocratic solutions as a means to maneuver and rise politically.

Churchill's propensity for political disruption brought him into contact and alignment

with a group of young MPs of similarly aristocratic and politically related backgrounds to his own. These young Tories, who would be derisively referred to as the "Hooligans" or the "Hughligans" in honor of the MP who brought them together, Hugh Cecil, made a name for themselves between 1901 and 1906 by aggressively objecting to the policies of their party's more senior members.[91] The Hooligans included MPs with an array of policy interests, ranging from Hugh Cecil's fixation with preserving the Church of England's role in society to Arthur Stanley's interest in promoting automotive technology.[92] Churchill and John Seely, with their experience in British imperial warfare, were the group's military policy authorities and critiqued the government's plans for military reform.[93] Churchill and Seely's political alliance extended into the 1920s and helped define British postwar aviation policy, but their relationship began through their shared use of political agitation and disruption.

One such organized effort was during the debate over the new plan for reorganizing the British Army – after Broderick's effort had failed politically – in March 1902. Churchill said that he supported the new plan to shorten the length of soldiers' service and restructure training, which he argued "agreed with the lessons and experience of all modern war," especially compared to "the old days, when troops were brought into the field in solid masses, great accuracy of drill, precision of alignment, and almost mechanical obedience, were the main qualifications of the soldier."[94] He believed that

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[91] For more on Churchill's involvement with the Hooligans, see: Jenkins, *Churchill*, 76–79.

[92] Richard A. Rempel, "Lord Hugh Cecil's Parliamentary Career, 1900-1914: Promise Unfulfilled," *Journal of British Studies* 11, (1972): 104–30.

[93] Roger Fulford, "Seely, John Edward Bernard, First Baron Mottistone (1868–1947)," *ODNB*, 2004.

[94] 104 Parl. Deb. (4th ser.) (1902) 664-704.

"now all was changed," and "in these days initiative and individual judgment and determination were worth more than mechanical discipline and rigid obedience, and a long period of training was not required," which meant that "the War Office should cater for all sorts and conditions of men who were prepared to accept some terms of service."[95] Churchill's critique, though, was "a reproach to our system that in the course of this absorbing war we had produced no single military invention which had attracted the attention of the world."[96] He lamented that "in the great American Civil War, there were inventions which revolutionized the military materiel of the world," yet the only product of the Boer War was "a cap—a monstrous thing which affronted Members on the way down to the House of Commons," and even then, they "had borrowed that from Germany."[97] This was an allusion to the new style of brimless uniform forage cap that Broderick would make standard issue across the British Army in 1902, bore a striking resemblance to contemporary German headgear.

Churchill counterbalanced his derisive tone with his belief that "there was room for originality and inventive talent in the Army," and "he did not think such a nation as the British ought to try to imitate foreign countries."[98] Instead, he sought to "abandon servile imitations of continental methods," and "endeavor to develop the unique resources of this country with its unique and peculiar dangers," as a means of building "up such a force as would represent the natural and the military characteristics of the people."[99] This statement represented the endurance of Churchill's ideas about the integral nature of

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[95] 104 Parl. Deb. (4th ser.) (1902) 664-704.
[96] 104 Parl. Deb. (4th ser.) (1902) 664-704.
[97] 104 Parl. Deb. (4th ser.) (1902) 664-704.
[98] 104 Parl. Deb. (4th ser.) (1902) 664-704.
[99] 104 Parl. Deb. (4th ser.) (1902) 664-704.

technological innovation and grand military reform, and also how this focus had not

shifted even with his involvement with the Hooligans. What had shifted was his growing

awareness of a broader array of ideological perspectives due to the interactions between

the Hooligans and a wide variety of emergent and established leaders from across the

political spectrum. The product of this was his emphasis on "the natural and the military

characteristics of the people."[100]

The Hooligans met with the young, emerging generation of Liberal leaders like

Edward Grey, William Harcourt, and Richard Haldane, as well as Henry Campbell-

Bannerman, and Herbert Henry Asquith – the future Liberal Prime Ministers. These

politicians saw the young conservatives as a means of undermining the Tories in the

House by securing their cooperation. For example, Grey and Asquith met with the

Hooligans in August 1901 to lobby for their support in the upcoming debates on the

prosecution of the war in South Africa and to argue the merits of their own ideological

platform.[101] The Hooligans also dined with the more senior leaders and commentators of

the Liberal Party, including Lord Rosebery, the former Prime Minister who championed

the Liberal Imperialist wing of the party, and John Morley, who maintained a more

classical brand of liberalism in his policy initiatives.[102]

These elder statesmen – both were nearing the end of their careers – made a major

impression on the Hooligans and especially on Churchill because both offered drastic

visions for reforming the British state and society as well as a distinct means of

examining and understanding the world. Rosebery in particular became a mentor for

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[100] 104 Parl. Deb. (4th ser.) (1902) 664-704.
[101] Churchill, *Winston S. Churchill, Vol. II*, 25.
[102] Churchill, *Winston S. Churchill, Vol. II*, 29.

Churchill and attempted to recruit him in an effort to launch a new centrist party in 1902, that would attract the moderates from both the Liberals and Tories. Rosebery stated that he sought to "restore efficiency to our parliament, our administration and our people," to attain "a condition of national fitness equal to the demands of our empire," and to mobilize that "great volume of opinion not very expressive … which does not greatly sympathize with the extreme men of either party."[103] Ultimately this effort was a failure, mostly because Rosebery's mercurial political tendencies made it difficult for him to secure allies – he would often emerge from isolation to make a dramatic pronouncement and then disappear again for months, if not years, at a time.[104] Rosebery's most lasting legacy was his introduction of the concept of "National Efficiency" to Churchill's ideological paradigm.

Churchill's interest in National Efficiency perfectly encapsulated the pattern of technocratic political self-promotion which would define his career before and during World War I. G. R. Searle contends that the National Efficiency movement promised, "a disciplined population [that] could overcome any kind of material handicap." [105] He also noted that National Efficiency "was not a homogenous political ideology. It served as a convenient label under which a complex of beliefs, assumptions and demands could be grouped."[106] National Efficiency appealed to Churchill because it was a transformative ideology that would allow Britain to restore its flagging fortunes both economically and

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[103] John Davis, "Primrose, Archibald Philip, fifth earl of Rosebery and first earl of Midlothian (1847–1929)," *ODNB*, 2004.
[104] Churchill, *Winston S. Churchill, Vol. II*, 32.
[105] Geoffrey R. Searle, *The Quest for National Efficiency: A Study in British Politics and Political Thought, 1899 - 1914* (Berkeley: University of California Press, 1971), 67.
[106] Searle, *The Quest for National Efficiency,* 81.

imperially while preserving the qualities that he considered intrinsically British. These

included the character of institutions like the military, the British state, the strength of the

British imperial economy, the health of the British population, and the maintenance of

British social order. Patrick Joyce contends that it was the maintenance of these aspects

of British society that defined the evolution of the British state during the period, even as

it grappled with the expansion of capitalism and concepts of "liberal modernity."[107] The

result was a "technostate" that incorporated "technology in the usual sense of the term,

but also in a much broader sense, that of the techniques of governing oneself and

governing others."[108] Churchill perceived this transformative ideology as a means for

Britain to restore its flagging fortunes both economically and imperially while preserving

the qualities that Churchill considered intrinsically British.

Churchill's vision for National Efficiency's capacity to shape British life included

Free Trade and the characteristics of institutions like the military, but it also promised

something else: the ability to restore British society through the eradication of poverty.[109]

John Morley introduced Churchill to Seebohm Rowntree's *Poverty: A Study of Town

Life*, that examined the social conditions in York, and which deeply affected Churchill's

understanding not only of the problems facing the empire, but also those that threatened

the nation at home.[110] For Churchill, the two issues were connected through the decline

of British National Efficiency. He wrote in December 1901 that "it is quite evident from

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[107] Patrick Joyce, *The State of Freedom: A Social History of the British State since 1800* (Cambridge: Cambridge University Press, 2013), 5.
[108] Joyce, *The State of Freedom,* 10.
[109] Frank Trentmann, *Free Trade Nation: Commerce, Consumption, and Civil Society in Modern Britain* (Oxford: Oxford University Press, 2008), 2–7.
[110] Churchill, *Winston S. Churchill, Vol. II*, 29.

the figures which he adduces that the American laborer is stronger, larger, healthier, better fed, and consequently [a] more efficient animal than a large proportion of our population."[111] He felt that this was "surely a fact which our unbridled Imperialists, who have no thought but to pile up armaments, taxation and territory, should not lose sight of."[112] This holistic vision of British imperial, military, and economic power linked through the common denominator of National Efficiency as a barometer of the health of British society dominated Churchill's political ideology during the early twentieth century. For Churchill, science and technology were the catalysts for this restoration.

The combination of this ideological transformation with his antagonistic political tactics and ambitions of office corroded Churchill's relationship with his fellow Tories and led to his defection to the Liberal Party in the spring of 1904. This was certainly a politically pragmatic and self-serving maneuver that ensured a rapid rise in another party, but it also represented the maturation of a distinctly Churchillian ideology, and his sense of frustration with the limited acceptance of his ideas among his Tory contemporaries. The result of his change in affiliation was his appointment, first as an Undersecretary at the Colonial Office, then as President of the Board of Trade, and finally as Home Secretary. These offices reflected his shift in interest toward social and imperial policy, but Churchill also continued to meld core ideological tenets from National Efficiency and his military reform advocacy into his ideas about the use of science and technology, developing his own evolving mental model designed to meet his immediate political needs.

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[111] Churchill, *Winston S. Churchill, Vol. II*, 29.
[112] Churchill, *Winston S. Churchill, Vol. II*, 29.

Churchill especially focused on rationalizing administrative systems within the departments he led and the application of new technologies, especially through the utilization of experts to effect what Searle calls "a closer union between Government and Science."[113] For example, as Home Secretary, Churchill was a vigorous advocate of Eugenics – one of the most polarizing aspects of the National Efficiency movement – specifically as a means of realizing the strengthened population he thought was vital for Britain to remain competitive in a rapidly evolving world.[114] At the same time, he also successfully installed several great social reform programs, including a scheme for national unemployment insurance.[115] All of these programs drew on the emergent scientific and technocratic trends surrounding nutrition, psychology, family life, and the overall strength of the nation state.[116] They not only appealed to Churchill's technocratic conception of the role of the British government, but also increased his own personal power in that government.

Churchill was hardly alone in this effort to identify and articulate a new means of understanding the world consonant with the evolving and expanding social and economic complexity of life in the twentieth century. John Tomlinson, for example, examines how the popular perception of an increasing pace of life and speed of travel affected culture

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[113] Searle, *National Efficiency*, 83.

[114] Geoffrey R. Searle, *Eugenics and Politics in Britain, 1900-1914* (Leyden: Springer, 1976), 107–8; See also: Dan Stone, *Breeding Superman: Nietzsche, Race and Eugenics in Edwardian and Interwar Britain* (Liverpool: Liverpool University Press, 2002); Searle, *A New England?*, 375–86.

[115] Richard Toye, *Lloyd George and Churchill: Rivals for Greatness* (London: MacMillan, 2007), 57; Searle, *A New England?*, 366–69; Jenkins, *Churchill*, 151–54.

[116] Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002), 54–79; Erik Linstrum, *Ruling Minds: Psychology in the British Empire* (Cambridge, Mass.: Harvard University Press, 2016), 13–42; James Vernon, *Hunger: A Modern History* (Cambridge, Mass.: Belknap Harvard, 2007), 17–40.

during the twentieth century. He demonstrates that it elicited a variety of responses, "across the fault lines of cultural modernity, for example those of the left/right political divide."[117] Tomlinson argues that "Gramsci was an early admirer of the Futurists, despite their Fascist tendencies and Lenin enthusiastically embraced the 'scientific' speed regulation of Taylorism…[but] neither narrative finally triumphed, for both became overtaken by events."[118]

In many ways National Efficiency held a similar appeal for Churchill. It provided an array of mechanisms for interpreting and rationalizing a rapidly evolving world, while also providing an ideological framework for concrete reform that appealed to his preexisting interests in science and technology. His first speech in the House of Commons was emblematic of how National Efficiency could mesh with his long held ambitions for institutional reform. For example, he advocated for the need for more meritocratic promotion of military officers, saying that "under the process of selection mistakes are made and, unwittingly, injustice done; but the process is at work not only in the Army, but in every branch of commerce, in every walk of life, and it is nowhere more essential and more vital to efficiency than in the military service."[119] This perception that simultaneous revitalization of the military and the larger strength of the British nation was the key to preserving the British Empire in a political environment that demanded government achieve more with less represented the heart of Churchill's ideological world view and his interest in National Efficiency. It likewise fell neatly in line with many of

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[117] John Tomlinson, *The Culture of Speed: The Coming of Immediacy* (London: SAGE Publications, 2007), 9.

[118] Tomlinson, *The Culture of Speed*, 9; See also: Stephen Kern, *The Culture of Time and Space 1880-1918* (Cambridge, Mass.: Harvard University Press, 1983), 109–30.

[119] 90 Parl. Deb. (4th ser.) (1901) 1382.

the long-held tenets of the Liberal Party, further facilitating Churchill's shift in political identity.[120]

The inclusive ideological nature of the idea of National Efficiency offered Churchill access to allies across the political spectrum, even those who focused on aims that were more extreme than his own. For example, he was able to garner the support of Sidney and Beatrice Webb as well as H.G. Wells, all of whom subscribed to the efficiency movement, although they sought to achieve it in very different ways. Wells and the Webbs provided Churchill access to a wider array of political circles, especially within the radical wing of the Liberal Party. While Churchill found many of their ideas appealing, he was much more reticent to eschew the traditional aristocratic classes and their potential to guide society.[121] The Webbs, for example, supported National Efficiency as part of a gradualist approach toward realizing a socialist utopia that relied on observation and systematic reforms designed to eliminate poverty while retaining the structure of British society. This appealed to Churchill's more limited vision for societal transformation.[122] Yet, the Webbs' divisive nature limited them to a passing influence on Churchill, whose changeable interests were not long held by their broader ideological approach.

In contrast, Churchill's relationship with H.G. Wells proved to be longer lasting, and probably had the largest influence on his development as a technological enthusiast

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[120] Searle, *A New England?*, 172–202.

[121] Jenkins, *Churchill*, 148–50; Searle, *A New England?*, 372–73.

[122] John Davis, "Webb , (Martha) Beatrice (1858–1943)," *ODNB,* 2004; Searle, *A New England?*, 372–75; Richard Overy, *The Twilight Years: The Paradox of Britain Between the Wars* (New York: Penguin, 2010), 54–56.

and in formulating his distinctive technocratic ideology. Wells was a prolific writer whose works varied between futurological dystopian novels and analytical commentary on the role of science and technology in society. Churchill was a voracious consumer of Wells's works and took pride in the fact that he had read every book Wells had ever published.[123] Unlike the Webbs, many of Wells's writings envisioned a rapidly and fundamentally transformed future social structure, led by scientific experts drawn not from the aristocracy but from an emerging intellectual elite. For Wells, these technocratic elites would usher in the societal visions he presented in both his fictional narratives and his futurological ruminations.[124]

Churchill struck up a lifelong friendship with Wells based on his enthusiastic intellectual engagement with the ideas that Wells propounded in his works. As early as 1907, he arranged for Wells to attend a "small dinner every Thursday night in the House of Commons of some of the younger though not necessarily the duller members of the Tory Party [the Hooligans], which dines [sic] many distinguished people of every conceivable shade of thought and opinion have attended." [125] At such occasions, Churchill likely peppered Wells with questions about the content of his publications. Decades later in the 1930s, Churchill even arranged for Wells's membership in the Other Club, the conservative dining club that Churchill founded and used as a forum for intellectual discourse and political machinations.[126] Through these social gatherings,

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[123]Winston Churchill to H.G. Wells, 17 November 1907, Wells Papers, C-238, University of Illinois Rare Book and Manuscript Library (hereafter cited as WP).
[124] Searle, *National Efficiency*, 81; Peter J. Bowler, *A History of the Future: Prophets of Progress from H. G. Wells to Isaac Asimov* (Cambridge: Cambridge University Press, 2017), 17–22.
[125] Winston Churchill to H.G. Wells, 20 November 1907, WP C-238.
[126] Winston Churchill to H.G. Wells, 1 March 1934, WP C-238.

Churchill was able to engage with Wells's works directly with their author. Sadly no record of these conversations exist, but Churchill's early letters to Wells have survived and, through his commentary on Wells's ideas, provide an invaluable perspective on Churchill's own developing ideas about the role of science and technology in contemporary and future society.

Churchill read Wells's *A Modern Utopia,* for example, while on vacation in Venice and wrote that Wells had "certainly succeeded in making earth a heaven, but I have always feared that heaven might be a very dull place <u>á la longue</u>."[127] Wells's novel imagined an alternate reality where human society lives in total harmony and is governed by a voluntary ascetic warrior-scholar nobility called the "Samurai." This hyper-interventionist approach to creating a future utopia clashed with Churchill's ideological commitment to Free Trade.[128] Nonetheless, he found that there still was "so much in your writing that stimulates my fancy," especially "the skill and courage with which the questions of marriage and population were discussed."[129] This reflected both Churchill's enthusiasm for the application of science and technology to the problems he perceived in society, and the influence on him of the wider – and often seemingly incongruous – appeal of eugenic theory in early twentieth century Britain. In fact, Churchill's conflicting reactions to Wells's ideas perfectly encapsulates the evolution of his own technocratic ideology. On a deep level, he mistrusted a utopian future determined by

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[127] Winston Churchill to H.G. Wells, 9 October 1906 [Original emphasis], WP C-238; Herbert George Wells, *A Modern Utopia* (London: Charles Scribner's Sons, 1905).
[128] Michael Freeden, "Eugenics and Progressive Thought: A Study in Ideological Affinity," *The Historical Journal* 22, (1979): 645–71.
[129] Winston Churchill to H.G. Wells, 9 October 1906, WP C-238.

science, but at the same time was also drawn to the idea of a society strengthened through the application of science and technology.

The following autumn, when Churchill read Wells's older work, *Anticipations of the Reaction of Mechanical and Scientific Progress Upon Human Life and Thought,* it elicited a much more extensive and intellectually critical response.[130] *Anticipations* was a serialized non-plot-based rumination on technology and society and the limitations of capitalism and democracy to cope with the challenge of creating a harmonious and rationalized society. Wells presented a future ruled by experts who could control every aspect of society, including the elimination of those deemed unfit, with the goal of achieving a utopia.[131] Churchill rejected the underlying assumptions of Wells's future and wrote that while "there is a great deal in the present volume with which I agree…there is also a great deal which I cannot accept," because "nothing would be more fatal than for the Government of States to get into the hands of the experts."[132]

Churchill was not alone in his concern over the viability of Wells's vision for a reformed society, but unlike other critics he was less concerned about the devolution of individual agency or the expansion of the state into everyday life.[133] Instead, he worried that "expert knowledge is limited knowledge: and the unlimited ignorance of the plain man who knows only what hurts is a safer guide than any vigorous direction of a specialized character."[134] He wondered why Wells would "assume that all except

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[130] Herbert George Wells, *Anticipations of the Reaction of Mechanical and Scientific Progress Upon Human Life and Thought* (London: Harper, 1901).
[131] Bowler, *A History of the Future*, 20.
[132] Winston Churchill to H.G. Wells, 17 November 1907, WP C-238.
[133] Philip Coupland, "H. G. Wells's 'Liberal Fascism,'" *Journal of Contemporary History* 35, (2000): 541–58.
[134] Winston Churchill to H.G. Wells, 17 November 1907, WP C-238.

doctors, engineers etc. are drones or worse?"[135] Churchill thought that "surely outside

scientific spheres there are just regions of human thought," because "is not government

itself, both an art and a science[?]"[136] He believed that "to manage men, to explain

difficult things to simple people, to reconcile opposite interests, to weigh the evidence of

and disputing experts, to deal with the clamoring emergency of the hour… [were] things

in themselves worth the consideration and color of a lifetime."[137]

Churchill saw "the mere administration of public affairs [as] so vast and

complicated a business that it precludes the specialized study of anything else," and while

he agreed that "it is very badly done at present… like all other sciences, government is

progressive," and "year after year we get a little less corruption, a little less chatter, a

little broader basis, a more delicate and perfected machinery."[138] Unfortunately, he did

not think that this gradual improvement would make it possible to "get great men,"

because "periods of danger, discord and suffering are needed to produce them," and "the

very excellence of our results retards improvement."[139] Churchill feared that

"commercial prosperity means mediocrity," and that "good systems of government

produce small men; but lots of them."[140]

As such, the rulers of the future needed to "be a generalist, not a specialist," and

"knowledge, education [and] training of men are no test of their worth; it is the nature of

the beast that counts."[141] Churchill believed humanity had "no intention of putting

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[135] Churchill to Wells.
[136] Churchill to Wells.
[137] Churchill to Wells.
[138] Churchill to Wells.
[139] Churchill to Wells.
[140] Churchill to Wells.
[141] Churchill to Wells.

himself in the hands of amiable but pitiless philosophers to be regulated and improved as if he were a breed of shorthorns," and warned that "Plato felt the same desire to mold and shape; and perished under somewhat painful circumstances."[142]

Churchill's aggressive expressions of distrust for the rule of experts provoked a heated response from Wells, forcing Churchill to clarify what he meant. He wrote that Wells "must not be too impatient with the politician," because "he has his own necessary function; it is the immediate future by makeshifts and compromises to protect millions of imperfect people who merely wish to remain comfortable against those who on the one hand would make them perfect and those who on the other would make them drudges."[143]

Beyond his belief that metaphorically while "you may teach a dog all kinds of tricks, and he may get a better home thereby…you can't improve the breed of the dog in a hurry," Churchill thought that "human nature is I think (and this is really where we should have to divide) a much more intractable and masterful thing than your specialists admit."[144] He argued that "all the solvents of science and civilization will only affect it very slowly and slightly," and "we shall not change so quickly as you think," because even if "systems of society and government may alter, manners, habits, standards of morality will flush and fade over and again…the nature of man will cover the old limits and for a hundred times the period which your 'anticipations' contemplate he will remain an animal," since "change even for the better he accepts doubtfully and thanklessly."[145]

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[142] Churchill to Wells.
[143] Churchill to Wells.
[144] Churchill to Wells.
[145] Churchill to Wells.

Despite his reticence over humanity's ability, or willingness to undergo a fundamental transformation, Churchill seemed much more interested in Wells's ideas about warfare in the future, though he remained frustratingly vague about specifics. Wells's contention, that "the great change that is working itself out in warfare is the same change that is working itself out in the substance of the social fabric," seems to mesh neatly with Churchill's own statements about the future nature and danger of warfare before the House of Commons.[146] Similarly, when Wells wrote "of the progressive supersession of the horse and the private soldier…by machines, and the obliteration of the old distinction between leaders…and the led," it echoed Churchill's thoughts on the necessity of investment in new military technology and reform of officer promotion.[147] Yet, Churchill doubted the value of experts even in military affairs, writing, "wherefore I say from the dominion of all specialists (particularly military specialists) good Lord deliver us."[148] This did not preclude him from entertaining the possibilities of novel military technologies or utilizing experts when it suited him. Rather, Churchill saw experts as component parts of a much larger technocratic system with technologically sympathetic aristocratic leaders (like himself) at the top.

While no record of Churchill's thoughts on Wells's more famous futurological military novels survives, including Wells's most famously prophetic work on the potential of air power, *The War in the Air*, it seems virtually certain that he was familiar with them based on his assertions that he read everything Wells wrote and his continuing

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[146] Wells, *Anticipations*, 194.
[147] Wells, *Anticipations*, 194.
[148] Winston Churchill to H.G. Wells, 17 November 1907, WP C-238.

references to them.[149] For example, in 1916, Churchill wrote to Wells again about how much he had enjoyed his pro-war novel, *Mr. Britling Sees It Through*, and added in passing that "you will have been interested to see the success with which your land battleship idea was at last – after many weary efforts – put into practice."[150] This was an allusion to Wells's 1903 article in the *Strand Magazine,* "The Land Ironclads," which had described a climactic battle between two entrenched armies where the scientific and engineering abilities of the "civilized" side is able to produce massive unstoppable machines that overcome the physical and martial prowess of their opponents.[151] Churchill echoed many similar sentiments and ideas in his own evolving perspective regarding the direction of British military reform.

In these statements, Churchill revealed the crux of his guiding ideology for reform that drove his decision making just as much in 1901 as it would in 1917: utilizing science and technology to enable a new generation of British aristocrats to restore a complex – and often illusory – vision of former British greatness and to ensure future dominance. His was not an ideology of revolution, but rather synthesis between the old and the new.[152] This complex ideological framework provided him with avenues of political engagement outside the dominant narratives of national reform, and, consequently, a means to

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[149] Herbert George Wells, *The War in the Air: And Particularly How Mr. Bert Smallways Fared While It Lasted* (New York: MacMillan, 1908).

[150] Herbert George Wells, *Mr. Britling Sees It Through* (New York: MacMillan, 1916); Winston Churchill to H.G. Wells, 1 October 1916, WP C-238.

[151] Herbert George Wells, "The Land Ironclads," *The Strand Magazine*, 1903; See also: J. P. Harris, *Men, Ideas, and Tanks: British Military Thought and Armoured Forces, 1903-1939* (Manchester: Manchester University Press, 1995), 4–9.

[152] Jonathan Rose, *The Literary Churchill: Author, Reader, Actor* (New Haven: Yale University Press, 2014), 84.

enhance the power of his critiques and the promise of his leadership. His great strength

was not the narrow form of technological enthusiasm that defined many of the

technological experts he drew upon. Instead, he was able to see the capabilities,

interactions, and implications of a wide array of technologies more broadly and could

fuse them into a carefully constructed system. This was the backdrop for Churchill's rise

through the government, following his defection to the Liberals in 1904 and their

subsequent electoral landslide the following year.

Starting with his appointment as Under-Secretary of State for the Colonies in

December 1905, and his subsequent promotion to the President of the Board of Trade and

then to Home Secretary between 1908 and 1911, Churchill shifted his focus away from

military reform issues and onto the defining Liberal causes: social reform and Free

Trade.[153] These positions placed him in the heart of the defining political and social

issues of the day, and propelled him to great prominence within the Liberal government.

Yet, in all of these offices, he continued to focus on scientific concepts and technocratic

policies in his leadership roles.

At this time, Churchill also developed a new political ally in David Lloyd George.

Churchill and Lloyd George became linked because they shared enormous ambitions of

political advancement and an aggressive agenda for institutional and social reform. This

policy platform stressed domestic social programs, funded through a vibrant British

Imperial economy based on Free Trade, as a means of achieving a utopian society that

conformed to a set of idealized values. They believed this was achievable through a more

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[153] Jenkins, *Churchill*, 96–125.

centralized and authoritative state.[154] For Churchill and Lloyd George, the security and

cohesion of the British Empire was an indivisible component of their larger vision for a

revitalized British society, but their social reform ambitions could not be achieved

simultaneously with the maintenance of a large and costly military.[155] To solve this fiscal

conundrum, they sought institutional reform guided by science, which embraced

technology, as a means of both sustaining their social improvement programs and

preserving the security of the British Empire, most famously through a new system of

unemployment insurance designed to replace the Poor Laws.

Churchill and Lloyd George's domestic reform programs were so successful that

Beatrice Webb believed that they were the vanguard of a new generation of Liberal

leaders who would use National Efficiency as a guiding principle.[156] This was not to be,

as growing anxiety over the potential for war dictated and handicapped Liberal social

policy until 1914, when the reality and costs of the war would ultimately discredit and

marginalize the party permanently.

In this context, Churchill campaigned aggressively to become the next First Lord

of the Admiralty in 1911. As First Lord, he proposed the most clear prewar examples of

his emerging brand of technocratically-shaped policy.[157] While he effectively ended his

direct connections with the National Efficiency movement after 1911, he adapted key

concepts from the movement to his policies going forward. For example, during his

tenure at the Admiralty, he catered to political demands for expanded naval construction

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[154] Searle, *A New England?*, 166.
[155] Searle, *A New England?*, 366–75.
[156] Churchill, *Winston S. Churchill, Vol. II*, 303.
[157] Christopher M. Bell, *Churchill and Sea Power* (Oxford: Oxford University Press, 2013), 15.

to keep pace with Imperial Germany, but focused on investing in advanced technology in every aspect of Admiralty procurement.[158] In one of his early speeches as First Lord, he articulated two "general principles" that "we must have an ample margin of strength instantly ready; and, secondly, that there must be a steady and systematic development of our naval forces untiringly pursued over a number of years."[159]

After 1911, Churchill and Lloyd George became increasingly divided in the wake of the Agadir Crisis, as Churchill, by then First Lord of the Admiralty, became a champion of naval construction in the form of dreadnoughts.[160] Lloyd George, then Chancellor of the Exchequer, took pride in his radical Liberal positions – especially on social reform programs, which could not be possible alongside a major investment in capital warships. Consequently, he became increasingly antagonistic toward Churchill's budget demands. At the same time, some of Lloyd George's antipathy toward Churchill may have been inspired by his dissatisfaction with Churchill's rising political power, which increasingly rivaled his own.[161]

In this context of the evolving Anglo-German naval arms race, Churchill revealed a genuine commitment to Navalism. Navalism drew on the work of American naval theorist Alfred Thayer Mahan, and posited that future military confrontations – and the attendant imperial and economic consequences of them – would be dominated by any nation with the most powerful naval forces.[162] Implicit to Navalism was technological

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[158] Christopher M. Bell, *Churchill and the Dardanelles* (Oxford: Oxford University Press, 2017), 12–15.
[159] 41 Parl. Deb., H.C. (5th ser.) (1912) 817-947.
[160] Bell, *Churchill and Sea Power*, 13–15.
[161] Toye, *Lloyd George and Churchill*, 91.
[162] For more on Mahan and the theory of Navalism, see: Gat, *History of Military Thought*, 441–93; See also: Jon Tetsuro Sumida, *Inventing Grand Strategy and Teaching*

enthusiasm and the supposition of a decisive future naval battle, occurring within days, or

even hours, of the declaration of war, and dominated by a new class of capital ships—

Dreadnoughts. Churchill simultaneously campaigned to build the fleet that Navalism's

precepts demanded, and argued that pure naval construction was not sufficient to ensure

victory. While he believed ship designs had to be constantly refined, new technologies

introduced, and increasingly efficient systems of command developed, he also enacted

policies like raising the pay rates for enlisted sailors.[163] Churchill's efforts at improving

the plight of ordinary sailors echoed his earlier efforts at social reform. His most

important initiative though – both in terms of its effect on the Navy and as a harbinger of

his later technocratic military proposals – was a dedication to enmeshing technological

advances into the fabric of the Navy, both institutionally and practically. The two most

famous of these efforts was his creation of a Naval War Staff to plan and coordinate

naval operations, and the transition of the Royal Navy from coal power to oil power.

Oil power promised "to produce a ship which will fulfill given conditions of

speed and armament upon lesser dimensions, and consequently at smaller cost, than could

be done with coal."[164]   Beyond this, though, oil made "it possible to obtain vessels of

very high speed compared with the dimensions—a speed compared with other

Command: The Classic Works of Alfred Thayer Mahan Reconsidered (Baltimore: The Johns Hopkins University Press, 1997); Jon Tetsuro Sumida, *In Defence of Naval Supremacy: Finance, Technology and British Naval Policy, 1889-1914* (Boston: Routledge, 1989); Alfred Thayer Mahan, *The Influence of Sea Power upon the French Revolution and Empire, 1793-1812* (Boston: Little, Brown, and Company, 1894); Alfred Thayer Mahan, *The Influence of Sea Power Upon History, 1660-1783* (Boston: Little, Brown, and Company, 1890).
[163] Bell, *Churchill and Sea Power*, 45–47; Churchill, *Winston S. Churchill, Vol. II*, 584; Bell, *Churchill and the Dardanelles*, 13–14; Brian Lavery, *Churchill Warrior: How a Military Life Guided Winston's Finest Hours* (Oxford: Casemate, 2017), 76–96.
[164] 55 Parl. Deb., H.C. (5th ser.) (1913) 1465-583.

dimensions which could never be attained if coal remained the only fuel."[165] Achieving

this ideal drove Churchill's reorganization of the Admiralty and investment in new

communication and reconnaissance technologies like radio, aircraft, and submarines.[166]

In this case, as before, Churchill saw technological investment and institutional reform as

part of a holistic effort intended to enhance Britain's national military power and

efficiency, while retaining what he saw as its fundamental traditions and strengths.[167] For

example, while he sought to modernize the British fleet and utilize new technologies to

maximize its effectiveness, he never wavered in his belief in the preeminence of capital

ships or the potential for decisive naval combat.[168] He argued that oil both provided a

means of sailing speedily to engage the enemy within hours of the declaration of war, and

allowed the fleet tremendous operational endurance to hunt down commerce raiders.[169]

By insisting on the constant refinement of British naval efficiency, he revealed the

continued dominance of Liberal Imperialist and National Efficiency ideology in his

thinking. After all, if Britain had the most effective and efficient ships, she would need

fewer to maintain her dominance. He would show a similar commitment to decisive land

warfare in 1917, but again with the application of technology and institutional reform as

the means of creating a force reflective of his perception of Britain's potential for

National Efficiency.

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[165] 55 Parl. Deb., H.C. (5th ser.) (1913) 1465-583.

[166] Churchill, *Winston S. Churchill, Vol. II*, 593; Lavery, *Churchill Warrior*, 97–120; Bell, *Churchill and Sea Power*, 26. His efforts at aviation development will be dealt with at length in chapter three.

[167] Clarke, *Locomotive of War*, 105.

[168] Bell, *Churchill and Sea Power*, 19–20.

[169] *Winston S. Churchill: Companion Volume II, Part III: 1911-1914,* ed. Randolph S. Churchill (Boston: Houghton Mifflin, 1969), 1934.

When European war broke out in 1914, it marked another turning point in Churchill's early career. He was in charge of the most important military institution of a nation suddenly embroiled in a long anticipated conflict that many had assumed would be both climactic and quick. Unfortunately, the reality did not match Navalism's conception of immediate or decisive combat, rather it quickly bogged down on land and proved indecisive at sea as the German navy refused to engage in battle.[170] Even when the Royal Navy did succeed in engaging the German fleet at Jutland in 1916, it revealed the limited and incomplete nature of the reforms Churchill enacted during his time there. In the wake of the battle, though, many of the plans he had articulated but was unable to achieve came to fruition. Most notably, the Royal Navy placed more significance on centrally gathering and interpreting reconnaissance and signals intelligence.[171]

In an effort to realize his goal of providing a decisive battle that capitalized on what he perceived as Britain's strengths, Churchill championed one of the largest military blunders in British history and a political liability he had to contend with for the rest of his career: the Dardanelles Campaign.[172] The Dardanelles fiasco served as much as a fulcrum for British politics during the early stages of the war, as a disaster (albeit temporary) for Churchill's career. Vast quantities of scholarship have examined both the political and military causes and consequences of the operation, commensurate with its

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[170] Bell, *Churchill and the Dardanelles*, 18–20; Lavery, *Churchill Warrior*, 197–217.
[171] For more on this, see Searle, *A New England?*, 960.
[172] For more on Gallipoli and its effects on Churchill's career, see: Bell, *Churchill and the Dardanelles*, 48–74; Martin Gilbert, *Winston S. Churchill: Volume III: The Challenge of War, 1914-1916* (Houghton Mifflin Company, 1971), 248–571; Winston Churchill, *The World Crisis Volume II: 1915* (New York: Charles Scribner's Sons, 1923); Lavery, *Churchill Warrior*, 218–40.

importance within the war and the evolving memory of the conflict, especially its

foundational place within the formation of Anzac identity.[173] Churchill himself dedicated

a large portion of his postwar memoir to explaining and justifying his role in the

campaign, reflecting the significance he felt it had played in his legacy. In the wake of

the military fiasco, Lloyd George reflected the perception of many of Churchill's Liberal

colleagues when he said that in Gallipoli Churchill saw "the chance of glory for himself,

& has accordingly entered on a risky campaign without caring a straw for the misery and

hardship it would bring to thousands, in the hope that he would prove to be the

outstanding man in this war."[174] Rather than an aberration within his political career,

Churchill's motivations for advocating the Dardanelles Campaign fit neatly within his

larger pattern of tying aggressive policy reform to his own political aspirations.

Churchill was far from the only advocate for forcing the Dardanelles because it

offered a means of capitalizing on Britain's preeminent naval power to break the

deadlock on the Western Front, and in the process shorten the war with as little British

expenditure of resources as possible.[175] He supported the plan because he believed that

there was "no need for British or Russian anxiety about a war with Turkey," and because,

while "the price to be paid in taking Gallipoli would no doubt be heavy…there would be

no more war with Turkey" as a result.[176] In this contention, he drew on his prewar

emphasis on combining institutions and technologies that he felt were inherently British,

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[173] Peter Hart, *Gallipoli* (Oxford: Oxford University Press, 2011); Peter FitzSimons, *Gallipoli* (New York: Random House, 2015).
[174] Diary Entry, reprinted in A.J.P. Taylor, ed., *Lloyd George: A Diary by Frances Stevenson* (Hutchinson of London, 1971), 50.
[175] Bell, *Churchill and the Dardanelles*, 66–68.
[176] Gilbert, *Winston S. Churchill Vol. III*, 205.

and relying on their superior efficiency to overcome their relative shortages in numbers. For example, he felt that "a good army of 50,000 men & sea power," working in tandem would be enough to take and hold the Gallipoli peninsula.[177] This interaction between a "good army" and the Royal Navy fused his prewar emphasis on military and social efficiency as a means of amplifying Britain's global power.

Far beyond simply knocking Turkey out of the war, in the Dardanelles Churchill saw a means of creating "a Balkan Confederation comprising Bulgaria, Serbia, Romania, Montenegro, and Greece, strong enough to play an effective part in the destinies of Europe."[178] He believed that "the result of this war is not doubtful," and that "sooner or later Germany will be starved or beaten," and "Austria will be resolved into its component parts," because "England has always won in the end; and Russia is inconquerable."[179] Churchill saw this new power bloc as a natural ally to Britain and a means of both shaping the power dynamics of Continental Europe and Central Asia in the long term as well as stabilizing the region to prevent future conflict. This multifaceted operational approach, coupled with the cascading diplomatic and strategic potentialities, perfectly encapsulates the synthesis between National Efficiency and military operational policy that Churchill expounded. In his mind, he had identified a singular pressure point that could change the entire course of European history and secure British preeminence in a postwar world. While this was a wildly optimistic outcome for the Dardanelles

[177] Gilbert, *Winston S. Churchill Vol. III*, 205.
[178] Gilbert, *Winston S. Churchill Vol. III*, 201.
[179] Gilbert, *Winston S. Churchill Vol. III*, 201.

operation, if it had succeeded it would have been an unparalleled political victory for Churchill that would have allowed him "a [very] wide sphere of triumphant activity."[180]

Regardless of Churchill's ambitions for personal political aggrandizement, the result of the debacle at Gallipoli was his exclusion from elite politics beginning in the late spring of 1915.[181] Partly, this was because of the restructuring of the Henry Herbert Asquith's government as a result of the public criticism of his wartime leadership. To stabilize his political power, Asquith brought Tory leaders into the Cabinet who viewed Churchill as both insubordinate and treacherous due to his departure from their ranks a decade earlier.[182] Churchill's reputation for meddling in the workings of other departments meant that he was isolated and relegated to the position of Chancellor of the Duchy of Lancaster, a largely ceremonial role with no involvement in military affairs.[183] He spent the next five months struggling to participate in war policy-making while simultaneously striving to resuscitate his public standing as the debacle at Gallipoli deepened.

Much of this turmoil centered on his spreading the blame for the decision to launch the Dardanelles operation to his Cabinet colleagues. Churchill continued to advocate an almost single-mindedly strategic focus in the East, rather than supporting a large-scale offensive on the Western Front.[184] Most significant, he began to criticize the lack of expertise and coordination of the leadership of the military departments, most

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[180] Winston Churchill to Clementine Churchill, 13 February 1916 in *Winston S. Churchill: Companion Volume III, Part 2, May 1915-December 1916,* ed. Martin Gilbert (Boston: Houghton Mifflin, 1973), 1420.

[181] Clarke, *Locomotive of War*, 172.

[182] Searle, *A New England?*, 676–79; Clarke, *Locomotive of War*, 115.

[183] Jenkins, *Churchill*, 277.

[184] Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1197.

notably Lord Henry Kitchener. He wrote to Asquith that "we have suffered most terribly during the war from [Kitchner's] control of the War Office. The composition of our new armies, the preparation of munitions, the strategic & professional advice at the disposal of the Cabinet are three salient examples."[185] He echoed these statements in his later critiques of Lloyd George's administration and likewise would seek to impart the level of coordination that he found so lacking in the leadership of other Cabinet members in 1915, when he became Minister of Munitions in 1917.

Through all this, Churchill had retained his old political friendships, especially with Lloyd George, but, by November 1915, he was so isolated and powerless that it was impossible to remain in the Cabinet.[186] In a final bid to restore his reputation, Churchill entered a period of self-imposed political exile, taking command of a battalion on the Western Front.[187] Military service was the only means for Churchill to extricate himself gracefully from the political situation he had created. In a letter to his wife, he claimed that at the front he "lost all interest in the outer world and no longer worry about it or its stupid newspapers."[188] Additionally, in the trenches, he had the opportunity of "seeing and learning thoroughly," because he was both a formerly high-ranking political leader with long-standing elite social connections and a mid-level officer. Churchill enjoyed, by turns, a dreary existence cycling between the trenches and the rear as well as unparalleled access to all levels of the British high command, and to battlefields across the Western

[185] Winston Churchill to Henry Herbert Asquith, 4 October 1915, in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1196.
[184] Diary Entry, reprinted in Taylor, *Lloyd George*, 74.
[187] Jenkins, *Churchill*, 293–94.
[188] Winston Churchill to Clementine Churchill, 23 November 1915, in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1286.

Front.[189] While he only spent five months at the front, the time served to give him

firsthand knowledge of the realities of British military strategy and planning. He dined

repeatedly with Sir John French – the commander of the British Expeditionary Force

(BEF), and discussed the overarching progress of the war as well as the shape of British

politics, and then returned to the trenches.[190] Despite his pronouncements that he "could

be quite content with a company," he maintained a foot in both worlds throughout his

time at the front.[191]

The product of this experience in France was the first of Churchill's grand

statements of military doctrine that would define his aims for policy reform. Titled

"Variants of the Offensive," it brought together both his experiences as First Lord of the

Admiralty during the first ten months of the war and his initial observations of the

realities of combat on the Western Front.[192] He also designed his plan to appeal to the

current military leadership on the Western Front, who wanted a means of launching a

successful limited offensive operation. Consequently, Churchill argued for the utilization

of new, but relatively accessible, technologies, brought together within a system that

relied on already existing command and control mechanisms. He believed that "the

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[189] Churchill to Churchill, 23 November 1915, 1286; Lavery, *Churchill Warrior*, 241–54.
[190] Sir John French served as Commander of the British Expeditionary Force on the Western Front from 1914 until December 1915 when the political machinations of Sir Douglas Haig and Lord William Robertson led to his resignation. He was used by Asquith as a political scapegoat for the stalemate on the Western Front. For more see, Ian F.W. Beckett, "French, John Denton Pinkstone, First Earl of Ypres (1852–1925)," *ODNB*, 2004.
[191] Winston Churchill to Clementine Churchill, 27 November 1915, in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1290.
[192] Memorandum by Winston Churchill, 3 December 1915 in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1303–8.

problem of crossing two or three hundred yards of ground without undue loss and in superior force along a considerable front ought not to present insuperable difficulties."[193]

Like his earlier efforts at the Admiralty, Churchill drew on a variety of ideological and intellectual trends to construct novel solutions to concrete problems, while embracing technology and human qualities he perceived as inherently British. In an article published on 23 July 1916 in the *Sunday Pictorial*, titled "The Great Amphibian," he laid out his conception of these qualities, which he believed reached "far back along the fading paths of history," when "crusading armies moved across salt water to the fray."[194] Churchill invoked "the chivalry at Crecy," and "the archers at Agincourt," as well as "the sea rovers who affronted the power of Phillip II on the Spanish Main," and "the armies of William III and the Duke of Marlborough, humbling the glory of Louis XIV."[195] He saw these as expressions of "the long purse and far-ranging ships and stubborn infantry that sustained the Great King in one century, and warred down the Great Emperor in the next," who "all were manifestations one particular form of power."[196] He imagined this power as the manifestation of a "Great Amphibian," who was "a female beast, not clever but very tough; short sighted, but very patient; slow and clumsy, but very strong and fierce" – in other words, as the embodiment of the imagined qualities he ascribed to Britannia herself.[197]

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[193] Memorandum by Churchill, 3 December 1915 in 1303–8.
[194] Winston Churchill, "The Great Amphibian," *Sunday Pictorial*, 23 July 1916, in *The Collected Essays of Sir Winston Churchill*, ed. Michael Wolff (Library of Imperial History, 1976), 100.
[195] Churchill, "The Great Amphibian," 100.
[196] Churchill, "The Great Amphibian," 100.
[197] Churchill, "The Great Amphibian," 100.

Churchill argued that "the true characteristic of all British strategy [lay] in the use of amphibious power," and "not the sea alone, but the land and sea together," which had always allowed Britain to simultaneously protect itself and project its power. He placed the conflict in France in the same long lineage of British victories, but argued that the new engagement demanded a novel approach and a consequent transformation of "the larger part of her body," as, "armies must be raised – one, two, three, four millions, or more," and she must become "the world's armorer and arsenal."[198] The connection Churchill presented between Britain's military glories of the past and her challenges of the future was the symbiosis between a perceived relentless fighting spirit and a willingness to utilize technology – originally ships, and now novel military technologies like tanks and airplanes – to maximize her effectiveness.

Churchill's "Variants of the Offensive," also drew on these ideas and imagined a transformed battlefield where Britain's forces could retake the initiative and achieve the decisive victory he saw as implicit in the long narrative of military glory he presented. He conceived of a carefully planned nighttime surprise assault that relied on massed use of newly introduced "trench mortars," followed by a wave of "caterpillars" – what would come to be called tanks – to cut the barbed wire and provide close-range suppressing fire for infantry carrying and pushing steel shields to protect them from machine gun fire. Included in his scheme was the coordinated placement and detonation of mines to destroy sections of the enemy's lines and disorient their troops. Churchill believed that the successful utilization of his plan would provide "a damaging injury [to the] enemy's

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[198] Churchill, "The Great Amphibian," 100.

morale," for "after all, it is the enemy's *army* we are fighting and not the enemy's *position*."[199]

In this articulation of the nature of modern warfare, Churchill reflected both contemporary military doctrines that predicated battlefield victory on the relative morale of the opposing forces, and the beliefs of those on both sides who saw the army as the embodiment of their perceived national identities and cultures. It was a conflict Alan Kramer describes as "a war waged with all the resources of modern industrialized nations, fought for national aims for the survival and domination of nations. The enemy was not merely the enemy army, but the enemy nation and the culture through which it defined itself."[200] For Churchill, the only means of winning this titanic struggle was a highly coordinated assault that utilized every tool available – human and technological – and reflected British power and the will to win.

The British military leadership on the Western Front politely listened to Churchill's ideas and proceeded to *completely* ignore them. When Churchill asked the newly appointed commander of the BEF, General Douglas Haig, "if he would like to see 'Variants of the Offensive'…he said he would be 'honored' - !," but then completely disregarded Churchill's ideas.[201] Beyond their unwillingness to heed the advice of an outsider – especially one who was currently excluded from the circle of political power – and the massive organizational and logistical reforms Churchill's ideas required, deep

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[199] Memorandum by Winston Churchill, 3 December 1915 in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1308.

[200] Kramer, *Dynamic of Destruction*, 31.

[201] Winston Churchill to Clementine Churchill, 18 December 1915, in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1335.

intellectual barriers prevented British commanders from embracing his ideas. Timothy

Travers maintains that these barriers reflected:

> The severe mental difficulty of integrating, or "linking" together, what were really two different entities or images of war. On the one hand there was morale and human qualities, in fact the cult of the offensive and the psychological battlefield; on the other hand, fire power and new weapons, in fact the technological battlefield. On another level this became the problem of relating tactics to fire-power, and many officers such as Haig and Gough found the transition from one image to another difficult. Fire power and technology in the shape of new weapons was readily accepted, but the problems of integration into the human side of the equation had not been thought through.[202]

Travers further argues that these generals' unwillingness to accept an image of warfare

that embraced technology revealed their belief "that doctrine, or stereotyped methods,

damaged the morale or human factor in war, and deprived men in the attack of their

desire to close with the enemy at all costs."[203] Further, the "doctrine and fixed fire-power

tactics were rejected, not because they might be wrong, but because they did not fit the

Edwardian image of war as the human battlefield."[204]

Haig and his compatriots could not comprehend that Churchill's ideas represented

an attempt to bridge this intellectual gap, and Churchill could not understand why they

were so unwilling to entertain change. He perceived complacency and stagnation all

around him, from the unwillingness to invest in tanks to the continued reliance on horses,

which "are quite useless in modern war, & all cavalry ought at once to be abolished."[205]

Churchill believed that "they are fools not to use my mind – or knaves to wait for its

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[202] Tim Travers, *The Killing Ground: The British Army, the Western Front and the Emergence of Modern Warfare, 1900-1918* (London: Allen & Unwin, 1987), 62.
[203] Travers, *The Killing Ground* , 67.
[204] Travers, *The Killing Ground*, 67.
[205] Eustace Tennyson-d'Eyncourt to Winston Churchill, 14 February 1916 in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1422. Winston Churchill to Clementine Churchill, 24 January 1916 in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1394.

destruction by some flying splinter."[206] There were a number of lower-level officers who

understood what he envisioned in "Variants of the Offensive" and "were quite excited

about it and…urged [him] to go on developing it."[207] Yet, Churchill was powerless to

realize his ideas as long as he remained on the Western Front and began to question if he

could "help to a victorious peace more in the H[ouse] of C[ommons] than here?"[208]

Churchill felt an increasing urgency to make his "definite opinions about the war"

heard.[209] He believed that because "there was no chance of our winning in 1916…we

must make our plans for a combined attack in the summer of 1917: & meanwhile only

bicker on all fronts, while improving our armies, pilling up munitions and arming the

limitless manhood of Russia."[210]

A variety of forces, political and military, served to return Churchill to political

relevance in the summer of 1916, and ensured that the British Expeditionary Force would

not wait until 1917 to launch a major offensive. He returned to the House of Commons

in May 1916 and made a series of powerful (if ineffective) speeches criticizing the

conduct of the war and outlining his ideas for reform. These statements represented a

continuing refinement of his earlier ideas presented in "Variants on the Offensive" and

revealed how he incorporated his perception of both the realities of warfare on the

Western Front and the political environment in which he operated into a single vision.

Churchill contended that the war would "be settled by the supply of men," and "if the

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[206] Winston Churchill to Clementine Churchill, 16 February 1916, in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1428.
[207] Churchill to Churchill, 16 March 1916, 1454.
[208] Churchill to Churchill, 17 March 1916, 1456.
[209] Churchill to Churchill, 14 April 1916, 1488.
[210] Churchill to Churchill, 14 April 1916, 1488.

Germans are to be beaten decisively, they will be beaten like Napoleon was beaten and like the Confederates were beaten—that is to say, by being opposed by superior numbers along fronts so extensive that they cannot maintain them or replace the losses incurred along them."[211]   He identified "five large reservoirs of men which are capable of being drawn upon scientifically and systematically to feed the necessities of our fighting lines," and he argued that by utilizing these resources, Britain could field an army easily comparable to Germany's in size and efficiency.[212] These were support personnel within the army itself, especially servants of officers and grooms in the cavalry and the entire cavalry service itself, as well as the reduction in forces maintained for "Home defense," and the "Armies of the East" – the Indian Army, and Africans, and Asians.[213]

Churchill also stressed the necessity for scientific scrutiny and careful calculation in the application of those expanded forces. He insisted that any action must be "justified by purely military considerations. The argument which is used that 'it is our turn now' has no place in military thought. Whatever is done must be done in the cold light of science."[214] These appeals fell on deaf ears, but the disappointing performance of the Royal Navy at the Battle of Jutland, and the loss of the Secretary of State for War, Lord Kitchener, at sea, weakened the Asquith regime, making them vulnerable to political attacks and more willing to collaborate with Churchill.[215] He used this momentary opening to campaign for the publication of key documents relating to the Dardanelles operation, in an effort to resuscitate his political career. While he was unsuccessful in

[211] 82 Parl. Deb., H.C. (5th ser.) (1916) 2003-69.
[212] 82 Parl. Deb., H.C. (5th ser.) (1916) 2003-69.
[213] 82 Parl. Deb., H.C. (5th ser.) (1916) 2003-69.
[214] 82 Parl. Deb., H.C. (5th ser.) (1916) 2003-69.
[215] Jenkins, *Churchill*, 312.

that effort, it did result in the establishment of a commission of inquiry, and Churchill spent the rest of 1916 preparing his testimony and awaiting the commission's report.[216]

At the same time that Churchill's efforts at political rehabilitation were unfolding, the British Expeditionary Force fought the ill-fated Battle of the Somme, and thus made real Churchill's warnings about the necessity of thinking strategically and scientifically in military planning. The Somme offensive was the product of inter-Allied negotiations designed to facilitate the British to take their "turn" in bearing the brunt of casualties and responsibility for the front.[217] Furthermore, rather than launching the offensive over ground that favored the kind of operation Haig envisioned – specifically Flanders – the attack was planned for the junction between British and French forces, regardless of terrain.[218] While this theoretically allowed for greater coordination in action, it also undermined the possibility of success and sowed the seeds for Haig to dismiss the failed operation as a product of location and not of flawed strategy and tactics.

The debacle on the Somme realized Churchill's most dire fears, and he submitted a scathing – if unsolicited – memoranda to the Cabinet insisting that "in *personnel* the results of the operation have been disastrous; in *terrain* they have been absolutely barren."[219] He discounted all the justifications military leaders used to rationalize the attack, and warned that "so long as an army possesses a strong offensive power it rivets its adversary's attention. But when the kick is out, when the long-saved-up effort has

[216] Jenkins, *Churchill*, 313–16.
[217] Robin Prior and Trevor Wilson, *The Somme* (New Haven: Yale University Press, 2005), 2.
[218] Searle, *A New England?*, 691–96.
[219] Memorandum, 1 August 1916 in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1534–39. [Original emphasis]

been expended, the enemy's anxiety is relieved, and he recovers his freedom of movement."[220] Churchill perceived the Battle of the Somme as the worst possible use of British manpower, and emblematic of the lack of creative thinking by both the Asquith government and the British High Command. He believed that the destruction of Britain's infantry forces in mass assaults was expending an irreplaceable resource. Following the Somme, he began to couch his ideas for the utilization of technology around preserving British lives and maximizing the effectiveness of limited human resources. In other words, Churchill started to present technology as a "force multiplier," to use the modern parlance.

While Churchill believed that the human cost of the Somme would prove detrimental to Britain's future strength, his frustration was tempered by the success enjoyed by the initial appearance of one of his pet projects during the battle: tanks. Robin Prior and Trevor Wilson demonstrate that Haig utilized the new weapons system in mid-September because he believed "that German morale was collapsing," and "that the German army had entered a decline possibly approaching terminal collapse which could be accelerated by a large offensive employing novel weaponry."[221] In this context, the rudimentary nature of the tanks available and the lack of experience in using them limited their effectiveness. Haig and his commanders also significantly overestimated the psychological impact of the tanks on the German defenders.[222] These limitations meant that the tanks could never provide the decisive contribution to achieving the victory Haig envisioned, and while they were successful in assisting the infantry in taking a significant

[220] Memorandum by Winston S. Churchill, 1 August 1916, 1534–39.
[221] Prior and Wilson, *The Somme*, 218.
[222] Prior and Wilson, *The Somme*, 231.

portion of the German defenses, the attack fell far short of the high command's

aspirations. Haig was still committed to realizing a cavalry breakthrough as a result of

artillery and infantry assaults, and the tank's inability to make this possible led Haig to

dramatically depreciate his perception of their utility.[223]

Travers suggests that this was part and parcel of a "rejection syndrome" towards

technological innovations amongst elite British officers on the Western Front.[224] He

asserts that the reaction to new technologies like the tank followed a clear pattern:

> (1) the invention and introduction of the new piece of technology, with some
> resistance at the higher staff levels and some arm resistance; (2) after a certain
> period of time, ready acceptance of the technology, especially at middle and
> lower levels of the officer corps; but then an important stage occurs, (3) a
> corresponding reluctance to think through the logic of the new weapon, and
> therefore a tendency to relegate the weapon to traditional, peripheral or
> subordinate roles. At this important stage (4) there emerge small but vigorous
> groups of supporters and opponents, with a large middle ground of mostly
> non-thinkers; but (5) from the small support group there emerge further one or
> two individuals who articulate appropriate tactics for the new weapon, which
> eventually enable the weapon to assume either a semi-autonomous or separate
> role according to its own logic, and which firmly integrate the weapon into the
> tactical system of the army.[225]

Churchill unwaveringly fell amongst the vigorous supporters of the tank that Travers

identifies, and had followed the technology's development closely.[226]

Churchill first promoted research into what would come to be tanks as First Lord

of the Admiralty in early 1915, and kept abreast of research in the technology as well as

providing advice to its developers even when he was in political exile on the Western

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[223] Prior and Wilson, *The Somme*, 216.
[224] Travers, *The Killing Ground*, 75.
[225] Travers, *The Killing Ground*, 76.
[226] Travers views have inspired controversy, see: Harris, *Men, Ideas, and Tanks*, 82–83;
David J. Childs, *A Peripheral Weapon?: The Production and Employment of British
Tanks in the First World War* (Westport, Conn.: Greenwood Press, 1999), 143–44.

Front.[227] One of them – Eustace Tennyson-d'Eyncourt – wrote that "after losing the great advantage of your influence, I had considerable difficulty in steering the scheme past the rocks of opposition & the more insidious shoals of apathy, which are frequented by red herrings which cross the main line of progress at frequent intervals. The great thing now is to keep the whole matter secret & produce the machine all together as a complete surprise."[228] The issue of surprise would be a hallmark of Churchill's vision for the tank, and he would later lament that their use on the Somme negated their shock value before sufficient numbers were available to affect a major operation. By the fall of 1916, Churchill was recognized as an expert in tank technology and its utilization, but he also saw it as part of a larger coordinated system. At the beginning of October, he wrote to Sir Arthur Conan Doyle that "there are plenty of good ideas if only they can be backed with power and brought into reality."[229] Churchill spent the next eighteen months – both in and out of office – articulating and realizing what he meant by that statement.

As the Battle of the Somme ground to a halt in the fall of 1916, a growing perception within the British government of both the costs and futility of the operation made investment in mechanical warfare technology – especially tanks – much more appealing. As a result, members of the Asquith government began to approach Churchill – as a recognized expert on emerging military technologies – to gain his insights into how to develop and deploy tanks.[230] In response, Churchill produced a memorandum titled "Mechanical Power in the Offensive," which further articulated his evolving conceptions

[227] Lavery, *Churchill Warrior*, 166–74; Harris, *Men, Ideas, and Tanks*, 10–39.
[228] Eustace Tennyson-d'Eyncourt to Winston S. Churchill, 14 February 1916 in Gilbert, *Winston S. Churchill Comp. Vol.III, Pt. 2*, 1422.
[229] Winston Churchill to Sir Arthur Conan Doyle, 1 October 1916, Gilbert, 1572.
[230] Edwin Montagu to Winston Churchill, 31 October 1916, Gilbert, 1580.

about the place of technology on the battlefield begun almost a year earlier in "Variants of the Offensive." In it, he argued that "the conditions of this war deny to the stronger power, whether on sea or land, its legitimate offensive scope. In all previous wars the stronger army was able to force matters to a final decision. The great developments of defensive power now prevent this."[231] Churchill cautioned that Britain would "never have a superiority in numbers to triumph by itself."[232]

In order to overcome this shortfall, Churchill believed that Britain needed to "find another theater or another method," and that "the problem is to advance a large army in one bound 7,000 or 8,000 yards."[233] He believed that the key to achieving this goal was "an attack on two processes – (a) Blasting power and (b) Moving power; blasting power is very well provided for, but moving power is in its infancy."[234] He built upon his ideas from "Variants of the Offensive" and stressed the desirability of operating at night when "the offensive would have, if it could only act, all the advantages."[235] Churchill believed that realizing this vision was possible and could "shortly be described as 'the attack by armored vehicles, but he was also very forthright with his perception of the limitations of contemporary technology and tactics. He wrote in November 1916, that "I cannot pretend to do more than outline it and suggest it. I am not an inventor or designer. I have

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[231] Memoranda by Winston Churchill, 9 November 1916 in Martin Gilbert, ed., *Winston S. Churchill: Companion Volume IV, Part 1, January 1917-June 1919* (Boston: Houghton Mifflin, 1978), 28.

[232] Memoranda by Churchill, 9 November 1916, 28.

[233] Memoranda by Churchill.

[234] Memoranda by Churchill.

[235] Memoranda by Churchill.

no means of testing and elaborating these ideas. Evidently they require study, experiment, and at least six months preparation."[236]

A final, large portion of Churchill's memorandum dealt with finding ways of limiting "confusion" on the technologically enhanced battlefield he envisioned. This emphasis was a product, not only of his desire to launch future mechanized assaults at night, but of his experience on the Western Front and the problems faced by the BEF at the Somme. For Churchill, planning, mobility, and, most importantly, communications technology would help to alleviate the command and control issues that plagued World War I battlefields. In the process of articulating these ideas, Churchill revealed the same emphasis upon relying on experts to realize a techno-human system based on speed, power, and morale brought about through strong leadership that had inspired his interest in National Efficiency. He continued to espouse his belief that "on land, the mere thrusting forward of masses of heroic but easily vulnerable beings into a hail of machine-gun bullets only produces useless carnage."[237] Britain needed to "meet material dangers by material means, thus restoring to human bravery and skill its birth-right."[238]

Churchill imagined himself at the center of the reformed and technologically enhanced military he proposed, and self-promotion and political pragmatism played as great a role in his expostulations as any altruistic, nationalistic, or technologically enthusiastic motivation. This was increasingly clear in the early months of 1917, when, following the downfall of the Asquith government, he campaigned aggressively for his

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[236] Memoranda by Churchill.
[237] Winston Churchill, "The Meaning of Verdun," *Collier's Weekly*, 18 November 1916, 23.
[238] Winston Churchill, "The Meaning of Verdun," 23.

old ally David Lloyd George – now Prime Minister – to find a meaningful role for him in the Cabinet. In addition to Lloyd George's promises to Conservative leaders not to meddle in military decision making, he also had to promise them that he would not include Churchill in his government in order to gain their support for his premiership.[239] His actions as Prime Minister demonstrated that he had no intention of honoring either promise and he sent envoys to Churchill to let him know that he would bring him into his government after the release of the Dardanelles Commission Report. This open-ended promise did not appeal to Churchill's sense of urgency and impatience to resuscitate his career and implement his proposed reforms.[240] As a consequence, Churchill embarked on a campaign of criticism – in Parliament and the press – against the policies of Lloyd George's government.[241]

In a series of articles in *The London Magazine* and the *Sunday Pictorial* through the fall of 1916 and the first half of 1917, Churchill ruminated on the meaning and course of the war, and hammered at the Lloyd George government's policies. In these articles, he repeated his belief in the supremacy of technology on the battlefield, and advocate a policy shift toward the core tenets he espoused. Churchill wrote that Britain was in "a war of machinery," in which generalship "consists largely in the application of machinery to men," and that "the way to lose the war is to try to beat machinery by men."[242] He also maintained that "the anatomy of these vast modern battles as exemplified by Verdun and

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[239] Searle, *A New England?*, 704.

[240] Martin Gilbert, *Winston S. Churchill, Volume IV: The Stricken World, 1916-1922* (Boston: Houghton Mifflin, 1975), 3.

[241] Gilbert, *Winston S. Churchill, Volume IV,* 7–8.

[242] Winston Churchill, "The War by Land and Sea," Part III, *The London Magazine*, December 1916, in Churchill, *Collected Essays*, 137.

the Somme" amounted to the selection of a battlefield, around which "you build a wall – double, triple, quadruple – of enormous cannon," and "behind these you construct railways to feed them and pile up mountains of shells," all of which alerted the enemy and allowed them to bring in their own artillery and infantry.[243] The result was that "the battlefield [was] completely encircled by thousands of guns of all sizes, and a wide oval space is prepared," and "though this awful arena all the divisions of each army are made to pass in succession, as if they were the teeth of interlocking cog-wheels grinding each other and battered ceaselessly by the enveloping artillery."[244]

Chruchill felt that, even in this battle that had "been fought as a great field action between the armies in a wilderness of craters and shell holes…superior personal qualities of our troops, and the devoted leading of their officers, have found a scope long hitherto denied them."[245] Churchill believed that, while "it is a tremendous and even glorious fact that our new armies, the civilians of yesterday, have shown themselves capable of mastering in the closest of conflict the best soldiers of the Prussian military regime," they needed to "keep as many of our brave men as possible for the days when their superb valor and personal ascendancy will be rendered overwhelming by the resources of science, organization, and machinery."[246] In this article, Churchill thus brought together both an assumption of innate national superiority and the concept of technocratic amplification of power. In this process he was publicly promoting the ideas he had

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[243] Winston Churchill, "The War by Land and Sea," Part V, *The London Magazine*, February 1917, 157.
[244] Churchill, "The War by Land and Sea," Part V, 157.
[245] Churchill, "The War by Land and Sea."
[246] Churchill, "The War by Land and Sea," Part V, 158-159.

expounded in government circles since his first days in the House of Commons sixteen years before.

Churchill repeated again his faith that "machinery may be substituted for men," because "the outstanding lesson of this war has surely been to use lifesaving machinery to the utmost."[247] He argued that "munitions save men…good railway communications multiply the strength of men," and "mechanical devices of all kinds augment the power of the human hand and shield the sacred chalice of human life."[248] Finally, to the existing military leadership, like Sir William Robertson, who contended that "'We must put our backs into the war,'" he retorted that "we must do more, *We must put our brains into it*."[249] These articles were a public and powerful rebuke to the strategy of the British high command and the leadership of Lloyd George, and helped to resuscitate Churchill's political position in the spring of 1917.

At the same time, Churchill made a series of speeches in the House of Commons that likewise were highly critical of Lloyd George's government and echoed ideas he laid down in print. In one speech, he blasted the government for deferring to military authorities and not investing in more efficient strategies and technologies, while continuing to maintain large cavalry forces.[250] His critiques, though, were tailored to appeal to Lloyd George's interdependent ambition of exerting more control over military affairs and limiting casualties. Churchill's actions during the spring of 1917 were carefully calculated to make his continued exclusion from the Cabinet politically

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[247] Winston Churchill, "Manpower Problem: Wanted, A Policy," *Sunday Pictorial*, 8 April 1917, 190-91.
[248] Churchill, "Manpower Problem."
[249] Churchill, "Manpower Problem," [original emphasis].
[250] 91 Parl. Deb., H.C. (5th ser.) (1917) 81-182.

expensive, while providing opinions which could be used to justify giving him a military role within Lloyd George's government. This was evident when he championed "mechanical additions—in fact, in all these great man-saving processes—civilian influence and civilian thought have painfully but eventually triumphed over the orthodox professional views, to the great advantage of our fighting men, and the prospects of our cause."[251] He underscored the point when he pointed out that "machines save life, machine-power is a substitute for man-power, brains will save blood, maneuver is a great diluting agent to slaughter, and can be made to reduce the quantity of slaughter required to effect any particular object."[252] In the same speech, he also repeated his contention that the Allies should delay future offensives until the technologies and material resources necessary for victory were amassed and deployed strategically.

These admonitions were far from Churchill's only critiques of Lloyd George's government, and as winter turned to spring in 1917, Churchill's jabs became more frequent and pointed. He also began to call for a "Secret Session" where the House of Commons could demand direct answers from the government on the conduct of the war.[253] Ultimately, Churchill's ability to realize that "Secret Session" revealed the extent to which his political fortunes had recovered, and marked the culmination of his campaign to reenter the Cabinet through a vigorous techno-military advocacy. During the debate on May 10, Churchill brought together all of the various lines of argument he had initiated over the previous eighteen months and interjected a new theme that would

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[251] 91 Parl. Deb., H.C. (5th ser.) (1917) 81-182.
[252] 91 Parl. Deb., H.C. (5th ser.) (1917) 81-182.
[253] Secret Sessions were simply sittings of Parliament closed to the press and observers, consequently though, no official records were kept of the proceedings, see: Jenkins, *Churchill*, 321–23.

come to dominate his military policy advocacy: the potential contributions of America. He thought "that we ought not to squander the remaining armies of France and Britain in precipitate offensives before the American power begins to be felt on the battlefields."[254] The entry of the United States into the war a little over a month before the debate legitimized Churchill's repeated calls for delaying any major offensives, and promised the material capabilities to realize his technocratic initiatives.

Churchill's growing political influence meant that he could no longer be ignored or marginalized by Lloyd George, regardless of the objections and antipathy of his Conservative allies. This resulted in his appointment as Minister of Munitions on July 18, 1917.[255] In the course of sixteen years, Churchill had risen to power, lost it, and finally returned to a meaningful role in elite leadership. During this journey, he had developed a complex relationship with science and technology, as well as an ideology of reform through limited technocratic means. His dynamic worldview reflected his role as an enthusiastic intellectual as much as a political leader or literary figure, and was the product of the wide variety of ideological influences he had encountered throughout his rise to political power. He was remarkably consistent in his belief in the power and possibility of technology as well as his faith in British institutions and social structures. Whether it was debating radical visions of a reformed society or proposing a strategy for victory on the Western Front, he consistently embraced a technocratic vision enacted

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[254] Because no transcripts were kept of the proceedings, the only record of Churchill's statements was a recreated core of his speech that he included in his postwar memoir, see: Winston Churchill, *The World Crisis: Volume III* (New York: Charles Scribner's Sons, 1927), 261.
[255] David French, *The Strategy of the Lloyd George Coalition, 1916-1918* (Oxford: Clarendon Press, 1995), 149.

through existing institutional structures and guided by a ruling class with roots in the

nineteenth century. The challenge he faced beginning in 1917 involved translating this

ideological framework into a practicable and politically viable strategy as a member of a

British government under siege.

Chapter 2:

"The 25 per cent which turns the scale":

Politics, Strategy, and Churchill's Technocratic Revolution in Action

on the Home Front and the Western Front

In July 1917, Winston Churchill became Minister of Munitions and returned to a Cabinet

that was as strategically paralyzed and politically deadlocked as the body he had left two

years before. It was divided between "Easterners" and "Westerners," who disagreed over

whether the war should be prosecuted in Flanders or in some other theater. It was also

divided between "traditionalists" and "mechanical advocates," who diverged about the

best operational military model towards which to dedicate Britain's rapidly dwindling

resources.[256] Over the next nine months, Churchill articulated a revolutionary vision for

military technology and strategy, designed to break the deadlock both within Lloyd

George's government and on the Western Front. He aggressively advocated for a

massive program of state-funded research, development, and production of novel military

technologies, and their systematic utilization.

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[256] Geoffrey R. Searle, *A New England?: Peace and War, 1886-1918* (Oxford: Oxford
University Press, 2004), 703–5; Timothy Travers, *How the War Was Won: Command
and Technology in the British Army on the Western Front: 1917-1918* (London:
Routledge, 1992), 32–39; J. P. Harris, *Men, Ideas, and Tanks: British Military Thought
and Armoured Forces, 1903-1939* (Manchester: Manchester University Press, 1995),
159–65.

Churchill thought that his ideas would allow Britain to win a decisive battle on the Western Front and limit the loss of British lives. His vision was simultaneously ideologically driven and politically self-serving, evolving as he sought to appeal to different audiences. Essentially, Churchill's ideas were an attempt to bridge the strategic gap between Prime Minister David Lloyd George and Britain's military leaders by offering a grand technological and tactical system to solve immediate military problems that drew on the technocratic ideology he had gradually defined and refined across the course of his sixteen-year political career. The proposals Churchill articulated during and after 1917 reflected his efforts to transform his ideological worldview into a roadmap for institutional reform, as he sought a means of ensuring decisive victory in the World War I, and preserving and restoring Britain's power in the interwar period.

Churchill's plans and tactics evolved in the face of a variety of political, intellectual, and logistical forces between his reentry into elite British politics in July 1917 and the Armistice in November 1918. These included the realities of manpower shortages following the military disaster at Passchendale, equipment and munitions production and shipping delays both in Britain and the United States, and the strategic dilemma following the last German offensive in March 1918. The combination of all of these factors resulted in a partial acceptance of Churchill's ideas concerning mechanized technology and tactics on the battlefields of the Western Front. This would have long-lasting ramifications and formed the blueprint for postwar institutional reform, because neither the "traditionalists" nor the "mechanical advocates" had decisive evidence of the validity of their mental model. Thus, in the postwar world, British military development

followed a path where new mechanized military technologies were simply folded into an existing operational system and were not utilized to their full potential.

By the summer of 1917, the outlook for the British government was grim.[257] Nearly three years of intense warfare across Europe and the Middle East had resulted in little beyond stalemate, devastation, and embarrassment for Britain's military. The previous December Henry Asquith's Liberal regime fell, as a result of both interparty rivalry and maneuvering at the elite level, and growing popular dissatisfaction with Britain's costly and futile military strategy. The indecisive outcome of Sir Douglas Haig's Somme offensive in the summer of 1916 – and the 432,000 British casualties it produced – served as a lightening rod for criticism within government circles of Asquith's leadership.[258] David Lloyd George, a long-time ally of Asquith, summed up the general malaise when he said that "he could not possibly be a party any longer to the shameful mismanagement and slackness," and that "things are simply being allowed to slide, and that it is time someone spoke out."[259] He capitalized on this tri-partisan dissatisfaction within Parliament, and led a revolt from within Asquith's own Cabinet to form a new coalition government that brought together representatives from both the Tory and Labour parties in addition to a few key Liberals.[260] As director of the Ministry of Munitions since its

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[257] Adam Tooze, *The Deluge: The Great War, America and the Remaking of the Global Order, 1916-1931* (New York: Viking, 2014), 182–89.
[258] Robin Prior and Trevor Wilson, *The Somme* (New Haven: Yale University Press, 2005), 301; Searle, *A New England?*, 691–96.
[259] Diary Entry, 15 September 1915, reprinted in *Lloyd George: A Diary by Frances Stevenson,* ed. A.J.P. Taylor (London: Hutchinson, 1971), 57.
[260] John Turner, *British Politics and the Great War: Coalition and Conflict* (New Haven: Yale University Press, 1992), 140; Searle, *A New England?*, 702.

inception in 1915 and then Secretary of State for War, Lloyd George's frustrations stemmed from his Liberal colleagues' unwillingness to question or challenge the policies of Britain's leading generals.[261]

These leaders, above all Sir William Robertson (Commander in Chief of the Imperial General Staff) and Haig (Commander of the BEF in France), were intensely focused on achieving a decisive victory against Germany and her allies on the Western Front, but had little to show for their costly policies. This is not to imply that civilian leaders did not actively participate in strategic planning or agree whole-heartedly with Haig's plans, only that for the most part they chose to defer to the judgment of military leaders.[262] Despite Lloyd George's suspicion of Haig and Robertson's policies, his support from Conservatives – and therefore his ability to retain political power – rested upon his willingness to preserve the existing military leadership.[263] In addition to the Tory leadership, Robertson and Haig also enjoyed the support of King George V, which made demoting them politically difficult, if not impossible.[264]

The spring of 1917 found Lloyd George in a precarious situation. He could eliminate the existing military leadership who remained adamant that a new full-scale offensive in Flanders was required as soon as the weather permitted, but that action might come at a cost in political capital from which he could not recover. At the same time, there was no easily identifiable and seemingly failsafe alternative that promised to bring

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[261] Searle, *A New England?*, 697–702.

[262] For more on the power dynamics between civilian and military leadership during the war, see: Robin Prior and Trevor Wilson, *Passchendaele: The Untold Story* (New Haven: Yale University Press, 1996), 34; David R. Woodward, *Lloyd George and the Generals* (Newark: University of Delaware Press, 1983).

[263] Searle, *A New England?*, 703–5.

[264] Turner, *British Politics and the Great War*, 154.

the war to a speedy or decisive end. Part of the interparty dissatisfaction that brought

Lloyd George to power was a fundamental disagreement over the prosecution of the war.

Traditionally, this division between "Easterners" and "Westerners" implies that those

who opposed a strategic emphasis on the Western Front were vociferous advocates of

pursuing campaigns and expeditions in the "East." In actuality, their visions for strategic

reform were much more varied and complex, and reflected the different constituent

ideologies of the various "Easterners," many of whom were more interested in limiting

the loss of British lives than where military operations took place.[265] Some saw the war

as wasteful of lives and material in the extreme regardless of where it was fought, and

wished to find any means of discontinuing it honorably, or at the least, limiting Britain's

losses.

Others though – especially Conservatives – believed that the stalemate on the

Western Front was purely a product of a half-hearted commitment to victory and a lack

of strong leadership on the part of Asquith.[266] Haig and Robertson repeatedly mobilized

these politicians' support by pleading the need to break the morale of the enemy and by

presenting visions of speedy and decisive battlefield victories that appealed to these

politicians' perception of the war and the determinance of victory. Thus, while Lloyd

George might wish to move the focus of Britain's war effort away from further frontal

assaults in Flanders, he had to *appear simultaneously* to give lip service to the needs and

goals of his military leaders and aggressively fulfill Britain's commitments to her allies.

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[265] Woodward, *Lloyd George and the Generals*, 116; Searle, *A New England?*, 703–5.
[266] Searle, *A New England?*, 705.

Four possible alternatives to a full-scale British assault on the Western Front appeared possible to Lloyd George during the spring of 1917, but each would prove untenable. These included diverting resources to British forces in Egypt and Palestine (or Salonika), providing artillery and supplies – and potentially troops – to an Italian offensive against Austria, and supporting a French attack under the leadership of General Nivelle.[267] With the exception of the final proposal, none of the possibilities seemed to provide a means of prosecuting the war in a vigorous and decisive manner, making them politically problematic at best. Because of this, Lloyd George threw all of his support behind Nivelle's plans, which relied on the British launching attacks to distract and occupy the Germans while the French launched a major and decisive offensive.[268] This arrangement was a direct challenge to the authority and strategy of the British Imperial General Staff, who remained committed to launching an independent assault. The only way Lloyd George could acquire their support was through promises that if the French offensive did not progress quickly, they could turn their forces toward an attack in Flanders.[269] The abject failure of Nivelle's operation in April 1917, coupled with the success of the British diversionary attacks, had the dual effect of eliminating any possible

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[267] Turner, *British Politics and the Great War*, 156.

[268] The French promoted Nivelle to command of French forces on the Western Front in December 1916 mostly for his political viability, because of his lack of strong Catholic affiliation and his optimism, although his limited success in retaking several forts around Verdun lent him credibility. Nivelle believed that it would be possible to achieve a breakthrough on the Western Front by combining artillery tactics that the German's had used at Verdun with a large scale offensive across a wide area designed to tie up German forces and make it difficult, if not impossible, for them to bring in reinforcements or counterattack. See: Robert Doughty, *Pyrrhic Victory: French Strategy and Operations in the Great War* (Cambridge, Mass.: Belknap Harvard, 2005), 322–26; John Terraine, *The Road to Passchendaele: The Flanders Offensive of 1917, A Study in Inevitability* (London: Leo Cooper, 1977), 23; Searle, *A New England?*, 705–7.

[269] Searle, *A New England?*, 706.

alternatives to a renewed British offensive in Flanders, and restoring Robertson and

Haig's political supremacy among Lloyd George's Conservative allies.[270]

The net result of Lloyd George's strategic gambits was the entrenchment of

political stalemate between himself and the British High Command that mirrored the

military stalemate on the Western Front. Neither side could conceive of an effective

strategy for expeditiously winning the war while remaining consistent with the

ideological paradigm that guided their actions. Furthermore, each blamed the other

faction for this impasse. This was the atmosphere of deadlock and futility that greeted,

and indeed inspired, Churchill's return to the Cabinet. In bringing Churchill back to the

Cabinet, Lloyd George said that he desired "someone who will cheer him up and help &

encourage him, & who will not be continually coming to him with a long face and telling

him that everything is going wrong."[271]

Churchill's political tactic of actively criticizing Lloyd George's leadership, while

proposing alternative military policies during the course of 1916 and early 1917, gave

Lloyd George a political justification to bring him back into the Cabinet. But it was also

Lloyd George's "intense admiration for [Churchill's] cleverness, &…energetic and

forceful," ability to reform institutions that appealed to his need to find a solution to the

political deadlock he had created.[272] By 1917, Churchill and Lloyd George had enjoyed a

complex relationship for more than a decade, one which combined political self-interest

and shared ideology.[273] By placing Churchill at the Ministry of Munitions, Lloyd George

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[270] Woodward, *Lloyd George and the Generals*, 150–81.
[271] Diary Entry, 19 May 1917, reprinted in, Taylor, *Lloyd George*, 158.
[272] Diary Entry, 19 May 1917, reprinted in, Taylor, *Lloyd George,* 158.
[273] Richard Toye, *Lloyd George and Churchill: Rivals for Greatness* (London: MacMillan, 2007), 57.

hoped to be able to utilize him both in his capacity as a potent reformer and as a political bludgeon to break the stalemate in the Cabinet.

World War I pushed the British state to its limits, politically, economically, and institutionally, and the Ministry of Munitions embodied that strain, both in its inception and its function. Born out of the inability of the War Office to handle the exponentially larger supply demands of a new form of combat – trench warfare – and an increasingly global operational sphere, it was both an administrative expedient and a political compromise.[274] While it was recognized that reform of munitions procurement was necessary by March 1915, it took the Cabinet shakeup following Churchill's departure as First Lord of the Admiralty in May to realize the formation of the new ministry.[275] David Lloyd George became the first Minister of Munitions and set about forging a closer bond between government and business that built on his experience at the Board of Trade and his involvement with the "National Efficiency" movement to further his political reputation for vigorous reform.[276] The result of Lloyd George's efforts was a massive, and effective, bureaucracy that enlisted large numbers of business leaders – often at their own expense – to guide and accelerate production of the weapons, ammunition, and supplies that military leaders on the Western Front demanded.[277] The enormous British

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[274] Chris Wrigley, "The Ministry of Munitions: An Innovative Department," in *War and the State: The Transformation of the British Government, 1914-1919*, ed. Kathleen Burk (London: Allen & Unwin, 1982), 39.

[275] H. H. Asquith and Alexander Mackintosh, *Memories and Reflections, 1852-1927*, vol. 2 (London: Cassell, 1928), 67; Eugene Beiriger, *Churchill, Munitions and Mechanical Warfare: The Politics of Supply and Strategy* (New York: Peter Lang, 1997), 2.

[276] Wrigley, "Ministry of Munitions," 41; Searle, *A New England?*, 677–79.

[277] Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 3.

assaults of 1916 benefited from the availability of unprecedented quantities of

ammunition and material, but this came at a cost.[278] Each time a new production need

emerged, the ministry recruited a new business leader to oversee a new department. This

was a result of the singular mission which defined the formation of the ministry: the

supply of shells and machine guns, and despite what Chris Wrigley calls Lloyd George's,

"pragmatic, untrammeled ways," these remained the primary task of the institution.[279]

Lloyd George's transition from the Ministry of Munitions to the War Office in

July 1916 did little to alter either the character or the mechanisms of the ministry. His

two successors, Edwin Montagu and Dr. Christopher Addison, lacked the political power

to effect meaningful reform, and there seemed little need for it.[280] Rather, they focused

on trying to manage the increasingly chaotic and bloated ministry, which proved

extremely difficult. This inability to bring order to the ministry was one of the reasons

Lloyd George turned to Churchill, whose reputation for aggressive institutional reform

recommended him for the task. When Churchill arrived at the Ministry of Munitions in

July 1917, he found a staff of 65,000 clerical workers, overseeing the efforts of three

million industrial workers, divided into more than fifty separate departments, each

overseen by a different leader and each working essentially independently.[281] This

diffusion of control led to competition between departments and infighting among their

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[278] R. J. Q. Adams, *Arms and the Wizard: Lloyd George and the Ministry of Munitions, 1915-1916* (College Station: Texas A&M University Press, 1978), 171–72.
[279] Wrigley, "Ministry of Munitions," 43.
[280] Wrigley, "Ministry of Munitions," 44.
[281] A. J. P. Taylor, *English History, 1914-1945* (New York: Oxford University Press, 1965), 34; *Winston S. Churchill: Companion Volume IV, Part 1, January 1917-June 1919,* ed. Martin Gilbert (Boston: Houghton Mifflin, 1978), 137.

heads, so much so that many were on the verge of resignation when Churchill arrived.[282] This exacerbated Churchill's growing realization that "the immense and then unmeasured resources of the United Kingdom [that] afforded an ample field for the enterprise and energy of departmental direction and for the organizing capacity and bold initiative of British business men," was quickly being eclipsed by the requirements of industrialized warfare.[283] The bounds of British industrial capacity meant that it was impossible for supply problems to be solved in the ad hoc nature that Lloyd George had initiated.

Churchill believed that it was "necessary not simply to expand [Britain's industrial output and the Ministry of Munitions], but to go back over ground already covered, and by more economical processes, by closer organization, and by thrifty and harmonious methods, to glean and gather a further reinforcement of war power."[284] His vision for this relationship between industry and the supply of war materials reflected both his larger thinking on technology on the battlefield and his experience as a member of the British government. Churchill focused on three key areas of reform in his efforts at reorganization and managing the Ministry of Munitions. First, he attempted to enact what Chris Wrigley calls "Whitehall practices" at the ministry, but he sought to use them to temper – not overwhelm – the institutional dynamism that characterized the ministry.[285] In other words, he sought to realize at the ministry a synthesis of traditional British administrative methods that prioritized central control and streamlined transmission of information with the inclusion of business and technical experts at every

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[282] Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 55.
[283] Memorandum by Winston Churchill, 18 August 1917, in Gilbert, *Winston S. Churchill Comp. Vol. IV, Pt. 1*, 137.
[284] Memorandum by Winston Churchill, 18 August 1917, 137.
[285] Wrigley, "Ministry of Munitions," 43.

level of administration. This mirrored his efforts at intellectual synthesis that he applied to military operations and strategy.[286] Second, he attempted to shift the Ministry of Munitions from an institution that reacted to the armaments demands of the British High Command on the Western Front into a force defining procurement through technological innovation and participation in the debate over military strategy at the highest levels. Churchill would only have partial success in implementing this vision, but the experience served a defining role in his postwar efforts at institutional restructuring on a grand scale. Finally, his policies at the Ministry of Munitions both reflected his idealistic aspirations of a technocratic British state, and his personal political ambitions. His policies were always shaped by a long-term agenda, but tempered by the immediate requirements of currying favor with the different constituencies he served at the highest levels of British politics.

Churchill's reorganization campaign at the Ministry of Munitions was designed to streamline the flow of information to himself and minimize competition for resources and redundant production. Complicating this effort was the pressure to maintain the pace of munitions production without interruption and preserve the precarious political balance within the Lloyd George government that had brought Churchill's back to Whitehall. He could not afford to discard the business leaders whom Lloyd George had recruited, lest their departure cause production delays or political backlash. At the same time, when he arrived, "most of the leading men [were] in a state of mutiny, and…resignations [were]

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[286] For more on the traditional qualities and practices of the British state, see: Philip Harling, *The Modern British State: An Historical Introduction* (Cambridge: Polity, 2001); Patrick Joyce, *The State of Freedom: A Social History of the British State since 1800* (Cambridge: Cambridge University Press, 2013).

imminent," because of the inability of his predecessors to reorganize the ministry.[287] To

placate these leaders, he divided the seventy departments of the ministry into ten

directorates, whose leaders sat on a new Munitions Council, which mirrored the function

of the Board of Admiralty.[288] To manage this transition, Churchill brought in two expert

managers from his days at the Admiralty: Sir Graham Greene and James Masterton-

Smith.[289] Assembling a team of experts drawn from the breadth of Churchill's political

career would be a hallmark of his time at the Ministry of Munitions, and many of these

men followed him to the War and Air Ministries after the Armistice. Most notable of

these was his old political ally Jack Seely.

On a more basic level, Churchill sought to use the new Munitions Council as a

springboard for the increased flow of information and central direction, but also as a

mechanism for instituting "Whitehall practices" at the ministry. He demanded weekly

reports on the pace of production and development of key resources like steel plates and

technologies like tanks, and instituted a color code system to prioritize the flow of key

information upwards through the ministry.[290] Churchill also ordered the creation of a

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[287] Riddell Diary, 19 July 1917, reprinted in, Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 55.

[288] *History of the Ministry of Munitions.*, vol. II, Part 1 (London: H.M.S.O., 1921), 76–77; Churchill was not the first to propound the 'group idea,' but his quick action upon his appointment as minister speaks to the complimentary nature of the structure with his larger institutional goals, See: *History of the Ministry of Munitions.*, II, Part 1, 175–77.

[289] *History of the Ministry of Munitions.*, II, Part 1, 77; V.W. Baddeley, ed., "Greene, Sir William Graham (1857-1950)," *ODNB*, 2004.

[290] Winston Churchill to Walter Layton, 3 August 1917, in Gilbert, *Winston S. Churchill Comp. Vol. IV, Pt. 1*, 123; Departmental Minute by Winston Churchill, 31 August 1917, in Gilbert, 151; Memoranda by Winston Churchill, 7 August 1917, Churchill Papers, 15/155, Churchill Archives Center (hereafter cited as CHAR); John Brewer, *The Sinews of Power: War, Money and the English State, 1688-1783* (Cambridge, Mass.: Harvard University Press, 1990), xviii–xix.

system of locked boxes for circulating documents among the members of the Munitions Council as a mechanism for spurring collaboration and strategic planning at the highest levels of the ministry.[291] These systems were a transposition of methods he employed at the Admiralty, and were the standard procedures within traditional institutions of the British state. Similarly, Churchill's policies also reflected the same reform requirements he faced at the Admiralty, namely a diffuse body of strong willed leaders who often competed with each other for resources. Churchill's creation of a Naval War Staff was designed to alleviate these issues, while making the Royal Navy stronger overall.[292] Conversely, the Ministry of Munitions posed a different challenge, because, rather than maximizing the effectiveness of a preexisting technological system, Churchill sought to utilize the Ministry of Munitions to realize an entirely new technological system.

Through his combined administrative alterations, Churchill exerted significantly greater control over the enormous ministry, while operating it through mechanisms that were familiar to British civil servants.[293] This provided Churchill with the means to foster the development of technologies he found particularly appealing or important to his technocratic ideal. For example, Churchill's administrative changes allowed him to call a summit on tank development and production, spur the development of mechanisms for transporting tanks and artillery quickly over broken ground, call for modifying existing

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[291] Memoranda by Winston Churchill, 10 September 1917, CHAR 15/156.

[292] Randolph S. Churchill, *Winston S. Churchill, Volume II: Young Statesman, 1901-1914* (Boston: Houghton Mifflin, 1967), 521–27; Brian Lavery, *Churchill Warrior: How a Military Life Guided Winston's Finest Hours* (Oxford: Casemate, 2017), 43–51.

[293] Patrick Joyce deals extensively with the ways that the structures of forms and files within the British government helped bureaucrats to comprehend and transmit information, and for a relatively small number of functionaries and elite leaders to control vast territories and populations of people. See: Joyce, *The State of Freedom*, 144–84.

tanks to maximize immediately the numbers of effective machines at the front, or query

the possibility of developing specific types of tanks for specific applications. [294] It also

allowed him to support the use of technical experts within the departments of the

Ministry of Munitions, like the utilization of Dr. John Cadman, a leading petroleum

engineer, to accelerate the development of synthetic fuels, and focus intradepartmental

reform like streamlining the use of skilled labor in aircraft repair and maintenance in

order to allow the efficient expansion of the air service.[295] All of this was possible

because he demanded weekly reports on key elements of munitions production, which

allowed him to keep abreast of the general functions of every department while leaving

day-to-day operations to the members of the Munitions Council.

Eugene Beiriger extensively examines Churchill's reforms at the Ministry of

Munitions and acknowledges the connection with his days at the Admiralty, but he fails

to recognize that the administrative changes were a reflection of both Churchill's larger

evolution as an architect of technocratic institutional development and his ambitions of

integrating technology into the British military on the Western Front.[296] More than this,

while Beiriger recognizes that Churchill's strategic thought was "remarkably consistent,"

he characterizes Churchill's policies as reactive to the experience of the Great War.[297] In

actuality, Churchill's reforms at the Ministry of Munitions were driven by the same

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[294] Memoranda by Winston Churchill, 5 August 1917, CHAR 15/155; Memoranda by
Winston Churchill, 9 September 1917, CHAR 15/156; Memoranda by Winston
Churchill, 30 September 1917, CHAR 15/156; Memoranda by Winston Churchill, 9
September 1917, in Gilbert, *Winston S. Churchill Comp. Vol. IV, Pt. 1*, 159.
[295] Memoranda by Winston Churchill, 26 September 1917, CHAR 15/156; Memoranda
by Winston Churchill, 29 September 1917, CHAR 15/156.
[296] Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 56.
[297] Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 29.

commitment to bolstering the strength of the British state that drove his interest in H.G.

Wells's ideas a decade before and were only one manifestation of his long and continued

interest in infusing traditional British government institutions with technological

dynamism. Churchill believed that a new level of efficiency could be achieved because

"you have at once the initiative and the drive and force and practical experience of the

open competitive world, coupled with those high standards of duty and that long

experience of official routine and of methods which are the qualifications of the Civil

Service."[298] The creation of the Munitions Council was exceptionally effective in

eliminating the intradepartmental squabbling, and in facilitating the acceleration of

production central to Churchill's visions of a decisive battlefield victory.

Reorganizing the Ministry of Munitions would not be solely sufficient to achieve

the kind of cultural symbiosis Churchill envisioned. He also demanded a more

systematic and seamless flow of information within the ministry and the placement of

dynamic leaders in key positions, especially in regards to the most technically complex

munitions projects. This allowed him to curry favor with Lloyd George by retaining

many of the business leaders he had recruited, while ensuring that the areas Churchill was

most politically invested in received the maximum benefit. For example, he wrote to

Lloyd George that he wanted to replace the head of the Tank Supply Department with

someone better able to work with military leaders, and also that "the Munitions Invention

Department requires invigorating. I am quite sure [H.E.F.] Goold-Adams should go and I

am inclined to appoint Henry Norman, who though not very agreeable is very nearly a

first-class man with immense energy and a great deal of special knowledge and valuable

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[298] *History of the Ministry of Munitions.*, II, Part 1,78.

connections both here and in France in this class of subject."[299] Henry Norman was a

confidant of Lloyd George's and by querying if Lloyd George saw, "any objection on

political grounds to my giving him this Department," Churchill was subtly currying favor

and reassuring the Prime Minister of his authority.[300] Churchill needed to assure Lloyd

George that while "this is a very heavy Department," it was "almost as interesting as the

Admiralty with the enormous advantage that one has neither got to fight Admirals nor

Huns!."[301] He likewise assured Lloyd George that he was "delighted with all these

clever business men who are helping me to their utmost. It is very pleasant to work with

competent people," because his larger plans were sure to cause political antagonism

within the Cabinet and he needed to build up as much goodwill as possible.[302] Churchill

was already beginning to articulate a vision for large-scale institutional reform brought

military planning and procurement under one departmental umbrella, and he understood

that any attempt to realize such a vision would be sure to stir controversy.[303]

These administrative reforms underpinned Churchill's strategic proposals in the

fall of 1917, and the greater productivity he believed was possible through centralized

coordination of munitions manufacturing was the requisite for his more ambitious

technocratic ideas. Without the assurance of providing an abundance of traditional

munitions – namely artillery, machine guns, and ammunition – Churchill had little hope

[299] Winston Churchill to David Lloyd George, 9 September 1917, CHAR 15/46.
[300] Churchill to Lloyd George; Michael Pattison, "Scientists, Inventors and the Military in Britain, 1915-19: The Munitions Inventions Department," *Social Studies of Science* 13, no. 4 (November 1983): 521–68.
[301] Winston Churchill to David Lloyd George, 9 September 1917, CHAR 15/46.
[302] Churchill to Lloyd George.
[303] Winston Churchill, "Memorandum from the Minister of Munitions," 2 September 1917, CHAR 15/31.

of gaining the tacit support from the British General Staff needed to realize his new military system. One of Churchill's first acts upon taking over the Ministry of Munitions was to reach out to Sir Douglas Haig directly, and assure him of his commitment to providing the resources Haig demanded on an unprecedented scale. Churchill also hoped that this direct cooperation between the Ministry of Munitions and the British high command on the Western Front would allow more efficient and timely procurement of weapons and materiel.[304]

Within weeks of Churchill's appointment as Minister of Munitions, the BEF launched the costly campaign on the Western Front he had campaigned so vehemently against: the Third Battle of Ypres, more popularly known as the Passchendaele Offensive. Like the Somme before it, there were a wide range of political and military factors that played into Haig's decision to launch the offensive, most notably the inability of the French to continue to make major offensive contributions and his profound belief that German morale was at its breaking point.[305] The battle significantly contributed to the more than 750,000 casualties Britain incurred from January to November 1917 and weakened the political position of Haig and Robertson, both of whom once again had only vague assertions of wearing down the enemy to show for massive human and material costs.[306] As the battle raged, it gave credence to Churchill's belief that "we must make up our minds, whether in regard to munitions work, national service, or recruiting

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[304] Winston Churchill to Sir Douglas Haig, 26 July 1917, CHAR 15/155.
[305] David French, *The Strategy of the Lloyd George Coalition, 1916-1918* (Oxford: Clarendon Press, 1995), 111; Searle, *A New England?*, 712–19.
[306] Casualties of the expeditionary forces, 1st January to November 1917, National Archives of the United Kingdom (hereafter cited as TNA) CAB 24/34/GT2866; Searle, *A New England?*, 718.

for the Army, either to rub along in the existing basis… or, on the other hand, to undertake a great national campaign in order to extract the final percentage of effort from the people."[307]

By the autumn of 1917, Britain was running out of able-bodied men to fill the ranks of both the army and the industrial sector that was so vital to equipping both their own military and the forces of their allies.[308] Churchill reflected "that the wastage of the Army over recruitment will have been enormous - the divisions will have to be reduced from twelve to nine battalions each. This means that mechanical infantry in the shape of tanks will be very important to supply the deficiency in numbers."[309] The political result was that, despite Haig's earlier dismissive attitude towards Churchill's "meddling in the larger questions of strategy and tactics," and his belief that "he has no real training, and his agile mind only makes him a danger because he can convince Lloyd George to adopt and carry out the most idiotic policy," his weakened position meant that Churchill's ideas suddenly carried weight.[310]

Churchill seized the opportunity and repeatedly urged that the only effective way to produce the weaponry and fill the ranks for future operations was "if the War Cabinet were able to decide upon and communicate to the principle War Departments the general

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[307] Winston Churchill to Lord Milner, 26 July 1917, CHAR 15/155.
[308] French, *Strategy of the Lloyd George Coalition*, 180; Searle, *A New England?*, 719–25.
[309] Winston Churchill to Munitions Advisory Council, 3 August 1917, TNA MUN 5/212.
[310] Haig Diary, 14 September 1917, in Martin Gilbert, *Winston S. Churchill, Volume IV: The Stricken World, 1916-1922* (Boston: Houghton Mifflin, 1975), 47; Travers, *How the War Was Won*, 32–37; David Stevenson, *1917: War, Peace, and Revolution* (Oxford: Oxford University Press, 2017), 265.

character of their War plan for 1918."[311] Such a "war plan" meant the seizure of strategic

direction from the British high command, and the opportunity for Churchill to emplace

his technocratic vision. In this context, Lloyd George made a fundamental shift in policy,

away from pursuing an expeditious victory on the Western Front – borne on the back of

the British infantry – and toward the technologically infused campaign that Churchill

envisioned.[312]

Churchill now had the challenging task of proposing and justifying a concept for a

military of the near future that would do all of the following: appeal to his political

masters, be acceptable to the entrenched military leadership, and be achievable in a

timely manner using the productive capabilities available to him through the Ministry of

Munitions. The resulting memorandum, "Munitions Possibilities of 1918," combined

many of his earlier ideas about technology on the battlefield, and fused them into a

cogent argument designed to appeal to the variety of constituencies he needed to

placate.[313] Churchill justified the document as an effort to decide "upon the Munitions

Programme for 1918," which required answering two fundamental questions: "What is

the War Plan?" and "When is it to reach its climax?"[314] In reality, however, the

document was his justification for standing "on an active defensive in the West until

1919, when American armies should have become a decisive factor," which appealed

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[311] Minutes of the second meeting of the War Priorities Committee, 20 September 1917, TNA CAB 24/30/68.

[312] French, *Strategy of the Lloyd George Coalition*, 181–82; Searle, *A New England?*, 723–25.

[313] Winston Churchill, "Munitions Possibilities of 1918," 21 October 1917, TNA CAB 24/30; Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 98.

[314] Churchill, "Munitions Possibilities of 1918."

directly to Lloyd George's policy aspirations and remained in lockstep with his earlier

statements of military policy reform.[315]

On a deeper level though, "Munitions Possibilities of 1918" was the expression of

Churchill's technocratic evolution and futurological interests. The document was

carefully calculated to have the maximum political effect and appeal to preexisting

intellectual structures, but it also incorporated many of the futurological aspects of H.G.

Wells's works that Churchill found so appealing.[316] Namely, he presented a

revolutionized battlefield that relied on technology not only to overcome strategic and

tactical limitations, but to make British superiority so overwhelming that it would assure

victory.[317] Like Wells, while Churchill alluded to specific technologies, and clearly

understood how they operated, he was remarkably vague in providing details about the

way the actual climactic battle he envisioned would unfold. Unlike Wells, all of the

technological systems that his ideas relied on were already fully formed. What

distinguished his vision was not the presentation of a fantastical new technology, but

rather the systemization of a wide array of existing technologies.

Churchill appealed directly to Britain's elite military leaders when he asserted that

"the defeat and breaking-up of the German armies in the West affords the best, the

simplest and swiftest method of arriving at decisive victory. The only question is, 'Have

we the power to do it?'"[318] His answer was a resounding "yes," and even though it was

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[315] Churchill, "Munitions Possibilities of 1918."

[316] Peter J. Bowler, *A History of the Future: Prophets of Progress from H. G. Wells to Isaac Asimov* (Cambridge: Cambridge University Press, 2017), 17.

[317] Philip Coupland, "H. G. Wells's 'Liberal Fascism,'" *Journal of Contemporary History* 35, no. 4 (2000): 541–58.

[318] Churchill, "Munitions Possibilities of 1918"; Robert Citino, *Quest for Decisive Victory: From Stalemate to Blitzkrieg in Europe, 1899-1940* (Lawrence: University Press

"clear that in 1918 we cannot hope for any large numerical superiority in men," six

"principle forms of machinery" would make such an inferiority less of an impediment in

a campaign in 1919. [319] These technologies were: "artillery preponderance, air

supremacy, railway or mechanical mobility, trench mortar development, tank

development, [and] gas development," all of which could be "combined and applied by

generalship so as to produce the maximum intensity of offensive power during the

culminating period."[320] The goal was "the concentration of all our methods of attack

upon the enemy simultaneously at the decisive period," and "unless the effort reaches and

is maintained at the required degree of intensity or in a sufficiently large scale the

campaign will be indecisive like all the others [The Somme and Passchendaele]."[321]

Churchill's proposals centered on achieving a "continuous offensive," sustained by both

"blasting power" and "moving power."[322]

Churchill envisaged "blasting power" as an appeal to the mental models of the

existing military leadership who were wedded to artillery preponderance as a requisite for

battlefield success.[323] He contended that the Ministry of Munitions could provide an

unprecedented number of artillery pieces and ammunition for a future campaign,

provided that the ministry had access to sufficient labor forces and the BEF limited its

operations during 1918. Churchill believed these weapons could be supplemented by

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of Kansas, 2002), 162–67; Tim Travers, *The Killing Ground: The British Army, the Western Front and the Emergence of Modern Warfare, 1900-1918* (London: Allen & Unwin, 1987), 37–61.

[319] Churchill, "Munitions Possibilities of 1918."

[320] Churchill, "Munitions Possibilities of 1918."

[321] Churchill, "Munitions Possibilities of 1918."

[322] Churchill, "Munitions Possibilities of 1918."

[323] Travers, *The Killing Ground*, 62–82.

heavy guns taken from obsolete warships, and by the proliferation of trench mortars. He

believed that the combination of railway guns with traditional artillery would allow for a

bombardment on an immense scale and duration, provided it was coordinated and

concentrated on key targets. Yet, it was trench mortars which promised, at "the

culminating period and at the true psychological moment in relation to the main battle, to

pulverize and rip away the whole of the enemy's first system of trenches simultaneously

or successively over very considerable stretches of the Front."[324]

Trench mortars were a new technology of World War I, which Churchill had

advocated since 1915, including in "Variants on the Offensive" and "Mechanical Power

and the Offensive," but he pointed out that they had never been utilized on a large scale.

In his advocacy of these technologies, Churchill employed the language of the British

high command, and his emphasis on surprise, intensity, and attrition on enemy troop

morale was designed to appeal to that constituency's conception of warfare. His

contention that there were "two different kinds of battles…the main battle or battle of

Exhaustion, and the subsidiary battle, or battle of Surprise" was designed to alleviate the

fears of British commanders that his technocratic vision would come at the expense of

their traditional methodology.[325] In his emphasis on "blasting power," Churchill thus was

not challenging the dominant British strategy of attacking over a wide front. Rather, he

was advocating employing technology to attack on a wider front than ever before.

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[324] Churchill, "Munitions Possibilities of 1918"; Travers, *How the War Was Won*, 41–42.
[325] Churchill, "Munitions Possibilities of 1918."

"Moving power" was the key to Churchill's conception of a simultaneously dispersed and intense "battle of surprise."[326] Churchill described two key technologies that today would be lumped under the larger title of "armor," but at the time were seen as distinct. The first was tanks, which he alleged had been misused and misunderstood since their first appearance on the battlefield and had been "condemned to wallow in twos and threes in broad daylight in the most astounding crater fields, confronted by the enemy's massed artillery, and where every special preparation has been made to receive them."[327] Churchill proposed to produce new faster and more reliable tanks by the thousands, which could "be held back along an arc 15 to 20 miles from the centre of attack, and concentrated for battle by complete surprise."[328] Further, once a major British force had crossed no-man's land and captured the enemies' trenches, they needed to be able to "advance continuously *and at a sufficient speed* on a front of twenty or thirty miles," in order that "a general retirement would unquestionably be forced upon the German armies."[329]

This issue of maintaining momentum in the advance was something Churchill had dealt with in his earlier writings and speeches, and something that had plagued the British army on the Western Front.[330] While British forces might successfully utilize artillery bombardment and infantry to capture the enemy's trench system, their inability to quickly bring forward reinforcements at breakthrough points meant that the defenders had ample

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[326] Airpower also featured heavily in Churchill's ideas, and is included in "Munitions Possibilities of 1918."

[327] Travers, *How the War Was Won*, 36–39; Harris, *Men, Ideas, and Tanks*, 71–74; Churchill, "Munitions Possibilities of 1918."

[328] Churchill, "Munitions Possibilities of 1918."

[329] Churchill, "Munitions Possibilities of 1918."

[330] Travers, *The Killing Ground*, 181–85; Searle, *A New England?*, 694–95.

time to regroup and launch counter attacks. This had occurred at the Somme, at Passchendaele, and even at Cambrai when tanks were utilized in large numbers for the first time. Churchill's solution to this consistent failure to capitalize on initial success in offensives was producing and deploying the second of his technological innovations: "caterpillar tenders" – what today would be called armored personnel carriers. These tenders would "carry over the 'cratered' battlefield 10 tons, which by making certain fittings can either be expressed in guns, men, ammunition, or supplies."[331]

Churchill repeated three key themes throughout "Munitions Possibilities of 1918" that bear consideration. First, in keeping with his long-standing advocacy, he emphasized the desirability of delaying any offensive until several conditions were met, namely: superiority in both equipment and troop numbers, and surprise. By doing this, he believed that while there might be heavy casualties, they would be offset politically by a victorious outcome, and the increased utilization of new technologies would help limit human losses. Second, he stressed that traditional military tactics and technology would remain a vital part of his reformed army, and that new technologies did not obviate tradition. He did not discount the concept of the decisive pitched land battle, the preeminence of artillery firepower, or the superiority of British national spirit as the determinants of victory.[332] Instead, he sought to use mechanization to solve problems that those systems could not, and thereby ensure that a final battle would be a decisive one. He wrote that the difference between continuing along the same path in 1918 or waiting to launch his technologically enhanced campaign of 1919 would be "probably not

[331] Churchill, "Munitions Possibilities of 1918."
[332] Travers, *The Killing Ground*, 185; Daniel Ussishkin, *Morale: A Modern British History* (Oxford: Oxford University Press, 2017), 57–72.

more than 25 per cent one way or the other. *But that may be the 25 per cent which turns the scale.*"[333] Finally, Churchill was not simply advocating the mass production of fully formed technologies, but proposing to refine prototypical technologies like tanks and trench mortars, while also developing new ones. His plans for research and development programs formed at the Ministry of Munitions, were as much a technocratic aspiration as an expression of military policy.

Despite Churchill's political calculations and the growing crisis in confidence of Britain's military leaders, Churchill's ideas were not readily accepted or acted upon. A variety of factors played into this intransigence, ranging from internal political fissures to a series of interallied crises during late 1917 and early 1918. Military leaders' continued resistance to intellectual change was the most obvious and immediate barrier to implementing Churchill's ideas. While Churchill's efforts to cosset the tactical and strategic paradigm of Britain's reigning military leaders was wise, they were not fully disposed to implement his ideas.[334] These leaders were more than happy to pay lip service to his technocratic concepts, as long as they did not limit their access to manpower or munitions for their operations, but simply refused to *actively* support his larger reform plans. The demands on British manpower stemming from the tremendous casualties on the Western Front – especially skilled workers who had been exempt from the draft to that point – were also the same laborers necessary to manufacture Churchill's new military technologies.

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[333] Churchill, "Munitions Possibilities of 1918" [Original emphasis].
[334] Travers, *How the War Was Won*, 36–37.

Churchill recognized these conflicting demands from the moment he became Minister of Munitions, and spent much of the fall of 1917 negotiating the release of many of these laborers back to munitions work and finding systems of dilution of skilled workers and replacement by women volunteers.[335] The Royal Navy also objected to Churchill's plans because Churchill's new mechanized military required the use of some of the enormous quantities of steel plates earmarked for shipbuilding to replace losses to submarines and to build both capital warships and escort vessels for the convoy system. Eugene Beiriger examines Churchill's conflict with the Admiralty in detail, and aside from its deleterious effect on Churchill's technocratic aspirations its main significance was its role as the inspiration for a more holistic military planning apparatus which Churchill propounded in the postwar period.[336]

This bifurcation between industrial and military demands rankled Churchill's inclusive conception of creating an efficient military-industrial collaboration, because "if a plan of campaign suited to the actual facts of next year as far as we can foresee them were made out, it seems certain to me that the total demand could be substantially reduced."[337] He argued that "the calculations of military requirements have been based upon a continuance of the kind of offensive action which we have pursued during the last two years, whereas the balance of forces next year will clearly not permit a continuance of that policy on the same scale or to the same degree."[338] Rather, while it "is vital to us

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[335] "The following Report of the Third Meeting of the Munitions Council Sub-committee appointed to consider the question of the labour available for the 1918 Programme is circulated for the information of the Departments interested," 27 November 1917, TNA CAB 24/34/10.
[336] Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 57–74.
[337] Winston Churchill, "Man Power and The Situation," 8 December 1917, CHAR 15/32.
[338] Churchill, "Man Power and The Situation."

to have in the field at the opening of the Spring campaign a British Army stronger and better equipped than we have ever had before," this army "must be husbanded and not consumed."[339]

He continued to insist that in 1918, the BEF's "role and only chance of escaping defeat is to bridge the long intervening months before the Americans can become a decisive factor."[340] Central to this ground-holding role were "Mechanical engines," which "afford an important means of multiplying man-power" and would allow the BEF to fulfill the mission he envisioned while removing its demands on his labor force. He even believed that the troops necessary to man the tanks so vital to his plan for 1918 were already in the military when he disparagingly wrote "are we really to keep in being, at a time when every man is precious …30,000 or 40,000 cavalry, with their horses, when these admirable cavalry-men would supply the personnel for the greatest development of mechanical warfare …that has ever yet been conceived?"[341] Churchill's derision of the continued presence of cavalry on the battlefield spoke directly to the intellectual disconnect between his conception of warfare and Haig's. Haig still envisioned a day when mounted troops would charge through a hole in the enemies' defenses to harass their supply lines, and while he might be willing to see the value in using tanks to create that breakthrough he was loath to abandon his older military paradigm in order to achieve it.

Churchill's ideas appealed to Lloyd George who, as the autumn of 1917 wore on, was emboldened by the failure of Passchendaele and the small scale success of tanks at

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[339] Churchill, "Man Power and The Situation."
[340] Churchill, "Man Power and The Situation."
[341] Churchill, "Man Power and The Situation."

the Battle of Cambrai to take greater control of military strategy.[342] He agreed with

Churchill that replenishing Haig's armies could only come at the expense of achieving

the munitions program laid out in "Munitions Possibilities of 1918."[343] Lloyd George was

also preoccupied with a trio of major diplomatic crises during the late fall of 1917: the

French army mutinies in the wake of the failure of the Nivelle offensive, the Italian

military disaster at Caporetto, and the Russian revolution. These three setbacks, and the

Battle of Caporetto especially, were a seismic shock to the strategic outlook of the Lloyd

George government and led to an erosion of the power of Haig and Robertson as

resources intended for the Western Front were diverted to other theaters of operation.[344]

For example, in order to shore up their Italian allies and prevent a full retreat, the Cabinet

dispatched enormous quantities of supplies and food – as well as 200,000 British and

French troops – from the Western Front in an effort to bolster the Italian war effort.[345]

This further drain on British manpower on the Western Front effectively ended

Haig's case for resuming his attrition tactics in the spring of 1918 by eliminating the

troops who would have been utilized in any operation. The effect of the disaster on the

British government was magnified by the continuing downward spiral of revolutionary

Russia, and seemed to signal the exit of a major ally. A separate Russian peace meant the

release of huge German armies from the Eastern Front for a renewed German offensive in

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[342] Searle, *A New England?*, 719; Harris, *Men, Ideas, and Tanks*, 120–53; Travers, *How the War Was Won*, 11–31.
[343] Travers, *How the War Was Won*, 45–46.
[344] Woodward, *Lloyd George and the Generals*, 212–13; Searle, *A New England?*, 719; Stevenson, *1917*, 205–33.
[345] Winston Churchill, "Munitions Budget, 1918 (Amended - Not Provisional)," undated, CHAR 15/32; Searle, *A New England?*, 719; David Stevenson, *With Our Backs to the Wall: Victory and Defeat in 1918* (Cambridge, Mass.: Belknap Harvard, 2011), 370–87.

1918 which necessitated withholding supplies and munitions in anticipation of a potential German assault.[346] These twin disasters also invalidated Churchill's munitions production forecasts, and both weakened his ability to shape military policy on the Western Front while ensuring that a final British assault would have to wait until 1919.

In this context, Churchill campaigned aggressively for action on his proposals, and, in his rebuttals to his colleagues' challenges, further revealed his conception of a technocratically revitalized British military. He argued vehemently to Lloyd George that resources should not be diverted to the Navy at the expense of his munitions program. He believed that "the imminent danger is on the Western front: & the crisis will come before June," and that in order to prepare for this dire situation, Lloyd George needed to "ponder & then *act*."[347] Churchill's frustrations were not limited to Haig and the BEF's high command, and encompassed his Cabinet colleagues as well, including Lloyd George. While a series of administrative apparatus were instituted, all of the Allied leaders remained paralyzed over the issue of when, where, or if to launch a major offensive.[348] The determining factor for Churchill, and for the rest of the Allied leaders, was the pace of progress of American resources across the Atlantic.

A million American troops and vast quantities of supplies and munitions were expected by the end of 1918, and all of Churchill's production projections and strategic

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[346] Searle, *A New England?*, 724.
[347] Winston Churchill to David Lloyd George, 19 January 1918 [original emphasis] in Gilbert, *Winston S. Churchill Comp. Vol. IV, Pt. 1*, 232.
[348] Robert Cecil to Winston Churchill, 17 November 1917, CHAR 15/158; Searle, *A New England?*, 719.

concepts were predicated on this mobilization proceeding according to plan.[349] Without

key components from American factories like aircraft or tank engines and raw materials

like steel plates, Churchill's entire mechanized military program would grind to a halt. A

combination of American bureaucratic inadequacy, the complexity of mass producing

new technologies, and shipping shortages slowed the flow of American resources to a

trickle.[350] This delay in the arrival of key resources during the winter of 1917-1918,

when combined with the military setbacks, defined British strategic decision making – or

lack thereof – and was the driving force for the evolution of Churchill's technocratic

advocacy.[351]

Churchill finally maneuvered Lloyd George and the Cabinet into action at the

beginning of March 1918 when he circulated his memorandum "Munitions Progamme,

1919." Essentially, the document was his effort to adjust his proposals from "Munitions

Possibilities of 1918" to the changed circumstances now facing Britain, and to reiterate

his "firm conviction that the method and the means do exist by which in 1919 the

German armies in the West could be decisively defeated."[352] It also represented a further

refinement and narrowing of his technocratic focus. Instead of the grand sweeping

military revolution that he imagined incorporating a host of technologies, he focused

exclusively on technologies that could be readily produced in large quantities and which

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[349] Tooze, *The Deluge*, 202; Kevin D. Stubbs, *Race to the Front: The Material Foundations of the Great War* (London: Praeger, 2002), 230–32; Stevenson, *With Our Backs to the Wall*, 42–43.

[350] Stevenson, *1917*, 384–85; Tooze, *The Deluge*, 202–4; Stevenson, *With Our Backs to the Wall*, 212–13.

[351] Searle, *A New England?*, 722–24.

[352] Winston Churchill, "Munitions Programme, 1919," 5 March 1918, TNA CAB 24/44/35.

the British high command already had experience with. In the process, he more explicitly

stated his views of the current technological and strategic thinking of the British high

command and contended that their limitations "should be boldly faced, that we should

create, in order to attack the enemy in 1919, an army essentially different in its

composition and methods of warfare from any that have yet been employed on either

side."[353]

One notable difference from "Munitions Possibilities of 1918," however, was his

emphasis on development and deployment of poison gas in an effort to discharge "a

carefully thought out and ruthlessly pursued plan."[354] This reflected the emphasis on

chemical warfare American production of poising gas as well as the ability to scale up

manufacturing processes without withdrawing resources from other areas because the

technology was not reliant on access to steel or explosives. Churchill believed that

shifting significant resources away from infantry, artillery, and cavalry forces, and into

tanks, air forces, and chemical weapons, would make possible the new technological

military he envisioned. Churchill contended that it was:

> within our power to construct in very large numbers armoured vehicles of various
> types, some to fight, some to pursue, some to cut wire and trample trenches, some
> to carry forward men or machine-gun parties, or artillery, or supplies, to such an
> extent and carried on such a scale that 150,000 to 200,000 fighting men can be
> carried forward certainly and irresistibly on a broad front and to a depth of 8 or 10
> miles in the course of a single day.

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[353] Churchill, "Munitions Programme, 1919."

[354] Churchill, "Munitions Programme, 1919"; Stevenson, *With Our Backs to the Wall*, 205.

This revealed the extent to which he had refined his ideas about technological warfare and his confidence in the productive capacity of the technocratic apparatus he had developed at the Ministry of Munitions.[355]

"Munitions Programme, 1919" also exposed Churchill's continued commitment to the idea of a decisive battle, as both a means of victory and a barometer of relative national superiority, albeit adjusted to fit the mold of his technologically enhanced military. He returned to his 1901 contention that "war between equals in power is not an affair which can be carried to a result merely by quasi business and administrative process flowing smoothly out month after month and year after year."[356] Rather, "it should be a succession of climaxes on which everything tends and from which permanent decisions are obtained," and that the British people had been "misled by the increasing scale of our casualties, due to the increasing size of our armies, into thinking that the intensity of the conflict is greater now than in the opening stages of the war."[357]

Churchill completely discounted the possibility of victory through attrition as a "delusion," because "we have to be, in short, exchanging lives, and exchanging lives on a scale at once more frightful than anything that has been witnessed before in the world."[358] He believed that the only means of moving beyond the stalemate and indecisive attrition were "these novel methods, good in themselves, better still in combination with the older methods," to unleash "the whole strength of our stronger attacking armies, and yet each attack supported by some scientific method which overcame the wire and machine guns

[355] Churchill, "Munitions Programme, 1919."
[356] Churchill, "Munitions Programme, 1919."
[357] Churchill, "Munitions Programme, 1919."
[358] Churchill, "Munitions Programme, 1919."

of the defence."[359] This vision promised a final battle "proceeding by design through crisis to decision – not mere waste and slaughter sagging slowly downwards into general collapse."[360]

Churchill's aggressive language reflected his growing political power within the Lloyd George government, and his frustration with the military authorities, both within the Cabinet and the Imperial General Staff. His warnings about "general collapse" were especially powerful in the wake of the myriad allied setbacks of the previous year. A massive defeat, on the order of Caparetto, seemed possible with the millions of German troops freed from the Eastern Front, and the devolution of Britain into the political chaos that Russia was experiencing also seemed all too real. The latter seemed especially possible in the wake of the industrial unrest during the late fall and winter of 1917.[361] One of the issues, therefore, that dominated the policy debate and framed Churchill's actions during the winter of 1917-1918 was the issue of pay increases for munitions workers. He advocated accepting their demands in order to prevent work stoppages and as a means of raising morale.[362]

Churchill's ideas promised an alternative path that provided a greater sense of control – both political and military – to civilian leaders who felt their situation to be increasingly precarious. Churchill shared their fears, but it was also a brilliant political maneuver that simultaneously ensured the reconsideration of his proposals and the

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[359] Churchill, "Munitions Programme, 1919."
[360] Churchill, "Munitions Programme, 1919."
[361] Searle, *A New England?*, 719–23; Adrian Gregory, *The Last Great War: British Society and the First World War* (Cambridge: Cambridge University Press, 2008), 213–48; Chris Wrigley, *Lloyd George and the Challenge of Labour: The Post-War Coalition, 1918-1922* (London: St. Martin's Press, 1990), 13–18.
[362] For more on this, see: French, *Strategy of the Lloyd George Coalition*, 209.

extension of his political power. Additionally, by focusing more narrowly on technologies that could be produced in mass quantities, he also helped to avert further obstruction from military leaders. Within days of the circulation of "Munitions Programme, 1919," Churchill's conflict with British military leaders came to a head when Lloyd George called a special meeting to discuss Churchill's proposals. The meeting afforded both sides the opportunity to settle their grievances and revealed the degree of Lloyd George's success in taking a stronger hand in military policy.

At the meeting – known to posterity at the "Tank Meeting" – the First Lord of the Admiralty Sir Eric Geddes vigorously opposed Churchill's plans which in his estimation were "based on a fallacy," and that there were insufficient steel resources to meet both Admiralty needs and realize Churchill's tank program.[363] Churchill parried these critiques both by more explicitly stating how his plans worked in conjunction with the Admiralty's construction program, and by drawing on the popularity of his ideas within the Cabinet. Geddes, actually wrote to Churchill on the day of the tank meeting to say that he had enjoyed reading his "Munitions Programme, 1919," memorandum and hoped that "it will bring great thoughts to the minds of those who dictate our tactics."[364] As long as Churchill provided assurances that the Admiralty's interest would be protected, he could be confident in their support of his plan.

A few weeks before the tank summit, Lloyd George succeeded in ousting Robertson as Chief of the Imperial General Staff and replaced him with the more

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[363] "Minutes of a Meeting Held at 10 Downing Street SW, On Friday, March 8, 1918, at 3.30 PM, To Consider the Question of the Output of Tanks," TNA CAB 24/4/51.
[364] Sir Eric Geddes to Winston Churchill, 8 March 1918 in Gilbert, *Winston S. Churchill Comp. Vol. IV, Pt. 1*, 265.

politically compliant and technologically enthusiastic Sir Harold Wilson.[365] In contrast to the Admiralty leaders, Wilson demonstrated his value when he enthusiastically defended tanks, providing "instances of the advantages and the saving which had accrued by the use of tanks."[366] The meeting resulted in the approval of all of Churchill's plans. It seemed as if Lloyd George's goal of wresting control of military policy from the high command, and Churchill's vision for a technocratic battle on the Western Front would finally be realized.

Two weeks after Churchill's triumph at the tank meeting, the Germans launched the attack that British leaders had feared since Russia's exit from the war, which upended both his production forecasts and the strategic conditions on the Western Front. Operation Michael utilized large numbers of crack German troops freed from the Eastern Front in a last-ditch attempt to win the war before American forces and resources began to arrive en masse.[367] The battle was titanic and dire, as the German forces inflicted heavy losses on the British, both in men and material.[368] Churchill poured every available resource into providing replacement weapons to the BEF and Britain's allies on a massive scale, even imploring his munitions workers that "now is the time to show the Fighting Army what the Industrial Army can achieve."[369] As demands for munitions and men slowed the pace of production for Churchill's new weaponry, he constantly reminded the Cabinet that drafting British munitions workers for service at the front was

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[365] Searle, *A New England?*, 725.

[366] "Minutes of a Meeting Held at 10 Downing Street SW, On Friday, March 8, 1918, at 3.30 PM, To Consider the Question of the Output of Tanks," TNA CAB 24/4/51.

[367] Searle, *A New England?*, 725–28; Stevenson, *With Our Backs to the Wall*, 30–111.

[368] Travers, *How the War Was Won*, 50–109; Harris, *Men, Ideas, and Tanks*, 148–53.

[369] Winston Churchill to all munitions factories: telegram, 27 March 1918 in Gilbert, *Winston S. Churchill Comp. Vol. IV, Pt. 1*, 280.

irresponsible since "men taken from industry after July will not reach the battle-front in time to influence the decision."[370] Rather, he believed that their most valuable contribution would be creating the weapons to arm the waves of American troops finally landing in France.

This was a politically unpopular sentiment, both within the Cabinet and the British high command, because it presumed that the war would drag on into at least 1919 or 1920. In order to mollify these concerns and speed up the pace of technical development and procurement as well as facilitate relations with Haig's staff, Churchill undertook a second round of internal reorganization at the Ministry of Munitions in June of 1918. He brought his old political ally John Seely into the ministry to head a new "Warfare Group" which combined the departments responsible for chemical warfare, trench warfare, tanks, and inventions into a single administrative apparatus designed to streamline their development and liaise with the British high command.[371] Churchill's choice of Seely, whose political connections in both the Cabinet and the British Army made him a valuable asset, reveal his emphasis on a few key technologies over the grander and more elegant techno-military system he had propounded in the fall of 1917. This was the product of a realization that his production forecasts and assumptions about the pace of arrival of American forces had proved to be wildly optimistic, and thus represented an effort to salvage both the core of his larger vision for a decisive technocratic battlefield and his political prestige.

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[370] War Cabinet Memorandum by Winston Churchill, 12 July 1918, CHAR 15/34;
Stevenson, *With Our Backs to the Wall*, 383.
[371] *History of the Ministry of Munitions.*, II, Part 1, 78.

Churchill's efforts seemed to be vindicated as the British counterattacks, led by tanks, in August and September utilized the first fruits of Churchill's technocratic effort.[372] The larger numbers of more reliable tanks available to British units and the greater willingness of commanders to utilize them in coordinated assaults helped to regain control of the battlefield and take advantage of flagging German morale and resources.[373] In addition, Churchill's administrative reforms meant that British and American forces had access to nearly limitless supplies of weapons and ammunition, especially artillery and gas, which sated the demands of military leaders still enthralled with firepower and frontal assaults.[374] This, combined with the collapse of German morale, led to the breakthrough Haig had sought since 1915.[375]

The resumption of mobile warfare in the early autumn of 1918 undercut the need for the mechanized firepower at the heart of Churchill's technocratic battering ram. Liberated from the trenches, and bolstered by the artillery and poison gas that Churchill's armaments program had produceed in unprecedented amounts, Haig's forces pushed the German army back at a rapid pace. Nevertheless, this period, which Tim Travers describes as "useful anarchy," gave British commanders at every level experience with the wide array of new military technologies Churchill's ministry provided in a variety of conditions.[376] These commanders finally took delivery of the vanguard of Churchill's technological cornucopia, a rollout that was expected to grow into a flood during the

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[372] Searle, *A New England?*, 733; Travers, *How the War Was Won*, 110–44.
[373] Harris, *Men, Ideas, and Tanks*, 152–53; Travers, *How the War Was Won*, 110–15; Tooze, *The Deluge*, 160–63.
[374] Stevenson, *With Our Backs to the Wall*, 200–210.
[375] Searle, *A New England?*, 733.
[376] Travers, *How the War Was Won*, 145–49.

course of 1919, as Churchill's bureaucratic reforms came on line and began to translate into production increases. The Ministry of Munitions forecast that British factories would produce 6,000 tons of explosives per week by the spring of 1919, and would supplement this with an unprecedented number of gas shells, filled with a newly developed unnamed gas, 4,000 times more lethal than anything previously used. To this fusillade would be added over 4,000 tanks, up from 400, by April 1919, and over 8,000 by September. This arsenal, Churchill believed, would transform the nature of combat on the Western Front.[377]

Yet, even as the German forces retreated during the early fall, Churchill had little premonition that the war would be over so quickly. As late as September, he speculated about whether the decisive battle of the future would come in 1919 or 1920.[378] Even as allied victories mounted and it became increasingly difficult to justify withholding British manpower to produce weapons for a campaign that might not be necessary, he still argued vehemently against further drafts on skilled workers. The German collapse and the Armistice negotiations seemed to signal an abrupt and inconsequential end to Churchill's many years of thought, preparation, and campaigning for a battle decided by new technology.

In actuality, the years of war had only been the crucible in which Churchill matured and articulated his ideas. In the postwar world he would turn to the same concepts and justifications to deal with a similarly daunting array of problems in a similar atmosphere of crisis. The officers who had gained experience with the technological

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[377] *History of the Ministry of Munitions.*, II, Part 1:98–100.
[378] Winston Churchill, "Munitions Policy: 1919 or 1920," 5 September 1918, TNA CAB 24/63/26.

systems he championed during the last months of the war would form the vanguard of a new generation of technocratic military leaders that he would promote. Churchill did not see his goals for technocratic military reform as simply a blueprint for winning a final decisive battle, but also as a means of defining Britain's position within the postwar world.

Chapter 3:

"Of Value to our Country":

Churchill's Prewar Aviation Revolution

In June 1914, Winston Churchill wrote to his wife defending his decision to take flying

lessons because it allowed him to "know a good deal about this fascinating new art."[379]

He had learned to "manage a machine gun with ease in the air, even with high winds, &

only a little more practice in landings would have enabled me to go up with reasonable

safety alone."[380] In all, Churchill had "been up nearly 140 times, with many pilots, & all

kinds of machines," which he believed allowed him to "know the difficulties, the dangers

& the questions of policy which will arise in the near future."[381] This letter encapsulates

Churchill's early involvement with aviation, especially his simultaneous revelry in the

experience of controlling a novel and complex technology and his conceptualization of

the potential of that technology to transform – and be transformed – in global conflict.

Unlike others infatuated with aviation, Churchill was not satisfied to marvel

simply in the technology's capabilities as they existed.[382] Instead, he sought to advance

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[379] Winston Churchill to Clementine Churchill, 6 June 1914 in *Winston and Clementine: The Personal Letters of the Churchills,* ed. Mary Soames (Boston: Houghton Mifflin Harcourt, 1999), 91–92.

[380] Winston Churchill to Clementine Churchill, 6 June 1914, 92

[381] Churchill to Churchill, 6 June 1914, 92.

[382] Bernhard Rieger, *Technology and the Culture of Modernity in Britain and Germany, 1890-1945* (Cambridge: Cambridge University Press, 2005), 20–50; Stephen Kern, *The Culture of Time and Space 1880-1918* (Cambridge, Mass.: Harvard University Press,

them through personally supervising investment in research and experimentation at every

level. This fusion of intense technological enthusiasm with grand technocratic

intellectual and institutional investment in aviation was emblematic of, and central to,

Churchill's larger ideological, intellectual, and political evolution as a technocratic

advocate. For Churchill aviation represented a potential paradigmatic shift in technology

that could transform both Britain's strategic position and his own political career. In

aviation, Churchill's technological and technocratic enthusiasm blended seamlessly with

his political pragmatism and self-interest, which, in turn, defined the development of

British air power.

Churchill's first recorded involvement in British aviation policy came in 1909 in

the context of the British government's negotiations with the Wright brothers, but he had

already had exposure to the potential of flight long before that. As a war correspondent

during the Boer War, he had commented upon the use of observation balloons during the

march on Ladysmith, and his avid and exhaustive readership of H.G. Wells's works

meant that he had likely already engaged with the potentialities of aviation in the

abstract.[383] Regrettably, no record of Churchill's reaction to Wells's *The War in the Air*

or his predictions about the pace of aviation development in his work *Anticipations*

survives, but Churchill's subsequent intensive interest in aviation development seems to

indicate that he gave the subject some consideration.[384] This served as the backdrop for

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1983), 109–30; Craig Morris, *The Origins of American Strategic Bombing Theory*
(Annapolis: Naval Institute Press, 2017), 42–50.

[383] Hugh Driver, *The Birth of Military Aviation: Britain, 1903-1914* (Suffolk: Boydell
Press, 1997), 174; Winston S. Churchill to H.G. Wells, 17 November 1907, C-238, Wells
Papers (WP), University of Illinois Rare Book and Manuscript Library. .

[384] Herbert George Wells, *The War in the Air: And Particularly How Mr. Bert Smallways
Fared While It Lasted* (New York: MacMillan, 1908); Herbert George Wells,

his insistence on participating in aviation policy discussions, despite his position as President of the Board of Trade, an office with only the most tenuous of connections to military policy and resource allocation.

The British government had a long interest in the Wrights' research, going back even before their historic 1903 flight in North Carolina.[385] When the Wrights approached the British government (as well as almost every other European power) in 1908 about buying the rights to their invention as well as a prototype aircraft, it spurred the formation of an investigative committee. The committee sought to ascertain whether the Wrights' claims of achieving powered flight were valid and whether Britain should purchase their invention. During the committee's hearings, Churchill first voiced his ideas about the value of military aviation.[386] After a long conversation with Hiram Maxim, another early aviation experimenter, he wrote that he believed airplanes in the near future would be able to "lift and carry half a ton exclusive of the engines," and that "its most obvious military use would be, in conjunction with others, to destroy naval bases by dropping nitroglycerine bombs upon the docks, lock gates, vessels in the basins, &workshops."[387] Churchill argued that all this could be accomplished for a cost of only, "1/1000th part of a Dreadnought, and demanded very searching & authoritative investigation."[388] The British

Anticipations of the Reaction of Mechanical and Scientific Progress Upon Human Life and Thought (London: Harper, 1901); Peter J. Bowler, *A History of the Future: Prophets of Progress from H. G. Wells to Isaac Asimov* (Cambridge: Cambridge University Press, 2017), 20.

[385] Alfred M. Gollin, *No Longer an Island: Britain and the Wright Brothers, 1902-1909* (Stanford, CA: Stanford University Press, 1984), 20–73.

[386] For more on this, see the definitive work on the British negotiations with the Wrights: Gollin, *No Longer an Island,* 392–432.

[387] Gollin, *No Longer an Island,* 423.

[388] Gollin, *No Longer an Island,* 423.

government ultimately decided not to purchase the Wrights' invention, and instead

decided to wait and see if the technology would develop further. Churchill warned that

the decision was "too amateurish," and that "the problem of the use of aeroplanes was a

most important one, and that we should place ourselves in communication with Mr.

Wright himself, and avail ourselves of his knowledge."[389]

Churchill's advocacy in these exchanges represented the genesis of a pattern of

policy promotion that extended through World War I and into the interwar period. This

activism even continued into his premiership during the Second World War.[390] These

core concepts, which guided his long advocacy of aviation focused on the appeal he saw

in aviation's potential to accomplish traditional missions with unprecedented efficiency,

the preeminence of experts in successfully developing the technology, and the danger that

the technology posed to historical British security unless Britain invested adequately in it.

Additionally, his comments mirrored his larger interest in the reform of Britain's military

to maximize its effectiveness and financial efficiency through the application of

technology. It also revealed Churchill's political tactic of repeatedly utilizing aviation

policy to insert himself into larger debates about military strategy and to enhance his

political power.

Already in 1909, he was developing a reputation as a leading advocate of aviation

technology, and consequently international aviation advocates lobbied him to campaign

against further expenditure on naval construction in favor of creating a "Board of

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[389] Gollin, *No Longer an Island,* 431.
[390] Taylor Downing, *Churchill's War Lab: Codebreakers, Scientists, and the Mavericks Churchill Led to Victory* (New York: The Overlook Press, 2011), 81–181; David Edgerton, *Britain's War Machine: Weapons, Resources, and Experts in the Second World War* (Oxford: Oxford University Press, 2011), 72–122.

Aeronautics" to foster British aviation development.[391] This was possible because the majority of British military and political leaders saw little real danger to imperial security and even less military potential in aviation. Aviation also captivated the British public and energized both popular fears about future invasion and excitement about the greater mobility that this novel invention promised. This popular interest drove the British government's initial forays into aviation policy.[392] Churchill's early aviation advocacy likewise reflected the popular enthusiasm for the technology at the same time he capitalized on fears about its dangers to Britain to justify his involvement and maximize the political power of his ideas.

Another example of this confluence of technological change and political opportunism in Churchill's early political career came in May 1910, when a British delegation attended the first International Conference on Aerial Navigation in Paris. The agenda of the meeting dealt with mundane topics like registration of aerial vehicles and customs regulations. Consistent with the decision on the "amateurish" policy of the government, the British delegation went to the conference more as observers than as actual participants. Consequently, they were unprepared when the German delegation submitted a provision in the conference agreement stating that all aerial vehicles had unlimited flyover rights in any country regardless of their nationality.[393] The delegation

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[391] A. Duhamel, Secretary General of the Aero-Club International to Winston Churchill, 9 February 1909, Churchill Papers 11/19, Churchill Archive Center (hereafter cited as CHAR).

[392] Alfred M. Gollin, "England Is No Longer an Island: The Phantom Airship Scare of 1909," *Albion* 13, no. 1 (1981): 43–57; Michael Paris, *Winged Warfare: The Literature and Theory of Aerial Warfare in Britain, 1859-1917* (Manchester: Manchester University Press, 1992), 65–122; Rieger, *Technology and the Culture of Modernity*, 116–57.

[393] Alfred M. Gollin, *The Impact of Air Power on the British People and Their Government, 1909-1914* (Stanford: Stanford University Press, 1989), 134.

immediately wired London asking for guidance. An emergency session of the

Committee of Imperial Defense chaired by Churchill, newly promoted to Home

Secretary, drew up a memorandum warning that "The advantage to Germany of such an

arrangement during a period of strained relations with Great Britain is obvious. Being

comparatively weak in cruisers she may, it is thought, at such a time rely to a great extent

upon her airships for close reconnaissance of our coasts and harbors."[394]

      This clearly echoed the apprehensions Churchill had voiced a year earlier, but in

this document he went even further, contending that "if aerial navigation becomes a

practicable art, if airships can be designed able to move with reasonable certainty and to

drop explosives with reasonable accuracy on war vessels, docks, magazines, and factories

of warlike stores," then "neither our insular position nor the restrictions which we may

now seek to impose will avail us."[395] He believed that the only remedy would be

"acquiring and maintaining, if not air command, at least air equality by developing guns

and other appliances capable of destroying those air-ships, if in time of war they threaten

our sea warships or approaches to our shores."[396]

      Bernhard Rieger contends that the cultural impact of technological innovation in

Britain and Germany during the period "oscillated between admiration and anxiety," and

"generated a specific form of ambivalence that gave voice to unease without necessarily

endangering the acceptance of further change."[397] In the British context during the

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[394] "Memorandum by the General Staff," 11 July 1910, in: *Documents Relating to the Naval Air Service,* ed. Stephen Wentworth Roskill (London: Navy Records Society, 1969), 14–18.
[395] "Memorandum by the General Staff."
[396] "Memorandum by the General Staff."
[397] Rieger, *Technology and the Culture of Modernity*, 16.

period, a series of "airship scares" dominated the popular press and reflected the

technological ambivalence that Rieger described as well as the growing anxiety over an

ascendant Imperial Germany.[398] Churchill reflected and amplified this ambivalence in

his interest in aviation and, in fact, became the political force that drove further change.

More than anything else, Churchill manifested the "aesthetic event" that Robert Wohl

concludes was "long dreamt about, enshrined in fable and myth, the miracle of flight,

once achieved, opened vistas of further conquests over nature that excited people's

imagination and appeared to guarantee the coming of a New Age."[399]

From the very beginning, however, Churchill also clearly and consistently argued

for limits to aviation's capacity for transforming society and warfare. For Churchill,

aviation would not singlehandedly solve all of the problems of Britain or its empire, nor

would it make all traditional military technologies obsolete. Rather, air power would be

the connective tissue for a new vision of a technologically energized military system that

would accomplish more with fewer material and manpower resources. Additionally,

Churchill never allowed his interest in aviation to stand in the way of his political

advancement. Instead, he utilized the opportunities that debates about aviation policy

afforded him to achieve the maximum investment in aeronautical technology possible.

For example, when he was named First Lord of the Admiralty in 1911 and implemented

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[398] For more on this, see: 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), 17; Gollin, "England Is No Longer an Island"; Brett Holman, "The Phantom Airship Panic of 1913: Imagining Aerial Warfare in Britain before the Great War," *Journal of British Studies* 55, no. 1 (January 2016): 99–119; Brett Holman, *The Next War in the Air: Britain's Fear of the Bomber, 1908-1941* (Burlington: Ashgate, 2014), 26.
[399] Robert Wohl, *A Passion for Wings: Aviation and the Western Imagination, 1908-1918* (New Haven: Yale University Press, 1994), 1.

politically popular programs of intense naval construction, his appointment was also celebrated by the aviation enthusiast community.[400] They believed that "the *new* First Lord is above all a worker and a far-seeing personality. Here is a chance which would give him a place in history, as being the first head of any navy to properly grasp the possibilities of the aeroplane as an auxiliary to battle-fleets, and who, above all, placed Great Britain in a position of unquestioned supremacy at sea and in the air."[401] This optimism was borne out in Churchill's rapid expansion of the embryonic naval aviation program.[402]

As First Lord of the Admiralty, Churchill's aviation policy revolved around several key themes. First, he emphasized the necessity of cooperation between the traditional military services as a means of both reducing the cost of aviation technology development and ensuring that aircraft were integrated into existing military structures. At the same time, he believed in the necessity of promoting officers within aviation programs who were trained pilots and could understand both the capabilities and limitations of aircraft. Second, he invested heavily in research and development, both technologically and tactically, and fostered an atmosphere of innovation. Finally, he forged a partnership between private industry and the Royal Navy that provided access to new technological innovations quickly and allowed private firms to benefit from research

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[400] "Editorial Comment," *Flight*, Dec. 9, 1911, p.1056.
[401] "Editorial Comment," [original emphasis].
[402] "History of Naval Aeroplanes and Seaplanes," by Charles Rumney Samson, 30 December 1918, The National Archives of the United Kingdom AIR 1/724/76/2 (hereafter cited as TNA).

discoveries made by military researchers. These core themes would recur again and again in his aviation policies during and after World War I.

One of the first aviation related actions Churchill took upon his appointment as First Lord of the Admiralty in the fall of 1911 was to participate in the hearings and negotiations surrounding the formation of the Royal Flying Corps.[403] The hearings were inspired by the "backward state of Aerial Navigation" in Britain, "when contrasted with the progress made by other great naval and military Powers."[404] Essentially, the British government's unwillingness to embrace Churchill's advice about investing in aviation two years before meant that Britain had fallen behind its continental rivals, both in real terms and in public perception.[405] This disparity in relative aviation investment was made all the more critical by the atmosphere of intense military and naval rivalry, and diplomatic distrust, that the British government and press perceived. In an attempt to catch up, Churchill helped broker a political compromise that ensured Britain invested in aviation on an unprecedented scale, but also the institutional power of the traditional military institutions remained intact. The Royal Flying Corps would not be a new independent military service, but a shared institution between the Royal Navy and Army designed to maximize cost efficiency by facilitating collective training and equipment

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[403] "Report of the Standing Sub-Committee of the Committee of Imperial Defense on Aerial Navigation," 29 February 1912, TNA, ADM 116/1275.

[404] "Formation of the Royal Flying Corps (Naval Wing) 1911-1914," undated, TNA ADM 116/1275.

[405] For more on the intricacies of this disparity, see John Howard Morrow, *The Great War in the Air: Military Aviation from 1909 to 1921* (Washington: Smithsonian Institution Press, 1993), 4–11; Gollin, *Impact of Air Power*, 2–7.

procurement. The two "wings" of the corps would be completely controlled by their parent services who would be able to utilize them however they saw fit.[406]

There was a degree of self service in the compromise Churchill brokered. It allowed him to take a significant role in British aviation development while retaining his politically prestigious position at the Admiralty. The compromise was also possible because Churchill's counterpart at the War Office was an old political ally: John Seely. In 1911, Seely and Churchill's relationship already extended back over a decade and originated in their participation in a group of young assertive Conservative MPs called the Hooligans.[407] Seely was appointed Secretary of State for War at Churchill's urging, and Churchill believed that their close personal relationship and general agreement about the kinds of reforms necessary to modernize Britain's military would make their aviation compromise workable.[408]

For all of his emphasis on the traditional military institutions retaining control of British aviation, Churchill was a staunch advocate of the supremacy of aviation specialization as a requisite for effective technological development. He was adamant that "whatever happens, the Royal Engineers must have nothing to do with this new Corps of Airmen which should be a new and separate organization drawing from civilian as well as military and naval sources."[409] The limited efforts at military aviation within

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[406] "Formation of the Royal Flying Corps (Naval Wing) 1911-1914," undated, TNA ADM 116/1275; For more on the negotiations and the motivations of the different parties, see: Gollin, *Impact of Air Power*, 191.

[407] Richard Rempel, "Lord Hugh Cecil's Parliamentary Career, 1900-1914: Promise Unfulfilled" *Journal of British Studies* vol.11, no.2, (May 1972), 104-122.

[408] Roger Fulford, "Seely, John Edward Bernard, First Baron Mottistone (1868–1947)," *ODNB*, 2004.

[409] Minute by Winston Churchill, 13 December 1911, TNA CAB 17/19.

Britain up to 1911 were confined to the Royal Engineers who experimented with balloons

and manned kites, and who thus expected to take a leading role in an expanded aviation

program.[410] In contrast, Churchill believed that "the principle part of the art of aviation

was neither naval nor military. Before airmen could be useful either for naval or military

purposes they must have mastered the art of flying."[411] For this reason Churchill

appointed Lieutenants C.R. Samson and R.N. Gregory, both junior naval officers and

among the first naval aviators, to a subcommittee dedicated to formulating collaborative

aviation policy, otherwise composed of the elites of British military leadership.[412] He

wrote that it was vital for the success of Britain's aviation program, to have "due

recognition in all our arrangements of flying seniority within the Flying corps and the

exclusion or temporary suspension of ordinary naval or army seniority within that

corps."[413] This new breed of officer would form the foundation for a new military

discipline, and reflected Churchill's faith in innate British technological aptitude as a

reflection of his larger interest in National Efficiency ideology.

Churchill's aviation policy also hinged on emphasizing aggressive technological

and tactical experimentation as a means of catching up and surpassing Britain's rivals in

the air both quantitatively and qualitatively. He argued that it was "dangerous to delay

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[410] For more on this see: Percy Brooksbank Walker, *Early Aviation at Farnborough: The History of the Royal Aircraft Establishment*, 2 vols. (London: Macdonald and Co, 1971).
[411] "Minutes of the First Meeting of the Standing Sub-Committee of the Committee of Imperial Defense: Aerial Navigation," 18 December 1911, TNA CAB 17/19.
[412] "History of Naval Aeroplanes and Seaplanes," by Charles Rumney Samson, 30 December 1918, TNA AIR 1/724/76/2. Samson was one of the original four naval officers trained as pilots and Churchill relied heavily on his expertise.
[413] "First Lord's Minutes: Fourth Series (Air, August 1913-June 1914)" by Winston Churchill, 10 December 1913, TNA ADM 1/8621/43.

any longer in the adoption of a progressive policy."[414] Churchill hoped that "the future

development of aviation would proceed on entirely different lines."[415] What he

envisioned for this new direction was borne out in his policies at the Admiralty over the

next several years where he fostered a renaissance in aviation research and development.

There, a collaborative relationship between naval aviators and private firms produced a

range of pioneering efforts, including taking off from the deck of a ship, landing on the

water, and utilizing machine guns and radios in flight.[416] This rapid pace of

experimentation and development was possible because Churchill emphasized a

partnership between the Admiralty and the burgeoning aviation industry in Britain, which

allowed the Naval Wing to bring together both government and private research and

quickly translate theoretical advances into new designs.[417]

This contrasted with the Military Wing of the Royal Flying Corps whose policy

could best be described as "acquisitional" in that they simply folded aviation technology

into an existing intellectual and operational framework.[418] Furthermore, the Military

Wing produced all of its aircraft at the Royal Balloon Factory at Farnborough, which

severely limited its ability to invest in research and development or incorporate new

design elements. This meant that almost all of the British Army's aviation investment

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[414] "Minutes of the First Meeting of the Standing Sub-Committee of the Committee of Imperial Defense: Aerial Navigation," 18 December 1911, TNA CAB 17/19.
[415] "Minutes of the First Meeting of the Standing Sub-Committee of the Committee of Imperial Defense: Aerial Navigation."
[416] "History of Naval Aeroplanes and Seaplanes," by Charles Rumney Samson, 30 December 1918, TNA AIR 1/724/76/2.
[417] "History of Naval Aeroplanes and Seaplanes"; Driver, *The Birth of Military Aviation: Britain, 1903-1914*, 103; Morrow, *Great War in the Air*, 44; Maryam Philpott, *Air Power and Sea Power in World War I: Combat Experience in the Royal Flying Corps and Royal Navy* (New York: I.B.Tauris, 2013), 100.
[418] Morrow, *Great War in the Air*, 41–42; Gollin, *Impact of Air Power*, 195–203.

focused exclusively on aerial reconnaissance. Consequently, while the Army had

significantly larger numbers of aircraft and a more developed organizational structure, it

was extremely limited in capabilities and technological development compared to the

Naval Wing.[419]

The political difficulty of Churchill's efforts should not be discounted, and his

continued commitment to aviation reflected both the potential he saw in it for the future

of British military planning and his personal interest in the technology. He wrote that

replacing key components of Britain's traditional military systems with aircraft "offered a

prospect of large economies in expenditure," which meshed neatly with his long held

political emphasis on increasing Britain's military efficiency.[420] This flew in the face of

the pedantic debate over British military spending during the period, revolving around a

tug-of-war between advocates of increased naval spending and those who saw it as either

a waste of money or a recipe for inciting conflict.[421] Years later, Churchill reminded

Parliament that in the period before World War I "there was no real backing behind any

request for money, other than the personal influence of the Ministers at the heads of the

fighting Departments. It was always open to anyone to deride aviation as a silly fad, and

as another means of draining money from the public purse."[422] He recalled that it was

"pitiful and ludicrous to look back now upon the shifts to which we were put to obtain the

necessary money for the air," and that "in those days the repair to the naval hospital or

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[419] Morrow, *Great War in the Air*, 44–45.

[420] "First Lord's Minutes: Fourth Series (Air, August 1913-June 1914)," TNA ADM 1/8621/43.

[421] Geoffrey R. Searle, *A New England?: Peace and War, 1886-1918* (Oxford: Oxford University Press, 2004), 487–95; Morrow, *Great War in the Air*, 20–57.

[422] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*

the matter of coastguard cottages used very often to materialize in a fleet of aeroplanes or some other necessary portion of the Flying Service."[423] This willingness to foster aviation development even in the face of indifferent support in Parliament and the Cabinet demonstrated the depth of Churchill's interest in the technology's potential.

Churchill's commitment to aviation stemmed from more than just his aspirations of greater British military efficiency and reflected his long-standing enthusiasm about new technologies. He was an early adopter of the automobile, owning and driving his own motor car in 1901, which was far from common and represented both his elite social class and personal excitement for the act of driving as a transformative experience.[424] Churchill's passion for personally operating novel technology extended to aviation. Beginning in 1913, he began regular flying lessons from pilots at the Royal Navy's growing base at Eastchurch.[425] Of all of Churchill's aviation related activities, his flight training is probably the most studied and commented upon. Most authors have focused on his wife's fears of the danger associated with his aerial activities and have given little examination to how those experiences informed his larger military policies.[426] However, scholars have attributed Churchill's enthusiasm for flight to a whimsical and childlike

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[423] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*

[424] Georgine Clarsen, *Eat My Dust: Early Women Motorists* (Baltimore: Johns Hopkins University Press, 2011), 12–15; Randolph S. Churchill, *Winston S. Churchill, Volume II: Young Statesman, 1901-1914* (Boston: Houghton Mifflin, 1967), 23.

[425] Churchill, *Winston S. Churchill, Volume II,* 681–89.

[426] See, William Manchester, *The Last Lion, Winston Spencer Churchill*, 1st ed (Boston: Little, Brown, 1983), 444–48; Martin Gilbert, *Churchill: A Life* (New York: Holt Paperbacks, 1992), 251–60; Roy Jenkins, *Churchill: A Biography* (New York: Farrar, Straus, and Giroux, 2001), 349–50; Carlo D'Este, *Warlord: A Life of Winston Churchill at War, 1874-1945* (New York: Harper, 2008), 200–204; Downing, *Churchill's War Lab*, 29–31; The one exception is: Brian Lavery, *Churchill Warrior: How a Military Life Guided Winston's Finest Hours* (Oxford: Casemate, 2017), 110–20.

spirit of adventure, rather than a reflection of his deep technological enthusiasm and a manifestation of a larger vision for aviation investment and utilization. One of his instructors recalled decades later that "before our first flight together he said to me: 'We are in the Stephenson age of flying. Now our machines are frail. One day they will be robust, and of value to our country.'"[427] He also remembered that Churchill was "fascinated by the instruments, and used to keep his head in the box. He took the instruments seriously, and he was right to do so. He saw that one day the box of instruments would be more important than the pilot's ear."[428] In this way Churchill became an expert not only in the theoretical potential for military aviation, but also in the intricacies of the technology itself.

These two aspects of his experiences with aviation informed each other and carried over to his personal involvement in the Royal Navy's aviation program. Far beyond any other aspect of Britain's naval program, Churchill took a concentrated role in shaping the Naval Wing's development, and it remained closely associated with him even after he departed from the Admiralty in 1915. He produced voluminous memoranda on everything from the uniforms of naval aviators, to the design of aircraft, to the importance of incorporating standardized parts in aircraft designs to ease maintenance and repair.[429] This intense involvement in the most minute elements of naval aviation management reflected how flight had captivated his imagination, and also the importance he saw in air power to the future of naval strategy.

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[427] Churchill, *Winston S. Churchill, Vol. II*, 681.
[428] Churchill, *Winston S. Churchill, Vol. II*, 681.
[429] For examples of these, see: "First Lord's Minutes: Fourth Series (Air, August 1913-June 1914)," TNA ADM 1/8621/43.

After one of his flying excursions in October 1913, he wrote to his wife

Clementine that there were "signs of progress in every branch of the Naval Air Service.

In another year – if I am spared ministerially, there will be a great development. When I

have pumped in another million the whole thing will be alive and on the wing."[430] The

outbreak of war in 1914 upended these forecasts. Yet, the war also provided a proving

ground for Churchill's air force, as well as an impetus for him to expand his ambitions of

air power development.

This expertise and enthusiasm for a well-developed, unified British military

aviation program Churchill expressed in his correspondence was also evident in his

political negotiations with the War Office, and especially Jack Seely. Seely took a

similar level of personal interest in the progress of the Military Wing as Churchill, and

the two began a series of "High Level Bridge" meetings in late 1913. These meetings

were designed to coordinate effectively the development of the Royal Flying Corps and

to build a stronger working relationship between the two institutions. The meetings were

born out of fear on both Churchill's and Seely's parts that Britain's military was

dangerously unprepared to fend off a German invasion of Britain, and coordinating

aviation plans was the first step in their larger goal of developing a collaborative

defensive scheme.[431] Both were frustrated by the level of entrenched distrust endemic to

the officer staffs in both services and believed it was necessary to work together to

achieve an efficient and effective military. Churchill repeatedly urged his subordinates to

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[430]*Winston S. Churchill to Clementine Hozier Churchill* dated 22 October 1913 in
Winston Churchill, Clementine Churchill, and Mary Soames, *Winston and Clementine:
The Personal Letters of the Churchills* (Boston: Houghton Mifflin, 1999), 78.
[431] Gollin, *Impact of Air Power*, 269–73.

coordinate with their counterparts at the War Office in establishing training standards and

setting production standards for aircraft.[432] This became more difficult in the wake of

Seely's departure from the War Office due to his mishandling of political matters.[433]

Yet, even after Seely's dismissal, Churchill remained committed to maintaining

the Royal Flying Corps as a unified institution even in the face of a deteriorating

relationship with the Army leadership. This commitment stemmed from his belief in the

special place and requirements for successfully deploying military aviation and the

necessity of a degree of insulation for aviation from the traditional military services. He

wrote to the Prime Minister in July 1914 that "there ought to be a full and free

interchange of technical information between the Naval and Military Wings," and, that he

had "given directions that every facility in our power should be given to the War Office,

and that no secret is to be withheld, it being absurd that Departments of the Government

should treat each other like foreign powers." [434]

This statement flies in the face of generations of historiography contending that,

in the wake of Seely's departure from the War Office, Churchill led a reorganization of

the Naval Wing that separated it in spirit and function from the Military Wing and

effectively dissolved the Royal Flying Corps as a unified body. These authors argue that

while this separation was not formalized until after Churchill left in 1915, it was an action

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[432] "First Lord's Minutes: Fourth Series (Air, August 1913-June 1914)," TNA ADM 1/8621/43.
[433] Fulford, "Seely, John Edward Bernard, First Baron Mottistone (1868–1947)."
[434] Gollin, *Impact of Air Power*, 282.

taken at his behest, or, at the very least, his acquiescence and was the origin of the Royal Naval Air Service. [435]

The evidence for this argument, however, is faulty and relies on a Admiralty Circular Letter dated 1 July 1914. The circular letter stated: "The Royal Naval Air Service, forming the Naval Wing of the Royal Flying Corps, will comprise all naval aircraft and personnel." Murray Sueter, the director of the Admiralty's Air Department, assured those who feared the name change signaled a break from the Royal Flying Corps that it was largely a semantic issue because "the term 'Naval Wing' is not generally liked because it only applies to aeroplanes. Airships and Seaplanes were not contemplated when this name was introduced for Army and Naval branches of the Air Service. The term 'Naval Air Service' ropes in everybody." He also scrawled across the bottom of the memorandum that the "1st Lord verbally agrees to backing the name Naval Air Service."[436] These quotations seem to imply that rather than a decisive inter-institutional rupture, the name change was merely a result of Churchill's efforts at refining a program that was defined by experimentation. Churchill remained a vociferous advocate of the importance of maintaining a unified British aviation program throughout his career, and the spring and summer of 1914 were no exception to this previous pattern.

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[435] Examples include: Walter Alexander Raleigh and Henry Albert Jones, *The War in the Air: Being the Story of the Part Played in the Great War by the Royal Air Force*, 6 vols., History of the Great War Based on Official Documents (Oxford: Oxford University Press, 1922); Charles Frederick Snowden Gamble, *The Air Weapon, Being Some Account of the Growth of British Military Aeronautics from the Beginnings in the Year 1783 until the End of the Year 1929* (Oxford: Oxford University Press, 1931); Roskill, *Documents Relating to the Naval Air Service*; Gollin, *Impact of Air Power*, 280–83; Morrow, *Great War in the Air*, 44; Driver, *The Birth of Military Aviation: Britain, 1903-1914*, 273; Biddle, *Rhetoric and Reality in Air Warfare*, 21; D'Este, *Warlord*, 199–200.
[436] Both of these documents are contained in: "Royal Naval Air Service Reorganization," 1 July 1914, TNA ADM 1/8379/139.

These efforts and exchanges were indicative of a man immersed in aviation technology and reveal the genesis of Churchill's policy initiatives in the coming years. He sought to create the air force that he first envisioned at the Admiralty throughout World War I and after. His ideas were consistently cast through the lens of his effort to harness the full measure of Britain's military and forge it into a centrally coordinated technocratic system, with aviation as the lynchpin of that effort. However, that effort unfolded in the context of an evolving global conflict and echoed the political and economic consequences of four years of warfare. In the years before World War I, Churchill was still grappling with what technology would mean for the future of the British state's war making ability, and his patronage of the Admiralty's aviation program revealed his growing enthusiasm for technology and his burgeoning intellectual model for its application.

The atmosphere of crisis accompanying the outbreak of war in August 1914 pushed interdepartmental rivalries and dysfunction from the forefront of Churchill's concerns. The opening months of the war offered a proving ground for many of the technologies and tactics his aviation program had developed over the previous two years. Churchill's wartime aviation strategy centered on two goals: supporting amphibious operations overseas and ensuring the aerial security of the British Isles. The first was made possible by the deployment of RNAS squadrons to Dunkirk in September 1914 and the development of the Royal Navy's first aircraft carrier, HMS Ark Royal.[437] In the fall of

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[437] "Some Rough Notes on the Early Development of the Royal Naval Air Service prepared by Mr. E.W. Griffin," 30 October 1917, TNA AIR 1/625/17/1; Lavery, *Churchill Warrior*, 151.

1914, Churchill dispatched the Ark Royal to the Dardanelles where her aircraft provided

aerial reconnaissance and rudimentary aerial bombardments.[438] Both of these were only

moderately successful because of the technological limitations in communications and

the rudimentary nature of bomb targeting. The most lasting effect of these efforts was the

development of armored cars to protect airfields in France, which contributed to the

conceptualization of tanks.[439]

In contrast to the RNAS's deployments overseas, Churchill's air force

demonstrated its value as a mechanism for the aerial defense of Britain, a mission that

materialized on the eve of the war.[440] Susan Grayzel notes that, despite the dire popular

predictions that the outbreak of hostilities would lead to immediate and spectacular

devastation rained down from German Zeppelins, the reality of early aerial warfare and

terror bombing was far less effective than prewar commentators imagined.[441] The

German government was initially hesitant to utilize the airships against London, waiting

until early September to deploy its airship fleet and then only against Antwerp. This was

enough to spur Asquith to empower Churchill to move aggressively to secure Britain's

aerial defenses.[442] Churchill correctly recognized that Britain did not possess enough

guns of the proper type to mount a significant defense against aircraft once they were

over British territory, nor did the country possess enough aircraft to constantly patrol the

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[438] "Reminiscences of Group Captain C.R. Samson, August 1914 – February 1915,"
undated, TNA AIR 1/724/76/5; Morrow, *Great War in the Air*, 107–8.
[439] Lavery, *Churchill Warrior*, 166–67.
[440] Philpott, *Air Power and Sea Power in World War I*, 134–37; Gollin, *Impact of Air Power*, 291–320.
[441] Susan R. Grayzel, *At Home and under Fire: Air Raids and Culture in Britain from the Great War to the Blitz* (Cambridge: Cambridge University Press, 2012), 21.
[442] Winston Churchill, *The World Crisis* (New York: Scribner, 1923) vol. 1, 337.

skies. He warned: "There can be no question of defending London by artillery against aerial attack. It is quite impossible to cover so vast an area."[443] When German Zeppelins did raid Britain in early 1915, Churchill turned to a policy of bombing the German airships when they were on the ground.[444] These raids were moderately successful and eliminated a number of German airships in their sheds, forcing the German Army to pull their Zeppelins back to bases in the rear, out of range of Royal Navy aircraft.[445] These victories effectively eliminated the threat of Zeppelin raids on London through early 1915 and emboldened Churchill to expand his air force.

As Churchill learned from these experiences about the best means of organizing and utilizing air power he called a meeting on April 3, 1915, to discuss, "after eight months of war experience, what types of aeroplanes and seaplanes are best suited for the various duties."[446] The meeting provided the first meaningful glimpse of his later aviation policies, and demonstrated how his ideas were as much shaped by experimentation (writ large) as technological enthusiasm. Churchill noted "the possibility of working a squadron or squadrons of aeroplanes from an overseas base had not been foreseen; this operation was now being carried out with great success, and has materially altered preconceived ideas as to the means of employment of aircraft."[447]

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[443] Churchill, *The World Crisis*, 1:341.
[444] Morrow, *Great War in the Air*, 108; Lavery, *Churchill Warrior*, 159–63.
[445] "Report from Commander Spenser D.A. Grey to the Director of the Air Department, Admiralty, on the Raid on Cologne and Dusseldorf," dated 17 October 1914, in Roskill, *Documents Relating to the Naval Air Service*, 179; Hilary Aidan St George Saunders, *Per Ardua; The Rise of British Air Power 1911-1939* (Oxford: Oxford University Press, 1944), 48; Biddle, *Rhetoric and Reality in Air Warfare*, 21; Barry D. Powers, *Strategy Without Slide-Rule: British Air Strategy, 1914-1939* (London: Croom Helm, 1976), 11–51; Geoffrey L. Rossano and Thomas Wildenberg, *Striking The Hornets Nest: Naval Aviation and the Origins of Strategic Bombing in World War I* (Annapolis: Naval Institute Press, 2015), 7–19.
[446] "Minutes of Conference on Aircraft," 3 April 1915, TNA ADM 1/8433/270B.
[447] "Minutes of Conference on Aircraft," 3 April 1915, TNA ADM 1/8433/270B.

Essentially, Churchill sought to ascertain if it was time for his air force to begin to develop and produce specialized aircraft, and he drew on both his prewar experiences with aviation and his awareness of the political and logistical realities that Britain faced in the formulation of his ideas.

The heart of Churchill's proposals rested upon his conviction of "the necessity of developing a very large fleet of aircraft, capable of delivering a sustained series of 'smashing blows' on the enemy; more in the nature of a 'bombardment' by ships than the present isolated 'dashing exploits' of individual, or two or three aeroplanes dropping a few bombs only."[448] Churchill argued that "the object to aim at was so to harass the enemy and destroy his works as to effect very materially his ability to continue the war."[449] To accomplish this goal, he proposed that "1000 efficient aeroplanes and 300 efficient seaplanes, with the necessary accommodation, should be worked up," and "in particular the heavy bomb dropping type, and the small fast fighting machine should be developed."[450] These aircraft would be produced in the United States from designs developed by the RNAS in conjunction with American and British manufacturers. Essentially, in the spring of 1915, Churchill outlined the aviation scheme he would implement two years later at the Ministry of Munitions. Furthermore, these central concepts of using technology as a means of bringing about and winning a decisive battle would also be refined into his entire technocratic military strategy in 1917.

[448] "Minutes of Conference on Aircraft," 3 April 1915, TNA ADM 1/8433/270B.
[449] "Minutes of Conference on Aircraft," 3 April 1915, TNA ADM 1/8433/270B.
[450] "Minutes of Conference on Aircraft," 3 April 1915, TNA ADM 1/8433/270B.

Even as Churchill was laying out his plans for an expanded and redefined air force, the situation in the Dardanelles was undermining his political position.[451] By the end of May, Asquith had removed him from the Admiralty as part of a larger political restructuring of the Cabinet in response to public pressure over the handling of the war.[452] Churchill remained in the Cabinet, though in a significantly diminished non-military role as Chancellor of the Duchy of Lancaster. He was willing to accept this role because he still held out hope that Asquith would place him in charge of expanding and reorganizing Britain's military aviation program into an independent service along the lines he laid out in his April meeting.[453]

Unfortunately, this did not happen, and almost immediately after Churchill's departure from the Admiralty the Naval Wing formally severed ties with the Royal Flying Corps. The Admiralty abandoned Churchill's bombing campaign against Germany's Zeppelins and shifted the Royal Navy's air resources toward providing reconnaissance for the Grand Fleet. Churchill's ambitions of overseeing a new, independent air force ultimately proved to be fanciful, as there was no way Asquith would invite the wrath of his Conservative political allies in order to force the two traditional military services – and their powerful political leaders – to give up their air wings in order to humor the ambitions of a discredited underling. Churchill's goals of leading a unified and expanded British air force were put on hold.

When Churchill finally left the government for the Western Front in November, he took with him a burning resentment over the collapse of his aviation program and the

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[451] Searle, *A New England?*, 679.
[452] Jenkins, *Churchill*, 276.
[453] Morrow, *Great War in the Air*, 118.

rejection of his proposals. At the front, Churchill witnessed not only the military devastation and bureaucratic disorganization that characterized the British experience in World War I, but also the loss of air supremacy. He wrote to Clementine that "air fights have been going on overhead this morning…there is no excuse for our not having command of the air. Since I left the Admiralty, the whole naval ring has been let down: & all our precious ascendency has been dissipated."[454] He went on, "If they had given me control of this service when I left the Admiralty, we should have supremacy today."[455] On another occasion he wrote that, "this afternoon many aeroplanes overhead, & much shooting at them. I was disgusted to watch 1 German aeroplane sailing about scornfully in the midst of 14 British – none of which could or worse still perhaps – *would* bring him to action."[456]

Churchill was not alone in these observations, which contributed to the growing calls for aerial reform both in the British press and in Parliament.[457] In order to fend off these charges of mismanagement of the war effort, the Asquith administration created an Air Board under Lord Curzon to "discuss matters of general policy in relation to the air and in particular combined operations of the Naval and Military Air Services, and to make recommendations to the Admiralty and War Office thereon."[458]

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[454] Winston Churchill to Clementine Churchill, 17 January 1916 in, *Winston S. Churchill: Companion Volume III, Part 2, May 1915-December 1916,* ed. Martin Gilbert (Boston: Houghton Mifflin, 1973), 1377.
[455] Winston Churchill to Clementine Churchill, 17 January 1916, in, Gilbert, ed., *Winston S. Churchill: Companion Volume III, Part 2,* 1377.
[456] Winston Churchill to Clementine Churchill, 13 February 1916 [original emphasis] in: Gilbert, ed., *Winston S. Churchill: Companion Volume III, Part 2,* 1420.
[457] For examples of critiques in the press and political circles, see: Morrow, *Great War in the Air*, 177–78.
[458] Raleigh and Jones, *War in the Air*, 272.

Ultimately Churchill's opportunities to observe the war at first hand proved short-lived. After six-months of political exile on the Western Front, Churchill reentered Parliament in May 1916, and set about restoring his reputation through criticism of Henry Asquith's war leadership. He spoke on a wide array of topics relating to military strategy, but it was the debate over the formation of an Air Board that revealed the essence of his strategy for political rehabilitation. [459] The Air Board was an administrative reform effort designed to ward off criticism from both civil and military leaders about Britain's inability to produce advanced aircraft in significant numbers.[460] This deficiency was exposed by both Britain's failure to prevent German air raids and the loss of air superiority on the Western Front that Churchill had witnessed. Essentially, the Air Board was conceived as a collaborative administrative body to consult on air strategy and facilitate the accelerated production of more advanced aircraft for the war.

The issue at stake was whether the formation of an advisory Air Board constituted a significant enough reform. William Joynson-Hicks, a Conservative MP from Manchester with a penchant for technological innovation, said that he had "been out to the front and seen the organisation of our Air Service there. It is splendid, I do not dispute that for a moment. The organisation is good, the men are good, and the machines of a type are good. They are magnificent machines, but they are not fast enough, and have not sufficiently high engine power."[461] "I saw any number of new machines," he concluded, "all of the same old type of machines that we used when the War began, with the same

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[459] Jenkins, *Churchill*, 310.
[460] Morrow, *Great War in the Air*, 180–81.
[461] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*

old engines of eighty-five, ninety, and ninety-five horsepower. What I have been trying to impress, time and time again, is that you cannot meet a German machine of 150 horse-power with an English machine of 90 or 95 horse-power."[462] The tenor of Joynston-Hicks's comments, and of the debate overall, played perfectly into Churchill's own approach to air power and ambitions of using it to rehabilitate his political stature. Joynston-Hicks credited him with tremendous foresight in another of his remarks, for Churchill's ability to realize the potential of airplanes to defend against Zeppelin attacks.[463]

When Churchill finally spoke, he inquired as to the extent of the new board's executive power. He quickly established that the Air Board would have no power in setting air policy or deciding on the types of aircraft produced. Rather, it was merely a stopgap measure to provide the appearance of reform to Britain's air program without actually challenging the power or policies of the military leadership. Churchill saw this as emblematic of all of Asquith's failures during the war and charged that his government had "followed no principle whatever, except the familiar principle of postponing until the last possible moment and then following the line of least resistance."[464] This emphasis on grand strategy and long-term planning would become hallmarks of Churchill's proposals over the coming years, but in May 1916 Churchill had ambitions for his speech beyond simply admonishing the government for failing to take real steps toward reform. He wanted to use his speech to reframe the perception of his personal legacy in British military aviation development and aerial defence policy. More important, he needed to

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[462] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*
[463] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*
[464] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*

begin to define the platform of reform he could use to reinsert himself into the highest

levels of British policy making.

Simultaneously, Churchill needed to legitimize his expertise in aviation policy

and defend his leadership of the Admiralty before the war. This need was especially

acute because of the Royal Naval Air Service's failure to continue to prevent Zeppelin

raids on Britain, something blamed on his lack of foresight. Churchill insisted he had led

the Admiralty "to explore new regions and to endeavour to build up the new arm of the

air, and that in less than three years the powerful, efficient, and skilful Air Services with

which the Army and Navy began this War were brought into existence."[465] In this process

he had become the leading authority on aviation in the British government and a

champion of the necessity for air services insulated from Britain's traditional military

institutions, both administratively and intellectually. Churchill illustrated his argument

with the example of uninformed "reformers" who, since his departure from the

Admiralty, sought to "navalise the Naval Wing of the Air Service." [466] He lamented that

"in the pursuit of this general policy of navalisation, the speedometers in the machines,

by which the rate of flight was regulated and the position of the aeroplane located, which

were in miles, were all converted into knots...while the maps which the men were using

were in miles or kilometres."[467] Thus, "the naval pilot, with perhaps a Fokker machine in

the air above him and bursting shells below him, had to go through a careful, elaborate,

and difficult calculation to convert the miles into knots, or vice versa, to verify his

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[465] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*
[466] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*
[467] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*

position."[468] Furthermore, Churchill argued "that is a typical instance of a hundred small points of friction and petty friction arising from the undue particularism which we had hoped the Government would make proposals finally to remedy."[469] Churchill believed that "complete, unquestionable supremacy in the air would give an overwhelming advantage" and that the British had "not got...that complete supremacy now. You have not even got equality. On the contrary, in many respects the Germans have the advantage, and you have lost the superiority which, at the outbreak of war, it was admitted we possessed."[470]

Churchill believed that the Asquith coalition government's plan to create an advisory board was completely insufficient to achieve the lofty goal of taking back the skies over the Western Front and defending Britain from aerial attack. He considered achieving aerial supremacy as the single most important thing which could be done toward winning the war and contended "you can recover it. There is nothing to prevent your recovering it. At sea, the increased power of the defensive in mines and submarines has largely robbed the stronger Navy of its rights," and "on land, we are in the position of having lost our ground before the modern defensive was thoroughly understood, and having to win it back when the offensive has been elevated into a fine art."[471] In contrast, "the air is free and open. There are no entrenchments there...nothing stands in the way of our obtaining the aerial supremacy in the War but yourselves. There is no reason, and there can be no excuse, for failure to obtain that aerial supremacy, which is, perhaps, the

[468] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*
[469] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*
[470] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*
[471] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*

most obvious and the most practical step towards a victorious issue from the increasing dangers of the War."[472]

This rallying cry to use technology, specifically aviation technology, as a means of circumventing the limitations of older modes of warfare was the common denominator between all of Churchill's public and private critiques of the Asquith government. In order to achieve this goal of recovering air supremacy, Churchill had a twofold plan. First, create a powerful centralised Air Ministry that would have complete control over the procurement of aircraft, the training of pilots, and the deployment of air forces on land and at sea. Second, to resume the strategy he had pioneered of bombing German Zeppelins at their bases, which made it more difficult to launch bombing attacks on the British Isles or reconnaissance missions over the Western Front and the North Sea.

The significance of Churchill's speech was not immediately apparent in 1916 because it did little to change the political conditions in Britain in 1916 or the military situation on the Western Front. The speech also did not shift the structure or powers of the new Air Board under Lord Curzon, which, as Churchill predicted, was plagued by all the problems of effectively enacting reforms.[473] The Air Board struggled to coordinate the policies of the Admiralty and War Office, and its first report lamented that "there is no reason why, under such a system as that proposed, the relations of the Air Board with the Admiralty should not be as easy and pleasant as they are with the War Office."[474] The report noted that the insular and intractable nature of the Royal Naval Air Service began only after "the departure of Mr. Churchill from the Admiralty; and that it therefore

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[472] 82 Parl. Deb., H.C. (5th ser.) (1916) *1545-72.*
[473] Morrow, *Great War in the Air*, 180–82.
[474] "First Report of the Air Board," September 1916, TNA MUN 5/212.

has not the sanction even of antiquity."[475] Rather, "before the war… there was no independent Naval Air Service or organization at all. There were a military and a naval wing of a joint Service. Mr. Churchill took the Naval Air Service into his own hands, and, … ran it himself on vigorous but unorthodox lines."[476] The report credited Churchill's leadership with producing a "much greater command of scientific and technical knowledge at the outbreak of the war, which enabled it to obtain a decided lead both in engines and machines."[477] The consensus of the report was that the devolution of the Royal Flying Corps into separate and insular institutions was a grave misstep, and that a fundamental reform of Britain's aviation program would be required. This both confirmed Churchill's contentions – further legitimizing both his track record on aviation related matters and his ideas about the future direction of aviation policies – and opened the door for him to take a leading role in the redefinition of Britain's air forces.

Churchill's speech did not immediately improve his own political prospects. Instead it was just one of a host of speeches he made attacking the Asquith government as he struggled to return to political relevance. The significance of the speech was that Churchill revealed his strategy for a return to power that capitalized on his aviation expertise to criticize the Asquith government, and thus allowed him to begin to reinsert himself back into elite politics. This strategy allowed him to focus on his successes without dwelling on his failures like the Dardanelles fiasco, and, simultaneously, attack the government for failing to capitalize on his work. More important, the speech publicly articulated Churchill's concept for the future of British military aviation. This vision

[475] "First Report of the Air Board."
[476] "First Report of the Air Board."
[477] "First Report of the Air Board."

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combined the role of air power and strategic bombing in the prosecution of mechanized industrial warfare and his own experience from his days of creating and directing an air service at the Admiralty.

Over the next twelve months, the Dardanelles Commission dominated Churchill's attention. Nevertheless, during these same months he published prolifically in popular magazines and newspapers, critiquing Britain's military strategy and calling for military and political reform. Appearing between July 1916 and July 1917, these articles allowed him to examine the course and causes of the war broadly and wrest the maximum political effect from his critiques. Several key themes dominated his writings, namely the importance of defeating Germany conclusively, and the necessity of Britain embracing technology on the battlefield to effect that decisive victory.[478] He wrote that "it is surely to method and machinery rather than to numbers and heroism that one must look in the long succession of red months that are before us. It cannot be too often repeated that all that is necessary to secure a complete and speedy victory is the discovery of a method by which the stronger army can advance continuously against its antagonist."[479] He believed that "it is clear that the husbanding of human life and the lavish use of machinery of all kinds must be the foundation of any such method. The machinery will be continually improving."[480]

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[478] The articles had the added benefit of bringing a sizable payment which helped subsidize Churchill's family as he struggled to resuscitate his political career, see: *The Collected Essays of Sir Winston Churchill*, vol. 1, ed. Michael Wolff (London: Library of Imperial History, 1976), 91–208.

[479] Winston Churchill, "The War By Land and Sea", *London Magazine*, February 1917, in Wolff, 1:150–60.

[480] Churchill, "War By Land and Sea", *London Magazine*, February 1917, 1:150–60.

Aviation technology was one of the key types of "machinery" he identified in his articles. This same demand for a fundamental redefinition of British military strategy was also the central component of his speech during the "Secret Session" of Parliament in May 1917. In his call to develop the "mechanical and tactical methods of piercing an indefinite succession of fortified lines defended by German troops," aviation was one of the central technologies he believed were vital to winning the war.[481] His conception of utilizing machinery as a substitute for, and amplification of, British manpower was his defining policy platform throughout the rest of the war and the early interwar period. In all of these institutional reforms, aviation formed the strategic connection, and this preoccupation with air power as the fulcrum for mechanized development emerged directly out of his early experience with and enthusiasm for the technology.

The cumulative effect of the relegation of the Dardanelles from the immediate public consciousness and the growing influence of Churchill in print and Parliament ultimately made it impossible for Lloyd George to exclude him from the Cabinet in 1917. It was not until the early summer, though, that Lloyd George finally appointed Churchill to a Cabinet position, and it was not without controversy. While Churchill was eventually offered the position of Minister of Munitions, initially the press and many of his fellow political leaders assumed that Lloyd George wanted him as Chairman of the Air Board.[482] This was a reflection of Churchill's political reinvention not only as a

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[481] Winston Churchill, *The World Crisis: Volume III* (New York: Charles Scribner's Sons, 1927), 261.
[482] For more, see: Martin Gilbert, *Winston S. Churchill, Volume IV: The Stricken World, 1916-1922* (Boston: Houghton Mifflin, 1975), 23; Eugene Beiriger, *Churchill, Munitions and Mechanical Warfare: The Politics of Supply and Strategy* (New York: Peter Lang, 1997), 43.

potent critic of both Asquith's and Lloyd George's governments, but also as an acknowledged authority on aviation technology. Lloyd George's Conservative political allies moved aggressively and preemptively to block this supposed appointment, ostensibly because it would have included a seat for Churchill on the War Cabinet. Ultimately, Churchill's exclusion from the War Cabinet and any official role in defining British air power policy meant that he would have to pursue creative avenues to achieve the technocratic program he envisioned. These machinations defined his role in the development of British aviation policy and the evolution of British air power as a whole, and meant that his influence would extend far beyond both his time at the Ministry of Munitions and the end of the Great War.

Churchill was the driving force in prewar British military aviation development, and emerged as the leading authority and advocate of aviation investment during the war. His ideas about aviation's potential were shaped not only by the same futurological interest in technology that drove his larger development as a technocrat, but also a deep personal enthusiasm for flight. The result of his activism was an aviation program that waxed and waned technologically and institutionally with his involvement and one that formed the foundation for the future development of air power. The ideas Churchill laid out during his time at the Admiralty and in the political wilderness would define his actions when he again would took a guiding role in British aviation policy.

Chapter 4:

"The Air Ministry of the Future Must Be More Than A Fighting Service":

Churchill's Wartime Air Power Policy and the Origins of Strategic Bombing

At the first meeting of the newly formed Munitions Council in early September 1917,

Winston Churchill said that there were "only two ways left now of winning this war, and

they both begin with A. One is aeroplanes and the other is America. That is all that is left.

Everything else is swept away."[483] Churchill's statement perfectly encapsulated his

technocratic vision for a decisive victory on the Western Front. He understood how

important America's contributions to his mechanized juggernaut and his inclusion of

aviation on equal terms with American industrial production and manpower underscores

their centrality in his technocratic scheme. Aviation was emblematic of the investment in

technology writ large that he believed would buoy the British military long enough for

American forces and resources to arrive and turn the tide.[484] Yet, his statements also

implied that the appeal of aviation for Churchill was driven by short-term necessity and

belied his longstanding political advocacy of air power development.[485] In many ways,

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[483] Minutes of Munitions Council Meeting, 4 September 1917, The National Archives of the United Kingdom MUN 5/212/1960/23 (hereafter cited as TNA).

[484] Eugene Beiriger, *Churchill, Munitions and Mechanical Warfare: The Politics of Supply and Strategy* (New York: Peter Lang, 1997), 44; Adam Tooze, *The Deluge: The Great War, America and the Remaking of the Global Order, 1916-1931* (New York: Viking, 2014), 201–3; David Stevenson, *With Our Backs to the Wall: Victory and Defeat in 1918* (Cambridge, Mass.: Belknap Harvard, 2011), 43–44.

[485] Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 88–89.

Churchill's interest in aviation was both representative and exceptional within his vision

for a technocratic British military. While he placed aviation in a supreme position within

his theoretical framework for military reform, his advocacy in 1917 was only one stage in

a long evolution of his interest in British investment in the technology. Churchill's

aviation policy as Minister of Munitions between July 1917 and November 1918 was a

reflection of that evolution – and a response to a specific set of political and military

conditions.

As Minister of Munitions, Churchill had a complex task in his quest to reform and

redirect Britain's aviation program. His goal was to realize a redefined air service that

would bolster his own political ambitions of returning as a force within British military

policy-making. At the same time, this air service also needed to contribute substantively

to the war effort in a timely manner that could be comprehended by Britain's existing

political and military leadership. Like the rest of Churchill's technocratic policies, his

aviation program served these immediate political needs, while likewise reflecting his

enthusiasm for science and technology as a mechanism for national invigoration. In this

process, perception mattered as much as any real effect, and hinged on three key

efforts.[486] First, Churchill needed to restructure how the Ministry of Munitions

developed aircraft designs and produced them. Second, he sought to shape the

institutional reformation of Britain's air services, which by the fall of 1917 was a forgone

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[486] 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), 4–7.

conclusion.[487] Third, he needed to persuade Britain's military authorities of the validity

of his ideas about the best application of air power on the Western Front.

Throughout the implementation of this triadic process, he reaffirmed his notions

of aviation's role as a component in a technocratic military system and fully realized the

military-industrial production apparatus he first pioneered at the Admiralty. Much like

his efforts at applying technology on the terrestrial battlefield, Churchill's aviation

policies were as much aspirational as they were immediately achievable, and reflected his

conceptions about the demands that modern industrial war required of the British nation.

Ultimately, his aviation development program –like his mechanized warfare program –

was left incomplete, rendered void by the unexpected sudden end of the war. Yet, in its

embryonic state his scheme laid out both a blueprint for a postwar reconstitution of

Britain's air program and an intellectual paradigm with accompanying language that had

a lasting imprint on the development of British air power.

When Churchill arrived at the Ministry of Munitions in the late summer of 1917, he

found a massive institution in disarray.[488] The aviation production program was no

exception to this, and in many ways represented a microcosm of the inefficiency,

infighting, and intransigence that had stymied British military aviation development since

[487] Malcolm Cooper, *The Birth of Independent Air Power: British Air Policy in the First World War* (London ; Boston: Allen & Unwin, 1986), 97–107; John Howard Morrow, *The Great War in the Air: Military Aviation from 1909 to 1921* (Washington: Smithsonian Institution Press, 1993), 246–51; Biddle, *Rhetoric and Reality in Air Warfare*, 32–33.
[488] Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 55–56.

the war began.[489] The production of aircraft components was fragmented among the fifty

different departments and was impeded by the variability of cooperation and interest

among the semi-autonomous Director-Generals of each department.[490] Nominally

responsible for coordinating these efforts as the Ministry of Munitions representative on

the Air Board, William Weir had to contend with those institutional barriers as well as a

lack of coordination between the procurement demands of the Royal Flying Corps and

the Royal Naval Air Service.[491] Because of these limitations, Weir struggled to deliver

cutting-edge aircraft to Britain's air forces in a timely manner, let alone in significant

numbers.[492]

As part of his initial efforts to restructure the Ministry of Munitions and maximize

its efficiency, Churchill named Weir to a new Munitions Council that cut the

administrative leadership apparatus from more than fifty people to eleven.[493] Alongside

this shift, Churchill also pooled control of all aspects of aviation production – from

research and development to factories – under Weir and named him Director-General of

Aircraft Production, thereby streamlining the bureaucracy.[494] Essentially, this reform

created a mechanism for the rapid acquisition and dissemination of information,

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[489] Brian Lavery, *Churchill Warrior: How a Military Life Guided Winston's Finest Hours* (Oxford: Casemate, 2017), 259–63.

[490] Martin Gilbert, *Winston S. Churchill, Volume IV: The Stricken World, 1916-1922* (Boston: Houghton Mifflin, 1975), 42.

[491] "Synopsis of British Air Efforts Throughout the War," 1 January 1919, Weir Papers DC 96/20/13, University of Glasgow Archives (hereafter cited as WWP); Morrow, *Great War in the Air*, 247.

[492] "Synopsis of British Air Efforts Throughout the War," 1 January 1919, WWP DC 96/20/13.

[493] Gilbert, *Winston S. Churchill, Vol.IV*, 42; Beiriger, *Churchill, Munitions, and Mechanical Warfare*, 56–57.

[494] W. J. Reader, *Architect of Air Power: The Life of the First Viscount Weir of Eastwood 1877-1959* (London: Collins, 1968), 66–67.

theoretically allowing a greater pace of invention and manufacture.[495] Weir proposed to create six "centers" of research and production that would allow collaboration between private industry and military researchers.[496] Churchill believed that a lack of a systematic "war plan" hampered these efforts. He suggested "that is the thing which really ought to be found out not only in the Air Board but at the Cabinet. But it all depends on the war plan. What is your war plan? If you know what your war plan is, it is quite easy to parcel out your material."[497]

Churchill believed that any aircraft procurement plan, and the subsequent military strategy, was contingent on "the priority conceded to shipping" and the production of other military equipment which drew material and labor resources away from aircraft producers.[498] He contended that "if, as a matter of policy, the War Cabinet accepted the air programme, it could be carried out, but other projects might suffer in consequence."[499] Churchill continued the theme that had dominated his critiques of war policies from outside the Cabinet, noting that, "everything…turned on what the War plan of the Cabinet was for the following year."[500]

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[495] Weir is an interesting and under examined character. A Glasgow industrial magnate, he was recruited into the Ministry of Munitions under Lloyd George and rose meritocratically through the ranks. For more on Weir, see, Reader, *Architect of Air Power*; Geoffrey R. Searle, *A New England?: Peace and War, 1886-1918* (Oxford: Oxford University Press, 2004), 821–22; Morrow, *Great War in the Air*, 181.

[496] "Minutes of Munitions Council," 4 September 1917, TNA MUN 5/212/1960/23.

[497] "Minutes of Munitions Council."

[498] "Draft Minutes, First Meeting, Aerial Operations Committee," 26 September 1917, Churchill Papers 27/5, Churchill Archives Center (hereafter cited as CHAR); Searle, *A New England?*, 813; Stevenson, *With Our Backs to the Wall*, 311–49; Tooze, *The Deluge*, 203–4.

[499] "Minutes, First Meeting, Aerial Operations Committee," 26 September 1917, CHAR 27/5.

[500] "Minutes, First Meeting, Aerial Operations Committee."

Such a war plan turned on the Cabinet's willingness to take a greater role in defining British military strategy, a long-term goal of Prime Minister David Lloyd George. Churchill's emphasis on relying on a Cabinet-defined war plan revealed a political shift that he saw as possible in the immediate future and that was required for the realization of his entire technocratic scheme. This emphasis on planning became more than just a tool of political rhetoric for Churchill as he tried to organize the Ministry of Munitions because, as he argued, "the Cabinet might allot precedence to Man-Power, to the Navy, or to the Air."[501] Even before Churchill took control over the Ministry of Munitions, he wrote to Weir that "it seems to me that the first thing in this field is a clear view of war policy in the Air, and that until this is decided all subsequent decisions are obstructed and may be visited."[502] His belief that there were "at present the following main requirements - (a) the Armies in the Field; (b) Home Defense; (c) the Admiralty; (d) the Air Service Proper. We require to know what war purposes under each of these heads and to make a complete distribution of our resources between the heads."[503] Churchill thus simultaneously asserted aviation's centrality to his reimagined technologically infused British military, and his belief that strategic planning for aviation production and deployment was just as important as any other aspect of Britain's new mechanized forces.

Churchill set about filling the void in planning, both as an expedient to his own efforts at munitions production and as a means in steering the debates over war leadership and direction. His memorandum, "Munitions Possibilities of 1918," should be understood as his effort to both spur on the Cabinet to articulate a "war plan" and to

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[501] "Minutes, First Meeting, Aerial Operations Committee."
[502] Winston Churchill to William Weir, 28 July 1917, CHAR 15/57.
[503] Churchill to Weir.

shape the form of that plan. In "Munitions Possibilities of 1918" he dealt at length with his vision for aviation's potential and how best to utilize it. He wrote that the "most important of all the mechanical factors which are available [was] the Air Offensive," which he believed promised the same level of disruption to Germany's civil government and resources as the German submarine offensive had wrought in Britain.[504] This was a carefully calculated appeal to civilian leaders' desire to retaliate against Germany. Churchill couched the capabilities of damage and disruption he envisioned for his air offensive in familiar contemporary terminology. He believed that if they compared "the amount of national life-energy which the Germans have put into their submarine attack and compare it with the amount of national life-energy we are compelled to devote to meeting and overcoming that attack, it will be apparent what a fearfully profitable operation this attack on our communications has been to the enemy."[505] In essence, Churchill was presenting aerial bombardment as a means of drawing enemy resources away from the Western Front in an effort to defend against his bombers. He did not believe that it would destroy the fabric of German society, but rather that strategic bombing could weaken the war-making capacity of Germany's institutions as they diverted resources to defend against an elusive enemy.

Churchill believed that aviation offered the possibility of attacking not only lines of communication, but also the bases of the enemy, and could "either paralyze the enemy's military action of compel him to devote to the defense of his bases and communications a share of his straitened resource far greater than what we need in the

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[504] Winston Churchill, "Munitions Possibilities of 1918," 21 October 1917, TNA CAB 24/30.
[505] Churchill, "Munitions Possibilities of 1918."

attack."[506] The goal was "to deprive the German armies on the Western Front of their capacity for resistance," by deploying aerial bombardment at "its maximum development in proper relation to the main battles of Exhaustion and Surprise during the culminating period of our general offensive."[507] If the air assault was combined with an overwhelmingly mechanized and massed ground offensive, "the complete defeat and breaking up of their [German] armies in the West as a whole might not perhaps be beyond the bounds of possibility."[508] For Churchill, if "all attacks on communications or bases [had] their relation to the main battle," then it would function as a seamless component in a decisive victory.[509] This meshed neatly with contemporary military leaders' fixation with a decisive land battle. By positioning his proposed air offensive as an integral part of achieving a decisive breakthrough by ground forces, Churchill was eliminating a potentially significant objection.

There were limitations to and qualifications for Churchill's conception of aviation's potential in his new technocratic military system. He believed that it was "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."[510] As evidence of this, he pointed out that "in our own case we have seen the combative spirit of the people roused, and not quelled, by the German air raids."[511]

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[506] Churchill, "Munitions Possibilities of 1918."
[507] Churchill, "Munitions Possibilities of 1918."
[508] Churchill, "Munitions Possibilities of 1918."
[509] Churchill, "Munitions Possibilities of 1918."
[510] Churchill, "Munitions Possibilities of 1918."
[511] Churchill, "Munitions Possibilities of 1918."

This is a clear refutation of both the melodramatic predictions of prewar commentators like H.G. Wells, and the claims of wartime air power advocates. Churchill did not see air power as an effective terror weapon. Rather, he believed the British "air offensive should consistently be directed at striking at the bases and communications upon whose structure the fighting power of his armies and fleets of the sea and the air depends."[512] However, "any injury which comes to the civil population from the process of attack must be regarded as incidental and inevitable."[513] This final statement would have a dramatic effect on the strategy British commanders utilized when the air force Churchill proposed finally became operational in the summer of 1918. The key requisite to achieving the large scale aerial assault that Churchill envisioned was a General Staff for Britain's air services that could develop tactics, identify targets, and coordinate attacks. This would only be possible through a major institutional reorganization of Britain's air wings.

By the summer of 1917, it was "almost universally and fully recognized that an independent Air Service will unquestionably be demanded as soon as ever it is possible for one to be formed," because of public outcry over Britain's inability to defend itself from German Gotha bomber raids.[514] In an effort to stave off political fallout, Lloyd George appointed a special commission under South African premier Jan Smuts to make recommendations for reform, but this effort faced intense resistance. [515] The reasons for

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[512] Churchill, "Munitions Possibilities of 1918."
[513] Churchill, "Munitions Possibilities of 1918."
[514] Barry D. Powers, *Strategy Without Slide-Rule: British Air Strategy, 1914-1939* (London: Croom Helm, 1976), 52–74.
[515] Lord Cordray to Jan Smuts, 28 July 1917,CHAR 15/57; Biddle, *Rhetoric and Reality in Air Warfare*, 29–35; Morrow, *Great War in the Air*, 246–47; John Sweetman, "The

this were twofold: first, the traditional military services opposed any reorganization that diminished their institutional prestige and power.[516] Second, there was a fear that any large-scale reform program would lead to chaos of command and supply and the inability for Britain to mount an effective aerial resistance on the Western Front.[517] When the committee presented its report in the middle of August, it represented a major blow to the existing military leadership. Their report concluded that the lack of British air security was a reflection of institutional dysfunction on the part of Britain's air services, and that there was "no reason why the Air Board should any longer continue in its present form as practically no more than a Conference room between the older Services, and there is every reason why it should be raised to the status of an independent Ministry in control of its own War Service."[518] While the committee's report recommended significant reform in spirit, it provided no specifics about what a prototypical air ministry or unified air service would look like, or how it would operate.

Historians have debated the soundness of Smuts's recommendation, noting that the production forecasts that underpinned his assumption of sufficient surplus aircraft to supply a new independent bombing force in addition to the other traditional services were wildly optimistic, and consequently attributed the Smuts report to political opportunism or fanciful speculation.[519] In actuality, Smuts's report reflected a combination of factors,

Smuts Report of 1917: Merely Political Window-dressing?," *Journal of Strategic Studies* 4, no. 2 (June 1981): 152–74; Searle, *A New England?*, 751.
[516] Biddle, *Rhetoric and Reality in Air Warfare*, 33; Morrow, *Great War in the Air*, 257.
[517] Lord Cordray to Jan Smuts, 28 July 1917, CHAR 15/57.
[518] "Second Report of the Committee on Air Organization and Home Defense Against Air Raids," 17 August 1917, TNA CAB 24/22.
[519] Morrow, *Great War in the Air*, 249–58; Cooper, *The Birth of Independent Air Power*, 97–107; Sweetman, "The Smuts Report of 1917."

including Churchill's return to the Cabinet and his initial efforts at realizing his larger

technocratic ambitions – especially the increases in aircraft production he promised, as

well as the decline in the traditional services' political power in aviation matters and the

growing influence of more focused independent air power advocates. This complex

confluence of political, intellectual, and bureaucratic forces underpinned Churchill's

munitions planning and technocratic advocacy, and the reforms he proposed revealed not

only his perception of the immediate political situation, but also his larger vision for

aviation's institutional development.

Churchill assumed that American production estimates were accurate and that key

components required for his own production schedule, most famously the Liberty aircraft

engine, would be available on time and in the large quantities pledged.[520] Effectively,

Churchill also used his production forecasts as a means of sidestepping counterarguments

to a grand reform scheme by assuring leaders of the traditional military services that they

would not experience any short-term deficiencies. Churchill's forecasts were consistent

with the political tactics that informed his conception of a new technocratic British

military. He promised to extend Britain's warfighting ability without an expanded loss of

British lives and without abandoning or diminishing the mental model and political needs

of Britain's leading generals and admirals.

The only way to do this was through procuring military equipment and vehicles –

especially aircraft – on a spectacular and unprecedented scale. This promise of surplus

put Churchill in a difficult position that could potentially derail his entire aviation reform

scheme by creating increased resistance to the existence of any new air units, no matter

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[520] Tooze, *The Deluge*, 200–203.

how dramatically he might present their potential war-fighting utility. Within this context, he emphasized a dedicated planning staff because if "an immense scheme of bombing machines is to be developed both by day and night, it should be possible to make a forecast of the proportion of loss which would arise in such enterprises."[521]   This willful desire to realize his technocratic vision also led to a moment of profound miscalculation when he stated that the "proportion of loss might be quite different from that in ordinary Air fighting such as is proceeding on the Western Front."[522] The invalidity of this assumption about attrition became evident when Churchill's strategic bombing force went into operation and long-range bombing proved to be far more costly than he imagined.[523]

From the outset, Weir was in complete agreement that a "clear view and definite policy with regard to air operations is essential for the future conduct of the aerial arms," and that "unless some definite progress is made now towards the constitution under the Air Board of a proper Air General Staff, the output, however large, will continue to be absorbed by the two Services."[524] Weir believed aviation's "utilization at present as an auxiliary or accessory to other Arms, must certainly have definite limits as compared with its utilization from the standpoint of aerial strategy," and that "such an air policy, coupled with operations conceived by the Air Staff, would conceivably result in important modifications in the character of the constructional program."[525] Churchill and

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[521] Winston Churchill to William Weir, 28 July 1917, CHAR 15/57.
[522] Churchill to Weir.
[523] Biddle, *Rhetoric and Reality in Air Warfare*, 44–45; Morrow, *Great War in the Air*, 321–22.
[524] William Weir to Winston Churchill, 2 August 1917, CHAR 15/57.
[525] Weir to Churchill.

Weir shared the view that a fully-fledged general staff for Britain's air forces – and the accompanying institutional independence it implied – was a vital necessity to ensure the success of Britain's future military action. However, for others it was not a foregone conclusion.

Two distinct issues dominated the attention of those concerned with the reorganization of Britain's air services: defending against German attacks on the British population, and maximizing the efficiency of the air wings on the Western Front by providing them with both a steady supply of the most advanced aircraft possible and a cohesive and sustainable strategy. Both of these goals were rooted as much in political necessity as immediate military need, and reflected the dissonance between the Lloyd George government and Haig's high command.[526] For Churchill, these two issues provided a justification for the type of wholesale reorganization he envisioned for Britain's military, and indeed his air reform advocacy proved to be a microcosm of his larger efforts. Rather than two distinct problems demanding competing solutions, Churchill insisted that "the finest defense for London and this country was for us to attack, each night, 'Gotha' and submarine lairs."[527]

The creation of independent and unified air power promised to solve both problems. First, by reengaging the strategy of attacking German air forces at their bases that Churchill had pioneered at the Admiralty, it would be possible to *at least* limit – if not eliminate – German terror bombing attacks on Britain. Second, by providing the

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[526] Morrow, *Great War in the Air*, 237; Searle, *A New England?*, 697–705; David R. Woodward, *Lloyd George and the Generals* (Newark: University of Delaware Press, 1983), 116; John Turner, *British Politics and the Great War: Coalition and Conflict* (New Haven: Yale University Press, 1992), 154.
[527] "Minutes of First Meeting: Air Raids Committee," 1 October 1917, CHAR 27/5.

connective tissue, technologically, for the climactic mechanized battle Churchill

envisioned, aviation reform offered a key stepping stone toward a long-term political

solution to Britain's' strategic and political stalemate. Once British air supremacy was

achieved, in addition to a bombing campaign that would interfere with the enemy's

defensive capabilities, "all sorts of enterprises which are now not possible would become

easy…considerable parties of soldiers could be conveyed by air to the neighborhood of

bridges or other important points."[528] "'Flying columns' (literally)…could be organized

to operate far and wide in the enemy's territory, thus forcing him to disperse in an

indefinite defensive good troops urgently needed at the front," further compounding the

effect of this bombing campaign.[529] To help him conceptualize the structure of this type

of force, he even turned to one of his subordinates from his Admiralty days for advice:

Charles Rumney Samson.[530] In fact, more than anything else, Churchill's policy

proposals built on his experience at the Admiralty and the lessons he learned there. He

even went so far as to circulate to the Cabinet a memorandum he had drafted while still

First Lord of the Admiralty in April 1915, regarding types of aircraft for procurement. [531]

   The fall of 1917 was a unique window of time politically, not only because it was

obvious to Churchill that "sooner or later an Air Ministry has got to come," but also

because it provided a moment when "a new service should be started on proper

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[528] Winston Churchill, "Munitions Possibilities of 1918," 21 October 1917, TNA CAB 24/30.
[529] Churchill, "Munitions Possibilities of 1918."
[530] "Organization of Bombing Aeroplanes" by Charles Rumney Samson, 26 September 1917, CHAR 15/57:.
[531] Winston Churchill, "Minute by the First Lord of the Admiralty, April 3, 1915," October 1917, CHAR 27/2.

foundations."[532] He worried that the majority of those concerned with aviation reform were mesmerized by "haste and hypnotism by existing organization," and looked only "to the conditions of the <u>immediate present</u> because the wood is so thick in its locality that it is unable to see out of it."[533] Because of, "the delay of many years, which has occurred in getting straight our Air Services, no organization of this extent has got time to prove itself now during the present war."[534] Rather, he believed that "assuming - what is roughly true - that the armistice is booked for 1918, it will have just got going when it is thrown into chaos by the aftermath. The first and most important fact is that the <u>Air Ministry of the future must be more than a fighting service</u>."[535] The failure of Britain's air policy up to 1917 "was entirely caused by the fact that the leaders failed to realize that <u>war has passed from a question of professional entertainment to one of national co-operation.</u>

Thus, if the new Air Ministry is to be true, it must be in touch with all those activities of the nation that concern it."[536] The Air Ministry that Churchill advocated needed "<u>an organization which as a mere skeleton shall yet be sufficient to keep its finger on the pulse of all aerial possibilities</u>," and "the organization which is fundamentally sound for carrying on after the war must be capable of automatic <u>compression</u> during great peace and <u>expansion</u> during the approach of the planet Mars again, and exactly

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[532] "The Air Service" unsigned, undated, CHAR 15/57. It seems likely that the memoranda was a draft by Churchill commenting on provisional plans for the structure of a proposed Air Ministry and Air Force. It is unclear who sent him the documents or who he is addressing in his commentary. Regardless, it reflects the evolution in his thinking on the requirements of a future independent aviation establishment, as evidenced by the "Put by hand" scrawled across the top of the draft.

[533] "The Air Service," [original emphasis].

[534] "The Air Service."

[535] "The Air Service," [original emphasis].

[536] "The Air Service," [original emphasis].

conversely as regards the commercial side."[537] In essence, Churchill wanted a new institution that was a completely contained technological system and agent of technological innovation, designed to interlock in a larger reformed technocratic British military. After all, "the whole nation is now a fighting service, and the future of the air is going to make it more so because the air alone will prevent everyone's skin being safe behind a trench or a ship."[538] Churchill was thus manipulating the political consensus for air reform to mold it to his vision, but he had to find ways of sustaining that political momentum over the long haul in order to realize both an independent British air service and the bombing campaign he proposed.

The biggest roadblock to Churchill's goals was getting the Admiralty and the Army to "come into the pool."[539] The cessation of German raids by the end of August 1917 began to erode the political urgency that Lloyd George attached to air reform and the Army quickly closed ranks against it.[540] By promising that shipbuilding would remain the highest priority, Churchill garnered the Admiralty's support for a unified air service. The appointment of Major General Hugh Trenchard, the current head of the Royal Flying Corps and a close ally and confidant of Sir Douglas Haig, as Chief of Air Staff helped to soften objections from the Army because they assumed he would continue to advocate aircraft in ground-support roles.[541]

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[537] "The Air Service," [original emphasis].
[538] "The Air Service," [original emphasis].
[539] "Draft Minutes, First Meeting, Aerial Operations Committee," 26 September 1917, CHAR 27/5.
[540] Cooper, *The Birth of Independent Air Power*, 115.
[541] Biddle, *Rhetoric and Reality in Air Warfare*, 27–34.

The result was the official creation of the new Air Ministry at the end of November.[542] The institutional transition was chaotic as the first Secretary of State for Air, Harold Harmsworth, Lord Rothemere, tried to bring together two organizations with disparate institutional traditions and operational experiences while creating a strategic bombing program.[543] Churchill seems not to have been deeply involved in the decisions surrounding the administrative personnel of the new Air Ministry. Likely, his attention was more focused on labor disputes and efforts at getting other components of his technocratic program accepted. This dysfunctionality came to a head in the spring of 1918 when pressure from German attacks on the Western Front revealed the tensions within the Air Ministry over where Britain's air service's priority lay. Rothemere was adamant that bombing German cities was the first priority, while his Chief of Air Staff, Trenchard, wanted to concentrate on supporting the operations of the British Expeditionary Force on the Western Front.

This situation was exacerbated by enormous shortfalls in the pace of expansion of aircraft production that Churchill and Weir promised as a requisite for the formation of the Air Ministry.[544] The crisis resulted in Trenchard's resignation and the subsequent departure of Rothemere as his inability to manage the new department undermined his political credibility.[545] Rothemere's tenure and downfall was emblematic of the centrality of politics in the evolution of British aviation policy, and this would be even more evident in his successor Weir's actions.

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[542] Morrow, *Great War in the Air*, 247–48.
[543] Biddle, *Rhetoric and Reality in Air Warfare*, 36; Cooper, *The Birth of Independent Air Power*, 109–25; Andrew Boyle, *Trenchard* (London: Collins, 1962), 248–66.
[544] Morrow, *Great War in the Air*, 251–57.
[545] Biddle, *Rhetoric and Reality in Air Warfare*, 36; Boyle, *Trenchard*, 266–68.

Lloyd George needed a Secretary of State for Air who was politically acceptable to the wide variety of often conflicting constituencies in Parliament and the British military, but also who could command his and Churchill's confidence. Weir neatly fit that bill with his record of flexible and energetic institutional leadership, and he was installed at the end of April 1918.[546] Additionally, Weir's demand that his appointment would only last for the duration of the war meant that he did not upset the dynamics of party politics within the Cabinet.[547] With Weir's promotion, Churchill effectively extended control over the direction of the Air Ministry, and he believed that "now that the Air Ministry is definitely formed with you [Weir] at the head of it and in control of the Air Force, we shall expect to receive a fuller measure of guidance and initiative than heretofore."[548] To facilitate this initiative, Weir confirmed Sir Frederick Sykes as the new Chief of Air Staff and empowered a new Strategic Council to articulate and refine Britain's bombing program.[549]

Both Sykes's appointment and the creation of the new Strategic Council were actually holdovers from Rothemere's tenure, and represented the victory of independent air power advocates over their traditional service rivals.[550] Sykes was a highly contentious character who made a host of enemies during his service in World War I, most notably Trenchard, but his ideas did line up much more closely with Churchill's and

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[546] Reader, *Architect of Air Power*, 70.

[547] Cooper, *The Birth of Independent Air Power*, 129; Searle, *A New England?*, 703–5.

[548] Winston Churchill to William Weir, 7 May 1918, in Reader, *Architect of Air Power*, 70.

[549] Biddle, *Rhetoric and Reality in Air Warfare*, 36.

[550] Lord Rothemere to David Lloyd George, 9 April 1918, WWP DC 96/17/57.

Weir's.[551] In order to bolster the political security of the Air Ministry, Weir and

Churchill needed to find a way of bringing Trenchard and the rest of the traditionalists

back into the fold.

Hugh Trenchard represented an interesting contrast because, while he was fiercely

loyal to Sir Douglas Haig – and consequently both an advocate of the traditional services

retaining control over aviation and skeptical about strategic bombing's utility – he had

risen through the ranks because of both his ability to navigate the complex politics of the

British Army and his aviation expertise.[552] Since his resignation as Chief of Air Staff, he

had been in a self-imposed exile, and his continued isolation meant that he – and his ideas

– continued to exist as a potential alternative to the emphasis on strategic bombing that

Churchill, Weir, and Sykes espoused.[553] If Weir and Churchill could bring Trenchard

back into the Air Ministry in some meaningful way, it would go far to undercut both

Haig's political allies and bolster acceptance of their policies by the military

establishment. They would be aided by the fact that Trenchard's career trajectory was

inextricably linked to aviation and he needed to remain a meaningful figure in aviation

policy making if he wanted to continue his advancement.

Weir's negotiations with Trenchard reveal a great deal about the nature of politics

within the British government in 1918 and the realities of supply with the entrance of the

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[551] For more on Sykes, see, Cooper, *The Birth of Independent Air Power*, 130–31; Robert Blake, "Sykes, Sir Frederick Hugh (1877–1954)," *ODNB*, 2004; Frederick Hugh Sykes, *From Many Angles: An Autobiography* (London: Harrap, 1942); E. A. Ash, *Sir Frederick H. Sykes and the Air Revolution, 1912-1918* (London: Routledge, 1999).
[552] For more on Trenchard's early career, see: Boyle, *Trenchard*; Vincent Orange, ed., "Trenchard, Hugh Montague, First Viscount Trenchard (1873–1956)," *ODNB*, 2004; Hubert Raymond Allen, *The Legacy of Lord Trenchard* (London: Cassell, 1972).
[553] Boyle, *Trenchard*, 278–88.

United States into the war. In a letter from April 1918 Weir offered Trenchard, "(a) The

Bombing Command in the South of France. (b) A position which will immediately arise

from the necessity of immediately investigating, coordinating and settling out relations

and policy with America, particularly with reference to a long range bombing enterprise

from an English base, (c) The problem of who is to tackle the Mediterranean and Middle

East problems."[554] All three of the roles Weir proposed would put Trenchard in key areas

of the larger British aviation program, and reflected Weir's appraisal of his skills in

diplomacy and politics, but none would provide him with a role in the central operations

of the Air Ministry. This would prevent problematic internal conflicts between

Trenchard and Sykes, and circumvent political confrontations within the Cabinet.

Regardless of which position Trenchard accepted, he would have to become a willing

accomplice in the entrenchment of an institution he thought was superfluous.[555]

At the same time, though, the three positions reveal the importance of the United

States to the larger plans of Churchill and Weir for realizing their air force. Without the

influx of American resources, the surplus of aircraft on which the entire strategic

bombing campaign was predicated would be impossible. Ultimately, Trenchard chose

the command of the "long range bombing Forces in France, the strength and final

development of which will represent a big command, particularly if associated with

America."[556] Securing Trenchard's command of the Independent Force was a political

coup for Churchill and Weir, because by placing one of Haig's most loyal and trusted

subordinates in command of the unit, they alleviated much of the fear Haig may have

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[554] William Weir to Hugh Trenchard, 30 April 1918, WWP DC96/20/4.
[555] Biddle, *Rhetoric and Reality in Air Warfare*, 33–37.
[556] William Weir to Hugh Trenchard, 6 May 1918, WWP DC96/20/4.

harbored that the force would significantly challenge his own command for resources. This decision had dramatic consequences, not only for the course of British air policy during the war, but also the larger evolution of strategic bombing thought and practice.

One of the key caveats Trenchard demanded as a requisite to accepting command of the Independent Force was to correspond directly with Weir, in order to insulate himself and his policies from Sykes.[557] Their correspondence revealed the development of their ideas in the face of a rapidly evolving political and military situation. Three major issues dominated this evolution: a lack of cooperation from the French, who doubted the utility of strategic bombing; setbacks in the acceleration of aircraft production and pilot training; and the battlefield success of the Allies as the German spring offensive ground to a halt and they began to fall back.[558]

French cooperation was vital for the operation of Trenchard's command because his aircraft were based in France, and because his command technically fell within the jurisdiction of Marshal Ferdinand Foch, who was Supreme Commander of Allied forces on the Western Front.[559] To help ensure tacit French support, Weir and Churchill created the Inter-Allied Aviation Committee, designed to foster cooperation.[560] Their hope was that the committee would be a stepping stone to an Inter-Allied Bombing Force that

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[557] Reader, *Architect of Air Power*, 74–75; Biddle, *Rhetoric and Reality in Air Warfare*, 37.

[558] "Memorandum on the Subjects for Discussion Proposed by the French Representative for the Third Session of the Inter-Allied Aviation Committee," 9 July 1918, WWP DC96/20/4.

[559] Cooper, *The Birth of Independent Air Power*, 137; Searle, *A New England?*, 725; George Kent Williams, *Biplanes and Bombsights: British Bombers in World War I* (Maxwell Air Force Base: Air University Press, 1999), 156.

[560] William Weir, "Memorandum: Inter-Allied Aviation Committee," with note by Winston Churchill, 14 May 1918, CAB 24/51/52.

pooled British, American, and French aircraft under Trenchard's command, which

ultimately happened only days before the Armistice.[561]

When Trenchard's Independent Bombing Force went into action in June of 1918, the

issues of supply and allocation were far more difficult to solve than cooperation.

Consequently, these factors had a much larger influence on the conceptualization and

presentation of strategic bombing policy. Partially this was because of the steep learning

curve for Trenchard and Weir about the practical challenges of operating a long distance

bombing campaign, from issues of standardizing aircraft and streamlining maintenance,

and from the amount of fuel necessary for raids deep into German territory.[562] This was

exacerbated by more fundamental technological challenges in finding and hitting targets,

which was often impossible because of limitations in navigation technology and highly

unpredictable weather.[563] Most of all, the high loss rates during long-range missions flew

in the face of many of the assumptions that had underpinned Churchill's conception of

the utility of strategic bombing. For example, on one flight of nine aircraft on the night of

31 July 1918, only two returned. [564] While this mission was exceptionally costly, it is

indicative of the transformation of the bombing program Weir and Churchill envisioned

from the speedy and efficient instrument they had promised into a political liability. This

was especially the case as British and French ground forces began to enjoy success on the

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[561] Cooper, *The Birth of Independent Air Power*, 138.
[562] "Note of a Conference Held on Wednesday, 31st July, 1918, Dealing with the Revisions of Programme," undated, WP DC 96/20/4; Hugh Trenchard to William Weir, 1 August 1918, WWP DC 96/20/4.
[563] Williams, *Biplanes and Bombsights*, 190–200.
[564] Hugh Trenchard to William Weir, 6 August 1918, WWP DC96/20/4.

battlefield and their commanders sought means of compounding and extending their advance.

Exacerbating the indecisive nature of Trenchard's raids was the difficulty of procuring aircraft in the numbers that Churchill had forecast. At the heart of these shortfalls was the Liberty Engine, an American effort to create a standardized, mass-produced aircraft engine capable of producing upwards of 300 horsepower. This engine was to be produced by a wide variety of American firms and was intended to be incorporated seamlessly into existing Allied bombing and observation plane designs, most famously the De Havilland DH-9 and the Handley-Page and Caproni bombers.[565] This arrangement would provide both a much more powerful engine for these aircraft than was currently in production and alleviate a bottleneck in aircraft manufacture, namely that the Ministry of Munitions was far more effective at producing airframes than engines.[566] While the Liberty Engine had been designed as early as July 1917, production delays prevented its speedy manufacture. Britain contracted for 986 engines, but these delays pushed the delivery date back to 1 January 1919.[567] Without access to these more advanced engines, Churchill's production forecasts became meaningless, and Trenchard's force relied on older, more unreliable and underpowered engines that frequently broke down and severely limited his squadrons' effectiveness.[568]

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[565] Tooze, *The Deluge*, 200–203.
[566] Phillip S. Dickey, III, *The Liberty Engine, 1918-1942* (Washington, D.C.: Smithsonian Institution Press, 1968), 6.
[567] Robert Neal, *Liberty Engine: A Technical & Operational History* (North Branch, MN: Specialty Press, 2009), 212.
[568] Biddle, *Rhetoric and Reality in Air Warfare*, 41; Williams, *Biplanes and Bombsights*, 190–91.

In this context it was increasingly difficult to justify diverting what aircraft were being completed and the accompanying highly trained flight crews for missions that did not seem to provide immediate battlefield results.[569] When the Independent Bombing Force was originally conceived, it was presented as a means of retribution for German raids on British civilian populations during the summer of 1917.[570] As spring turned into summer in 1918, the mounting losses of aircraft and crews from blunting the German assault on the Western Front increased demand on aircraft production. In turn, this made the Independent Bombing Force, and the new vision of independent air power it represented, seem like a costly frivolity.[571] The Cabinet demanded regular reports of Trenchard's units' effectiveness, which Trenchard viewed distrustfully as a pretext to cannibalize his command.[572] To help lessen these criticisms, Trenchard and Weir needed to be able to show concrete statistical results from their force, which was struggling to reach its targets let alone bomb them accurately, to both the Cabinet and the British public. For this reason, Trenchard sent regular dispatches home for publication in the major newspapers extoling the effects of his bombing raids. Additionally this political necessity inspired Churchill, Weir, and Trenchard to emphasize the concept of the "moralé" effect of bombing on civil populations – both in Germany and in Britain.[573] As early as May 30, Churchill wrote to the Cabinet that he needed to "put on record his protest against the decision of the War Cabinet to make a formal and public promise not

[569] Morrow, *Great War in the Air*, 310–12.
[570] Biddle, *Rhetoric and Reality in Air Warfare*, 36–39; Williams, *Biplanes and Bombsights*, 140–41.
[571] Morrow, *Great War in the Air*, 311; Williams, *Biplanes and Bombsights*, 199–200.
[572] Williams, *Biplanes and Bombsights*, 133–37.
[573] Biddle, *Rhetoric and Reality in Air Warfare*, 41; Williams, *Biplanes and Bombsights*, 162–63.

to bomb Germany during the course of a Roman Catholic religious festival."[574] He believed that "the discouragement and misconception which a step of this kind causes throughout the country is out of all proportion to its actual importance," and that it was vital for the British population to be assured that the German people were being attacked aggressively and continuously.[575] Churchill realized the public thirst for retribution for German Gotha raids on British civilian centers in 1917, and was ready to use it as political cover to justify his plans for mechanization.

For Trenchard, bombing the German people was more rationally justifiable because he "looked upon the bombing of Germany just as much as one looked upon the blockade of Germany, both of which must not be stopped by any one battle," and that "the war would not be won on the ground alone, but would be won in conjunction with the bombing of Germany and the blockade."[576] In contrast, Weir needed to show both the Cabinet and the new Air Staff that Trenchard's bombing force could exact significant damage on German cities, and impart a consequent moralé effect. The Air Staff, under Sykes's leadership, chafed at the insulated arrangement that Trenchard had negotiated with Weir and constantly sought to exert more direct control over his operations.[577] This included targeting and equipment concerns like the use of incendiary bombs, which seemed likely to enhance the moralé effect on civilian centers.

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[574] Winston Churchill, "Cabinet Memorandum," in Martin Gilbert, ed., *Winston S. Churchill: Companion Volume IV, Part 1, January 1917-June 1919* (Boston: Houghton Mifflin, 1978), 319; This was likely the Feast of the Ascension, although it is unclear. Aditonally, it is unclear if the religious affiliation of the festival, i.e. Catholic, played any part in Churchill's perception of its importance in domestic political reception.
[575] Churchill, "Cabinet Memorandum," 319.
[576] Hugh Trenchard to William Weir, 22 August 1918, WWP DC 96/20/4.
[577] Biddle, *Rhetoric and Reality in Air Warfare*, 43.

In order to satisfy these demands and keep the Air Staff at bay, Weir wrote to

Trenchard of "the value of small incendiary bombs," which, he noted, "you have not yet

been able to get enough experience to convince you as to the value."[578] Weir had "had a

talk with the bomb people here and it seems quite clear that these bombs would be no use

if dropped in a district like the West End of London or in a new industrial town with good

permanent modern buildings."[579] Conversely, Weir believed that if incendiaries were

"dropped in the East End of London or in one of the older German towns such as

Heidelburg or the older parts of Mannheim, Cologne, Frankfort, or in a town like

Constantinople, very good results would be anticipated."[580] It is clear that Weir also

recognized the larger political realities of Britain in 1918 when he told Trenchard that he

"would very much like if you could start up a really big fire in one of the German

towns."[581] Moreover, he was "rather hopeful that you may obtain something rather

decisive as a result of your work, particularly if the boys can continue the low bombing,"

and that he could "conceive of nothing so terrifying to a civilian population as bombing

from a low altitude, and I was frequently very apprehensive that the Bosche would do this

in London, and the results would be very serious."[582] Further, Weir believed that

Trenchard should "not be too exacting as regards accuracy in bombing railway stations in

the middle of towns. The German is susceptible to bloodiness, and I would not mind a

few accidents due to inaccuracy."[583] Essentially, Weir wanted Trenchard to provide

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[578] William Weir to Hugh Trenchard, 10 September 1918, WWP DC 96/20/4.
[579] Weir to Trenchard.
[580] Weir to Trenchard.
[581] Weir to Trenchard.
[582] Weir to Trenchard.
[583] Weir to Trenchard.

terror bombing attacks that he could show to the Cabinet as having an unquestionable

effect on German popular perception, while also constructing his attacks to satisfy the

desire of strategic bombing advocates within the Air Ministry to demonstrate statistical

results from the bombing campaign.

It is difficult to say whether Churchill's and Weir's emphasis on the moralé effect

of terror bombing was the result of their own belief in its efficacy as a means of

shortening the war, or merely their attempt to fashion their policies around the paradigm

of their political superiors. Churchill seemed to have reservations about it, and expressed

them in his treatise, "Munitions Possibilities of 1918," so his reversal mirrored his desire

to preserve one of his pet projects in the face of intense resistance. Weir reflected this

resistance and the changing political winds – both in the Cabinet and the Air Staff – when

he wrote to Trenchard in mid-September that "matters are none too easy just now here,"

because, "for quite a long time you have been reporting attacks on railways."[584] This was

in response to the consternation within the Air Staff over Trenchard's failure to bomb

industrial targets. Tami Davis Biddle suggests that the Air Staff could not comprehend

why Trenchard insisted on bombing railway centers instead of factories and used it as

pretext to attempt to demand greater control over his targeting.[585] George Williams goes

even further, writing that Trenchard provided misleading lists of targets to Weir in an

effort to disguise the reality that he was choosing targets for their direct tactical

significance to Haig's ground offensive.[586] Weir "had always been under the impression

that you simply reported railways as an objective from a camouflage point of view and

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[584] William Weir to Hugh Trenchard, 17 September 1918, WWP DC 96/20/4.
[585] Biddle, *Rhetoric and Reality in Air Warfare*, 44.
[586] Williams, *Biplanes and Bombsights*, 177–78.

not as a genuine objective," and while he presumed that he was "really right in this assumption," he thought that "the form of the report should be changed to industrial targets," marking a change in the political climate of the Cabinet.[587]

Weir wrote candidly of the political turmoil within both the Air Ministry and the Cabinet when he stated that "the reports of the long range bombing of railways are beginning to do us harm, as everyone wants to hear that munitions works and other industrial targets have been objectives."[588] He did caution Trenchard, though, that he was "not speaking about railways which you bomb fairly close to the lines for the purpose of affecting the enemy's material supply, but rather the railways at long range in Germany."[589] This represented the growing demands that the Independent Force's resources be diverted towards support for Haig's advancing ground forces.[590] Weir reflected this when he warned Trenchard that "as you can well realize, the recent successes are having a great effect on the war thought here, which affects us to the extent that some people think we are putting too much strength into the Air preparations, and this is having a bad effect on our man power situation."[591]

Weir needed Trenchard to continue targeting these railroad centers because it helped justify the retention of his forces by demonstrating their contribution to the battle being waged on the front lines. Instead, he wanted Trenchard to supplement these attacks with more news like "the report of the bombing of the Daimler Works," which gave

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[587] William Weir to Hugh Trenchard, 17 September 1918, WWP DC 96/20/4.
[588] Weir to Trenchard.
[589] Weir to Trenchard.
[590] Williams, *Biplanes and Bombsights*, 179–80.
[591] William Weir to Hugh Trenchard, 17 September 1918, WWP DC 96/20/4.

"great satisfaction" and helped mollify Sykes and the Air Staff.[592] Weir assured

Trenchard that "the reason why I am anxious about" his targeting and reportage "is that

there are signs of a little reaction just now as regards the operations of your Force."[593] He

believed that "it is our old friend 'Impatience' again," and that "we must do all we can to

meet it, and I hope you will have good weather in the next four weeks, as I am certain

that good continuous work will tell very much in our favor."[594] Weir also hoped that "if

you could manage to do one really big concentration on Stuttgart, Mannheim, Frankfort

or Cologne, it would have a great effect."[595]

Trenchard's explanation completely validated Weir's concerns and perfectly

encapsulated both the technological limitations his bombing force faced and the ways he

had attempted to mold his strategy to Churchill and Weir's political needs. He informed

Weir that "with regard to reporting railways as being bombed, the railway is chosen

because the situation is usually in the center of the town and consequently, bombs which

miss their objective will hit the town."[596] In this way, regardless of the notorious

inaccuracy of the Independent Force's bombs, he could report the mission as a success

and provide statistical data, no matter how fanciful it might be, to support this

conclusion.[597] He said as much when he wrote that "the reason stations are chosen" was

because "industrial targets are on the edge of the town [or] very often well outside if,"

which meant that "when I bomb these objectives, all the misses which are 99% fall into

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[592] Weir to Trenchard.
[593] Weir to Trenchard.
[594] Weir to Trenchard.
[595] Hugh Trenchard to William Weir, 20 September 1918, WWP DC 96/20/4.
[596] Trenchard to Weir.
[597] Biddle, *Rhetoric and Reality in Air Warfare*, 42.

fields, etc. and I am not able to report that the objective was well hit."[598] Still, he was

amenable to helping to alleviate the political challenges to the bombing campaign and

wrote that "if the War Cabinet will agree I will report that I bombed the town."[599]

Further, he revealed the politicization of aviation that he felt was at the heart of the

Independent Force's creation when he reminded Weir, "if you remember the object of the

I.F. and the bombing originally was to bomb German towns, and that munition works

were added after."[600]

Churchill's solution to this disagreement over the allocation of resources was to

shift manpower and productive capacity away from the Admiralty and toward the Army

and Air Force, because he believed that a British-led victory at the cost of short term

losses to submarine warfare would be preferable to a peace negotiation defined by the

United States.[601] This was predicated on the assumption that the war would end with a

climactic battle in the summer of 1919, which Churchill still clung to and that many of

his Cabinet and military colleagues believed was inevitable.[602] The result of the

fluctuating political environment was a shift in Trenchard's targeting, but two forces

converged to nullify the change: the weather and the end of the war. By the middle of

October, weather effectively grounded Trenchard's forces, which might have severely

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[598] Hugh Trenchard to William Weir, 20 September 1918, WWP DC 96/20/4.
[599] Trenchard to Weir.
[600] Trenchard to Weir.
[601] Winston Churchill, "Man-power 1918 and 1919," 25 September 1918,TNA CAB
24/65/27; Tooze, *The Deluge*, 224.
[602] Winston Churchill, "Munitions Policy: 1919 or 1920," 5 September 1918,TNA CAB
24/63/26; Williams, *Biplanes and Bombsights*, 161; Searle, *A New England?*, 737–38.

damaged the political position of the air power proponents had the war not ended so quickly.[603]

Even before the Armistice was signed, Weir and Trenchard began the process of retroactively justifying the investment in strategic bombing.[604] As the allied forces advanced, they began to capture towns and cities that had previously been targeted by Trenchard's forces, and Weir began to search for evidence of the effects of those attacks. After touring Bruges and Cambrai, he wrote to Trenchard that "the net result of my visit has been to convince me that in no direction of war effort are we able to obtain such a good dividend as by long range bombing."[605] Weir believed it was "not the destructive effect, but the effect of what we cause the Germans to do. We cause them to expend their man power in defensive measures," and when he applied "this to the numerous towns of the Rhine, then I know we have done right and that you are contributing very largely to preventing the Bosche from exerting his effort on the Front."[606]

This inaugurated a decades-long effort to rationalize and justify the effect that a relatively brief and small-scale strategic bombing campaign had on the outcome of World War I, an effort that would be continued under Churchill and evolve to meet the changing political needs of both the Air Ministry and the British state.[607] Buried in this process of political maneuver and statistical extrapolation was the reality that at every stage of the process, from conceptualization, to operation, to interpretation and presentation, the

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[603] Hugh Trenchard, "Report on the operations of the Independent Force during October 1918," 1 November 1918, WWP DC 96/20/4.
[604] Biddle, *Rhetoric and Reality in Air Warfare*, 57–62.
[605] William Weir to Hugh Trenchard, 5 November 1918, WWP DC 96/20/4.
[606] Weir to Trenchard.
[607] Biddle, *Rhetoric and Reality in Air Warfare*, 69–127; Williams, *Biplanes and Bombsights*, 239–63.

Independent Force was defined by political aspiration more than empirical evidence or strategic initiative.

Churchill, Weir, and Trenchard sought to structure and present their operations to appeal to a political establishment that had constrictive conceptions of the way to achieve victory. Churchill wanted to build the institutional foundation that the Air Ministry represented as part of his effort to create a technocratic military system. If the Independent Force was dissolved or diminished to the point of irrelevancy, his ambitions for an Air Ministry might follow and aviation might devolve to the conservative control of Britain's traditional military leaders. For Churchill, the strategic bombing campaign was a test case for his larger ambitions of military reform. If it did not go well, it would be difficult to convince Lloyd George and his other Cabinet colleagues of the legitimacy of his larger vision. Weir likewise sought to please the changing expectations for strategic bombing within Britain's political leadership. While the Independent Force was originally conceived as a means of exacting retributive bombing attacks on the German population to placate popular discontent in Britain over the Gotha raids, the changing military situation on the Western Front shifted the political imperative to demonstrating concrete material results. This presented a problem because the inaccuracy of British bombing meant that it was virtually impossible to inflict quantifiable damage on specific targets. In response, Weir focused attention on the moralé effect of bombing, but, rather than emphasizing solely the abstract psychological effects on civilian perception, he also pointed to the diversion of military resources and work stoppages designed to protect civilians and their moralé as quantifiable results of the Independent Force's efforts.

Finally, Trenchard also demonstrated a willingness to tailor not only his operations, but also his reporting, to the political needs of these two leaders.

Trenchard's motivation in this accommodation is perhaps the most puzzling component of the evolution of the Independent Force. Seemingly overnight, he transformed himself from one of the most ardent skeptics of the utility of strategic bombing into one of its most potent agents and lasting proponents. Trenchard's metamorphosis likely resulted from a combination of self-serving careerism, and a legitimate sense of duty to his country, coupled with a belief that if he controlled the Independent Force he could direct its resources in ways that would best support the war on the Western Front. He had only limited prospects for advancement within the Army and must have sensed the winds of change in the form of Churchill and Weir. By accepting command of the Independent Force, and pursuing its interests vigorously, he placed himself in a position of technical authority and political security within a rapidly evolving institution. This confluence of factors seems to explain Trenchard's abandonment of his long held antipathy toward removing resources from Haig's command and providing direct support to his ground forces. Regardless of his rationalization for his change of direction, the result was a commander who was willing to bend to the needs of his political masters on all sides.

In contrast to Trenchard, Churchill's role in this key moment in the evolution of strategic bombing was much more distant. He designed Britain's air power policy as part of a much larger system of mechanized military technologies, and consequently was much less involved in the day-to-day operation and refinement of aviation strategy. Rather, he would build on his prewar patterns of emplacing and empowering expert

managers who shared both his technocratic vision and political acumen. Weir and

Trenchard were exemplars of this pattern, and because of the complex array of challenges

facing Churchill's grand technocratic scheme they were both forced to operate more

independently and constantly tailor their actions to these shifting demands. In the long

term, this pattern of reliance on key trusted subordinates defined Churchill's policies and

leadership, as would his emphasis on retaining an independent Air Ministry. Churchill

would continue to mold British aviation policy around the goal of retaining an

independent Air Ministry and fashion its structure and mission around the political

necessities of the day to make it indispensable. This tactic emerged directly from his

experience during the last months of the war and had lasting effects on his thinking about

the place of aviation in the British military during the next two decades.

Chapter 5:

"The expenditure of time and brains": Churchill's Ministry of Defense,

Technocratic Institution Building, and the Political Crisis of 1919

On 10 May 1940, as German armored columns tore through the Low Countries, Winston

Churchill assumed office as Prime Minister of Great Britain. [608] On the same day, he

named himself Minister of Defense and empowered the office with coordinating and

guiding Great Britain's military strategy.[609] This gave him virtually unlimited authority

over all British war-making activities both at home and overseas, from armament

procurement, to food rationing, to operational planning. It was no accident that in his

moment of power, in the face of a seemingly overwhelming military threat, he realized an

institutional framework he had first proposed when he feared just such a challenge to

Britain's security two decades before. Twenty-one years earlier, in the atmosphere of

governmental anxiety and austerity of 1919, Churchill imagined forces that would

eventually lead to another mighty conflagration and sought institutional and technological

solutions he thought would ensure British dominance. His efforts to create a Ministry of

Defense were simultaneously a response to the complex political and financial conditions

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[608] Martin Gilbert, *Churchill: A Life* (New York, NY: Henry Holt and Company, 1991), 641; Brian Lavery, *Churchill Warrior: How a Military Life Guided Winston's Finest Hours* (Oxford: Casemate, 2017), 409.
[609] Martin Gilbert, *Winston S. Churchill, Volume VI: Finest Hour, 1939-1941* (Boston: Houghton Mifflin Company, 1983), 322–26.

Britain faced in 1919 and an instance of Churchill's enduring fascination with realizing the technocratic military system he gradually articulated throughout his career.

Churchill's advocacy of a Ministry of Defense in 1919 was also an effort to solidify the political rehabilitation he had undergone during the last stages of World War I and to further enhance his power in his quest to restore his status to its prewar heights. It was another example of his utilization of military theory and institutional reform in service of – and reaction to – political imperatives at the highest level of British government. David Lloyd George provided him with a springboard to pursue this transformation when he named him both Secretary of State for War and Air, thus providing him with enormous latitude and personal power. In this role, his grand technocratic vision presented in "Munitions Possibilities of 1918" was a blueprint for the operational and technological transformation he saw as possible through a Ministry of Defense. This effort defined his leadership of the War Office and Air Ministry during 1919, as he sought to craft a policy reform proposal that provided solutions to the most pernicious fiscal and strategic challenges that he perceived in the British government's path, thus making himself politically indispensable.

Churchill's ideas reflected the interplay between his technocratic ambitions, the forces and factors that influenced and necessitated his conceptualization of effective military institutional reform, and the political realities that ultimately defined the acceptance of his ideas. They also mirrored his technocratic ambitions across the whole course of his career up to 1919, and responded to the conditions he saw around him – both political and military – articulated as a grand vision for technocratic, tactical, and institutional reform. Finally, like the rest of his efforts, when he encountered political

resistance to his ideas, he regrouped and achieved an incomplete transformation that

retained his core concepts, and that had a lasting effect, but that failed to realize the grand

technocratic structure he originally envisioned. What remained in the wake of this failure

were vestigial components of the scheme, including the Royal Air Force or the Royal

Tank Corps that functioned not as part of a coherent technocratic system but instead as

competing technological and intellectual constituencies. These institutions nonetheless

preserved the emphasis on research and development that underpinned Churchill's

technocratic ambitions and propelled Britain into a leadership role in military technology

development.[610] In addition, Churchill's failure to realize the Ministry of Defense had a

direct determinative effect on Britain's imperial military policies. Churchill tasked the

Royal Air Force with controlling Britain's new colonial territories in the Middle East and

envisioned its function through the lens of the administrative and operational framework

he first proposed for the Ministry of Defense.

The end of World War I initiated a period of turmoil and transition within Britain and her

empire from top to bottom, belied by the seeming political stability at the highest levels.

By the end of 1918, David Lloyd George's coalition government was outwardly

legitimized by the infamous "Coupon Election," which provided candidates aligned with

his coalition government political support – or coupons – and further entrenched his

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[610] For more on the nature and endurance of this technological leadership, see: David Edgerton, *Warfare State: Britain, 1920-1970* (Cambridge: Cambridge University Press, 2006), 15–58; Robert H. Larson, *The British Army and the Theory of Armored Warfare, 1918-1940* (Newark: University of Delaware Press, 1984), 108–70; J. P. Harris, *Men, Ideas, and Tanks: British Military Thought and Armoured Forces, 1903-1939* (Manchester: Manchester University Press, 1995), 195–236.

political power. Victory on the Western Front, however, also opened the door to a new

wave of internal economic and ideological conflicts within the British cabinet and

populace that ultimately led to the downfall of Lloyd George's government by the end of

1922.[611] This instability was the result of new voting rights enacted in 1918 that shifted

the bounds and demands of the British electorate, but was also endemic to the complex

policy demands of a coalition government that continued to exist more from political

convenience and anxiety than from any clear shared political identity.[612] For example,

conflict and concern over Britain's financial future exacerbated Conservative leaders'

desire for a return to the Gold Standard and collided with the nation's crippling wartime

debt.[613] This directly threatened funds that Lloyd George's Liberal and Labour allies

sought to return to a prewar emphasis on social programs. This dichotomy generally

represented the deep ideological divides within Lloyd George's government in general.

    Churchill's appointment to the dual role of Secretary of State for War and

Secretary of State for Air was unprecedented in contemporary British politics, but

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[611] For more on this, see: Kathleen Burk, ed., *War and the State: The Transformation of British Government, 1914-1919* (London: George Allen & Unwin, 1982), 157–81; Philip Harling, *The Modern British State: An Historical Introduction* (Cambridge: Polity, 2001), 141–53; Susan Kingsley Kent, *Aftershocks: Politics and Trauma in Britain, 1918-1931* (Basingstoke: Palgrave Macmillan, 2009), 35–63; Kenneth O. Morgan, *Consensus and Disunity: The Lloyd George Coalition Government 1918-1922* (Oxford : New York: Oxford University Press, 1979), 26–45; John Turner, *British Politics and the Great War: Coalition and Conflict* (New Haven: Yale University Press, 1992); Chris Wrigley, *Lloyd George and the Challenge of Labour: The Post-War Coalition, 1918-1922* (London: St. Martin's Press, 1990), 80–173.
[612] Susan Kingsley Kent, *A New History of Britain since 1688: Four Nations and an Empire* (Oxford: Oxford University Press, 2016), 371–72; Wrigley, *Lloyd George and the Challenge of Labour*, 1–12; Morgan, *Consensus and Disunity*, 80–108.
[613] Martin Pugh, *State and Society: British Political and Social History 1870-1992* (London: Hodder Arnold, 1994), 165; Morgan, *Consensus and Disunity*, 80–108; Peter Clarke, *Hope and Glory: Britain 1900-2000* (New York: Penguin Books, 2004), 90–110.

likewise was emblematic of the chaotic nature of Lloyd George's postwar administration. While Lloyd George ended 1918 as both the preeminent Liberal politician in Britain, and was hailed as "the man who won the war," his power rested on his ability to rally conservative Tory support, rather than on a strong foundation of Liberal Party backing.[614] This meant that he had to balance Conservative desires for a reversion to Victorian policies with a resumption of the social reform programs that defined his rise to political prominence.[615] While he sought to create a new centrist party out of the remnants of the Liberal Party who had transferred their allegiance to him – like Churchill – and moderate Tory leaders with whom he had forged bonds during the war, it was not to be. Partially this was because of the rise of Labour and partially because of political miscalculation on Lloyd George's part. In retrospect, it is clear that the voting rights extended to all men and many women in 1918 profoundly changed British politics during the interwar period, but in early 1919, it was far from clear what that effect might be.[616] Yet, within this rapidly changing socio-political environment, Lloyd George saw an opportunity to solidify his premiership.

At a meeting within weeks of the armistice, Lloyd George offered Churchill either the War Office or the Admiralty and told him, "you can take the Air with you in either case; I am not going to keep it as a separate department."[617] Churchill lobbied aggressively for an appointment to the Admiralty because of his nostalgia for his prewar

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[614] Pugh, *State and Society*, 178; Clarke, *Hope and Glory*, 85–90; Wrigley, *Lloyd George and the Challenge of Labour*, 1–12.

[615] Clarke, *Hope and Glory*, 98; Morgan, *Consensus and Disunity*, 80–108.

[616] Kent, *New History of Britain*, 371–74; Clarke, *Hope and Glory*, 111–43; Kent, *Aftershocks*, 35–63.

[617] Winston Churchill, *The World Crisis: Aftermath*, vol. V (New York: Charles Scribner's Sons, 1929), 40.

experiences, and because "there will be good reason for connecting the Air with the Admiralty, for though aeroplanes will never be a substitute for armies, they will be a substitute for many classes of warships."[618] Yet, Lloyd George disregarded Churchill's desires and placed him in the War Office instead – despite grave objections from Conservative members of his government – and made a Tory, Walter Long, First Lord of the Admiralty.[619]

No documentation survives to explain this decision, but numerous factors likely played a role. First, the kind of grand reconfiguration Churchill imagined as part and parcel of a streamlining of air and naval power would cause institutional disquiet within a revered and politically powerful organization like the Royal Navy. This was a political cost that Lloyd George could little afford. Second, the position of First Lord of the Admiralty was a historically prestigious one, and a valuable piece of political patronage that could be used to solidify Tory support for Lloyd George's regime. Third, the War Office held little appeal to many of Lloyd George's political allies because it would require enormous and long-term administrative efforts. Fourth, Lloyd George likely saw his old political ally's potential for dynamic and rapid institutional reform as better applied to the administrative challenges of the War Office, namely the problem of demobilizing Britain's enormous conscript armies.[620]

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[618] Winston S. Churchill to David Lloyd George, 29 December 1918, in, Martin Gilbert, ed., *Winston S. Churchill: Companion Volume IV, Part 1, January 1917-June 1919* (Boston: Houghton Mifflin, 1978), 448.

[619] Gilbert, *Winston S. Churchill: Companion Volume IV, Part 1,* 450.

[620] Richard Toye, *Lloyd George and Churchill: Rivals for Greatness* (London: MacMillan, 2007), 198.

Regardless, from the start of Churchill's tenure at the War Office and Air Ministry, the internal political divisions of Lloyd George's cabinet dictated his role as much as concerns over military strategy and planning. This dichotomy between military technological policy and pragmatic political strategy dominated Churchill's tenure at the War Office and proved to be a defining force in the development of both British military and imperial strategy during the early 1920s. In fact, Churchill's advocacy of the Ministry of Defense can be seen as an effort to circumvent Lloyd George's decision to exclude him from the Admiralty by bringing it under the larger administrative umbrella he proposed. In the process, he hoped to *simultaneously* achieve the rationalized technocratic system he envisioned and the personal political resuscitation he desired.

The immediate problem Churchill faced when he arrived at the War Office and the Air Ministry in January 1919 was demobilizing Britain's 3.5 million man conscript army as fast as possible, which had become politically imperative by early 1919.[621] Troops in depots across France were on the verge of mutiny because of delays in their transport home and a lack of transparency over when they would be discharged.[622] This added to the growing political discontent at home over the speed and nature of the peace settlement.[623] Complicating the process was the issue of logistics. This could be as simple as providing an accurate accounting of the sheer number of Britain's forces, as

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[621] Churchill himself quoted this figure, see: Winston Churchill to Sir Eric Geddes, 22 January 1919, Churchill Papers 16/3, Churchill Archives Center (hereafter cited as CHAR).

[622] Clarke, *Hope and Glory*, 103; Wrigley, *Lloyd George and the Challenge of Labour*, 24–52; Keith Jeffery, *The British Army and the Crisis of Empire 1918-22* (Manchester: Manchester University Press, 1984), 11–30.

[623] Winston Churchill to David Lloyd George, 19 January 1919, CHAR 16/3; Jeffery, *The British Army and the Crisis of Empire*, 12–15.

exemplified by Sir Eric Geddes, who overestimated Britain's forces by 2.5 million soldiers.[624] The demobilization scheme that troops objected to so vehemently was based on returning workers to key industries and then gradually releasing men into the work force in an effort to limit labor oversupply and economic collapse. This did not take into account troops' length of service, and had the effect of retaining soldiers with longer service while releasing the most recently drafted, a policy that was perceived as patently unfair.

Beyond these immediate concerns, Britain had vast postwar military commitments around the world that demanded the maintenance of large military forces both in Europe and throughout the empire.[625] Churchill perceived thirteen challenges facing Britain's military that all either demanded the maintenance of large standing armies or had slowed the dissolution of Britain's conscripted forces. These included the violent uprisings and protests in Egypt, Palestine, Syria, India, Afghanistan, and Ireland, as well as maintaining armies of occupation to enforce diplomatic agreements with former belligerents like Germany and Turkey.[626] Rapidly dissipating Britain's wartime armies, without replacing them with a sustainable peacetime volunteer force, would make it impossible to fulfill these commitments. Adding further urgency to the process of demobilization was the financial cost of maintaining Britain's armies, which added to her

[624] Winston Churchill to Sir Eric Geddes, 22 January 1919, CHAR 16/3.
[625] Pugh, *State and Society*, 206.
[626] Churchill provided a list of thirteen different demands on Britain's military, see: Martin Gilbert, *Winston S. Churchill, Volume IV: The Stricken World, 1916-1922* (Boston: Houghton Mifflin, 1975), 195; Winston Churchill to David Lloyd George, 27 January 1919, CHAR 16/3; Jeffery, *The British Army and the Crisis of Empire*, 31–51; Morgan, *Consensus and Disunity*, 109–48; Kent, *Aftershocks*, 64–121.

already considerable debt of "seven thousand million pounds." [627] This financial burden

stood in the way of Lloyd George's goal of reverting to a prewar Liberal agenda of social

welfare legislation or pursuing monetary reform policies to curry favor with his Tory

allies.[628] This imperative for financial savings incentivized Churchill to find creative

ways of lowering military costs because it would mean a boost to his own personal

political prestige. International demands, domestic tension, and financial austerity

defined Churchill's military reform advocacy, which he adjusted repeatedly to adapt to

the evolving political environment of Lloyd George's Cabinet.[629] Lloyd George's desire

for political stability and financial savings at almost any cost afforded Churchill almost

unlimited latitude to remake Britain's military as he saw fit, as long as he could

demonstrate financial efficiency in both the short and long term and did not alienate his

political colleagues.

The process of reforming the demobilization process was a relatively quick fix for

Churchill, who had a working plan in place within three weeks of taking office that

largely mollified the Army's concerns.[630] Concurrently with these negotiations, he began

to express the scope of the transformation he sought within the British military by

melding the different technological capabilities he perceived in the British Army and

Royal Air Force. Churchill saw the dissolution of the wartime military as the perfect

opportunity to select key technologies and tactics developed during wartime and to knit

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[627] Memoranda by Winston Churchill, undated, CHAR 16/16; Toye, *Lloyd George and Churchill*, 197; Gilbert, *Winston S. Churchill, Vol.IV*, 169–72.
[628] Pugh, *State and Society*, 164.
[629] Wrigley, *Lloyd George and the Challenge of Labour*, 174–232.
[630] For more on this and the political considerations surrounding it, see: Gilbert, *Winston S. Churchill, Vol.IV*, 181–92; Jeffery, *The British Army and the Crisis of Empire*, 11–30; Wrigley, *Lloyd George and the Challenge of Labour*, 24–52.

them into a cohesive system designed to exert maximum effect with minimum exposure, both financially and in terms of human cost.

In September 1919, Churchill drafted a comprehensive synopsis of his belief that "our experience during the last war should have taught us how we may maintain the security of our scattered Empire on land, and also attain to a better and more scientific state of preparedness for warfare on a large scale, at a far less cost of man-power and money than formerly."[631] He believed this would be possible by "wherever possible, replacing and supplementing man-power by machinery," which implied "the expenditure of time and brains in experimenting and developing machines both for traction and all kinds of close fighting, of which the tanks are merely the embryos"[632] His emphasis on the cost savings speaks to the centrality of financial expenditure within the decision making of the British government of 1919. For example, he thought that tanks, "if developed, as I think they can be…will replace animals for traction, will replace infantry for all kinds of action, and will perform many of the duties now attempted by cavalry, at a very great reduction of the man-power necessary to produce the same result."[633] Churchill saw this technocratic transformation as essential because "this reduction in men will not only cut down recurrent expenditure such as pay, food, etc., but abroad, will reduce the amount of sickness by the lesser number of men who have to serve in unhealthy climates, and the consequent decrease in the number liable to disease."[634]

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[631] Memoranda by Winston S. Churchill, September 1919, CHAR 16/12.
[632] Memoranda by Churchill.
[633] Memoranda by Churchill.
[634] Memoranda by Churchill.

Aviation's equal position in Churchill's technocratic ideas reflected his belief that while "bombing warfare is as much in its infancy as Tanks are…it is capable of being refined into an art which will enable any required spot to be subjected to a shower of missiles that will either shatter, burn, poison or merely temporarily blind and stupefy those whom it is wished to affect."[635] This spoke to his expectation of technological research and development's capacity to fully *realize* his grandest technocratic ambitions, and that infused his vision for a technologically transformed British military. He saw technology as a means to adapt to and compound "the general tendency in warfare, except where Brain is needed…to eliminate so far as is possible the human element and replace it by something less vulnerable to the weapons now being used and these which will be used."[636] This concept of replacing "man power" with "machine power," thereby eliminating the potentially costly variables that accompanied dispatching traditional military units like infantry and cavalry, represented the heart of Churchill's technocratic ambitions. His conception also embodied the product of four wartime years of trial and experimentation blended with a prewar vision of technocratic futurism designed to reinvigorate an imagined national efficiency that, in his perception, was in decline. The consequences of the war, and indeed the experience of the war itself, only made the need for this restoration seem more urgent.

How Churchill sought to achieve this technocratic vision reveals a great deal about the political atmosphere of the day. During 1919, he championed and then abandoned a revolution in military and naval administration designed both to achieve his

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[635] Memoranda by Churchill.
[636] Memoranda by Churchill.

technocratic vision and to bolster his political standing: the Ministry of Defense. On the surface, Churchill's failed advocacy of a Ministry of Defense appears as a historical cul-de-sac amid enormous events of much larger historical import, like the Paris Peace Conference or the massive strikes that spread across Britain.[637] Yet, the story of Churchill's proposed Ministry of Defense reveals both the complex political situation of 1919 and Churchill's continuing effort to realize his vision of Britain's military of the future.

The Ministry of Defense that Churchill spent much of 1919 promoting would have unified the Air Ministry, the War Office, the Admiralty, and a new Ministry of Supply within a single new Cabinet-level organization.[638] This fusion served several of Churchill's different goals, both short and long term. By bringing greater control and coordination over Britain's armed forces he could, theoretically, reduce their cost while increasing their effectiveness.[639] Such an arrangement promised to facilitate the systematic technocratic rationalization he envisioned both during the war and in his negotiations with Lloyd George over his postwar appointment. For Churchill, a Ministry of Defense was both a vehicle for and a product of a new rationalized military, staffed by a new class of officers trained to conceptualize warfare across traditional military service

[637] Wrigley, *Lloyd George and the Challenge of Labour*, 80–233; Clarke, *Hope and Glory*, 98–110; Keith Jeffery and Peter Hennessy, *States of Emergency: British Governments and Strikebreaking Since 1919* (London: Law Book Co of Australasia, 1983), 10–39.
[638] Sir Henry Wilson Diary, 11 July 1919 in: *Winston S. Churchill: Companion Volume IV, Part 2, July 1919 - March 1921,* ed. Martin Gilbert (Boston: Houghton Mifflin, 1978), 739.
[639] 112 Parl. Deb., H.C. (5th ser.) (1919) 219-238.

lines and seamlessly engage with technology.[640] It would also provide a means of consolidating Churchill's political position by making him both the source of enormous cost savings and returning him to the center of Cabinet decision making.

The issue of Churchill's position within the Cabinet was especially important during early 1919, because until October Lloyd George retained the small "War Cabinet" that he had formed during 1917. This body was composed of elite representatives of the various constituent parties involved in his coalition government, and did not include a position for either the Secretary of State for War or Air. This small body possessed extraordinary executive powers and afforded Lloyd George a wide range of autonomous action, something he was slow to relinquish.[641] As he envisioned it, Churchill's elevation to Secretary of State for Defense would have justified his inclusion in this body and helped to strengthen his political position by granting him greater access both to the Prime Minister and a larger voice in policy decisions. Additionally, Churchill and Lloyd George both saw the reorganization as an opportunity for destabilizing growing Tory power. Redistributing political patronage within the Cabinet became increasingly appealing as parliamentary power dynamics evolved with the growing labor crisis.[642]

The unfolding situation on the Continent in 1919, both at the Paris Peace Conference and in Russia also loomed over Churchill's advocacy of the Ministry of

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[640] 112 Parl. Deb., H.C. (5th ser.) (1919) 219-238; Winston S. Churchill to Austen Chamberlain, 22 January 1919, CHAR 16/3.

[641] Winston S. Churchill to David Lloyd George, 8 July 1919, in: Gilbert, *Winston S. Churchill Comp. Vol.IV, Pt. 2*, 735; Geoffrey R. Searle, *A New England?: Peace and War, 1886-1918* (Oxford: Oxford University Press, 2004), 818–19.

[642] Sir Henry Wilson Diary, 11 July 1919, in Gilbert, *Winston S. Churchill Comp. Vol.IV, Pt. 2*, 739; Major-General Sir C. E. Callwell, *Field-Marshall Sir Henry Wilson Bart., G.C.B., D.S.O.; His Life and Diaries*, vol. 2 (Cassell & Co., 1927), 203.

Defense. He was consumed by the Russian Civil War throughout 1919 and much of 1920, and he carried on what amounted to a private war in support of White Russian forces, sending them troops and equipment. Understandably, the study of his actions on this issue has dominated the historiography of Churchill for this period. Historians have noted the political cost his efforts to fight the Bolsheviks had on his relationship with Lloyd George and the emerging Labour Party as well as how out of step they were with war-weary public sentiment. [643] Largely unexamined was how his desire to make available resources and convince Lloyd George to dispatch those resources to the Russian conflict shaped his political tactics on military reform or the imperative of his broader military technocratic policy.

As early as January 1919, Churchill wrote Austen Chamberlain, the Chancellor of the Exchequer, "I entirely agree with you in thinking that a further [financial] reduction will be possible in the near future, in consequence of the removal of the Russian menace, and the development of mechanical weapons of war."[644] Churchill saw the Russian revolution as the catalyst for a coming war that Britain must be prepared for, because "as long as Russia is in chaos there will be no peace in Europe and no economic revival. Without Russia the League of Nations is a farce and no Peace Treaty can be anything but provisional."[645] He believed that "Russia will certainly rise again, perhaps very swiftly, as a great united empire determined to maintain the integrity of her dominions and

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[643] Toye, *Lloyd George and Churchill*, 200–207; Gilbert, *Winston S. Churchill, Vol.IV*, 219–442; Ashley Jackson, *Churchill* (New York: Quercus, 2014), 163–66; Roy Jenkins, *Churchill: A Biography* (New York: Farrar, Straus, and Giroux, 2001), 350–52.
[644] Winston Churchill to Austen Chamberlain, 30 January 1919, CHAR 16/3.
[645] Winston Churchill to Unknown Recipient [likely David Lloyd George], 21 February 1919, CHAR 16/4.

recover everything that has been taken away from her."[646] Further, he argued that "while

this process is going on Europe will be in a perpetual state of ferment," with "the belt of

little States we are now calling into being … quaking with terror and no doubt

misconducting themselves in every possible way."[647] The elevation to the War Cabinet

that would potentially accompany his promotion to Minister of Defense might allow him

to advocate more effectively for intervention in Russia. Additionally, the instability he

perceived as spreading outwards from Russia like a contagion only added to Britain's

potential military commitments, increasing costs and demanding greater financial

efficiency – something he believed could only be accomplished by a Ministry of Defense.

In the long term, Churchill feared that "Germany and Russia will have miseries

and ambitions in common and their mighty national interests will be struggling for

expression and restoration," and that "when we have abandoned Russia, she will be

restored by Germany and Japan, and these three Powers together will constitute a menace

for Britain, France and the United States very similar to that which existed before the

present war."[648] This refrain dominated his writings throughout 1919, and even in

October he cautioned that "it is a mistake to suppose that we have a choice between 'a

strong Russia' and 'a weak Russia,'" because "a strong Russia will certainly arise," and

"the only doubt is when and how."[649] In Churchill's mind, freeing up British military

resources through rapid demobilization, and consequently alleviating British strain on the

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[646] Winston Churchill to Unknown Recipient, 21 February 1919, CHAR 16/4.
[647] Churchill to Unknown Recipient.
[648] Churchill to Unknown Recipient.
[649] Cabinet Memoranda by Winston S. Churchill, 14 October 1919, CHAR 16/18:.

Exchequer, it would make it possible to dedicate a portion of those resources to fighting what he saw as a battle for the future of Europe and the British Empire.

For Churchill, the potential of this new military threat was linked directly to Britain's policy decisions at the Paris Peace Conference. He advocated more lenient war reparations for Germany, writing that "all the soldiers are agreed that the most important military action required from the allies is to feed Germany, not only with food but with raw materials, and to raise the blockade."[650] He feared that "Germany is on the verge of a complete collapse, and there is no doubt that it would from many points of view pay her to escape the consequences of the war by taking refuge in Bolshevism."[651] This "view of the future" presented "a purely military Russia in one form or another coming to the aid of a Bolshevist Germany and Austria and Hungary, and thus confronting us after a few years with a situation very formidable to France and Great Britain, and to the United States as well unless she keeps out of it."[652] Churchill's alarmism went even deeper because he believed "that Japan will certainly be drawn to act with Germany and Russia in this eventuality," because "already we receive reports of her engaging German officers, both naval and military," and "I am assured that she had relations with Germany in October last year."[653]

Churchill believed that this global power realignment would result in "two Leagues of Nations instead of one, and the beaten ones re-arming while the victorious ones are disarming."[654] His short-term solution was to "'Feed Germany; Fight

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[650] Winston Churchill to David Lloyd George, 9 April 1919, CHAR 16/6.
[651] Churchill to Lloyd George.
[652] Churchill to Lloyd George.
[653] Churchill to Lloyd George.
[654] Churchill to Lloyd George.

Bolshevism; make Germany fight Bolshevism,'" but he feared that "it may well be that it is too late for this."[655] This doom-laden tone helps to explain both why he so strongly advocated military intervention in Russia and why he was so fixated on preparing Britain for a global confrontation in the relatively distant future, even as she recovered from one. To Churchill, failure to destroy Bolshevism would result in a challenge to Britain's security that traditional military systems and strategies were incapable of fighting. He believed that if he could not eliminate the threat in the short term, then he must prepare to deal with it in the long term. This was the ideological underpinning of his advocacy of a Ministry of Defense. There also was the potential for personal political gain and the realization of decades-long technological enthusiasm in his sponsorship of the reform, but it was primarily a means to create the kind of military system he felt was vital to surviving a future military confrontation that he saw as inevitable.

The institutional realignment that Churchill's new military system demanded was not readily accepted by the services he led, or by their supporters. Advocates of British aviation development overwhelmingly greeted Churchill's dual appointment as Secretary of State for War and Air with consternation and viewed it as a stepping-stone to the dissolution of the Air Ministry and division of the Royal Air Force between the British Army and the Royal Navy.[656] Churchill's memories of Lloyd George's wishes certainly seem to substantiate that concern, but as an assertive advocate of unified British air power himself, Churchill was actually the perfect leader to ensure the survival of an independent Air Ministry and Royal Air Force. Churchill was adamant that "the fact that

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[655] Churchill to Lloyd George.
[656] Gilbert, *Winston S. Churchill, Vol.IV*, 197.

I hold the seals of two offices in no way implies the absorption of the Air Force in the Army," and he envisioned providing greater structure for the Royal Air Force as a means of ensuring its stability and efficiency.[657] These assurances did not temper the immediate effort by the Admiralty to cleave naval aviation from the RAF, and Churchill's desire to block that campaign and preserve an independent Royal Air Force also formed a key impetus for his advocacy of a Ministry of Defense.[658] Churchill's enthusiasm for aviation and advocacy of independent air power, as well as the preservation of an independent Air Ministry and Royal Air Force, fit neatly within his mental model for the best means of developing British aviation technology.

To meet the challenge was shepherding the institution through a key period of government-wide retrenchment and interagency competition, Churchill used a multi-pronged approach during 1919. He focused on three main avenues in his leadership at the Air Ministry: appointing leaders who could effectively market air power while also maintaining working relationships with other military institutions, developing sustainable institutional systems to aid in long-term planning and operational efficiency, and realigning an interservice framework that integrated air power into existing military paradigms without dissolving the institution of the Air Ministry. This eventuality inspired the Ministry of Defense because it would have preserved an independent Royal Air Force, while forcing the acceptance of Churchill's aviation rationalization on the

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[657] Winston Churchill to Walter Long, 8 February 1919, CHAR 16/4.
[658] Winston Churchill to John Seely, 2 February 1919, CHAR 16/4; Air Marshall Sir Hugh Trenchard to Winston Churchill, 25 April 1919, CHAR 16/6; Walter Long to David Lloyd George, 1 February 1919, in Gilbert, *Winston S. Churchill Comp. Vol. IV, Pt. 1*, 507.

British Army and Royal Navy, but it would not be the only means that Churchill tried to achieve this goal.

When Churchill arrived at the Air Ministry, the Chief of Air Staff was Sir Frederick Sykes, an aggressive aviation enthusiast who propounded grand plans for British military air power in the postwar world. Unfortunately, these plans were expensive and called for the maintenance of an enormous air force more in line with wartime requirements than the much smaller and more economical one Churchill believed was vital to justifying the Royal Air Force's survival.[659] Instead, Churchill turned to Hugh Trenchard, who served as the head of the Independent Bombing Force during 1918, to oversee the formation of the postwar air service. Trenchard had several key advantages over Sykes, most notably his reputation for working well with other services, exemplified by his loyalty to Sir Douglas Haig, and his much more limited vision of a postwar air force.[660]

Historians have traditionally given Trenchard nearly complete credit for the survival and structure of the postwar Royal Air Force. However, it was Churchill who was the driving force both politically and intellectually in that survival, while Trenchard was merely an instrument in that process.[661] Trenchard represented a compliant underling

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[659] Winston Churchill to Frederick Sykes, 9 February 1919, CHAR 16/4; Frederick Sykes to Winston Churchill, 10 February 1919, CHAR 16/4; Memoranda by Winston S. Churchill, 13 February 1919, CHAR 16/15; Andrew Boyle, *Trenchard* (London: Collins, 1962), 329.

[660] Memoranda by Sir Hugh Trenchard, dated 5 February 1919, CHAR 16/4; 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), 27.

[661] Boyle, *Trenchard*, 6–7; Malcolm Cooper, *The Birth of Independent Air Power: British Air Policy in the First World War* (London: Allen and Unwin, 1986), 155–56; Biddle, *Rhetoric and Reality in Air Warfare*, 97–98; John Howard Morrow, *The Great War in the*

who was enthusiastically motivated to pursue Churchill's policies because he had little prospect of career advancement in the regular army, and thus his career trajectory was tied to the continued existence of an independent air force.[662] Trenchard shared Churchill's enthusiasm for technocratic military theory and his willingness to harness and shape that theory for political ends. This was especially important because Churchill sought to recreate the "High Level Bridge" meetings that he pioneered before the war between the Admiralty and the War Office, as a regular trilateral meeting among the Admiralty, War Office, and Air Ministry.[663] These would make it possible to coordinate military planning and potentially avoid future interagency rivalry that was already beginning to appear. Trenchard served as the Air Ministry's representative to this body, and so his reputation for diplomacy and deference recommended him for the position of Chief of Air Staff. Ultimately, the failure of these meetings to reduce naval challenges to the independence of the Royal Air Force probably contributed to Churchill's advocacy of a Ministry of Defense, and the more drastic institutional reforms that he and Trenchard applied to preserve the RAF.

Trenchard's appointment as Chief of Air Staff was delayed until April 1919 because he contracted the Spanish Flu and spent months convalescing. Consequently, it was not until the summer of 1919 that Churchill and Trenchard set about institutionalizing Churchill's vision for a streamlined and sustainable Air Ministry and

Air: Military Aviation from 1909 to 1921 (Washington: Smithsonian Institution Press, 1993), 40.

[662] Air Marshall Sir Hugh Trenchard to Winston Churchill, 25 April 1919, CHAR 16/6.

[663] Winston Churchill to Walter Long, 18 April 1919, CHAR 16/6; Winston Churchill to John Seely, 26 April 1919, CHAR 16/6; Minutes of Interdepartmental Conferences, 5 May 1919, The National Archives of the United Kingdom AIR 8/17 (hereafter cited as TNA).

Royal Air Force. Churchill's image for postwar British air power centered on combining his lessons and observations from the war with his longer-term conceptions of aviation's potential for development, and then translating those ideas into institutional systems. For example, he believed that heavier-than-air craft represented the future of aviation technology and that "the proper defense of this country consists in possessing the finest fighting aeroplanes capable of superior climbing and maneuvering and armed with the special bullets which have been devised."[664] Churchill felt that it was these aircraft, "and not the guns or the balloon aprons or other paraphernalia on which we wasted our strength, that brought the zeppelin and aeroplane attacks from Germany to a conclusion."[665] Furthermore, he believed that it was through "carrying this form of offensive superiority in the air to the highest possible pitch of excellence and development that the future security of this country depends."[666] In this, Churchill pointed directly to recent experience to support a long-held belief in the supremacy of heavier-than-air technology and direct funding for development towards it. He expected that "for the next 10 years the success of the R.A.F. must depend upon three factors - (1) unit efficiency, (2) theoretical and practical mastery of aerial warfare, and (3) mechanical leadership through experiment."[667] The last point formed the crux of Churchill's aviation policy during 1919, and he insisted that "everything that we can save from useless production and the deadweight of accumulation of aeroplanes, wasting away in storehouses, will make it easier for us to secure the largest possible funds for experiment

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[664] Memoranda by Winston Churchill, 22 February 1919, CHAR 16/15.
[665] Memoranda by Churchill.
[666] Memoranda by Churchill.
[667] Memoranda by Winston S. Churchill, 1 July 1919, CHAR 16/17.

and scientific development of aviation in all its forms." [668] He was particularly interested "in the design of new engines and new machines for the conveyance of passengers and materials."[669]

This emphasis on research and development, rather than the procurement or maintenance of large numbers of existing aircraft designs, represents the genesis of the "warfare state" that David Edgerton has documented in such rigorous detail.[670] At the heart of these plans were political exigencies necessary to preserve an independent RAF, most importantly aggressive cost reduction and demonstrating future benefits of a technical service at the outset of a path of development with seemingly limitless potential. The inclination of air force leaders was to preserve as many stockpiles of war production aircraft as possible, no matter the cost of storage and maintenance, and Churchill cautioned that "the Royal Air Force must not be sacrificed for the sake of looking after war material in excess of its requirements."[671]

Churchill felt that the British state was in a transitional period, and that if the RAF were to survive intact, its long-term existence would be secured. He believed that "in making our plans at this juncture we ought to work on at least a 5 years basis and we ought not to do the same thing every year," because "we are not passing through normal times in which the years repeat themselves one after the other. We are passing through a swiftly changing phase in which the conditions in one year are totally different to the next."[672] Churchill's goal was "to aim at quality and progress rather than quantity and

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[668] Memoranda by Winston Churchill, 25 February 1919, CHAR 16/15.
[669] Memoranda by Churchill.
[670] Edgerton, *Warfare State*, 15–58.
[671] Memoranda by Winston Churchill, undated, CHAR 16/16.
[672] Memoranda by Winston Churchill, 26 July 1919, CHAR 16/17.

immediate war power during the next 10 years."[673] After all, "who is going to attack us this year, or next year, or the year after that? It is probable that for the next 10 years we need not take into consideration a great European War similar to that in which we have been engaged, and that other tasks of an entirely different scope will be assigned to our defensive forces."[674]

This was the genesis of the infamous "Ten Year Rule" that inspired so much ire in the historiography of World War II. Rather than a foolhardy or naïve gesture toward pacification, it was a calculated risk designed to achieve institutional survival and a technocratic military transformation.[675] Edgerton's "warfare state" was designed as the recipient for funds and resources diverted from mass arms production in order to develop the prototypes for a new generation of weapons designed to provide a technological advantage in a future conflict. For Churchill, the Ministry of Defense would facilitate this technocratic transformation on a grand scale, and make Britain not only militarily secure, but assure future superiority. Unfortunately, without the directing influence of the Ministry of Defense the "Ten Year Rule" was a policy divorced from the institutional system it was designed to serve.

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[673] Memoranda by Winston Churchill, 1 July 1919, CHAR 16/17.

[674] Memoranda by Winston Churchill, 26 July 1919, CHAR 16/17.

[675] For more on this, see: John Robert Ferris, *The Evolution of British Strategic Policy, 1919-1926* (London: Palgrave Macmillan, 1989), 15–30; Keith Neilson, "The Defence Requirements Sub-Committee, British Strategic Foreign Policy, Neville Chamberlain and the Path to Appeasement," *The English Historical Review* 118, no. 477 (2003): 651–84; B. J. C. McKercher, "Deterrence and the European Balance of Power: The Field Force and British Grand Strategy, 1934-1938," *The English Historical Review* 123, no. 500 (2008): 98–131.

The concept of a Ministry of Defense originated with one of Churchill's old political

allies: John Seely. Appointed by Churchill as Undersecretary of State for Air, Seely

likely saw the creation of a Ministry of Defense as a mechanism for his own promotion to

head the Air Ministry.[676] Before the war, Seely had served as Secretary of State for War,

and had collaborated with Churchill in the development of aviation technology, but was

forced to resign over a political scandal. In his new role at the Air Ministry, he chafed

under Churchill's authority and on multiple occasions sought to circumvent Churchill and

have himself named Secretary of State for Air.[677] A new Ministry of Defense would

allow Seely's promotion without an accompanying political setback for Churchill, and

preserve a leader who shared Churchill's technocratic vision. Seely ultimately resigned

in November 1919 in protest over Churchill's retention of dual appointments, but his

departure really stemmed from frustration over the slowness of his promotion to

Secretary of State for Air.[678]

These multiple levels of political opportunism and obfuscation help to explain

both why a drastic administrative reform seemed appealing and why it ultimately proved

impossible. Even though Lloyd George alluded to the potential merits of a Ministry of

Defense as late as November 1919 the proposal was essentially dead by mid-October.[679]

Lloyd George's decision to reinstate the full cabinet in October 1919 likely eliminated

much of the urgency Churchill placed on creating the new ministry, and explains why he

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[676] John Seely, "Memoranda for the Lord Chancellor," undated, CHAR 16/5.
[677] Winston Churchill to John Seely, 7 February 1919, CHAR 16/4; Frederick Guest to
Winston Churchill, 2 July 1919, CHAR 16/9; Winston Churchill to John Seely, 24
August 1919, CHAR 16/10.
[678] See: Gilbert, *Winston S. Churchill, Vol.IV*, 213–14; Jenkins, *Churchill*, 348–49.
[679] Gilbert, *Winston S. Churchill, Vol.IV*, 213.

subsequently let the issue drop. The rise and fall of the Ministry of Defense was also a symptom of the divisive environment within the Lloyd George government during 1919, as a combination of ambition and paranoia drove the reactions of policy makers at every level.

The failure to realize a Ministry of Defense reflected the different forces at play discussed so far, from the tenuous balance of political power within the Cabinet to Churchill's expenditure of his political capital on the Russian conflict. The result was that rather than the creation of a new holistic and rationalized system that encompassed every aspect of Britain's military forces, the traditional institutional divisions persevered. This was a major impediment to the kind of sweeping technocratic reform Churchill envisioned, and he had to contend not only with the consequences that his advocacy of a Ministry of Defense had on institutional planning, but also the conservative and reactionary attitudes of Britain's generals and admirals as they resumed prewar attitudes toward institutional change and rivalry. Churchill's continued desire to achieve his other objectives, both personal and institutional, complicated this effort and help explain the circuitous path that British military policy followed during the early 1920s.

The cornerstone to Churchill's proposed Ministry of Defense, and the springboard for much of the financial savings that he forecast should the ministry come into being, was a new Ministry of Supply. He envisioned it as a natural outgrowth of his wartime experience at the Ministry of Munitions, and the mechanism for producing the new technology he sought to embed on a large scale throughout Britain's military while keeping development and production costs down. With the downfall of the Ministry of Defense, the Ministry of Supply became a liability rather than an asset because it opened

the door for shearing off whole sections of the Air Ministry and War Office and amalgamating them in a new department outside of his purview, all in the name of financial savings. This would diminish Churchill's personal power and prestige in the short term and open an avenue for the demise of an independent Air Ministry in the long term. It also would make it possible for the Army to reject the technocratic transformation he envisioned by divorcing technological development and procurement from the institutional core of the War Office.

Churchill's campaign to dissuade Lloyd George from creating a Ministry of Supply, that was his own idea reveals a great deal about how he conceived the preservation of his vision for the postwar Air Ministry and War Office institutionally, and how he planned to achieve it politically. Churchill wrote that "a decision is urgently required about the Ministry of Supply," and admitted that "since the war stopped I have changed my mind upon the subject," revealing the mixture of subservience and flattery that dominated his relationship with Lloyd George during the period.[680] His argument against creating a Ministry of Supply rested on the supposition that "the amount of purchases required to be made on behalf of the War Office and Air Ministry during the next four or five years will be much too small to warrant for this purpose the continuance of a separate Ministry with all its expensive apparatus," and Churchill's new stance of opposition toward the ministry was designed to appeal to Lloyd George's appetite for financial savings.[681]

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[680] Winston Churchill to David Lloyd George and Andrew Bonar Law, 25 October 1919, CHAR 16/12; Toye, *Lloyd George and Churchill*, 195.
[681] Churchill to Lloyd George and Bonar Law, 25 October 1919, CHAR 16/12.

This emphasis on pushing off the expansion of the Air Ministry's procurement program for "five or six years" also fit neatly with the way Churchill shaped research and development policy within the Air Ministry, all based on the assumption that Britain was years away from another major war. He also emphasized that "the War Office possess masses of munitions and military stores of all kinds, and the greatest efforts must be made to live as far as possible on these," but "in so far as new purchases have to be made…these will not involve production on a great scale, but, on the other hand, require to be very carefully supervised by the Department which is responsible for them, as they are necessarily largely of an experimental character."[682] This was the crux of his new plan for institutional transformation: rely on wartime production and invest in a new generation of equipment that would be developed out of the internal research and development establishment within the military services. He said as much when he argued that "the Quartermaster-General's Department and that of the Master General of the Ordnance can discharge all such functions easier, I believe cheaper, and certainly with a more real sense of responsibility, than if they are entrusted to an outside and separate body."[683] This alternate proposal thus allowed Churchill to retain this centerpiece of his technocratic vision under his direct control, which both aided him politically by preserving his departments intact and giving him a driving role in shaping the technologies themselves.

Churchill believed that abandoning the concept of a Ministry of Supply would especially aid the development of the Air Ministry, which needed "the substance and

[682] Churchill to Lloyd George and Bonar Law.
[683] Churchill to Lloyd George and Bonar Law.

'body' afforded to it by the technical department to support its independent existence. It will be on a very small scale and cannot afford to cut off from itself this extremely important branch of its restricted activities."[684] He rationalized this within his paradigm of long-term war preparations by insisting that "in time of peace technical development is the life-blood of the Air Force."[685] His justification drew again on his wartime experience, recalling that "during the war it was quite impossible to divide these activities, and I virtually handed over the whole administration of the technical departments of the Air Force to the Air Ministry under Weir."[686] This fit neatly with his concept of a scalable air service which he first articulated during the war when he contended that the Air Ministry "must have an organization which as a mere skeleton shall yet be sufficient to keep its finger on the pulse of all aerial possibilities," and that "the organization which is fundamentally sound for carrying on after the war must be capable of automatic compression during great peace and expansion during the approach of the planet Mars again, and exactly conversely as regards the commercial side."[687] Churchill believed that "in time of war mass production of particular types of aeroplanes, on a gigantic scale and with great speed, is requisite," but in peacetime "mass production is not required on any large scale, but rather a steady experimental development of types enabling at any time a large production to be initiated, if necessary, of the latest and best types."[688] He worried that "if such a Ministry were created, it would lead to considerable duplication, both in the Air Ministry and the War Office of departments in touch with the

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[684] Churchill to Lloyd George and Bonar Law.
[685] Churchill to Lloyd George and Bonar Law.
[686] Churchill to Lloyd George and Bonar Law.
[687] Memoranda by Winston Churchill, undated [original emphasis], CHAR 15/57.
[688] Churchill to Lloyd George and Bonar Law, 25 October 1919, CHAR 16/12.

corresponding departments of the Ministry of Supply," and that "this duplication would involve very heavy additional unnecessary expense."[689] These were all carefully calculated statements designed for maximum effect on a Prime Minister desperate for financial austerity.

In one final attempt at achieving his goal of institutional amalgamation, Churchill wrote that "the only way in which a separate Supply department could justify its existence would be as a part of a unified Ministry of Defense," which "would afford many possibilities of economy, as gradually the ordering departments of the three services would come together and many services now run separately for the three fighting departments could be treated from a single standpoint."[690]

This final plea for the acceptance of a Ministry of Defense had no effect on Lloyd George, who was interested only in cost savings when it came to military affairs and by late 1919 had little political capital to spare on a potentially contentious institutional reorganization. In fact, he may not have even read Churchill's letters, as his ideas about the future of Britain's military technology and institutional alignment may have been swept up in a sea of ramblings about fighting Bolshevism and reorganizing the Cabinet.[691] Regardless, Churchill's writings provide a clear window into the way he adjusted his approach in the face of political setback, and what aspects of his technocratic reform he considered most important. Ultimately, Churchill's tactics in the wake of the failure of the Ministry of Defense represented a reversion to a conception of a technocratic institution he formulated before and during the war, and demonstrated how

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[689] Churchill to Lloyd George and Bonar Law.
[690] Churchill to Lloyd George and Bonar Law.
[691] Jenkins, *Churchill*, 352.

he would go about trying to inculcate his technocratic ideals within the narrower confines of the traditional institutional structure.

Beyond the failure of the Ministry of Defense, Churchill's ideas faced an even larger problem in the twofold challenge of financial constraints imposed from above and intellectual resistance to his ideas from within the British Army itself. Churchill believed that instituting his ideas required achieving both a material and conceptual metamorphosis that demanded a fine balance between financial and intellectual investment in the short term and a promised a fiscal and operational boon in the long-term. The challenge of achieving this shift was perfectly encapsulated in an exchange with the then Chancellor of the Exchequer, Austen Chamberlain, in the fall of 1919 when he wrote "it seems to me that you are most unwise to resist the substitution of machinery for man-power. The only result of so doing is to force the military authorities to solve all their problems in terms of more numbers."[692] Churchill argued that "the discussions which we have had on the Finance Committee will surely show you how very difficult it is to reduce numbers in any particular theater below a certain point when actual danger to the troops can be pleaded and in the absence of any effective or novel substitute."[693] As someone well versed in the bureaucratic tendencies and justifications of elite military officers, Churchill was in a unique position to both predict the resistance his ideas would encounter and to utilize that knowledge to overwhelm his political peers.

Churchill used his military expertise to bombard those who opposed him with statistics. He also wrote to Chamberlain that reliance on traditional military systems was

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[692] Winston Churchill to Austen Chamberlain, 30 October 1919, CHAR 16/12.
[693] Churchill to Chamberlain.

exacerbated "now that the cost of the individual soldier cannot be much less than £250 a year," and that "enormous expense is bound to result from trying to defend our increased possessions on old-fashioned lines."[694] The enormous cost of more traditional military systems was compounded by "the preponderance of military opinion [who are] quite content to carry on along those lines, dealing in factors which they understand and have been familiar with all their lives and have rested themselves on in the Great War, namely, infantry, cavalry and artillery in as large numbers as possible in each particular theater."[695] Churchill believed he could not "hope to carry military opinion with me in the very drastic changes I have in contemplation (which afford the sole hope of an economical solution) unless I am able to show these new weapons not as a mere experimental pattern but as definite features in the military organization."[696] He felt there was "no comparison between the best tank used in the war and this new model," and that "unless these new tanks can be made and the military authorities impressed with their practical utility, it is hopeless to look for a speedy transition to a mechanical army."[697] The institutional conservatism of the British Army which so concerned Churchill represented the endurance of the attitudes and patterns of the Great War. These attitudes were not wholly antitechnological, but rather technologically skeptical and tended to interpret technologies as a mechanism for overcoming an immediate obstacle on the way to pursuing more traditional military methods.[698]

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[694] Churchill to Chamberlain.
[695] Churchill to Chamberlain.
[696] Churchill to Chamberlain.
[697] Churchill to Chamberlain.
[698] For more on this, see: Timothy Travers, *How the War Was Won: Command and Technology in the British Army on the Western Front: 1917-1918* (London: Routledge,

Even without a Ministry of Defense, Churchill's vision for Britain's army of the future far exceeded what Austen Chamberlain could conceive. Chamberlain proposed achieving the technocratic transformation Churchill envisioned, and the accompanying financial savings, simply "by distributing the existing Mark V Tanks, with all their faults and limitations," which he described as "a great new program."[699] Churchill's justification for an expanded capital investment is revealing of his conception for achieving the financial savings he promised in real terms. The plan Chamberlain proposed would cost £500,000, while "the cost of maintaining a single cavalry regiment is more than £150,000 a year," and "the 40 tanks that we should get for the half a million would require to man them the equivalent personnel of a cavalry regiment, say, £150,000 a year, with the addition of £25,000 a year in capital outlay makes a total of £175,000 a year."[700] Still, Churchill believed that "the new force when created would be the equivalent of at least six cavalry regiments, equal to £900,000 a year," and "this simple sum is typical of the kind of evolution by which alone the increased cost of the individual soldier can be surmounted without loss of security."[701] Churchill's expectation of technocratic force multiplication speaks to the power he attributed to technology on the battlefield, and also to the seismic shift in military planning and tactics he proposed.

To achieve the financial savings he envisioned, Churchill proposed "to do away with at least half the cavalry and substitute for them a much smaller number of these very

1992), 32–49; Robert Citino, *Quest for Decisive Victory: From Stalemate to Blitzkrieg in Europe, 1899-1940* (Lawrence: University Press of Kansas, 2002), 181–214.

[699] Winston Churchill to Austen Chamberlain, 30 October 1919, CHAR 16/12.

[700] Churchill to Chamberlain.

[701] Churchill to Chamberlain.

fast tank units (which alone possess the swiftness of cavalry)."[702] He knew that he would

"never get military opinion to accept this, except under violent duress, unless and until it

is possible to show the definite tactical results which can be achieved by the use of this

new arm maneuvering with the others."[703] Unfortunately, "before these proofs can be

offered, it is necessary not only to have the weapon but to train men to use it, and for this

purpose every month counts."[704] To imbue his demands with a sense of urgency,

Churchill cautioned that nine months had "already been consumed in fruitless discussion

and correspondence," and warned that he feared "that there is nothing now for it but to

re-open the whole matter before the Cabinet."[705] Finally, he also reminded Chamberlain

that "the Prime Minister expressed the strongest opinion in favor of the mechanical

evolution, and this opinion was endorsed by the War Cabinet meeting, as may be seen on

reference to the minutes."[706] By invoking the Prime Minister, Churchill reminded

Chamberlain of his relationship with Lloyd George and implicitly threatened a political

confrontation that might not end well for the Chancellor of the Exchequer.

In these letters, Churchill played a variety of different political forces and

intellectual currents off each other, using them to thread a delicate route to secure the

position he wanted: unquestioned control over every aspect of the two military services

he oversaw and projecting an atmosphere of extreme financial austerity and urgency that

he could use to force his technocratic ideas on Britain's generals. In both avenues, he

was somewhat successful. The Ministry of Supply was decisively dropped and he

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[702] Churchill to Chamberlain.
[703] Churchill to Chamberlain.
[704] Churchill to Chamberlain.
[705] Churchill to Chamberlain.
[706] Churchill to Chamberlain.

received the funding he demanded for mechanization research and development, as well as procuring a new generation of tanks. These machines and the new generation of soldiers and officers trained in using them would form the nucleus of Britain's new Royal Tank Corps in 1923.[707]

During this time of transformation, and as a result of Churchill's emphasis on mechanization, two young military theorists emerged who would dominate not only this process, but the larger global dialogue over the role of technology in warfare: J.F.C. Fuller and Basil Liddell Hart.[708] Their rise was representative of the slow institutional transformation Churchill achieved within the British Army during the early 1920s, and this process continued after he departed from the War Office.[709] Yet, the transformation was hardly a complete one, and while statistically Britain had the most heavily mechanized army in the world at the outbreak of World War II, technology was far from seamlessly integrated into either the structure, doctrine, or the strategy of her military.[710] How this happened is difficult to ascertain. It may have been because without a driving force from above like Churchill, elite military leaders gave tacit attention to mechanization as a totem of institutional status but struggled to *intellectually* incorporate the technology's potential into their operational paradigm.

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[707] Harris, *Men, Ideas, and Tanks*, 195–236.

[708] Azar Gat, *Fascist and Liberal Visions of War: Fuller, Liddell Hart, Douhet, and Other Modernists* (Oxford: Oxford University Press, 1998), 13–42; Citino, *Quest for Decisive Victory*, 181–214; Mary Habeck, *Storm of Steel: The Development of Armor Doctrine in Germany and the Soviet Union, 1919–1939* (Ithaca: Cornell University Press, 2003), 36–70; Brian Holden Reid, *J.F.C. Fuller: Military Thinker* (New York: St. Martin's Press, 1987), 56–106.

[709] David French, "Doctrine and Organization in the British Army, 1919-1932," *The Historical Journal* 44, no. 2 (2001): 497–515.

[710] David Edgerton, *Britain's War Machine: Weapons, Resources, and Experts in the Second World War* (Oxford: Oxford University Press, 2011), 61–63.

In contrast, the Air Ministry of the early 1920s experienced an explosion of

technological development and social relevance, as the emphasis Churchill placed on

research and development made British aviation technology a world leader and made

celebrities of record-setting British pilots.[711] The failure of the Ministry of Defense did

not impede the development of British aviation, and by the end of the 1920s Britain

possessed the most advanced air force in the world.[712] Instead, the failure of the Ministry

of Defense left the Air Ministry vulnerable to an outside threat in the form of the

Admiralty's continued challenge to its independence. Without Churchill's political

protection, the RAF's control over seaborne air power was repeatedly threatened

throughout the 1920s as the Royal Navy struggled to retain its political prestige and

financial security in the face of an emergent technology and fierce interservice rivalry.[713]

In a move that reflected both his technocratic ambitions for Britain's military

future and the political maneuvering that defined his postwar policy, Churchill attempted

to stave off these attacks and secure the Royal Air Force's institutional survival by giving

it a clear mission. Henceforth, the RAF would patrol and control Britain's colonial

empire from the air. He envisioned this as a means of accomplishing tasks traditionally

performed by the army at a fraction of the cost in money and men, while simultaneously

restoring Britain's power over colonized peoples. The combination of the financial

benefits his plan promised and the potential to knit the empire closer and more securely

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[711] Edgerton, *Warfare State*, 108–44; Bernhard Rieger, *Technology and the Culture of Modernity in Britain and Germany, 1890-1945* (Cambridge: Cambridge University Press, 2005), 119–26.
[712] Edgerton, *Warfare State*, 43.
[713] The Admiralty finally achieved this just before the outbreak of World War II. For more, see: Ray Sturtivant, *British Naval Aviation: The Fleet Air Arm, 1917-1990* (Annapolis: Naval Institute Press, 1990), 27–32.

together, also was designed to provide institutional security for the Royal Air Force now more vulnerable without the Ministry of Defense. In this way, the failure of the Ministry of Defense combined with the political atmosphere of 1919 and 1920 to shape both the institutional development of British aviation and the experience of colonized peoples as they increasingly encountered British agents and experienced colonial violence through aviation technology. The next chapter will examine how this process was conceived and adapted from 1920 to 1922.

Chapter 6:

"The Weight of the British Arm":

Churchill, Technology, and Violence in the British Empire, 1920-1922

In November 1928, Hugh Trenchard wrote to Winston Churchill to commemorate the departure of the last British Army units – Indian and Regular – from Iraq and the transfer of complete responsibility for the mandate's security to the Royal Air Force.[714] He waxed nostalgic about the day eight years earlier, "when you sent me an urgent note up by special messenger to Cambridge asking me what I thought of running Iraq with the Air Force."[715] While Trenchard acknowledged that there had "been risks, and there is still a risk," he also noted that "it was the first venture of the Air Force in carrying out a responsibility, and whatever the results in the future may be, at present it has been a great success, and the Air Force should have this to their credit."[716] Trenchard wanted to "congratulate" Churchill "on the foresight that brought this about."[717]

Since Churchill had first proposed using the RAF to control Iraq, Britain's government had changed twice, and Churchill had switched parties, been out of power, and been named Chancellor of the Exchequer, yet he still remained the savior of an independent Royal Air Force in the eyes of its leader. Trenchard's letter illustrates the

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[714] Air Marshal Sir Hugh Trenchard to Winston S. Churchill, 3 November 1928, Trenchard Papers, 76-1-164, Royal Air Force Museum (hereafter cited as TREN).
[715] Trenchard to Churchill.
[716] Trenchard to Churchill.
[717] Trenchard to Churchill.

connection he perceived between the salvation of the Royal Air Force and Britain's

empire, yet the formation of this relationship was the product of a long and complex

development that mirrored the rest of Churchill's World War I and postwar proposals for

technocratic military reform.

Churchill's advocacy for empowering the Royal Air Force to police Britain's

newest imperial holding was a politically pragmatic ploy to preserve an institution he was

invested heavily in, intellectually and politically. Yet, like the bombing campaigns

against Germany in 1918 or the unrealized mechanized army of 1919, it was also the

remnant of a much larger technocratic vision that had proved to be logistically and

politically unviable. Churchill saw technology in the British Empire as a means of

restoring an imperial power dynamic that rested on irresistible force, and also knitted

together geographically disparate populations while attaining a commanding position in a

resurgent Great Game as Bolshevism seemed to threaten Britain's imperial hold on

Central Asia.[718]

Churchill's vision for technology in the empire thus extended far beyond Iraq.

Yet, the vast majority of scholarship on Churchill, technology in the interwar British

Empire, and British policy in the Middle East has either misunderstood the parameters

and purposes of his proposals, or been too narrowly focused geographically or topically

to reveal the larger ideological, institutional, and technological processes he

propounded.[719] Churchill's ideas about imperial control in the early postwar period

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[718] Kim A. Wagner, "'Calculated to Strike Terror': The Amritsar Massacre and the Spectacle of Colonial Violence," *Past & Present* 233, no. 1 (November 2016): 185–225.
[719] Susan Kingsley Kent, *Aftershocks: Politics and Trauma in Britain, 1918-1931* (Basingstoke: Palgrave Macmillan, 2009), 64–90; David E. Omissi, *Air Power and Colonial Control: The Royal Air Force 1919-1939* (Manchester: Manchester University

evolved with the political and technological forces around him, but represented a

concerted effort to realize the kind of technocratic institutional transformation he had

proposed again and again from 1917 onwards. If the Ministry of Defense represented an

effort at solidifying and entrenching the technocratic systems he had helped form during

the final stages of the war, then Churchill's advocacy of technological imperial control

was an effort to adapt his concepts for a new and potentially very different set of

circumstances.

The postwar British Empire was a complex and changing political, economic, and

military edifice that produced both increasingly overt colonial nationalist movements

across the globe and an increasingly violent interaction between the colonized and the

colonizers. Susan Kingsley Kent suggests that this dynamic was a manifestation of the

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Press, 1990), 18–59; Robert S. G. Fletcher, *British Imperialism and "The Tribal Question": Desert Administration and Nomadic Societies in the Middle East, 1919-1936* (Oxford: Oxford University Press, 2015), 133–82; Warren Dockter, *Churchill and the Islamic World: Orientalism, Empire and Diplomacy in the Middle East* (London: I.B.Tauris, 2015), 85–155; Richard Toye, *Churchill's Empire: The World That Made Him and the World He Made* (New York: Henry Holt, 2010), 122–62; Priya Satia, *Spies in Arabia: The Great War and the Cultural Foundations of Britain's Covert Empire in the Middle East* (Oxford: Oxford University Press, 2009), 239–62; Brian Lavery, *Churchill Warrior: How a Military Life Guided Winston's Finest Hours* (Oxford: Casemate, 2017), 273–311; Priya Satia, "Turning Space into Place:: British India and the Invention of Iraq," in *Asia Inside Out*, ed. Eric Tagliacozzo, Helen Sui, and Peter Perdue (Cambridge, Mass.: Harvard University Press, 2015), 271–301; Keith Jeffery, *The British Army and the Crisis of Empire 1918-22* (Manchester: Manchester University Press, 1984), 96–154; Martin Thomas, *Violence and Colonial Order: Police, Workers and Protest in the European Colonial Empires, 1918-1940* (Cambridge: Cambridge University Press, 2012), 64–86; Daniel Ussishkin, *Morale: A Modern British History* (Oxford: Oxford University Press, 2017), 78–86; John Darwin, *The Empire Project: The Rise and Fall of the British World System, 1830-1970* (Cambridge: Cambridge University Press, 2009), 359–95; Simon J. Potter, *Broadcasting Empire: The BBC and the British World, 1922-1970* (Oxford: Oxford University Press, 2012), 26–44.

trauma of World War I, transmuted into increasingly paranoid and reactionary politics. She presents the infamous violent British imperial interactions from the period, like the Amritsar massacre and violent reprisals in Ireland, alongside the corresponding political debate as the tangible expression of this dynamic.[720] In contrast, Kim Wagner disagrees and argues that the events at Amritsar in particular were the product of longstanding British modes of control through large scale demonstrative violence.[721] Regardless, for people living in Britain during the period, and elite political leaders in particular, it was not difficult to perceive the wave of uprisings and protests in territories like Egypt and India in early 1919 as evidence of some form of national or imperial decline.[722] The source of this perceived decline would be one of the most hotly contested aspects of this issue, which Churchill would attempt to define.

As Secretary of State for War and Air, and eventually for the Colonies, Churchill interpreted these events and perceptions through his own analytical and ideological lens and then reacted to them in a manner that had become typical of his leadership: proposing a comprehensive technocratic military system designed to respond to all of the new challenges. Churchill had a complex relationship with Empire and, other than his premiership during the World War II, it is probably the most studied aspect of his career. Until his experiences on the Western Front in 1915 and 1916, Churchill's only direct combat experiences had occurred within the context of late Victorian colonial warfare,

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[720] Kent, *Aftershocks*, 2–8.

[721] Wagner, "'Calculated to Strike Terror,'" 188.

[722] Susan Kingsley Kent, *A New History of Britain since 1688: Four Nations and an Empire* (Oxford: Oxford University Press, 2016), 353–56; John Gallagher, "Nationalisms and the Crisis of Empire, 1919-1922," *Modern Asian Studies* 15, no. 3 (1981): 355–68; Darwin, *The Empire Project*, 375–93.

both in northern India and central and southern Africa.[723] This meant that he was both experienced with warfare in Britain's imperial hinterland relative to his elite political contemporaries, but also that his assumptions about the nature of the British imperial relationship were also subsumed in the conditions he witnessed at the turn of the twentieth century.

Yet, historians have demonstrated that Churchill had a far more nuanced view of the British Empire and colonized populations than his reactionary and racist remarks about Indian nationalism during the 1930s would indicate. Richard Toye examines Churchill's relationship with empire across his career and shows that, while he viewed the British Empire through a Victorian lens, his bombastic statements about empire did not necessarily translate into policy decisions. Furthermore, he was at best a hesitant proponent of the "forward policy" of British imperial control.[724] Rather, Toye shows Churchill to be far more interested in restoring an imperial relationship based on indirect British authority that he perceived as intrinsic to an earlier era in the development of Britain's empire. Adding further complication, Warren Dockter has exhaustively demonstrated that Churchill's views on Islam, and religion more broadly, were far more complex and nuanced than the xenophobic image many scholars have presented.[725] He reveals a "Churchillian perspective" that vacillated between enthusiasm for – and

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[723] Lavery, *Churchill Warrior*, 15–37; Toye, *Churchill's Empire*, 35–85; Geoffrey Best, *Churchill and War* (New York: Bloomsbury, 2005), 9–31.

[724] The "forward policy" emphasized the violent domination and occupation of colonial territory by imperial military forces, which tended to lead to reactionary acquisition of additional lands, see: Toye, *Churchill's Empire*, 44.

[725] Dockter, *Churchill and the Islamic World*, 7–12.

abhorrence of – Islam, in ways that mirrored his views on many other issues, including technology.

Churchill's connection with the Islamic world is scrutinized by scholars because he was at the center of a moment of profound transformation within the Middle East and in Britain's relationship to it, from 1920-1922, that still resonates today. Priya Satia's work has revealed how British agent's paranoia about Bolshevism mixed with their Orientalist preconceptions about the "Arab mind" during this period of transformation to color both their policies in the Middle East and how they analyzed and reported on the colonial environment.[726] She sees the British interwar emphasis on aerial surveillance and control in Iraq as a manifestation of this mystical and reactionary conception of the space and its inhabitants. Churchill's central role in this process, as Satia describes it, obscures both his reservations about imperial expansion and his larger goals for preserving an imagined colonial control dynamic through technological investment and deployment.

Like his ideas for the technocratic reform of Britain's military for future conventional warfare, Churchill's vision for applying technology in the empire emerged out of an immediate political problem: the enormous financial costs of controlling Britain's empire through traditional military systems.[727] Churchill enumerated thirteen new demands on Britain's military, beyond its prewar role, that would add unprecedented ongoing financial challenges.[728] He perceived "the unrest in Egypt due largely to internal

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[726] Satia, *Spies in Arabia*, 5–8.

[727] Darwin, *The Empire Project*, 369–75; Adam Tooze, *The Deluge: The Great War, America and the Remaking of the Global Order, 1916-1931* (New York: Viking, 2014), 364.

[728] Tooze, *The Deluge*, 374–93; Kent, *Aftershocks*, 64–121; Darwin, *The Empire Project*, 380–81.

causes," as well as "the unrest in Palestine and Syria due to French designs upon the latter province," and "the disorders in India and the threatening situation on the Afghan frontier," as both a potentially long-term financial drain and evidence of the inability of traditional military forces to cope with a new atmosphere of imperial instability.[729]

Churchill believed these imperial challenges were the result of a global decline in Britain's power that extended to domestic issues like "the situation in Ireland requiring the retention of between 50 and 60,000 men," and "the need of preparing for certain action in the event of a strike by the Triple Alliance."[730] In all of these settings, he sought to find novel military solutions to these unprecedented problems. Exacerbating all of this was the uncertainty surrounding the negotiations with Germany and the "failure to reach any settlement with Turkey and the continuous deterioration of the position throughout the Turkish Empire caused by the activities of the Greeks and the Italians."[731] Of all of the imperial issues, Turkey posed the largest financial and logistical challenge, because of the geographic size of potential new colonial territories and the lack of traditional infrastructure that Britain's military relied on to project power over colonized populations.[732]

By the fall of 1919, Churchill was "increasingly concerned at the developments in the Turkish situation."[733] He saw the collapse of the Ottoman Empire as a threat to a wide

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[729] Winston Churchill to David Lloyd George, September 1919, Churchill Papers 16/11, Churchill Archives Center (hereafter cited as CHAR).
[730] Winston Churchill to David Lloyd George, September 1919, CHAR 16/11.
[731] Churchill to Lloyd George.
[732] Darwin, *The Empire Project*, 375–85.
[733] Winston Churchill to David Lloyd George, 25 October 1919, CHAR 18/18.

range of diplomatic and imperial goals for the British government.[734] This was especially

the case for Greece, which was divided between rival factions with different allegiances

to various Allied powers and who all sought different degrees of territorial expansion into

former Ottoman territory. For example, Churchill believed that "Venezelos and the

Greece he represents (in whose future we have so great an interest) may well be ruined as

a result of their immense military commitments in the Smyrna Province."[735] The potential

collapse of Greeks forces would destabilize the region and potentially deeply tarnish

Prime Minister David Lloyd George's reputation because he was attracted to Greek

nationalism, and sought to aid it as an expression of his conception of Classical Greek

history. He was captivated with the ancient Greek cultural tradition and adamantly

supported Greek claims to territory on the Adriatic coast.[736]

Similarly, Churchill thought the French decision to "overrun Syria with hordes of

Algerian troops" would lead to "a protracted and bloody struggle with the Arabs who are

defending their native land."[737] He feared that "as this struggle proceeds, British

sympathies will pronounce themselves increasingly upon the side of the Arabs," which

would lead the French to "retaliate with charges of bad faith and that we are fomenting

their troubles."[738] This had the potential to cause either "a serious injury to Anglo-French

relations" if the British government sided with public opinion and denounced the French

actions, or further erosion of public confidence in Lloyd George's Coalition

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[734] Robert Gerwarth, *The Vanquished: Why the First World War Failed to End* (New York: Farrar, Straus and Giroux, 2016), 227–47.
[735] Winston Churchill to David Lloyd George, 25 October 1919, CHAR 18/18.
[736] Dockter, *Churchill and the Islamic World*, 90.
[737] Winston Churchill to David Lloyd George, 25 October 1919, CHAR 18/18.
[738] Churchill to Lloyd George.

government.[739] Finally, there was the issue of the Zionists "whom we are pledged to introduce into Palestine and who take it for granted that the local population will be cleared out to suit their convenience," which further threatened to enflame Arab resentment in the region and public support at home.[740] These problems had the potential to undermine the domestic political conditions in Britain, and to overextend Britain's military if it was called on to take a significant role in arbitrating the complex and competing claims in the region.[741]

In the former Ottoman territories, Churchill saw an even larger imperial issue as an outgrowth of the situation in Turkey, because all the conflicts would "act and re-act upon our position as the greatest Mohommedan Power, and involve us in immense expense and anxiety."[742] In other words, Churchill saw the conditions in the former Ottoman Empire as potentially exacerbating the unrest throughout the rest of the British Empire, because "India, Egypt, Mesopotamia and Palestine are all affected prejudicially," which "in regard to Egypt, Mesopotamia and Palestine, we are forced to maintain military establishments the cost of which far exceeds the resulting revenue and throw a burden on Army Estimates of the very gravest kind."[743] Beyond these potential financial drains, military commitments in former Ottoman territory ran "the risk at any time of denuding our forces, under pressure of economy, to a point where a local disaster will

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[739] Churchill to Lloyd George.
[740] Churchill to Lloyd George.
[741] Darwin, *The Empire Project*, 410–17.
[742] Winston Churchill to David Lloyd George, 25 October 1919, CHAR 18/18; See also: Gallagher, "Nationalisms and the Crisis of Empire, 1919-1922," 359–65; Tooze, *The Deluge*, 384–85; Michelle Tusan, *The British Empire and the Armenian Genocide: Humanitarianism and Imperial Politics from Gladstone to Churchill* (London: I.B.Tauris, 2017), 216–22.
[743] Winston Churchill to David Lloyd George, 25 October 1919, CHAR 18/18.

occur with consequent renewal of war and expenditure on a large scale."[744] Overall,

Churchill believed "that the policy of the partition of the Turkish Empire among the

European Powers is a mistake," because "it will involve us (1) in abetting a crime against

freedom, namely, the conquest of the Arabs and the Turks; (2) in deserting and, it will be

alleged, betraying those Arabs who fought so bravely with us in the war."[745] Churchill's

concerns about the conflict between a just settlement and retributive action represented a

dichotomy playing out on a grand scale within the British government and public during

the early interwar period.[746]

Even if these moral objections were not enough to sway Lloyd George, Churchill

also reminded him of the "immense expense for military establishments and development

work far exceeding any possibility of return." After all, he believed that "we have far

more territory in the British Empire than we shall be able to develop for many

generations."[747] For example, he pointed out that "in Africa alone we have enormous

estates of immense potential value which we have pitifully neglected," and "the need of

national economy is such that we ought to endeavor to concentrate our resources on

developing our existing Empire instead of dissipating them in new enlargements."[748]

Churchill's fears expressed in this letter perfectly encapsulate his dynamic

relationship with empire. On one hand, he had no qualms about perpetuating and

promulgating British imperial control and investment and recognized that violent military

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[744] Churchill to Lloyd George.
[745] Churchill to Lloyd George.
[746] Michelle Tusan, *Smyrna's Ashes: Humanitarianism, Genocide, and the Birth of the Middle East* (Berkeley: University of California Press, 2012), 135–43.
[747] Winston Churchill to David Lloyd George, 25 October 1919, CHAR 18/18.
[748] Churchill to Lloyd George.

repression was an inherent part of that process. On the other hand, he also demonstrated

an awareness of the intrinsic inequality and hypocrisy that British imperial control rested

upon and how that relationship was perceived by colonized peoples. This represented

both the endurance of older Liberal imperialist ideals concerning a civilizing mission and

the atmosphere of crisis which inspired that Michelle Tusan calls Churchill's trend

toward "Realpolitik."[749]

Churchill offered little in the way of a politically viable solution to the moral and

financial conundrum that the former Ottoman territory represented. His only

recommendation was that the "European Powers should…jointly and simultaneously,

renounce all separate interests in the Turkish Empire other than those which existed

before the war."[750] Instead of the mandate system, he proposed that Britain campaign to

"preserve the integrity of the Turkish Empire as it existed before the war but should

subject that Empire to a strict form of international control, treating it as a whole and

directing it from Constantinople."[751] To manage and police the former Ottoman territory,

the new League of Nations should be based in Constantinople instead of Geneva, which

would also help facilitate the formation of a new secular government in Turkey itself.

Churchill also wanted the military government of Constantinople entrusted to "an

American Commander-in-Chief responsible to the League of Nations," transforming

Constantinople into "a sort of 'District of Columbia' for the purposes of the League of

Nations."[752] This would have the dual effect of linking the League of Nations inexorably

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[749] Tusan, *The British Empire and the Armenian Genocide*, 211.
[750] Winston Churchill to David Lloyd George, 25 October 1919, CHAR 18/18.
[751] Churchill to Lloyd George.
[752] Churchill to Lloyd George.

to the Middle East, and drawn the United States into a significant role in European and Central Asian affairs, which in 1919 seemed like a viable and realistic possibility to Churchill.[753] Yet, Churchill acknowledged that the British government could "only compel the other Powers to give up their exploitation claims against Turkey by ourselves being willing to set an example," which he recognized would be difficult because it would require relinquishing "the satisfaction of those dreams of conquest and aggrandizement which are gratified by the retention of Palestine and Mesopotamia."[754]

Churchill's plan was elaborately conceived, elegant, and synergistic because it would simultaneously eliminate a major financial and political burden from Britain and bring the United States into a collaborative position with Britain, strengthening the security of the British Empire. It was also wildly unrealistic because it relied on Lloyd George's willingness to expend precious domestic political capital on abandoning the spoils of a costly war and his ability to cajole a wide array of allied powers with their own domestic political concerns into giving up their long-held territorial agendas. Furthermore, it demonstrated a lack of understanding on Churchill's part of Woodrow Wilson's willingness or ability to sell an indefinite overseas military commitment to the American people.[755]

Yet, Churchill's ideas, no matter how politically impractical, reveal several key themes. First, they echoed the intellectual patterns he demonstrated in his advocacy of technological investment and institutional transformation in that they represented a fully

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[753] Tooze, *The Deluge*, 336–37; Susan Pedersen, *The Guardians: The League of Nations and the Crisis of Empire* (Oxford: Oxford University Press, 2015), 19; Darwin, *The Empire Project*, 362.
[754] Winston Churchill to David Lloyd George, 25 October 1919, CHAR 18/18.
[755] Tooze, *The Deluge*, 333–50.

articulated, if wildly optimistic, plan designed to solve multiple pernicious political and military problems simultaneously. Second, and more importantly, his schemes reveal the anxiety Churchill felt over the potential compounding imperial political and military problems he saw emerging out of the Middle East.

At the core of Churchill's apprehension about the Turkish issue was his paranoia about Bolshevism.[756] Priya Satia extensively examines the preoccupation of British agents during the interwar period with the idea that a cabal of Bolshevik infiltrators and interlopers were at the heart of unrest in the Middle East.[757] She concludes that much of this thinking was attributable to the imagined qualities these agents perceived in the cultural, geographical, and environmental space they constructed around the concept of the Middle East. Yet, while she does acknowledge the emphasis Churchill placed on Bolshevism for the rejection of British imperial power around the world, she spends little time examining the scale and scope of his conspiratorial imaginings.[758] For Churchill, Bolshevism represented a subversive and corrosive global force emanating from within revolutionary Russia, that was spreading outward like a virus. He believed that "a large proportion of the Bolshevik leaders look to Turkestan and Central Asia as the refuge of their sect and the region from which they will wage a general war of Oriental Communists against Christian Governments."[759]

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[756] Gerwarth, *The Vanquished*, 155–56; Tooze, *The Deluge*, 235–36.
[757] Satia, *Spies in Arabia*, 201–37.
[758] Satia, *Spies in Arabia*, 225.
[759] Memoranda by Winston Churchill, 17 September 1919, CHAR 16/18.

Churchill imagined the Bolshevik threat through a Victorian lens, conceiving of it as a resumption of the "Great Game," leading "to Afghanistan and Persia being thrown into a state of extreme excitement by Bolshevik propaganda and armed assistance in the near future," and would "react upon India."[760] The "Great Game" was the way that Victorian commenters had imagined the competition for imperial territory within Central Asia between Great Britain and Tsarist Russia throughout the nineteenth century. It was the domain of intrigue, imagination, and espionage, and proved a fertile ground for both imperial adventure fiction and real world state action.[761] On the basis of this worldview, Churchill interpreted every disturbance and form of colonial resistance in Central Asia as evidence of Bolshevik influence.[762] For example, he believed that the "Afghans have only made this peace in order to regroup their forces and gather strength for another attack in a few months' time," at the behest of Bolshevik infiltrators, eager to destabilize British power in the region.[763] To thwart this threat, Churchill sought "to take steps to make sure that the Indian aviation was in the highest state of efficiency and that it possesses machines capable of striking at the cities of Afghanistan, including Kabul, within a few hours of an outbreak of hostilities."[764] In Churchill's mind, the danger was

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[760] Memoranda by Churchill; For more on the "Great Game's" Victorian origins and Churchill's interest in it, see: David Jablonsky, *Churchill, the Great Game and Total War* (London: Routledge, 1991), 55–77; Peter Hopkirk, *The Great Game: On Secret Service in High Asia* (Oxford: Oxford University Press, 2001), 121–64; Karl E. Meyer and Shareen Blair Brysac, *Tournament of Shadows: The Great Game and the Race for Empire in Central Asia* (New York: Basic Books, 2009), 173–260; Evgeny Sergeev, *The Great Game, 1856–1907: Russo-British Relations in Central and East Asia* (Baltimore: Johns Hopkins University Press, 2014), 1–22.
[761] Peter Hopkirk, *Quest for Kim: In Search of Kipling's Great Game* (University of Michigan Press, 1999), 1–17.
[762] Satia, *Spies in Arabia*, 211–17.
[763] Memoranda by Winston Churchill, 17 September 1919, CHAR 16/18.
[764] Memoranda by Winston Churchill.

not merely confined to Afghanistan and could be exacerbated by a variety of factors that consequently demanded mitigation of a comprehensive policy system.

The negotiations between the allied powers and the Turkish government provide an excellent example of how Churchill perceived every aspect of Middle Eastern policy through the lens of the interplay between Bolshevism and pan-Islamic sentiment. In early 1920, he wrote "of the resentment that would be excited in India and throughout the Mohammedan world by the expulsion of the Turks from Constantinople," which could be preyed upon to foster sympathy for Bolshevism.[765] To Churchill, such an alliance between Bolsheviks and Muslims was an almost apocalyptic imperial nightmare because "all our limited means of getting the Middle East to settle down quietly are comprised in the use of Indian troops," which necessitated that they "must not do anything that will raise Indian sentiment against the use of these troops or affect their own loyalty."[766]

Churchill's expectation that "a united militarist Russia in the near future" would not "be a friendly united militarist Russia but a hostile united militarist Russia," was a defining force in all of his policy advocacy and decision making, but in the Middle East it took on a new, pragmatic, angle.[767] He believed that "if the Turk is in Constantinople, the manhood of the Turkish Empire can be used to prevent the forcible acquisition by Russia of Constantinople and the Straits," but "if the Turk is gone, there will be nobody to defend Constantinople except the international force, which of course would be valueless against a great Power unless all the countries involved are prepared to take up

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[765] Memoranda by Winston Churchill, 6 January 1920, CHAR 16/51.
[766] Memoranda by Churchill.
[767] Memoranda by Churchill [Original Emphasis].

arms."[768] Further, Churchill feared that "once the Turk is out of Constantinople, there will be no reason why Turkish Mohammedans and Russian Bolsheviks should not make common cause," which would undermine the larger international mandate system that Lloyd George sought, and would likely destabilize the Greek state that he had invested so much political capital into.[769]

Throughout 1920, Churchill repeatedly used the dual threat he saw in Bolshevism and pan-Islamic sentiment to lobby for a variety of diplomatic and military policy initiatives. For example, in October he saw the elimination of "the dangerous position of our force at Kasvin and of the impossibility of defending Tehran or Northern Persia in the event of a serious Bolshevik invasion across the Caspian," as the result of "the great victory won by the Poles over the Bolsheviks and the increasing power and successes of General Wrangel," which had "greatly reduced the pressure on our troops in North Persia and on the Persian government."[770] This was a thinly veiled reminder to the Cabinet of the need to continue providing aid to White Russian forces in the Russian Civil War as a means of securing Britain's position in Central Asia and elsewhere. Churchill believed that "Bolshevik force, Bolshevik prestige, Bolshevik propaganda have waned together and our position at Kasvin can now probably be maintained without disaster for some months to come."[771] Unfortunately, "the peace which has been made between the Poles

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[768] Memoranda by Churchill.

[769] Memoranda by Churchill; See also: Tooze, *The Deluge*, 381–82.

[770] Memoranda by Winston Churchill, 27 October 1920, CHAR 16/53; Wrangel was a White Russian general commanding troops in the Crimea, see: Martin Gilbert, *Winston S. Churchill, Volume IV: The Stricken World, 1916-1922* (Boston: Houghton Mifflin, 1975), 389–99; Jonathan Smele, *The "Russian" Civil Wars, 1916-1926: Ten Years That Shook the World* (Oxford: Oxford University Press, 2015), 141–72.

[771] Memoranda by Winston Churchill, 27 October 1920, CHAR 16/53.

and the Bolsheviks has enabled the former to turn their attention to the Lithuanians and the latter to concentrate upon Wrangel and, to some extent, upon Armenia."[772] Churchill feared that "if the Bolsheviks destroy Wrangel, as they may, they will be able to increase their pressure upon our troops in North Persia and generally in the East."[773]

Less than a month later, he capitalized on the same fears when he argued that "an opportunity now presents itself of securing an effective abatement of the strain and pressure put upon our troops and interests in the East and Middle East."[774] Churchill believed that the British government ought to change diplomatic strategy and turn away from the Greeks in order to "come to terms with Mustapha Kemal and arrive at a good peace with Turkey which will secure our position in Egypt, Mesopotamia, Persia and India."[775] He felt it was "time to abandon the policy of relying on the weak and fickle Greeks and by so doing estranging the far more powerful, durable and necessary Turkish and Mohammedan forces."[776]

Again, Churchill harkened back to the intellectual framework that underpinned the "Great Game" of the nineteenth century in his hope that the British could "thus recreate that Turkish barrier to Russian ambitions which has always been of the utmost importance to us," and "by regaining our influence over the Turks we should be able to do something to save the Armenians and enable Georgia to withstand Bolshevik influences."[777] This was the same strategy he had advocated since January, but now he

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[772] Memoranda by Churchill.
[773] Memoranda by Churchill.
[774] Memoranda by Winston Churchill, 23 November 1920, CHAR 16/53.
[775] Memoranda by Churchill.
[776] Memoranda by Churchill.
[777] Memoranda by Churchill.

sought to embrace the new Turkish nationalist government because "we have always hitherto had either Turkey or Russia on our side."[778] Churchill believed British "policy since the peace has brought about to a very large extent an extraordinarily unnatural union between these opposite forces," and that "in our present state of military weakness and financial stringency we cannot afford to go on estranging the Mohammedan world in order to hand over a greater Greece to King Constantine."[779] Rather, he felt it was imperative to "establish a just and lasting peace with the real leaders in Turkey," to allow Britain to direct its military resources toward the rest of its empire and potentially to containing Bolshevism.

Churchill voiced his frustration with Lloyd George's continuing obstinate support of Greece and the political and military devolution he perceived in the Middle East one final time in 1920, and in the process reverted back to the pattern of compromise that defined his policies throughout the period.[780] In the memorandum he presented to the Cabinet, he outlined "the unfortunate course of affairs [that] has led to our being simultaneously out of sympathy with all the four Powers exercising local influence there [the Middle East]."[781] He argued that the British government was "at variance with the Bolsheviks for many grave reasons," and that it would be "a sanguine man who supposes that a satisfactory joint policy can be arranged between them and Great Britain," while

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[778] Memoranda by Churchill.
[779] Memoranda by Churchill.
[780] Richard Toye, *Lloyd George and Churchill: Rivals for Greatness* (London: MacMillan, 2007), 217–18; Dockter, *Churchill and the Islamic World*, 90–102.
[781] Memoranda by Winston Churchill, 16 December 1920, CHAR 16/53.

they had also alienated "the Turks because we have taken the lead against them and put ourselves forward as the principle anti-Turkish Great Power."[782]

In this statement, Churchill seemed to present the Bolshevik presence in the Middle East as a fact of life, reflecting his dejection over the British government's unwillingness to embrace a full-scale counterrevolution in Russia, and the poor relationship with the new Turkish regime as a product of a similar lack of imagination on the part of the British government. In contrast, he felt that "mischief has been made between us and the Arabs by the French treatment of the Arabs," and "the return of Constantine to Greece [the pro-German king of Greece] has severed the special relations which we had with that country under Monsieur Venizelos," representing diplomatic realities outside of Britain's control.[783] At the same time, this exacerbated the military situation because Britain had "not secured a single friend among the local powers." The result was a "despondent conclusion to our foreign policy in these regions" that could only be remedied by reverting to traditional British imperial tactics.[784]

Churchill believed that "the only way in which we can exert influence in the Middle East and safeguard our enormous and varied interests there is by dividing up the local Powers so that if we have some opponents we have also at any rate some friends," which was "what we have always done in the whole of our past history."[785] Here he harkened back to a Victorian understanding of extending and wielding imperial power rooted in the writings of Thomas Macaulay, which stressed a policy of "divide and

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[782] Memoranda by Churchill.
[783] Memoranda by Churchill; Tooze, *The Deluge*, 381–82.
[784] Memoranda by Winston Churchill, 16 December 1920, CHAR 16/53.
[785] Memoranda by Churchill.

rule."[786] He proposed that the British government "choose from these four local Powers some whose interests we shall favor and others for whom we cannot do much," because if they continued "embroiled with or estranged from all four local Powers, [it] will soon reduce us to a very weak position which we have no adequate military power to restore."[787] The issue, in Churchill's estimation, was deciding which side to align with that would limit the British government's political and financial exposure. The Greeks had already proved to be fickle allies. Similarly, he believed it would "be found impossible, however much is tried, to have intimate and special relations between this conservative and monarchical country and the Soviet Communist Government of Russia," because "the more it is tried the more it will fail and the more it will injure the political structure on which the present Government rests."[788] In Churchill's mind, it was no longer possible to ally with a single outside power in order to secure Britain's imperial position.

Rather than subsidizing or legitimizing a foreign government to pacify the Middle East, Churchill believed it was imperative to cultivate relations with the Turks and Arabs because "although they have hitherto been divided, they are both Mohammedan influences and our attitude towards them produces reactions throughout the whole Mohammedan world."[789] In his mind, Britain, as "the Greatest Mohammedan Power in the world," had an obligation "to study policies which are in harmony with Mohammedan

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[786] Jonathan Rose, *The Literary Churchill: Author, Reader, Actor* (New Haven: Yale University Press, 2014), 24–25; Bernard Porter, *The Lion's Share: A Short History of British Imperialism, 1850-1995*, Third (London: Longman, 1996), 207–8.
[787] Memoranda by Winston Churchill, 16 December 1920, CHAR 16/53.
[788] Memoranda by Churchill.
[789] Memoranda by Churchill.

feeling."[790] This near complete reversal from his position eighteen months before was indicative of his growing expertise in the region and its political and cultural landscape, as well as the changing domestic and international political environment. The conflicting public demands for war spoils and justice for Turkish war crimes meant that relations with the young Turkish nation would likely remain hostile for years to come.[791] Furthermore, by late 1920 the overthrow of the Bolshevik regime seemed increasingly unlikely, so a new bulwark to contain its spread was needed. In this context, utilizing Britain's new imperial territories as a buffer to Bolshevism suddenly appeared more appealing.

Churchill's sustained advocacy of policy reform in the Middle East made him the obvious choice to institute the changes he proposed. This resulted in Lloyd George naming Churchill Secretary of State for the Colonies in January 1921, with the express purpose of finding a solution to the crisis in the Middle East.[792] Warren Dockter notes that the appointment was unexpected considering Churchill and Lloyd George's disagreements about the Turkish-Greek relationship.[793] It seems likely that Lloyd George hoped that Churchill would effect the same speedy resolution to the diplomatic predicament that he had accomplished with the demobilization crisis in early 1919, and

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[790] Memoranda by Churchill.
[791] Tusan, *Smyrna's Ashes*, 159–74.
[792] Robert J. Blyth, *The Empire of the Raj: India, Eastern Africa and the Middle East, 1858-1947* (New York: Palgrave Macmillan, 2003), 132–69; Charles Townsend, *Britain's Civil Wars: Counterinsurgency in the Twentieth Century* (London: Faber and Faber, 1986), 79–120.
[793] Dockter, *Churchill and the Islamic World*, 90–102.

probably assumed that he would be able to cajole or bully his minister into siding with his pro-Greek position.[794]

Because Lloyd George asked Churchill to take over unofficially immediately, before he stepped down from the War Office, Churchill, for two months, was in control of Britain's army, air forces, and the Colonial Office.[795] This was an unprecedented concentration of power in a single minister, which reflected not only the scale and scope of the Bolshevik threats Churchill perceived around the world and his ability to win over the Cabinet to his fears, but also the multifaceted and interconnected ways that he sought to mitigate these dangers. In November 1920, he spoke about the "world-wide conspiracy against our country, designed to deprive us of our place in the world and rob us of victory."[796] Churchill believed that "having beaten the most powerful military empire in the world, having emerged triumphantly from the fearful struggle of armageddon," Britain now risked allowing themselves "to be pulled down and have our Empire disrupted by a malevolent and subversive force, the rascals and rapscallions of mankind who were now on the move against us."[797] He felt that "whether it be the Irish murder gang, the Egyptian Vengeance Society, the seditious extremism in India, or the arch-traitors we had at home, they should feel the weight of the British arm."[798] In Churchill's mind, "the weight of the British arm" would be manifested in technology, specifically technologies adapted from the Western Front.

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[794] Toye, *Lloyd George and Churchill*, 195–97.
[795] Dockter, *Churchill and the Islamic World*, 124–25.
[796] Gilbert, *Winston S. Churchill, Vol.IV*, 912.
[797] Gilbert, *Winston S. Churchill, Vol.IV*, 912–13.
[798] Gilbert, *Winston S. Churchill, Vol.IV*, 913.

Churchill saw the military technological innovations of the Great War as the prototype for a new generation of vehicles and weapons that would be as useful in surveilling and controlling the British Empire as he hoped they would in the future conventional war against European forces he believed was inevitable. From the beginning of his leadership of Britain's ground and air forces, he had argued that "our experience in the last war should have taught us how we may maintain the security of our scattered Empire on land, and also attain to a better and more scientific state of preparedness for warfare on a large scale, at a far less cost of man-power and money than formerly," by "replacing and supplementing man-power by machinery."[799] The potential financial savings of such a shift in imperial policy was the twin pillar of his case for the creation of a Ministry of Defense. In the wake of the collapse of that political gambit he continued to contend that mechanization represented the future of state control, both at home and in the Empire.

Churchill envisioned military aviation as the initial connective tissue in a new network of imperial control, communication, and exploitation running from Cairo, to Baghdad, and on to Karachi that would bring the far-flung extent of Britain's empire into much closer coordination.[800] Yet, it was also only the vanguard of a new technocratic military system designed to imbue Britain's imperial forces with speed and surprise, while simultaneously cutting costs. For example, in addition to aircraft, Churchill thought that "in all the clearing up that remains to be done after the war, the armored car

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[799] Memoranda by Winston Churchill, September 1919, CHAR 16/12.
[800] Winston Churchill, "Air Route from Egypt to India," 8 November 1919, The National Archives of the United Kingdom CAB 24/92/84 (hereafter cited as TNA); Memoranda by Winston Churchill, 16 May 1919, CHAR 16/16.

will play a vital part."[801] He believed that "instead of large forces of infantry, cavalry and heavy artillery maintained as garrisons, we require in many places smaller forces with machine guns in armored cars which are very mobile and which can move into streets and villages and push out across the deserts in suitable country."[802] This allowed British forces to project power far beyond their traditional confines. Additionally, by using mechanization to achieve greater speed and coverage, it could give the impression that there were more British troops in the region and that they were omnipresent. Without the benefit of technology, Churchill believed there was "no other way of holding and administering the very large regions we have in our charge except by an undue expenditure of troops organized on the old lines."[803] Churchill observed that across the British Empire "everyone is crying out for armored cars - India, Egypt, Mesopotamia, Denikin, Ireland, the Army of the Rhine - and I am sure that in the next few years great reliances will be placed upon this means of maintaining order which can so often operate without loss of life."[804] This emphasis on imperial control "without loss of life" that would be at the crux of Churchill's technocratic ideas.

In technology, Churchill saw the potential to adapt Britain's traditional mechanisms of imperial power for a new era and restore the empire to a perceived height during the Victorian period. Praseeda Gopinath, in her examination of twentieth-century British literature, suggests that this imperial decline was perceived by contemporaries as the result of elite British men's' inability to adapt to the challenges of the postwar

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[801] Winston Churchill to Austen Chamberlain, 22 June 1919, CHAR 16/8.
[802] Churchill to Chamberlain.
[803] Churchill to Chamberlain.
[804] Churchill to Chamberlain.

world.[805] David Jablonsky goes even further, arguing that Churchill in particular had a growing conviction that the nature of the World War I and the challenges of the postwar world demanded a reversion back to an idealized male archetype in order for Britain to retain both its empire and position in geopolitics.[806] In his ancestor, the first Duke of Marlborough, Jablosky contends, Churchill found an exemplar of the kind of "man of action" that he felt was required.

For Churchill, the erosion of Britain's imperial power was at the core of the threat of Bolshevism to the British Empire, because colonial populations would never question British rule unless that imperial dynamic was undermined. With technology, Churchill believed that Britain's manhood would be transformed back into the men of action that he idolized, and, in so doing, the imperial relationship that had allowed a miniscule number of colonial agents and military forces to dominate a quarter of the globe would be restored. In Churchill's mind, the seeming omnipresence and omnipotence of Britain's imperial forces, made possible by the application of ever more sophisticated technology, would so overawe colonized populations that they would retreat into the submissive and subservient station that he deemed fundamental to Britain's imperial power.

For Churchill, the simple replication of the existing technology from the Western Front to the British Empire would not be enough. He envisioned the technological innovations of World War I as merely the prototypes of a new range of technological tools and systems that would revolutionize the medium of imperial engagement as much as they would the tactical and operational experience of future climactic battles. This

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[805] Praseeda Gopinath, *Scarecrows of Chivalry: English Masculinities after Empire* (Charlottesville: University of Virginia Press, 2013).

[806] Jablonsky, *Churchill, the Great Game and Total War*, 69–70.

technocratic development would simultaneously contain the spread of Bolshevism, and diminish the cost of patrolling the empire, thus freeing up economic resources for other endeavors, allowing for a new era of unprecedented imperial economic development.

Churchill articulated these ideas concurrently with his fears about the situation in the Middle East and his paranoia about a global Bolshevik conspiracy through 1919 and 1920, and these twin interconnected anxieties informed his thinking about technology in the British Empire. He also saw technology as a remedy for long-standing issues of imperial control and communications. His ideas were not designed to revolutionize the fundamental nature of the imperial relationship; rather he saw technology as a means of restoring an abstract dynamic from an earlier era in much the same way that his glorified archetype of the British "man of action" was a set of imagined qualities from a distant past. For Churchill, technocratic imperial reform was not a means to a new empire, but a mechanism for recapturing an old one. To aid in this process, he drew on a host of experts to fully *articulate* the details of the concepts he envisioned, yet these specialists' ideas were clearly shaped by the parameters and potentialities that Churchill attached to the postwar world and the imperial interaction.

J.F.C. Fuller was the prototypical expert Churchill turned to in order to express the full scope of his ideas. Fuller had made a name for himself as an imperial military officer during the Boer War and then as a tank strategist during World War I, and was one of a host of innovative technocratic theorists Churchill promoted at the War Office and Air

Ministry during his postwar tenure.[807] Fuller's work formed the intellectual nucleus of

mechanized warfare during the interwar period, and Churchill saw his expertise as

applicable to imperial control. In May 1921, Churchill and Fuller met in Oxford to

discuss the potential of tracked vehicles (or "Roadless Traction" as Fuller described it) to

aid in the process imperial control and development.[808] Following their meeting, Fuller

sent Churchill a sheaf of policy documents that provided more detail about the ideas they

had discussed. One of these: "The Influence of Roadless Traction on Imperial

Development and Security," explicitly expressed the way Churchill, through Fuller,

conceived of new technology in the imperial context.

In the document, Fuller echoed Churchill's belief that British imperial policies

needed to "be adapted to the circumstances which the Great War has created," especially

the "lassitude after battle, commercial and military, a want of national stability and a lack

of means to create it on account of the enormous debts the war has handed down to

us."[809] Fuller saw this condition as a result of the world "still suffering from shell-shock,

and this period of social neurosis will continue till physically we can recreate the energy

which existed prior to the war."[810] This concept of "social neurosis" fit into the larger

intellectual evolution of Fuller's belief that the postwar world was on the threshold of a

new "mechanical epoch" defined by science and communications technology.[811]

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[807] For more on Fuller, see: Brian Holden Reid, *J.F.C. Fuller: Military Thinker* (New York: St. Martin's Press, 1987); Azar Gat, *Fascist and Liberal Visions of War: Fuller, Liddell Hart, Douhet, and Other Modernists* (Oxford: Oxford University Press, 1998), 13–42.
[808] John Frederick Charles Fuller to Winston Churchill, 1 June 1921, CHAR 17/1.
[809] Memoranda by J.F.C. Fuller, undated, CHAR 17/1.
[810] Memoranda by Fuller.
[811] Gat, *Fascist and Liberal Visions of War*, 33.

Fuller's beliefs were the result of his attempts to transmute his efforts to define principles of warfare, rooted in the endurance of Enlightenment ideas about universal laws, into a larger conceptualization about the evolution of society.[812] As such, he was part of a much larger effort to understand and reform British society during the interwar period, and the appeal of his ideas to Churchill represented the endurance of the same interventionist and positivist impulses that inspired Churchill's interest in National Efficiency more than a decade before.[813] For example, Fuller wrote that like "the feeble mind of a sick man will become strengthened through building up of his bodily strength, so must we seek convalescence not through mere faith cures adumbrated in political ideals such as state control, universal brotherhood and self determination."[814] Fuller maintained that the only remedy to the situation was through "renovating the physical powers of the nation which have been bled white by a debt of some £8,000,000,000."[815]

In order to accomplish this revitalization, Britain needed "to reinstitute productive labor, not as it existed before the war, for by the old processes it would take many years to make good the present deficit, but by a new process which will enable a higher output per working hour than was possible in 1914."[816] In technology, specifically roadless traction, Fuller proposed to jumpstart "the problem of economic movement or the higher utilization of time for productive work," because "until this problem is solved commercial lassitude will continue, our debts will tend either to increase or decrease

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[812] Gat, 20–27.
[813] Richard Overy, *The Twilight Years: The Paradox of Britain Between the Wars* (New York: Penguin, 2010), 50–135.
[814] Memoranda by J.F.C. Fuller, undated, CHAR 17/1.
[815] Memoranda by Fuller.
[816] Memoranda by Fuller.

excessively slowly, unemployment will remain rife and no scheme of absorbing into our old and newly acquired territories our surplus of unemployed manpower will be possible."[817] He believed that maintaining the British Empire demanded a speedy solution to "the political problem of the governmental self-determination of non-European races within the empire," because "unless the countries inhabited by these peoples can be sufficiently developed before they attain to dominion control, it will not be possible to base this control on a degree or grade of civilization equal or approximately similar to our own, and unless this be possible, autonomous rule."[818] To Fuller, the nationalist agitation in India and Egypt would "only lead to separation through a divergence due to the differences of the civilization accruing from the varying degrees of commercial prosperity between Great Britain and her eventual Asiatic and African Dominions."[819] In all of these statements, Fuller adhered to Churchill's intellectual dichotomy between anxiety over imperial decline and optimism about technology's capacity to rebuild imperial power on every level: economic, intellectual, political, and military.

Fuller's technocratic keystone to the imperial stimulus he and Churchill both sought was the "land car," which in his mind was a broad new class of tracked vehicles that could operate independently of roads. He saw the technology as a means of "opening up the empire generally to commercial development, which alone can render an absorption of our surplus man-power possible, and which alone can equilibrate the different civilizations under our control and equilibrate them on a common degree of

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[817] Memoranda by Fuller.
[818] Memoranda by Fuller.
[819] Memoranda by Fuller.

prosperity and luxury."[820] This would be possible by using roadless traction to extend the

British logistical network from its existing railroad systems on an unprecedented scale.

In Fuller's mind, this singular technological innovation in conjunction with existing

imperial structures would make it possible for the British Empire to dominate the

periphery of its territory, both economically and politically, in a host of ways. He saw

tracked vehicles as a mechanism for alleviating traffic congestion by effectively widening

existing roads, aiding farming practices, bringing agricultural products to market more

efficiently, and carrying far greater loads of supplies over rough terrain than ever

before.[821] For example, he suggested that, in conjunction with Britain's railroad network

in Africa, tracked vehicles would allow Britain to *effectively* double the range of its

penetration, both economic and political, into the African countryside.

Fuller's brand of technological enthusiasm was most clearly evident when

discussing the military potential of the "land car" in the British Empire, because he

believed "it was the tank, above all other tactical means employed, which went the

furthest to win the war for the Allies."[822] This contribution necessitated the elaboration

of "a theory, the fundamental factor in which is that the future of war will demand a vast

replacement of existing muscular energy by mechanical power, so much so that at the

present moment we stand on the threshold of a new epoch in warfare," which was "only

comparable in its possibilities to that which faced the navy when sails gave way to

steam."[823] Fuller believed that "twenty years from today we predict that what may now

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[820] Memoranda by Fuller.
[821] Memoranda by Fuller.
[822] Memoranda by Fuller.
[823] Memoranda by Fuller.

appear as fantastic to the unthinking will appear but the commonplace, namely, that the

military organization and equipment which at present we think so wonderful will seem to

belong to a barbarous and undeveloped age."[824] This vision of technological futurism

extended to the British Empire in Fuller's mind by effectively reducing "the size or

territorial liabilities of the empire by one half," and "in place of scrapping bits of the

empire, we may actually find it possible to cut down the size of our existing (prewar)

army and so liberate men who commercially are unproductively employed."[825] This

theory of using technology to shrink the spatial extremes of the British Empire clearly

reveals Fuller writing directly to appeal to the conceptual framework of his primary

audience: Churchill.

Fuller's ideas continued to echo those of Churchill throughout the structure he

laid out for implementing the imperial transformation he proposed. He asserted that "to

accomplish this military revolution we must analyze the past and the present and discover

our deficiencies," and that "we must also look forward and estimate probabilities, so that,

when the change over is decided on, we may be ready on the starting point with a clear

cut goal in front of us."[826] He also believed that "it should be visualized that the

immediate military objective of our army is not to prepare for another great national war

but to maintain the integrity of our empire and to guarantee law and order within it."[827]

This echoed Churchill's planning provisions in military development that are commonly

referred to as the "Ten Year Rule." Furthermore, Fuller felt that it was imperative "to

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[824] Memoranda by Fuller.
[825] Memoranda by Fuller.
[826] Memoranda by Fuller.
[827] Memoranda by Fuller.

devise a scheme which will not only fit the requirements of the army but those of the navy and air force as well, so that movement in all its forms may be economized."[828] This would be possible "if the land-car be looked upon not merely as a fighting machine, but as a means of economic movement," which could be accomplished by the military leader of the future conceptualizing military policy beyond land operations and thinking "in terms of sea and air warfare as well," by "turning to the oracle of the petrol engine to seek an answer to his difficulties."[829] In these statements, Fuller gave at least tacit reference to the institutional reforms Churchill proposed during 1919 with his Ministry of Defense – and the rationale of cost savings he used to justify them. However, Fuller was singularly focused on the potential of tracked vehicles, while Churchill demonstrated that he envisioned a wide variety of technologies functioning in concert.

Churchill saw a use for almost every military innovation of the Great War within the postwar British Empire, including poison gas.[830] He wrote that he did "not understand this squeamishness about the use of gas," because the British government had "definitely adopted the position at the Peace Conference of arguing in favor of the retention of gas as a permanent method of warfare."[831] Churchill believed that it was hypocritical and "sheer affectation to lacerate a man with the poisonous fragment of a bursting shell and to boggle at making his eyes water by means of lachrymatory gas."[832] He was "strongly in

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[828] Memoranda by Fuller.
[829] Memoranda by Fuller.
[830] He also advocated that it would be a vital part of Britain's preparedness for a major war, see: "Gas Warfare, Memorandum by the Secretary of State for War," 3 May 1920, TNA CAB 24/105; See also: Dockter, *Churchill and the Islamic World*, 111–16.
[831] Memoranda by Winston Churchill, 12 May 1919, CHAR 16/16.
[832] Memoranda by Churchill.

favor of using poisoned gas against uncivilized tribes," because "the moral effect should be so good that the loss of life should be reduced to a minimum."[833] It is important to note that Churchill distinguished between the poison gas used in combat on the Western Front and felt that it was "not necessary to use only the most deadly gasses," because "gasses can be used which cause great inconvenience and would spread a lively terror and yet would leave no serious permanent effects on most of those affected."[834] Yet, his lack of qualms about the use of chemical agents on colonized populations reveals the continuity he saw between the threat and deployment of overwhelming violence and imperial control.

Churchill was largely alone in his advocacy of gas as a viable weapon of colonial control. When he encountered resistance to the use of gas to suppress unrest in northern India, he felt that "the objections of the India Office to the use of gas against natives are unreasonable," since he continued to believe that "gas is a more merciful weapon than high explosive shell, and compels an enemy to accept a decision with less loss of life than any other agency of war."[835] He also maintained that "the moral effect is also very great," and that "there can be no conceivable reason why it should not be resorted to," because "we have definitely taken the position of maintaining gas as a weapon in future warfare, and it is only ignorance on the part of the Indian military authorities which interposes any obstacle."[836] Churchill believed that if it was "fair war for an Afghan to shoot down a British soldier behind a rock and cut him in pieces as he lies wounded on the ground, why

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[833] Memoranda by Churchill.
[834] Memoranda by Churchill.
[835] Memoranda by Winston Churchill, 22 May 1919, CHAR 16/16.
[836] Memoranda by Churchill.

is it not fair for a British artilleryman to fire a shell which makes said native sneeze. It is really too silly."[837] The "moral effect" that Churchill put such stock in was the restoration of imperial authority through implicit violent repercussions and perceived technological supremacy. In Churchill's mind, the tools that won the war against other Europeans would prove to be almost incomprehensible to "uncivilized tribes" and impose an irresistible threat of retribution for colonial populations in more developed areas, should they rebel against British authority. This correlation between the "moral effect" and civilization within the British Empire would become synonymous with the third pillar of Churchill's technocratic imperial project: aviation.

Of Churchill's imperial technocratic policies, air control has received the most attention but also inspired the most confusion. Historians have focused heavily on his advocacy of air control in the Middle East but failed to recognize that not only did he see aviation as a useful tool in a wide array of imperial settings he also never envisioned aircraft as capable of unilaterally controlling colonized populations.[838] Rather, from the start, he saw it as one technocratic tool, albeit a central one like he had previously on the Western Front, that when used in conjunction with a host of other technologies appealed to his vision of British superiority. This systematic and comprehensive application of

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[837] Memoranda by Churchill.

[838] Omissi, *Air Power and Colonial Control*, 8–38; Priya Satia, "The Defense of Inhumanity: Air Control and the British Idea of Arabia," *The American Historical Review* 111, no. 1 (2006): 16–51; Satia, *Spies in Arabia*, 239–62; Dockter, *Churchill and the Islamic World*, 103–20; Fletcher, *British Imperialism and "The Tribal Question,"* 67–82; James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence: University Press of Kansas, 2003), 51–86; Daniel R. Headrick, *Power Over Peoples: Technology, Environments, and Western Imperialism, 1400 to the Present* (Princeton: Princeton University Press, 2010), 302–21.

technology made it possible to control the British Empire more effectively – and with greater financially efficiency – than ever before.[839]

The concept of utilizing aviation to suppress colonial uprisings and pacify territory was not new to Churchill during the interwar period. He first advocated for it as an efficient means of breaking the resistance of Mullah Muhammad Abdullah Hassan, a tribal warlord in Somaliland, in 1914 when he was still at the Admiralty.[840] He revived the idea in 1919 when the "Mad Mullah" continued to resist British control, leading to a successful RAF expedition to the region in 1920 that relied on bombing and strafing native settlements and bodies of troops, followed by air reconnaissance and overflights to support ground troops who occupied the area.[841] Furthermore, in September 1919, when he lamented that "many good Russian observers believe that a large proportion of the Bolshevik leaders look to Turkestan and Central Asia as the refuge of their sect and the region from which they will wage a general war of Oriental Communists against Christian Governments," which would lead "to Afghanistan and Persia being thrown into a state of extreme excitement by Bolshevik propaganda and armed assistance in the near future," he directed Air Marshal Hugh Trenchard "to make sure that the Indian aviation was in the highest state of efficiency and that it possesses machines capable of striking at the cities of Afghanistan, including Kabul, within a few hours of an outbreak of hostilities."[842] In air power Churchill found a technological solution to every challenge he saw to the British Empire, from pacifying "uncivilized" populations on the extreme

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[839] Dockter, *Churchill and the Islamic World*, 103.
[840] Dockter, *Churchill and the Islamic World*, 104; Omissi, *Air Power and Colonial Control*, 8–16.
[841] Omissi, *Air Power and Colonial Control*, 13–16.
[842] Memoranda by Winston S. Churchill, dated 17 September 1919, CHAR 16/18.

frontiers of empire to mitigating ideological contaminants that threatened to undermine

British authority.[843]

The success of these operations, coupled with the effectiveness of overflights in

Yemen, seemed to indicate to contemporary observers that aviation would become a

unilateral tool of imperial policing.[844] Yet, events in the Punjab region of India in 1919

called the omnipotence of air control into question: the Amritsar Massacre and the attack

at Gujranwala. On April 13, 1919, ninety Indian Army troops commanded by long-

serving Colonel Reginald Dyer opened fire on a crowd of peaceful protesters in the city

of Amritsar, killing hundreds.[845] On the following day, a British airplane bombed and

strafed a similar group of protesters in the town of Gujranwala. These twin events were

both a catalyst for – and barometer of – the political strife in India and the rest of the

British Empire, and were interpreted in different ways by different observers. Concerned

with quelling Indian popular upheaval, the British government in India set up a

commission to investigate the events surrounding the attacks, which recommended

relieving Dyer of command and precluding similar air attacks in the future.

The Hunter Commission, as it was known, observed that "although for purposes

of reconnaissance and communication the value of aircraft cannot be overestimated, there

can be no doubt that at the present stage of their development as weapons of offense,

bomb carrying aeroplanes ought not to be used in the suppression of civil disorder,"

except "against districts or areas which, after due proclamation or warning of intention to

use them, are or must be assumed by reason of the action of their inhabitants to be

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[843] Dockter, *Churchill and the Islamic World*, 109–10.
[844] Omissi, *Air Power and Colonial Control*, 10, 15–16.
[845] Kent, *Aftershocks*, 62–90; Wagner, "'Calculated to Strike Terror,'" 186.

belligerent as a whole."[846] The issue of aerial bombing was intimately linked to the

events of Amritsar, because the progression of warnings against civil disorder that the

commission recommended as a precursor to intervention from the air was identical to that

Dyer used in the days leading up to his attack. The utilization of these systems directly

undermined the operational mechanisms Churchill envisioned as part of his new

technocratic imperial control structure, even if the effect he sought was effectively the

same as Dyer's.[847] Dyer testified to the Hunter Commission that he "fired and continued

to fire until the crowd dispersed, and I consider this is the least amount of firing which

would produce the necessary and moral effect it was my duty to produce if I was to

justify my action."[848] In other words, Dyer fired because he believed that the British

government's authority in India was threatened by the continued existence of the

crowd.[849] When Dyer returned to Britain, he expected to be defended by the War Office

for his actions, but Churchill sided with the Secretary of State for India and ensured that

Dyer would not be reinstated, setting up a political maelstrom in Britain.[850]

Churchill saw Dyer, and others like him, as a liability in his efforts for imperial

restoration, and as emblematic of the kind of decline in British imperial action that his

technocratic policies were designed to alleviate.[851] People across Britain sided with Dyer

and saw him as a righteous guardian of British authority and fancied him the protector of

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[846] "Conclusions of Indian Disorders Committee," 6 May 1920, TNA CAB 24/105.

[847] Dockter, *Churchill and the Islamic World*, 108–16.

[848] "Summary of Lord Hunter's Commission Report," 1920, CHAR 16/60.

[849] Wagner, "'Calculated to Strike Terror,'" 192–95.

[850] For more on Dyer and the deliberations surrounding his dismissal, see: Nigel Collett, *The Butcher of Amritsar: Brigadier-General Reginald Dyer* (New York: Hambledon & London, 2005), 335–50; Nick Lloyd, *The Amritsar Massacre: The Untold Story of One Fateful Day* (London: I.B.Tauris, 2011), 151–84.

[851] Collett, *The Butcher of Amritsar*, 360–63.

British women and children threatened by an angry mob.[852] His removal from command and the India Office's subsequent demand that he retire from the Army led to an enormous public outcry that threatened the political position of Lloyd George's government. The climax came in July 1920 when the decision was debated on the floor of the House of Commons and Lloyd George called on Churchill to defend the government. In his speech, he disparaged Dyer's actions as "not the British way of doing business," and instead characterized them as "*frightfulness,*" defined as "inflicting of great slaughter or massacre upon a particular crowd of people, with the intention of terrorizing not merely the rest of the crowd, but the whole district or the whole country."[853] Instead, he felt that British military power in India stood on a foundation of technological disparity between British forces and their Indian subjects, comprised of a "whole apparatus of scientific war."[854] He said that "machine guns, the magazine rifle, cordite ammunition," and "the great developments which have followed the conquest of the air and the evolution of the aeroplane" could buttress British security in India far better than Dyer's actions, and that "motor lorries and wireless telegraphy would give increasingly the means of concentrating troops, and taking them about the country with an extraordinary and almost undreamed-of facility."[855]

Churchill's speech was a triumph of political theater that effectively ended the public controversy but also revealed the complexity and contradiction of his vision for the use of mechanized violence against colonized populations.[856] He objected to the use

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[852] Wagner, "'Calculated to Strike Terror,'" 212–25.
[853] 131 Parl. Deb., H.C. (5th ser.) (1920) 1705-1819.
[854] 131 Parl. Deb., H.C. (5th ser.) (1920) 1705-1819.
[855] 131 Parl. Deb., H.C. (5th ser.) (1920) 1705-1819.
[856] Dockter, *Churchill and the Islamic World*, 87–88.

of "frightfulness" against "civilized" populations, but conversely supported using gas, aerial bombing, and armored cars against "uncivilized tribes," and his continued advocacy of colonial air control further clouded the issue. Perhaps most revealing of all, his objection to using terror to control whole regions speaks to his belief in technology as a means of restoring a subservient imperial dynamic. British possession of technological superiority would, in Churchill's mind, preclude the assembly of the crowd in the first place.

In contrast to his skepticism of Dyer, Churchill sought to defend the use of air power in colonial control, sending along the extract from the Hunter Commission's report dealing with the attack at Gujranwala to Hugh Trenchard, the Chief of Air Staff, for comment.[857] Like Fuller, Trenchard served as the expert hand of Churchill in the development of air control policy, crafting many detailed documents laying out the nuances of the system that Churchill initially conceived.[858] Trenchard's response articulated the way Churchill justified expanding air power's role in policing throughout British territory. He argued that while present regulations and the Hunter Commission's report stressed "that in civilized countries the Air Arm will not on any occasion be used to take action from the air against rioters on the ground, until a state of war is declared to exist," it was "impossible, in the present state of the development of aircraft as weapons of offense to fulfill the provisions of humanity laid down in the King's regulations as the conditions under which Military force may be employed to quell riots."[859] This was

[857] Memoranda by Winston Churchill, 13 May 1920, CHAR 16/60.
[858] Dockter, *Churchill and the Islamic World*, 104–5.
[859] "Proposed Paragraph, Revised in the Light of the Air Staff Memorandum of May 1920", undated, CHAR 16/60.

because it was "nearly impossible to distinguish from the air whether the whole of a particular crowd, or only some members of it, are engaged in acts of violence," and "even when the temper of the major portion of the crowd is evident, the inevitable inaccuracy of the aeroplane as a weapon of offense must result in suffering to the innocent as well as to the guilty."[860]

Trenchard did offer one careful caveat, though: "emergencies may occur, when owing to distances, or damage to communications or both, and the progress of murderous mob violence and arson which there is no other means of checking, exceptions from this general position are not only justified, but necessary."[861] Essentially, Trenchard and Churchill sought to mollify the concerns of other members of the British government that aircraft would not bomb civilian centers indiscriminately, but reserved the right to use air power indiscriminately during crisis situations, which they or their subordinates were empower to determine and act upon. Effectively, this allowed them to preserve their vision of using air power for imperial control, without having it tainted by the political turmoil surrounding the events in northern India.

This controversy over the use of air control on "civilized" populations was complicated because, despite his protestations, Churchill had few moral qualms about utilizing air power in almost any setting. In much the same way that he perceived every act of political protest or colonial nationalism as evidence of a grand Bolshevik campaign of subversion, he saw the technocratic systems he promoted as a means of countering any threat to the authority of the British state. While he imagined the utility of new military

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[860] "Proposed Paragraph."
[861] "Proposed Paragraph."

technologies, regardless of the race or nationality of those targeted, he was conscious of the way violence against European civilian populations might effect political support for Lloyd George's government. Consequently, he was much more circumspect in how he planned for, justified, and authorized the use of mechanized violence within the British Isles, even when he personally felt it was justified.

In the wave of strikes that threatened British industry in late 1919 and 1920, for example, he dispatched mobile troops around the British Isles to be at the ready in case "conditions approximating to war or revolution" developed out of the social and political strife.[862] Similarly, he wrote to Trenchard that he agreed with him about "the disadvantages in using RAF personnel in strikes," but maintained that acts of resistance like the "Triple Alliance strike must be regarded not as an industrial dispute but as an attempt to overthrow the State; and from this point of view every loyal man must be employed to the full to cope with the situation."[863] In these cases, Churchill advocated the use of aerial surveillance and mechanized forces to maintain a visible government presence during industrial unrest and theoretically anticipate or circumvent escalation.

In Ireland he was more willing to utilize mechanized violence, and, even though he recognized the potential political fallout from aerial bombardment and strafing, he wanted to make sure "that the following case should be carefully provided for."[864] The hypothetical Churchill envisioned supposed that information was "received that Sinn Feiners are accustomed to drill in considerable numbers at any particular place, with or

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[862] Winston Churchill to David Lloyd George, September 1919, CHAR 16/11; Memoranda by Winston Churchill, 14 January 1920, CHAR 16/51.
[863] Memoranda by Winston Churchill, 11 January 1920, CHAR 16/51.
[864] Memoranda by Winston Churchill, 1 July 1920, CHAR 16/52.

without arms," which "must be regarded as a rebel gathering."[865] He felt that if they could "be definitely located and identified from the air," then he saw "no objection from a military point of view…to aeroplanes being dispatched with definite orders in each particular case to disperse them by machine gun fire or bombs, using no more force than is necessary to scatter and stampede them."[866]

Effectively, in this scenario, Churchill envisioned air control functioning in the same way against Irish revolutionaries as it would against rebellious "tribesmen" on the Afghan frontier or in Somaliland. Even after the formation of the Irish Free State, Churchill still sought to send aircraft to aid in establishing British control over territory that resisted their authority, and proposed the use of delayed-action aerial bombs to dislodge rebels in the Four Courts in the heart of Dublin.[867] Much like his advocacy of using mechanized forces in dealing with domestic industrial disturbances, his air control policies in Ireland elicited trepidation from his experts about the legitimacy of air power. These same leaders did not have the same concerns when dealing with non-European populations.[868] Churchill never seemed to waver in his conviction of technology's utility in all of these diverse settings and in its ability to dispense graduated violence to achieve the political and imperial ends he desired.

In all of these scenarios, Churchill sought to use aerial surveillance and the threat of mechanized violence to restore the power of state authority over populations that

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[865] Memoranda by Churchill.
[866] Memoranda by Churchill.
[867] "Minutes of the Eighth Meeting of the Committee of Imperial Defense Sub-Committee on Ireland," 29 June 1922, TNA AIR 8/48.
[868] Hugh Trenchard to Winston Churchill, 4 October 1920, TNA AIR8/22; "Minutes of the Eighth Meeting of the Committee of Imperial Defense Sub-Committee on Ireland," 29 June 1922, TNA AIR 8/48.

seemed to him to be contaminated with Bolshevik ideology, and who he believed

perceived the British nation as weakened as a result of the Great War. He sought to

translate the ideas that the Air Staff under Trenchard's leadership were developing for

use "against semi-civilized or uncivilized tribes," who historically had not been

effectively subdued by traditional ground forces.[869] The Air Staff contended that

"experience of native psychology suggests that so long as the tribesman is opposed to a

flesh and blood enemy on whom he can inflict visible casualties, so long as ground troops

are marching through his territory…a state of war will have its compensations."[870] To

the Air Staff, "the aeroplane gives the tribesman no such opportunities; his scouts are

useless, he has no warning before the attack is delivered, and most important of all, he

cannot from the very nature of the things strike back."[871] The threat of mechanized

violence that continuing overflights represented ensured "that the lesson learnt is not

forgotten," bolstered by "warning propaganda [which could] be dropped over wide areas

should occasion arise, and political officers [could], where conditions are suitable, be

carried on a tour so that they are in a position at the shortest possible notice to exercise

their personal influence."[872]

In these statements, the Air Staff fused the emerging interest in imperial

psychology with traditional imperial political tactics to justify the superiority of their own

techno-operational system, in the process formulating a new dynamic of imperial

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[869] "Air Staff Note on the Lasting Effect of Air Operations on Semi-Civilized and Uncivilized Tribes," 23 November 1921, TREN 76-1-21.
[870] "Air Staff Note."
[871] "Air Staff Note," [Original emphasis].
[872] "Air Staff Note."

interaction both in intellectual and real terms.[873] Yet, while the Air Staff was clear about

the geographic and cultural parameters that made a population viable for air control,

Churchill's willingness to transplant this system and the companion dynamic of

interaction seems to indicate he believed that "civilized" populations also were not

immune to air power's effect. Churchill imagined in all of these scenarios that

mechanized forces – both on the ground in the form of tanks, armored cars, and poison

gas, and in the air – provided the ability to dispense precise, gradational violence upon

any population that threatened British authority.

Maintaining air control as a politically viable concept was of special importance to

Churchill and Trenchard in the spring of 1920 because they were in the process of putting

together a plan that would effectively preserve the Royal Air Force as an independent

institution. This scheme provided the low-cost territorial control required to hold the new

British mandates in the Middle East.[874] In February 1920, Churchill wrote to Trenchard

that "you will have observed my reference in Parliament to the possibility of the Royal

Air Force taking over the military control in Mesopotamia," and ordered him to "submit a

scheme and state whether you consider the internal security of the country could be

maintained by it."[875] Churchill put strict parameters on what he intended for Trenchard

to do, cautioning him that "it is not intended that the force holding Mesopotamia should

be sufficient to guard it against external invasion," and "it would be proportioned solely

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[873] For more on the growing interest in psychology in the British Empire for a variety of purposes, see: Erik Linstrum, *Ruling Minds: Psychology in the British Empire* (Cambridge, Mass.: Harvard University Press, 2016), 13–42.
[874] Omissi, *Air Power and Colonial Control*, 18–38.
[875] Memoranda by Winston Churchill, 29 February 1920, CHAR 16/51.

to the duty of maintaining internal security."[876] This was because, "in the event of a serious invasion from without by the Turks, the Russians or the Arabs, or by a combination of them, reinforcements would have to be sent from India or home and a regular state of war would supervene."[877] In other words, Churchill did not see air power as a unilateral or omnipotent technological solution that negated the employment of other military systems, even older ones.

Instead, Churchill wanted Trenchard to "consider the maintenance of local and interior security," which he believed "might well be obtained by having a series of defended areas in which air bases could be securely established," where "strong aerial forces could be maintained in safety and efficiency."[878] Yet, Churchill needed to provide the Royal Air Force with a politically protected mission that could not easily be usurped by one of the other military services. Even though he had written in September 1919 that he did "not think it will be possible to go back and break up the Air Force after all that has been done during the present year, and I believe that its independent existence is really beyond challenge," the continuing efforts of the Royal Navy to shear off naval aviation caused him to fear for the long-term security of an independent air force.[879] By charging the Royal Air Force with responsibility for a new colonial mandate, Churchill was effectively ensuring its survival by legitimizing it and making it difficult to eliminate, while also bolstering his own political position by delivering on demands to cut costs while holding and defending unprecedented amounts of territory.

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[876] Memoranda by Churchill.
[877] Memoranda by Churchill.
[878] Memoranda by Churchill.
[879] Winston Churchill to John Seely, 21 September 1919, CHAR 16/28.

Churchill envisioned the RAF controlling Iraq through "an ample system of landing grounds judiciously selected," that "would enable these air forces to operate in every part of the protectorate and to enforce control, now here, now there, without the need of maintaining long lines of communications eating up troops and money."[880] These airfields would "be well-defended areas of a permanent character – probably a ring of blockhouses with a certain number of tanks or moveable structures to supplement them and a system of carefully sited machine guns sweeping the approaches," and needed to "in nearly every case be accessible by river."[881] These air bases would form a network of outposts and "afford a temporary refuge for the small party of officers and mechanics who would be stationed there."[882] He emphasized that "not only must the air force be able to operate from the air by bomb and machine gun fire on any hostile garrison, but it must possess the power to convey swiftly two or three companies of men to any threatened point where ground work is required, and to maintain them."[883] This would require "the construction of special aeroplanes for this purpose, and indeed for all other incidental to the scheme must be the subject of special study," because "you will naturally make the tools you require for the job and exactly those tools ad hoc."[884] This fit neatly with his long-term goal of developing a new generation of purpose-built vehicles and weapons, from tanks to aircraft, to gases, designed for both the requirements of imperial service and superiority in a future major conflict. He even noted that "the question of chemical

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[880] Memoranda by Winston Churchill, 29 February 1920, CHAR 16/51.
[881] Memoranda by Churchill.
[882] Memoranda by Churchill.
[883] Memoranda by Churchill.
[884] Memoranda by Churchill, [Original emphasis].

bombs which are not destructive to human life but which inflict various degrees of minor

annoyance should also be the subject of careful consideration."[885]

Yet, Churchill was not abandoning the imperial systems of old like "local

diplomacy," and noted that negotiations would need to "conform to the conditions of

aerial control," and "every effort would be made to enlist the cooperation of the

tribesmen in the establishment and maintenance of peace and order by subsidies and

possibly by giving them an interest in the development of the oilfields, etc."[886] Churchill

believed this could be facilitated through "local tribal militias," which "for the purposes

of maintaining order, be raised by the Chiefs like the Kyber Rifles in India or the

Bakhtiari in Persia."[887] Added to this, would be "a flotilla on the river, certain

organizations of armored cars, and the necessary garrisons of ground troops to hold the

defended areas and generally assist in maintaining control," likely amounting to "4,000

white and 10,000 native Indian troops…to secure the full effects of aerial control."[888]

This mirrored his larger vision of using mechanized forces in conjunction with aircraft to

control the landscape from the surface and the air, but these forces would be under the

unified command of a Royal Air Force officer. More than a year later, when the Royal

Air Force was about to take control over Mesopotamia, he insisted once more that "we

must have some of these light Tanks," and "if the War Office cannot produce a company

themselves we must ask the Air Force to organize a unit." This bureaucratic arrangement

preserved the RAF's indisputable claim to institutional authority in the region, thus

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[885] Memoranda by Churchill.
[886] Memoranda by Churchill.
[887] Memoranda by Churchill.
[888] Memoranda by Churchill.

securing its position politically within the British state while facilitating the symbiosis between mechanized ground forces and air power at the heart of Churchill's technocratic vision.

The plan Trenchard produced closely resembled Churchill's directive, and merely provided details about the siting of air bases and the kinds of units required for the scheme as well as details of its costs.[889] Trenchard's proposal, taken in conjunction with Churchill's long held advocacy of imperial air control and his emphasis on technocratic imperial development, demonstrates incontrovertibly that the scheme for RAF control in Iraq was entirely Churchill's idea and accomplishment. Additionally, the technocratic institutional framework and mechanisms that Churchill envisioned for the RAF in Mesopotamia perfectly mirrored the operational concepts he had propounded in his campaign for a Ministry of Defense. In many ways, the RAF in Mesopotamia would function as a miniature version of the Ministry of Defense he had envisioned.

Churchill lobbied hard throughout 1920 for the adoption of the plan Trenchard produced, at the same voicing alarmist warnings about the political devolution he believed was underway in the Middle East. He sent a preliminary version to Lloyd George, Andrew Bonar Law (the leading Conservative member of the Cabinet), and Austen Chamberlain (the Chancellor the Exchequer), in order to gain their support and streamline the acceptance of the rest by the Cabinet. He wrote that the "scheme gives promise of holding Mesopotamia effectively with an enormous reduction in the garrison and in the military expense," and seemed to him "to be the only way of saving the

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[889] Air Marshal Sir Hugh Trenchard, "A Preliminary Scheme for the Military Control of Mesopotamia by the Royal Air Force," 12 March 1920, TNA CAB 24/106/21.

province from being hopelessly crushed by military expenditure."[890] By emphasizing the

financial savings that would be possible by refraining from "marching a large army into

Mesopotamia and holding down each part of it with posts and garrisons," and instead

utilizing the "sort of quasi-military control which we have used with so much success in

the Sudan and Nigeria," he dangled an almost irresistible object in front of political

leaders desperate for financial savings for a variety of reasons.[891]

The transfer of responsibility for Mesopotamia to the RAF represented a political

diminution for the British Army. Consequently, the Imperial General Staff fought back

hard against the plan, claiming that it risked chaos in the Middle East and demanding that

Churchill – who was also Secretary of State for War – circulate a memoranda to the

Cabinet to that effect. In response, Churchill wrote that he would be "quite willing to

circulate your paper about Mesopotamia and Palestine to the Cabinet," but that it

amounted "to a declaration by the General Staff that these provinces cannot be held

except with garrisons which will utterly ruin them."[892] He suggested that the political

reality of the situation meant "that the choice of the Cabinet will have to lie between (a)

giving up the provinces, or (b) relieving the War Offices of all responsibility in the matter

and accepting the Trenchard plan."[893] Churchill felt that it was "no doubt quite easy to

demand great armies and enormous expense and wash one's hands of the rest of the

business," but this would not make a "contribution to the national problem," and their

"reasoning…would have prevented us developing a single one of our Asiatic or African

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[890] Memoranda by Winston Churchill, 22 March 1920, CHAR 16/51.
[891] Memoranda by Churchill.
[892] Memoranda by Winston Churchill, 7 May 1920, CHAR 16/52.
[893] Memoranda by Churchill.

dependencies."[894] In this process, Churchill risked a mutiny from within a powerful

institution that he was responsible for, but he also stood to reap enormous potential

political rewards, as well as prove the veracity of an operational model that he hoped to

replicate throughout the British Empire.

Churchill and Trenchard's plan was the political and bureaucratic backdrop of the

creation of the Middle East Department within the Colonial Office and the Cairo

Conference in March 1921, which together defined Britain's role in the Middle East

during the rest of the interwar period. When Churchill was named Secretary of State for

the Colonies in January 1921, it was for the express purpose of brokering a speedy and

financially advantageous settlement of the question of former Ottoman territory. To

facilitate this, he insisted on the creation of a new Middle East Department to concentrate

various powers and resources currently in the hands of a wide variety of other offices of

state and give him nearly autocratic power over imperial policy in the region.[895] This

allowed him to install functionaries who shared both his technocratic vision for imperial

control and his apprehension about the region's vulnerability to outside interference and

potentiallly to destabilizing Islamic populations across Britain's central Asian

territories.[896]

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[894] Memoranda by Churchill.
[895] "Middle East: Report of the Interdepartmental Committee Appointed by the Prime
Minister to make recommendations as to the formation of a new Department under the
Colonial Office to deal with Mandated and other Territories in the Middle East," 7
February 1921, CHAR 17/13; For more on the political intricacies surrounding the
creation of the Middle East Department, see: Dockter, *Churchill and the Islamic World*,
121–42; Gilbert, *Winston S. Churchill, Vol.IV*, 507–30; Darwin, *The Empire Project*,
375–85; Satia, *Spies in Arabia*, 180–81.
[896] Satia, *Spies in Arabia*, 179–98.

The most famous of these new officials was T.E. Lawrence, who represented for Churchill the kind of "man of action" who could restore Britain's imperial ascendency. Lawrence also represented the fusion between the cultural expertise that Churchill desired and the technological enthusiasm he was drawn to, as exemplified by Lawrence's fascination with motor vehicles.[897] While Lawrence took a leading role, he was only one of a whole array of cultural experts Churchill recruited. More significant, the accretion of power that the Middle East Department represented gave Churchill the authority to install the technocratic system that he and Trenchard had conceived, even in the face of objections from both the rest of the British military and other political leaders within the Cabinet. The formalization of these twin pillars of Churchill's vision for imposing imperial control over the Middle East was the focus of the Cairo Conference.

At the Cairo Conference, Churchill brought together a wide array of these new experts, including Lawrence, Trenchard, and Gertrude Bell, to design not only the political structure of the British mandates in the region, but also the technocratic framework by which the region would be economically exploited and militarily controlled.[898] At a meeting of the Combined Political and Military Committee, Churchill told the assembled group "that it would be necessary to carry out a far-sighted policy of Imperial aerial development in the future," that could connect "Egypt with Mesopotamia and India, which would shorten the distance to Australia and New Zealand by eight or ten days."[899] Yet, for Churchill, the success of this effort was contingent upon achieving a

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[897] John E. Mack, *The Prince of Our Disorder: The Life of T.E. Lawrence* (Cambridge, Mass.: Harvard University Press, 1998), 332–405.

[898] Fletcher, *British Imperialism and "The Tribal Question,"* 133–82.

[899] "Report on the Middle East Conference held in Cairo and Jerusalem, March 12th to 30th, 1921," June 1921, TNA AIR 8/34.

stable political settlement in the region. He believed that "in order to execute this policy it was essential that tranquility should be maintained upon the route," so that "a motor track [could] be made across the desert …along which aerodromes and wireless stations would be placed at various points."[900] He felt that "the security of this route might be maintained by granting subsidies to the tribes, and every effort must be made to improve its commercial and military value."[901] This perfectly encapsulates the interconnectivity Churchill perceived between traditional British imperial policies and the potential of new technology to enhance the effectiveness of those policies.

Churchill did not advocate controlling the Middle East exclusively through air power, but rather by a combination of new technologies that could efficiently cross terrain that had not been developed or improved by older technologies of empire. The management of these interconnected technological systems by the Royal Air Force was merely a bureaucratic means of installing Churchill's technocratic system, free from the institutional resistance of Britain's older military services. Additionally, these technologies would both be reliant on much older techniques of imperial coercion and facilitate a new level of intraimperial communication and travel. Most importantly for Churchill, the Middle East became a laboratory for his experiment with modern military technology and imperial control, and a stepping-stone to implementing his ideas across the British Empire.

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[900] "Report on the Middle East Conference."
[901] "Report on the Middle East Conference."

The experience in India in 1919 at Gujranwala and Amritsar demonstrated that mechanized violence utilized by untrained officers without careful centralized planning and control could be just as destructive to British imperial power as more traditional military forces commanded by incompetent or parochial leaders. The case of Dyer highlighted the injury that commanders operating independently could inflict on the British Empire's stability. In order to achieve the technocratic transformation of British imperial control Churchill envisioned, he needed a new generation of commanders accustomed to using mechanized weaponry and who would understand both its potential and its limitations. This required a transformation of the demographics and training of British military leaders on the ground. This process mirrored the transformation that Churchill sought in modernizing Britain's preparation for conventional warfare, but it carried more urgency because of the immediacy of imperial strife. For example, when Indian Army division commands came up for replacement in 1919, he went against the recommendation of the selection board because he thought that the generals they nominated, based on seniority, would not "do justice to the future of the army."[902] He believed that the British government needed to compel older generals to retire so that they could be replaced by "younger men who have made great names and displayed great qualities in the war."[903] These officers would be versed in the speed and capability of the technology of the Western Front, and better suited to deal with the complexity of the postwar imperial environment.

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[902] Memoranda by Winston Churchill, 6 September 1919, CHAR 16/18.
[903] Memoranda by Churchill.

To institutionalize this technocratic thinking across the military, Churchill sought to create an officer exchange program between the Royal Air Force and the other services because "the Army and the Navy gain a very great advantage in securing the continuous presence in their ranks of a class of officers who will be able to speak with a measure of real authority on questions connected with the air."[904] Churchill believed that it "would be little short of a disaster to the Army and Navy, and still more to the general interests of the Defense as a whole, if the Air Force were to be built as an absolutely mysterious expert specialist service."[905] His hope was that this would lead to a "free flow, interchange and liaison between the services," that would facilitate the promotion of a "class of young officers," who would acquire "influence in the Army which would make their Air Force training really useful to the Army."[906] While Churchill cautioned that "it must be remembered that we are only at the beginning of a system," these young officers, trained to think about warfare multi-dimensionally, would make his grand vision of technocratic imperial control possible.[907] These were the "men of action," fortified through technology, who would become the imperial agents and strategists of the future.

Churchill's ideas also demanded the centralization of both the accumulation of information made possible by aerial surveillance and control over violent action. The political stakes that accompanied these officers' actions compelled greater direction from British leaders in London who could see the full spectrum of issues in play and better understood the potential consequences of violent action. In Churchill's mind, it was not

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[904] Memoranda by Winston Churchill, 12 May 1920, CHAR 16/52.
[905] Memoranda by Churchill.
[906] Memoranda by Churchill.
[907] Memoranda by Churchill.

enough to *simply* replace, with younger men, commanders who operated on outmoded patterns of thought and action. He also needed the ability to direct their actions on the ground as they wielded new technological tools that could magnify their destructive power. Churchill's requirements represented the continuation of traditional British administrative methods, adjusted for the enhanced speed and connectivity possible through advanced technology.[908] In this way, Churchill's technocratic systems of control both necessitated and enabled a greater degree of centralized authority.

This was part of the rationale for the creation of centralized administrative control in the Middle East Department, but the technology that Churchill believed would ultimately make it possible was radio. Churchill believed that there was an "urgent necessity for the improvement of Imperial telegraphic communications," and that "a wireless network is one important means to this end."[909] In a memorandum Churchill circulated to the Cabinet, Trenchard also emphasized that "the necessity for an efficient wireless network throughout the Empire is urgent, both from a strategic and commercial point of view."[910] Churchill wanted a chain of radio stations to enable communications

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[908] John Brewer, *The Sinews of Power: War, Money and the English State, 1688-1783* (Cambridge, Mass.: Harvard University Press, 1990), xv–xix; Patrick Joyce, *The State of Freedom: A Social History of the British State since 1800* (Cambridge: Cambridge University Press, 2013), 3–11; James Scott, *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1999), 4.

[909] Winston Churchill, "Proposal by Marconi's Wireless Telegraph Company to Construct a Network of Wireless Communications to serve the needs of the whole British Empire", 7 April 1920, TNA CAB 24/103/31.

[910] "Imperial Wireless Communications: Marconi Proposals", 3 May 1920, TNA CAB 24/105.

across the British Empire with unprecedented speed.[911] The system would be partially

paid for by Australia, India, and the British colonies in Africa, and would create invisible

links among the territories and populations in those far flung locales.[912] Eventually, each

of these colonies demanded their own powerful transmitters that would allow them to

communicate directly with London, attesting to the importance of the technology in the

imperial relationship.[913] This was the final component in Churchill's grand technocratic

system, and would be the foundation of the BBC with all of its capacity for fostering

cultural and political cohesion during the interwar period.[914]

Churchill was relatively successful implementing his ideas in the last months of

1921 and most of 1922. The RAF took over control of Mesopotamia, and established

what became known as the "Desert Corridor," connecting Egypt to India through a

network of bases, airfields, wireless stations, and narrow dirt tracks.[915] Robert Fletcher

notes that this route never became the sole domain of aviation, divorced from the ground,

that some contemporary commenters and many subsequent scholars imagined. [916] Yet,

that symbiosis between the air and ground was exactly how Churchill conceived of it, and

the thin strand of imperial control that it represented was the intended result.

The success in creating this logistical connection and in controlling Mesopotamia

helped justify the retention of the RAF as an independent organization as Churchill had

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[911] Winston Churchill, "Proposal by Marconi's Wireless Telegraph Company to Construct a Network of Wireless Communications to serve the needs of the whole British Empire", 7 April 1920, TNA CAB 24/103/31.
[912] Winston Churchill, "Imperial Wireless Scheme", 15 August 1921, TNA CAB 24/137/30.
[913] Churchill, "Imperial Wireless Scheme."
[914] Potter, *Broadcasting Empire*, 18–46.
[915] Fletcher, *British Imperialism and "The Tribal Question,"* 67–77.
[916] Fletcher, *British Imperialism and "The Tribal Question,"* 72.

hoped. It also seemed to legitimize the application of his ideas to the rest of the British

Empire, but political events intervened to prevent the realization of this goal. In October

1922, Lloyd George's coalition government fell, effectively ending the realization of

Churchill's ideas by ejecting him from office. While he did return to office two years

later, he did so as Chancellor of the Exchequer and as a member of a different party – the

Tories – and he would not have a leadership role in British military or colonial policy

again until September 1939 when he returned as First Lord of the Admiralty. The result

of this abbreviated leadership was the incomplete installation of the larger vision he had

for technocratic reform in the British Empire. Churchill's great technocratic talent was

understanding how disparate political, economic, military, and technological systems

intersected and interacted, and then creating a comprehensive scheme to achieve an

efficient result. Without his leadership, the various institutions involved in the

technologies he championed retreated into isolation and competition with one another,

resulting in technocratic stagnation.

The British Army and the Royal Air Force did follow the institutional path that

Churchill had forced them onto, which speaks to his success at shifting – at least in part –

their cultural and intellectual frameworks. They continued to refine and expand the

technological systems that he promulgated and further adapted them to the imperial

environment.[917] By the late 1920s, this resulted in a new generation of tanks and aircraft

better suited to the demands of imperial control but different in form and intended

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[917] J. P. Harris, *Men, Ideas, and Tanks: British Military Thought and Armoured Forces, 1903-1939* (Manchester: Manchester University Press, 1995), 97–229; Williamson Murray, "Armored Warfare: The British, French, and German Experiences," in *Military Innovation in the Interwar Period* (Cambridge: Cambridge University Press, 1996), 19–29.

function from their wartime predecessors.[918] The tanks in particular were far lighter and faster than their wartime predecessors, much more in line with the "land car" that Fuller had envisioned. The investment in these new technological systems during the 1920s, coupled with the severe budget constraints of the early 1930s, and the asymmetric nature of warfare against colonial populations meant that there was little impetus for either further technological or intellectual development. The result of this unfinished transformation was that while the British Army was the most mechanized in the world in 1940, the service had dedicated little time or thought – and had even less experience with – fighting an even partially mechanized force and could do little to adapt to the challenge it posed. In contrast, the emphasis Churchill had placed on research and development within the Royal Air Force, in addition to its imperial mandate, coupled with a significantly more technologically enthusiastic leadership meant that Britain's air service was more quickly able to develop and produce advanced designs of aircraft.[919] The inconsistent institutional performance almost two decades later at the beginning of World War II was as much the result of the uneven implementation of Churchill's intellectual paradigm as the vagaries of politics, economy, or institutional momentum.

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[918] David Edgerton, *Warfare State: Britain, 1920-1970* (Cambridge: Cambridge University Press, 2006), 42–45.

[919] David Edgerton, *Britain's War Machine: Weapons, Resources, and Experts in the Second World War* (Oxford: Oxford University Press, 2011), 61–67.

Conclusion

The scale of institutional and societal change that Britain witnessed during and after the First World War cannot be overstated. Almost every aspect of British life – both at home and in the Empire – was affected. Yet, many of these changes were interconnected, even if they did not seem to be on the surface. The common thread running between them was the effort of the British state to remain relevant and in control despite unprecedented challenges to its traditional economic and political mechanisms of authority. The result of this transformative effort was a technocratic "warfare state" that sought technological solutions to the increasingly fraught political and logistical challenges that agents of the British state perceived around themselves.[920]

Churchill was at the center of this effort. His significance was a product of both his unique technocratic skillset and the unanimity he perceived between his own political fortunes and those of the British state as a whole. As a supremely and overtly political actor, Churchill's involvement in defining the course of British state institutional development must be understood as simultaneously reactive and proactive. Churchill's enthusiasm for technology was always shaped through the lens of his enthusiasm for political advancement. Yet, he was also hyperaware of the complexity and consequences that technocracy presented to the British state, for both good and ill. This dichotomy

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[920] David Edgerton, *Warfare State: Britain, 1920-1970* (Cambridge: Cambridge University Press, 2006), 15–58.

between opportunity and caution was also central to his technocratic advocacy. His ambivalence was rooted in his engagement with a wide array of ideological and intellectual trends that spanned the nineteenth and twentieth centuries.

The result of this dialogue among political power, technological enthusiasm, and technocratic anxiety produced several consistent features in Churchill's institutional reform advocacy. One such feature was Churchill's embrace of expertise as a means of installing the technocratic systems he saw as integral to the future success and stability of the British state, despite his protestations against the "rule of experts." The key component to this contradiction was his systemic understanding of technology and his belief in intangible leadership qualities innate to Britain's traditional ruling class. The characteristic that separated Churchill from other technocratic agents of the day was his ability to conceptualize a large technological system that utilized the interaction between the capabilities of a wide array of technologies to both enhance their effectiveness and offset their limitations. He was more than happy to draw on those with expertise in discrete technologies, but he placed them within an institutional and intellectual structure that he designed and controlled. This was consistent with his belief in the necessity of controlling technology's corrosive qualities by tempering them with the classically educated liberal worldview of Britain's traditional ruling class.

This desire for control also defined Churchill's conception of technocratic reform, both in real and imagined terms. In technology, he saw a means of exerting greater control over realms that had consistently challenged British state authority, like colonized people or conventional land warfare. Yet, on a deeper level, technocracy offered a means of controlling the pace of change affecting the British nation, and the British state as an

extension of that body. Churchill did not share the transformative aspirations of other

technocratic advocates. Instead, he saw it as a mechanism for increasing the efficiency of

the British state's traditional institutions and of revitalizing the role of Britain's elite class

in that process. Ironically, Churchill's technocracy offered the potential of staving off the

effects of change – perhaps permanently – rather than acting as the catalyst for it.

Change also defined the evolution of Churchill's technocratic vision at every turn.

His ideas were a reaction to change, and would never have gained political traction

without the pressure exerted by the rapidly changing environment of World War I.

However, Churchill's ideas also changed in response to the shifting political conditions

his ideas were constructed to satisfy. Churchill's technocratic schemes always began as

elegant and elaborate solutions to pernicious challenges, but evolved as his ideas proved

untenable either for logistical, intellectual, or political reasons. The result of this

evolution was a shrunken system tailored to meet the requirements of empire, that

retained the core concepts that had defined its grander antecedent. This process ensured

the final characteristic of Churchill's technocratic reform: the unfinished nature of his

reforms.

This incomplete reform process was the result of an array of factors. These

included Churchill's efforts at curtailing the scope of his reform ambitions in the face of

political resistance, but also the vagaries of his political career and indeed inherent

intellectual assumptions within his larger technocratic schemes. At their core, his

insistence on retaining and preserving the cultural frameworks and characteristics of the

British state ensured that, while he might change the institutional systems of

technological development and procurement or the mechanisms for imperial control, his

technocratic transformation would not be accompanied by a complementary intellectual transformation. Yet, the incompleteness of Churchill's reforms might be the most lasting and important aspect of his technocratic efforts, because it helps to explain the incongruity between the interwar British military's voracious accumulation of technology and the services' complete inflexibility in the use of it. [921] In many ways the military challenges Churchill faced two decades later as Prime Minister were born from the limitations of his own technocratic transformation efforts, both those he had intended and those he had not yet realized or imagined.

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[921] David Edgerton, *Britain's War Machine: Weapons, Resources, and Experts in the Second World War* (Oxford: Oxford University Press, 2011), 28–65.

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