

The Shadow of the Bomber:
Maurice Gamelin, Air Power and the Fall of France

Robert Parker

A Thesis
In the Department of
History

Presented in Partial Fulfillment of the Requirements
For the Degree of
Doctor of Philosophy (History) at
Concordia University
Montreal, Québec, Canada

January 2022

© Robert Parker, 2022

**CONCORDIA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

This is to certify that the thesis prepared

By: Robert Parker

Entitled: The Shadow of the Bomber: Maurice Gamelin, Air Power and the Fall of France

and submitted in partial fulfilment of the requirements for the degree of

DOCTOR OF PHILOSOPHY (History)

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final examining committee:

_____ Chair
Dr. Marcie Frank, Department of English:

_____ External Examiner
Dr. Martin Laberge, Département d'histoire (Université du Québec en Outaouais)

_____ Examiner
Dr. Alison Rowley, Department of History

_____ Examiner
Dr. Gavin Foster, School of Irish Studies

_____ Examiner
Dr. Andrew Barros, Department of History (UQAM)

_____ Thesis Supervisor
Dr. Norman Ingram, Department of History

Approved by _____
Dr. Peter Gossage, Graduate Program Director

January 26, 2022 _____
Dr. Pascale Sicotte, Dean of Arts and Sciences

Abstract

The Shadow of the Bomber: Maurice Gamelin, Air Power and the Fall of France

Robert Parker, Ph.D.

Concordia University, 2022

This study aims to clarify the various means by which air power determined the course of the Battle of France from May 10 to June 25, 1940. The influence of aircraft is shown to have played a dual role in the conflict, exerting both material and psychological effects upon both strategists and combatants. The material business of war in the skies is explored with particular attention to the grievously neglected historical fact that in the spring of 1940, France had achieved numerical equality with the German *Luftwaffe*. Pilot shortage, rather than insufficient production of aircraft, ensured that French aircraft were greatly outnumbered throughout the battle. Materially, France was prepared to wage a defensive war with reasonable chances for success. Chapter two outlines how France passed the industrial test of war. Chapter three explores the financial resiliency of the French economy after mid-1939 and the strength of the national war chest. However, the central concern of this study is the means by which the threat of modern air power exerted a decisive and overall deleterious *psychological* influence upon those tasked with defending the Republic. Commander-in-Chief Maurice Gamelin, in particular, is shown to have devised a radical and unprecedented strategy based on minimizing the impact of German air power over the battlefield. All else became subordinate to this overarching priority, resulting in the sacrifice of the entire French strategic reserve in a failed bid to neutralise the power of the German air force.

The absence of a strategic reserve force was instrumental to the collapse which took place on the Meuse River between May 12-15, 1940. This study's novel contribution lies in its exploration of the reasons behind the lack of reserves in the French order of battle, an omission which has been often noticed but never investigated. The concluding chapter also expands our understanding of the man at the apex of the French military, Maurice Gamelin. New insights into the state of his physical and cognitive health during the leadup to war provide deeper understanding of the causes behind the General's ineffective leadership and strategy.

Résumé

L'Ombre du Bombardier : Maurice Gamelin, la Puissance Aérienne et la Chute de la France

Robert Parker, Ph.D.

Université Concordia, 2022

Cette étude vise à préciser les différents moyens par lesquels la puissance aérienne a déterminé le déroulement de la bataille de France du 10 mai au 25 juin 1940. L'influence de l'aviation a joué un double rôle dans le conflit, exerçant à la fois un effet sur les stratèges et les combattants. L'affaire matérielle de la guerre dans le ciel est explorée avec une attention particulière au fait historique, gravement négligé, qu'au printemps 1940, la France avait atteint l'égalité numérique avec la *Luftwaffe*. La pénurie de pilotes, plutôt que la production insuffisante d'avions, a fait en sorte que les avions français étaient largement inférieurs en nombre tout au long de la bataille. Matériellement, la France était prête à mener une guerre défensive avec des chances raisonnables de succès. Le deuxième chapitre décrit comment la France a réussi l'épreuve industrielle de la guerre. Le troisième chapitre explore la résilience financière de l'économie française dès l'été de l'année 1939, ainsi que la force du trésor de guerre national. Cependant, la préoccupation centrale de cette étude est les moyens par lesquels la menace de la puissance aérienne moderne a exercé une délétère influence *psychologique* sur les personnes chargées de défendre la République. Le commandant en chef Maurice Gamelin, en particulier, a mis au point une stratégie radicale et inédite basée sur la minimisation de l'impact de la

puissance aérienne allemande sur le champ de bataille. Tout le reste est devenu subordonné à cette priorité primordiale, entraînant le sacrifice de l'ensemble de la réserve stratégique française dans une tentative ratée de neutraliser la puissance de l'aviation allemande.

L'absence d'une force de réserve stratégique a contribué à l'effondrement qui a eu lieu sur la Meuse entre le 12 et le 15 mai 1940. La contribution originale de cette étude se trouve dans l'exploration des causes pour le manque de réserves dans l'ordre de bataille français, une omission qui a été souvent remarquée mais jamais étudiée en profondeur. Le dernier chapitre élargit également notre compréhension de l'homme au sommet de l'armée française, Maurice Gamelin. De nouvelles informations sur l'état de sa santé physique et cognitive avant la guerre permettent de mieux comprendre les raisons derrière l'inefficacité marquée de la stratégie conçue par le général pour la défense de la France.

Acknowledgement

To Wendy, Roman and Madeleine who remained patient and supportive. Thank you also to my parents for always believing that I could do this. I would also like to thank Dr. Norman Ingram for all his insight and wise advice, Dr. Andrew Barros (U.Q.A.M.) and Dr. Gavin Foster (Concordia) for their time and support. I am grateful to Concordia University's Department of History and the late Dr. Geoffrey Adams for generous financial assistance. Sincere thanks are also due to the staff at the *Service Historique de l'Armée de Terre* and the *Service Historique de l'Armée de l'Air* in Vincennes. I am also indebted to the patient help given with a smile by the staff at the *Archives Nationales* in Paris.

Table of Contents

| | | |
|----------------------|--|-----|
| Chapter 1: | The Aerial Apocalypse | 1 |
| Chapter 2: | Reconstructing the <i>Armée de l’Air</i> : 1934-1940 | 49 |
| Chapter 3: | Long War or Short War? | 158 |
| Chapter 4: | Gamelin’s War | 248 |
| Chapter 5: | Gamelin’s Burden | 293 |
| Conclusion: | | 329 |
| Bibliography: | | 334 |

Chapter 1

The Aerial Apocalypse

On the eve of the German invasion in May 1940, France was a nation of forty-two million people, of whom nearly five million were placed into military service. Yet, following one major defeat on its eastern border, France's military house of cards collapsed so rapidly and with such finality, nothing short of total surrender sufficed to halt the invader's progress. It was an unprecedented collapse, the pace of which was only accelerated by the shocking fact that the French order of battle provided no major reserves with which to counter unforeseen setbacks. When the line broke around Sedan, no large formations could be called upon to challenge the irrupting *panzers*. In the all-important days that followed, no secondary army could be sent into the widening breach along the Meuse River, because no such formations existed. It begs the question at the heart of this study: *why did France's military leadership fail to provide a strong and mobile reserve force in the spring of 1940?*

The earliest attempts to explain the military defeat addressed this problem by creating a myth of overwhelming German material superiority.¹ Belief in overwhelming German

¹ Two of the earliest voices describing an avalanche of German armor pouring into France were heard at the 1942 Riom trials. There, French general Keller estimated that 2700 French tanks had faced 6500 German *panzers*. General Besson estimated 3000 French tanks opposed by 8000 German *panzers*. Julia Bracher. *Riom 1942: Le Procès* Paris: Omnibus 2012), pp 886 (Keller) and 804 (Besson). Recent scholarship has completely overturned these early testimonies - establishing respective tank forces at 2439 German tanks versus 3254 French tanks and 310 British tanks available on May 10th, 1940. Karl-Heinz Frieser *The Blitzkrieg Legend: The 1940 Campaign in the West* (Annapolis: Naval Institute Press, 2005), 37, 40-41.

military/industrial output was often coupled with concurrent arguments of a longstanding decay in French political and military institutions. This notion of internal decadence served to explain why the French had not been able to resist their traditional eastern rival more successfully. From the beginning, rationalizations for the battle's surprising lopsidedness thus assumed a dual nature. On the one hand, moral failings pertaining to the psychological and spiritual fiber of the nation explained the ineffectual defense of France's borders. On the other hand, material deficiencies pertaining to the state and quantity of France's rearmament prior to the war explained how the *Wehrmacht* was able to amass what appeared to be an overwhelming advantage in modern military equipment. Historians have largely followed these two broad themes ever since.

Moralists dominated the early discussions, when the events under scrutiny were still recent and vivid in witnesses' memories. In lieu of large caches of archival documentation, early researchers relied extensively on personal accounts and memoirs of those involved. As we will see, this imbued first accounts of the defeat with a sense of shame, of personal disappointment, as though the nation had been abandoned by its sons and daughters at the very moment of existential crisis. In other words, the attempts by early writers to rationalize the debacle devolved quickly into exercises of national handwringing, citing a perceived decline of France's moral and civilizational self-confidence as the chief contributor to the nation's misery. Moralist accounts favored macro-historical trends over specific, observable causes for the war's outcome. While at times bloated with personal theory at the expense of empirically driven research, they remain invaluable as first attempts to make sense of the unexpected national collapse, and it is to these first researchers into the Battle of France that we will presently turn our attention.

Part 1

The Moralists

The search for explanations followed closely on the heels of defeat. How was the French army, only recently considered among the world's most formidable, brought low so quickly, and with such apparent ease? Among the first voices to venture an answer was that of Maurice Gamelin, Commander-in-Chief of the French Armed Forces. On May 18th, eight days into the battle, General Gamelin was called upon to report his impressions in a letter to the Minister of War and National Defense, Edouard Daladier. This request came at the height of the battle, when matters were by no means finalized. Despite this, Gamelin began penning his reply in a nine-page handwritten letter which certainly required several hours to compose and edit. In its completed form, his letter contains two passages laying the blame for defeat upon the French citizen-soldier's lackluster performance. In the first of these, he wrote: "encouraged in the name of civilization to enjoy a soft, daily life, today's serviceman did not receive in the years between the wars, the moral and patriotic education which would have prepared him for the drama in which the country's destiny is going to be played out." In the second, he concluded: "Today's French soldier, yesterday's civilian, did not believe in this war...other than as something to endlessly criticise."²

² SHAT 5N580. Letter from M. Gamelin to Daladier, May 18, 1940. [This and all subsequent translations are the author's].

In this way, France's commander in chief demystified the unravelling catastrophe by citing the common soldier's moral and motivational deficiencies. His opinion softened, but essentially maintained in his three-volume memoirs, blamed French recruits for displaying less *cran et élan* than their counterparts of 1914-18. In his estimation, the defeat was not only military, but revelatory of deeper, more generalized ailments within the nation. "I am personally convinced," he confessed to his journal, "that our defeat was not only a simple military matter, such as history has witnessed so many times before, but a kind of reckoning. It was the entire nation which was made to pay for its accumulated errors."³ Gamelin was only the first in what would become a long line of observers seeking to explain defeat by pointing to a moral degeneracy long since steeped within French culture and institutions.

Gamelin's replacement as Commander-in-Chief, Maxime Weygand, called into duty only nine days after the opening of hostilities, developed similar arguments. "The wave of materialism which submerged France, the spirit of pleasure and ease are the deep causes for our weakness and our defeat. We must return to the strong ideals summarized by the following words: God, Nation, Family."⁴

Philippe Pétain added his voice to this same theme, citing the nation's decline into Epicureanism since 1918 as the cause for defeat. "Our defeat is punishment for our moral failures. The mood of sensual pleasure had destroyed what the mood of sacrifice had built up."⁵

³ SHAT GR 1K 224 15, Conditions dans lesquelles a été déclarée et s'est développée la guerre de 1939, p.23.

⁴ Maxime Weygand, *Rappelé au Service*, (Paris: Flammarion, 1950), 299.

⁵ Philippe Pétain. *Paroles aux Français, Messages et Ecrits '34-'41* (Lyons: Lardenchet, 1941), 18-19. Pétain had been repeating this theme for many years as noted by Norman Ingram. As early as 1934, Pétain warned "the education of the race is too much neglected. Youth and children are not educated with a view to their duties..." See Ingram, *The Politics of Dissent: Pacifism in France, 1919-1939* (Oxford: Clarendon Press, 1991), 169.

In this, if in nothing else, Pétain's opinion dovetailed with another important early analyst of the Battle of France. Historian Marc Bloch was among the first voices "from below" to speak along similar lines. Like his military Commanders-in-Chief, Bloch wondered whether France's shocking defeat had been the result of a longstanding decline in morality and civil mindedness. He pointed to the failure of educators and the spread of both communism and luxuriousness as reasons for the army's humiliating defeat.

Let us at least have the courage to admit that what so far has been conquered in our land is precisely the life of our dear, dead town. The leisurely rhythm of their days, their crawling motor buses, their sleeping officials, the time lost in their soft atmosphere of lethargy, the lazy ease of their café-life, their local politics and petty trades...and their mistrust of anything that may shake them out of their comfortable habits.⁶

Bloch's narrative in *Strange Defeat* points to military mistakes, but also to an educational system which failed to inculcate sufficient patriotism among the nation's youth, and to a national press obsessed with self-deprecation.⁷

The fact remains that we are now in a position to measure up the results. Ill-informed about the infinite resources of a people that has remained far healthier than they, as a result of poisonous teaching, have been inclined to believe; rendered incapable by inherited contempt and by the limited routine of their training to call in time upon its inexhaustible reserves of strength, our leaders not

⁶ Marc Bloch, *Strange Defeat: A Statement of Evidence Written in 1940*, (New York: Norton, 1999), 149.

⁷ Bloch was not alone in assigning some measure of blame upon the nation's schoolteachers. Barnett Singer has demonstrated the widespread circulation of this belief by political and military leaders eager to conceal their own roles in the debacle. "Many politicians and army officers - themselves guilty - cast bitter animadversions upon the entire teaching profession." See Barnett Singer, "Patriots to Pacifists: The French Primary School Teachers, 1880-1940," *Journal of Contemporary History*, (July 1977), 12:3, 426.

only let themselves be beaten, but too soon decided that it was perfectly natural that they should be beaten.⁸

These prominent, early voices spoke of the events of May-June 1940 as punishment for longstanding moral decadence, as the result of a decline which sapped the nation's ability to resist its invader. Such opinions were widespread. They were not limited to a particular social or political mindset, as indicated by the examples cited above. Ideas like these found representation across the political spectrum. Weygand's Catholic monarchism, Gamelin's avowed republicanism and Bloch's left-leaning support of the Radical Party, each in their own way, meandered toward a similar interpretation of the state of their nation. They shared the conviction that French culture, represented by its civil, political and military institutions, had declined during the interwar years. As a result, its people were not able to draw upon the same reserves of fortitude and self-sacrifice which had saved the nation in 1914.

Arguments of moral decline and inevitable defeat were not only quickly developed, but also proved remarkably durable. They offered nebulous macro explanations which were impossible to verify, which pointed to no one in particular, and which therefore exonerated individual responsibility. In this way, they served to obfuscate the role played by specific military commanders at specific moments, in setting the stage for disaster. It is what John Cairns has memorably labeled "the providential approach to the Fall of France."⁹ Cairns' observation

⁸ Ibid, 170.

⁹ John C. Cairns "Along the Road Back to France, 1940" in *American Historical Review* 64:3 (April 1959), p.590 (583-603)

(made in 1959) that “historians tended not to pick it up”¹⁰ did not age well, and by the late 1960s, had been contradicted by a series of influential studies on the topic.¹¹ In fact, the notion of unavoidable French defeat based on national decline since 1918, would persist for decades, and serve as the thread tying together a body of popular works on the subject for years to come.

Among the most widely read of these remains Alistair Horne’s *To Lose a Battle* (1969). The book remains one of the best-selling general works on the topic. Its description of the French military is scathing, filled with punitive descriptions and discrediting anecdotes. Horne describes the French military culture as lethargic, inept and unimaginative and France’s national survival dependent upon the intervention of Allied powers. In the 1920s, he writes, England and the USA “would do almost anything rather than risk having to save France a second time.”¹² That either of the two World Wars were fought for this reason remains to be demonstrated; Horne provides no attempt to do so. “Since the ‘day of Glory’ of 14 July 1919” [the year when national Bastille Day events incorporated a grand military parade, headed by Foch and Joffre, in celebration of the nation’s victory in the First World War] “almost every throw of the dice had resulted in advantage to Germany and loss to France.”¹³ Elsewhere Horne presents a collection

¹⁰ Ibid.

¹¹ Notable examples from French historians include André Beaufre, *La Drame de 1940*. (Paris: Plon, 1967), Claude Paillat’s, *Le Désastre de 1940: La Guerre Immobile, Avril 1939-10 mai 1940* (Paris: Robert Laffont, 1984) and Jean-Baptiste Duroselle’s *Politique étrangère de la France, La décadence (1932-1939)*, (Paris: Imprimerie Nationale, 1979). The late 1960s saw two widely read English-language studies make similar arguments on the near-inevitability of French defeat in the spring of 1940. These were Alistair Horne, *To Lose a Battle: France 1940*, (London: Macmillan, 1969) and William Shirer, *The Collapse of the Third Republic: An Inquiry into the Fall of France in 1940*. (New York: Simon and Schuster, 1969).

¹² Alistair Horne *To Lose a Battle: France 1940* (London: Macmillan, 1969), 13.

¹³ Ibid, 515.

of photos, one of which is captioned “Two happy, drunken French prisoners.” The accompanying picture shows two smirking French soldiers being marched into German captivity.¹⁴

In such ways, Horne leads his readership toward a caricature of France’s military effort, one doomed to defeat from the start. This theme is carried into his depiction of Anglo-French diplomacy before the war. He describes BEF camps as dynamic and full of activity. French camps on the other hand were unruly and led by desultory officers presiding over insubordinate men. The Munich Conference is described as a British initiative, reflective of their vigor and determination to avoid war. French President Daladier is described as a reluctant hanger-on to the proceedings.¹⁵

Conversely, Horne’s description of German performance in the war is laudatory. His narrative is filled with superlatives in its description of German re-armament and “the awe-inspiring process by which Hitler within the following 4 years was to create...the most dazzling instrument of war...”¹⁶ Elsewhere, he refers to the *Sickelschnitt*, Germany’s strategy of attacking through the Ardennes and sweeping north toward the English Channel, in terms of its “inherent beauty”.¹⁷ Horne’s praise of the *Wehrmacht* coupled with his deprecating, rather mocking, tone in describing the French army, combine to generate a sense of inevitability to the events of 1940. It is the familiar “providential” view of the battle put forward by Gamelin,

¹⁴ Ibid, picture collection between pages 36-37.

¹⁵ Horne 91

¹⁶ Ibid, 38.

¹⁷ Ibid., 166, asterisked (unnumbered) footnote.

Weygand, Pétain and Bloch. From this point of view, defeat appears pre-ordained, informed by a logic that dismisses French military capabilities, not only on a material level, but more emphatically in reference to the nation's willingness to fight.

In the same year, William Shirer published *The Collapse of the Third Republic*. Written in a spirit similar to Horne's narrative, this work presents France's defeat as a quick and inevitable result of years of "sclerosis in the high command".¹⁸ His description is a catalogue of French deficiencies and of German efficiency. It is a tautological work, constructed backwards from the aftermath of total French defeat. Its popularity with readers did much to create the enduring myth of unavoidable German success in 1940. The ineptitude of France's military leadership is the central theme of Shirer's thousand-page investigation. On the subject of Gamelin's actions from May 10-19, he writes, "the lethargy, the hesitancy of the Commander-in-Chief leaves one breathless."¹⁹ Elsewhere he observes, "France's two ranking military chiefs...appear to have been more concerned with blaming each other for impending disaster than with throwing themselves together with abandon to make one last desperate all-out effort to stave it off".²⁰ As to France's role in the community of nations, the book concludes with the following insight: "In the end, France had been saved by the victory of British, Russian and

¹⁸ William Shirer, *The Collapse of the Third Republic: An Inquiry into the Fall of France in 1940* (New York: Simon and Schuster, 1969), 174.

¹⁹ *Ibid.*, 701.

²⁰ *Ibid.*, 706.

American arms...how many times in history, I wondered, can a nation be rescued from defeat and collapse by other countries?"²¹

His readers are led by eloquent and lively prose to envision the defense of France as an enterprise doomed from the start, an effort made even less viable by the hopelessly inept leadership of its planners and executors. Well into the 1970s then, the historiography of May-June 1940, remained saddled with the persistent assumption that a sickly Third Republic was doomed to collapse under the strain of invasion. According to this view, years of French mismanagement and concurrent German progressivism in matters of military and industrial development had made this a battle of unequal foes, with one belligerent so far in advance of the other in terms of leadership, military theory and industrial preparation, as to have made any other outcome unlikely in the extreme.

Part 2

The Materialists

By the middle years of the 1970s, the historiography of the Battle of France underwent a shift away from moral causes in favor of a closer inspection of the material factors involved. In 1979 Geoffrey Gunsburg's influential work *Divided and Conquered* carefully outlined what was then a novel argument: that Germany and the Allies were, in fact, closely matched in terms of military equipment. Gunsburg shows how in most important respects, with the notable exclusion of air power, the Allies were in a favorable material position from which to wage war against

²¹ Ibid., 943.

Hitler. And by 1940, even the gap in warplane construction was being rapidly narrowed. Allied defeat came as a result of poor strategy and poor communications. For these deficiencies, Gunsburg blames Gamelin and his subordinate, General Alphonse Georges. *Divided and Conquered* was one of the earliest attempts to demonstrate how France and her Allies could have fought Nazi Germany with greater success using the materials already at hand by the spring of 1940. Moreover, Gunsburg suggests that with a few important changes in leadership and execution, the outcome might well have been radically different. This was a significant departure from the bulk of historical research on the subject; it was an investigative trail widened by the work of a new generation of historians led by Robert Doughty.

In the mid-1980s, Doughty began his remarkable series of works analyzing the battle from an operational level. Doughty points to the failure of the *Deuxième Bureau*, France's intelligence gathering apparatus, in "making the worst mistake one can make in intelligence estimates."²² That error lay in interpreting information according to their preconceived notions, indeed their hopes, of where the Germans intended to press their attack, rather than accepting the reality as it was developing on the ground. He also points to the importance of the German experience in Poland which signaled weaknesses in the *Wehrmacht's* existing doctrines, among its officer corps, and the manner by which it employed its most modern equipment. This experience helped the German army improve its methods and engage French forces more effectively than it would otherwise have been able to in the spring of 1940.

²² Doughty, *The Breaking Point: Sedan and the Fall of France, 1940*. (Mechanicsberg, Pennsylvania: Stackpole, 2004) 343.

In the same spirit, Julian Jackson wrote *The Fall of France* “to offer primarily military explanations for the Fall of France”.²³ Like Doughty, Jackson points to slow communications throughout every level of the French army as well as to poor intelligence gathering as the most important contributors to France’s defeat. According to this view it was mismanagement in the realm of technology and intelligence-gathering, not national decadence, which led to France’s defeat and occupation. Anthony Adamthwaite wrote in *Grandeur and Misery*, “The defeat was primarily a military one. Political and ideological weaknesses contributed to the collapse but did not determine it.”²⁴ In 2005, Karl-Heinz Frieser’s excellent work, *The Blitzkrieg Legend* continued the search for less philosophical and more demonstrable, causes for Germany’s striking victory. Written from a German perspective, Frieser’s narrative is consistently aware of how vulnerable the German army was at times and how untried and risky its *Sickelschnitt* manoeuvre seemed before the events of May 1940. While praising the *Wehrmacht’s* performance, Frieser is also cognizant of how its invasion of France could have floundered at specific points in the battle. He points to the familiar failings within the French army: poor communications and intelligence gathering. French strategic weakness is acknowledged, in some areas, but Frieser insists that the French army had its opportunities to blunt the advance of the *Blitzkrieg*. In particular, this work pays attention to choices made by French general Flavigny after he was ordered to counterattack German tank columns from the south on May 14-15. Frieser considers the events of these two days, and the personal decisions made by one particular general, absolutely pivotal in explaining the outcome of the battle. Far from the

²³ Julian Jackson, *The Fall of France: The Nazi Invasion of 1940* (Oxford: Oxford University Press, 2003), 224.

²⁴ Anthony Adamthwaite, *Grandeur and Misery: France’s Bid for Power in Europe, 1914-1940*. (London: Arnold, 1995), 225.

narrative of unavoidable defeat based on nation-wide deficiencies in education, lifestyles and leadership, Frieser points to one particular point in time and space to determine why the battle unfolded as it did. This is a far cry indeed from the earliest interpretations of the battle, which used sweeping accusations of decadence to explain the disaster. For Frieser, general Flavigny's failure to mount the attack he was ordered to launch grants him the dubious title of "the real loser of the battle of Sedan".²⁵

The theme of unavoidable German victory in 1940 is most robustly challenged in the work of Ernest R. May. *Strange Victory* (a deliberate reversal of Marc Bloch's deterministic *Strange Defeat*), argues that victory could easily have gone to the other side. Re-enactments of the battle conducted for May's research, using a U.S. Army tactical simulation system resulted in Allied victory. May claims that systematic failures in French intelligence gathering was the chief culprit in allowing for a German breakthrough in the Ardennes. Failure to detect the fulcrum of the German attack until it was all but too late determined France's fate. This failing was more attributable to the Deuxième Bureau, France's intelligence gathering network, than to any commander in the field. "The defeat of France," he writes, "...was not, then, foreordained. As late as mid-May, events could have turned in such a way that later historians would have been explaining why Germany launched an offensive that failed."²⁶

Most recently, Philip Nord has written, "France's defeat in 1940 was a military phenomenon, not the inevitable expression of some generalized national malaise or moral deficiency. And it was the army brass, far more than the common fighting man, who deserve the

²⁵ Karl-Heinz Frieser, *The Blitzkrieg Legend: the 1940 Campaign in the West* (Indianapolis, MD: Naval Institute Press, 2005), 204.

²⁶ Ernest R. May *Strange Victory: Hitler's Conquest of France* (New York: Hill and Wang, 2000), 459.

lion's share of the blame."²⁷ In this passage, Nord succinctly encapsulates the journey traveled by historians over the last several decades in studying *La Grande Chute*. Gamelin's observation from May 19th, 1940, that the French soldier's uninspired performance was the chief cause for the defeat, has not been vindicated by ensuing years of scholarship. In fact, over the last twenty years, most historians have worked to overturn Gamelin's rendition of events. They have shown how mistakes made throughout the French army's leadership cadre were to blame for a battle which, by any stretch of the imagination, could not have played itself out any worse for France.

The preceding recapitulation of the historiography of the Fall of France had as its purpose the clear delineation of distinct schools of thought: moralists and materialists. Recent materialists have been influential in re-orienting scholarship toward equipment, doctrine and decisions taken by the high command to explain the reasons for Germany's rapid victory. However, it is possible that the pendulum has swung too far in favour of materialist arguments over the last several years. There remains an important space within the historiographical debate to consider the extent to which France's population, civilian and military, were (or were not) prepared to fight. This work will attempt to re-orient the investigation of the events of May-June 1940 towards moral causes, or more accurately, toward a closer analysis of morale within the military leadership of France. For there *was* a profound and demonstrable defeatism among the highest ranks of both the French army and air force; a defeatism which rankled and festered within the top civilian/military organisations, the Conseil Supérieur de la Guerre and the Conseil Supérieur de la Défense Nationale, since German rearmament began in earnest in 1934. By

²⁷ Philip Nord, *France, 1940: Defending the Republic*, (New Haven, CT.: Yale University Press, 2015), 97.

1940, mounting pessimism regarding their ability to resist aggression from a resurgent German military machine would serve to stultify French leadership and ossify the army into a purely defensive, wholly reactionary force, incapable of the kind of decisive action which alone could have saved the Republic during the first and decisive days of the conflict.

Of all the external threats faced by the Third Republic in the second half of the 1930s, none preoccupied its military and civilian leadership more than the specter cast by Germany's growing air power. The spectacular growth of the *Luftwaffe* in both technological and numerical terms reinstated Germany as a military force to be reckoned with and transformed the geopolitical landscape of Europe. This growing threat played into pre-existing fears of modern air power as a potentially decisive, war-winning force in the next European conflict. By the late 1930s, an apocalyptic literary tradition had already been established by writers from both sides of the Atlantic, promising swift and devastating air raids upon the outbreak of war. As we will see, many such views argued that the belligerent who called upon the greatest number of bombers, and therefore the most powerful striking force, would quickly obliterate enemy resistance and devastate military targets, industrial centers and densely populated urban areas alike. The end would come quickly, but only after the delivery of unimaginable terror and destruction from swarms of high-flying bombers which would transform the very nature of armed conflict.

Part 3

The "Apocalyptic" Theory of Air Power

Throughout the interwar period, military theory on the application of air power was in a state of flux. Debate flourished between conservative theorists who looked upon First World War lessons as sacrosanct and the innovators who saw in the modern air force a tool to ensure that prolonged, static warfare would never again stultify the armies of Europe. Military academies were replete with contradictory opinions on the subject. In France, official aerial theory clung to the lessons of 1914-18 but the dizzying pace of technological progress suggested new and previously inconceivable possibilities for modern air power. Already by the mid 1920s, improvements in speed, altitude and maneuverability had transformed the capabilities of Great Powers to apply military force into the third dimension. The rule book on air power demanded to be rewritten, but how this could be done without extensive modern experience on a European battlefield was unclear.

During the First World War, aircraft were used primarily for reconnaissance and limited ground support. Surveillance craft were expected to perform an active and pre-emptive reconnaissance which was not to be mistaken for the passive role of intelligence gathering. The airman's ability to observe enemy movement and concentration was relied upon to prepare a more effective and informed defense than had been previously possible. The aircraft's spotting ability alone was revolutionary. As one theorist wrote in 1909, "aircraft will destroy surprise and therefore destroy strategy."²⁸ One of the earliest and most strategically significant examples of this use of air power took place at the Marne in September 1914. There, a French observation crew spotted the concentration of German field artillery and successfully directed French fire

²⁸ R.P. Hearne. *Aerial Warfare*. (London: Bodley Head, 1909), 26.

upon it. By the time the battle had begun in earnest, the German Sixteenth Army Corps had lost half of its field pieces.²⁹ Proving its value from the outset of the War, observation remained the aircraft's primary role until 1918. The RAF's official wartime historians expressed this very fact unambiguously: "[the aircraft's] first duty was reconnaissance. All its other and later uses were consequences of this central purpose and were forced on it by the hard logic of events."³⁰

How much the use of aircraft might have changed had the war lasted into 1919 or beyond can of course never be known. However, aircraft in use at the time of the Armistice were already unrecognisable from their predecessors dating back to the outbreak of war. A telling illustration of this fact is found in the illustrious career of Roland Garros, the French ace, who was taken as prisoner of war in April 1915, after being forced into a glide landing by mechanical difficulties. Upon his escape in 1918, he returned to France and immediately attempted his return to service. This, however, proved to be impossible. The planes in use had changed so much since the days of his air victories in 1915, that he was obliged to go back to flight school before being allowed to rejoin a fighter squadron.³¹ Technological progress was so rapid that over the course of the war, French and German air forces each used over two hundred different types of airplanes. A new design that was conceived in January could be a prototype by March and its first production

²⁹ Lee Kennett has provided an excellent account of this action in *The First Air War: 1914-1918*. (Toronto: MacMillan, 1991), 33.

³⁰ Ibid, 40. Citing Raleigh and Jones, *The War in the Air: Being the Story of the Part Played in the Great War by the Royal Air Force vol. 1* (London: Hamish Hamilton), p. 213.

³¹ Jean-Pierre Lefebvre-Garros, *Roland Garros* (Paris : Carrère, 1988), 535.

planes could join active squadrons by the end of the year.³² At the armistice, French industry was producing a whole new generation of lighter, more powerful mostly water-cooled engines including the 300hp Hispano-Suiza, the 450hp twelve cylinder Renault, the sixteen cylinder 450 hp Bugatti, and the 500hp Salmson twin-row radial.³³ With each new generation of ever lighter chassis and ever more powerful engines, strategists laboured for insight into the manner by which the new machines could be expected to change the face of war. By the late 1920s, when airplanes began reaching speeds of 300 km/h and ceilings of 13 000 meters, theorists were keenly aware that the air arm had been completely transformed from its First World War iteration. The potential of these machines to influence the course of a future European war remained largely hypothetical, and as a result, speculation at times ran rampant. Limited displays of modern airpower in distant (usually colonial) disputes offered conflicting impressions on the proper role of aviation above the modern battlefield.

Military writers were not the only ones studying the matter. From the earliest days of flight, conjecture on the future role of air power had been conducted and published by civilian writers, academics, and journalists alike. A literary tradition had emerged by the 1920s which, taken as a whole, grew decidedly alarmist. In books, articles and movies, apocalyptic imaginings painted the specter of air power as an ultimate weapon, capable of unprecedented terror and destruction. The newly accessible skies took on a menacing appearance to some writers who were already aware of the many ways by which the 'third dimension' might be increasingly

³² For example, the Spad VII went from prototype to initial delivery in five months (April-September 1916). See Kennet, p.94.

³³ John H. Morrow, Jr. provides an excellent summary of the progression of aerial technology from 1914 to 1918 in *The Great War in the Air: Military aviation from 1909-1921* (Washington and London: Smithsonian Institute Press, 1993), 294.

militarised. C. Grahame-White, one of England's first trained pilots, expressed early concerns about the use of air power in future conflicts. Grahame-White asked whether nations had a right, according to the agreements of the Hague Convention to employ such means of attack. 'When this war is over,' he wrote in 1915, "in view of the experience that has been gained, there will be need for a code of rules in aerial war. It is obvious already that certain forms of attack must be declared illegitimate."³⁴ Grahame-White referred specifically to attacks on 'unfortified' towns and villages as examples of unlawful or illegitimate attacks.

In his work, *Aerial Warfare*, journalist R.P. Hearne visited the same theme and introduced the notion of international legislation to regulate the use of national air forces. Hearne was one of the first voices calling for the establishment of a worldwide authoritative body whose mandate would be to govern air operations. He advocated for the identification of each aircraft's country of origin with painted flags. According to him, aircraft should first receive special permission before crossing an international frontier line. He promoted the development of an international code of signals by which all airships would agree to conform to instructions signalled to them when over another country. International 'open routes' were to be established (much like oceanic sea lanes) which could be used by all without fear of violation of any nation's sovereign territory.³⁵

What makes Hearne's study so interesting to us a century later is his evident concern over aircraft's ability to trespass at will over national boundaries. In this age of robust nationalism, Hearne wondered how traditional state borders could be maintained and defended,

³⁴ Claude Grahame-White and Harry Harper. *Aircraft in the Great War: A Record and Study* (Chicago: A.C. McClurg and Co., 1915), 254.

³⁵ R.P. Hearne. *Aerial Warfare* (London: The Bodley Head, 1910), 207-208.

faced with the potential for enemy incursion from above. Airplanes presented an obvious challenge to defence plans based on standard two-dimensional campaign maps. Hearne's work was an attempt to restrain the revolutionary potential of air-based attacks through legislation and international standards. This idea was revisited often during the interwar years. In 1920, a League of Nations air force was suggested in the British House of Commons. In 1922, Robert Cecil, Chairman of the Executive Committee of the League of Nations Union, suggested that making air forces the League's "special weapon" would facilitate disarmament. This idea culminated in a proposal by French Minister of War, André Tardieu, before the Geneva Conference for the Reduction and Limitation of Armaments in February 1932. There, Tardieu proposed a plan for international control of aviation as the key to European security. Individual nations would be prohibited from construction of military aircraft. According to this proposal, the League would also exercise control over the operation of international airlines.³⁶

Attempts like these to harness national air forces under the aegis of an international regulatory body stemmed from a growing fear of what modern bomber fleets would be able to accomplish in the next European war. Less than fifteen years after the Wright Brothers' achievement at Kitty Hawk, soldier turned journalist and playwright, Edgar Charles Middleton wrote *Airfare of today and of the future* (1917). Produced after three years of European war, Middleton's work reflects how the conflict was able to shatter earlier hopes that international law could still govern military conduct. 'We are at last beginning to realise that in aircraft, we have a

³⁶ This reflected the common fear that civilian aircraft could be quickly transformed into military aircraft after a declaration of war. In 1930 U.S. Air Strategist William Mitchell wrote, "In case of war, large [civilian] airplanes can be transformed into a bomber within 24 hours." See William Mitchell, *Skyways, A book on modern aeronautics* (Philadelphia and London, J.B. Lippincott, 1930), 307. David Davies (Lord Davies of Llandinam) argued in 1930 that Germany, for example, could covert her civilian aircraft into military machines "within an hour or two". See Michael Pugh, "Policing the World: Lord Davies and the Quest for Order in the 1930s" *International Relations* 16:1, (2002), 101.

hitherto uncontrolled factor of war that will alter entirely every condition of the modern, civilized world.³⁷ Middleton considered that the bomber was destined to become the decisive weapon of the future. “Warfare,” he wrote, “will be to all purposes instantaneous. The belligerent fleets of aircraft will set out with the dawn or the darkness...and within twelve hours the conflict must be finished one way or another.”³⁸ Middleton was among the first to publish a vision of the bomber as queen of the battlefield, evoking waves of bombs devastating entire cities, thus rendering prolonged conflict impossible. It was an image that was to recur time and again, as we will observe, and gives Middleton the distinction of seeing, far earlier than most, the permanent changes to war brought about by the advent of aviation.

It also bears noting that Middleton’s text describes the development of flying machines in terms of a spiritual rebirth for humanity.

Aviation will affect the psychology of every nation in that it will develop an entirely new race of men. It will eradicate the decadent side of human nature, and will build up the better side, the hunger for beauty and peace, and ever natural and wonderful phenomena of a wonderful creation. The air can never be petty or small or mean, so neither can the beings that navigate it.³⁹

In both positive and negative terms, as a signal to progress on the one hand and as a deliverer of destruction on the other, the airplane is here described as having a transformative effect upon its user. Many of the fears concerning airpower in the early decades of the 20th century were founded on such awestruck notions of a technological marvel, whose practical,

³⁷ Edgar C. Middleton, *Airfare of To-day and of the Future* (London: Constable and Co. 1917), 159

³⁸ *Ibid.*

³⁹ *Ibid.*, 172.

indeed even spiritual potential remained shrouded in the nebulous domain of imagination and pure speculation.

Fears like Middleton's were also fueled in part by the experience of bombing runs conducted during the First World War. Though relatively small in size, these raids struck a powerful psychological blow, wherever they occurred, totally out of proportion with the small amount of physical damage they managed to produce. In England, the memory of lighter-than-air dirigibles – the famous zeppelins – droning over the urban landscape left a lasting impression. The initial panic witnessed at the appearance of these aerial monsters led British Air Marshall Trenchard to observe: “the moral effect of bombing stands undoubtedly to the material effect in a proportion of 20 to 1.”⁴⁰ Lieutenant-Colonel N.J. Gill also drew attention to the striking disparity between the bomber's capacity for delivering enormous blows to the enemy's morale while curiously inflicting so little material damage. He wrote, “the material damage caused by bombing raids is a debatable factor, there can be no doubt as to their moral effect.” Gill went on to observe that “numerous documents taken from captured Germans show the holy dread created by our bombs...It is, I believe, universally conceded that there is no form of frightfulness so trying to the nerves as aerial bombing.”⁴¹

By 1917, attacks by German lighter-than-air dirigibles declined as Allied countermeasures, in the form of searchlights and incendiary bullets, rendered the lumbering

⁴⁰ Alan Stephens. “The True Believers: Air Power Between the Wars” in *The War in the Air 1914-1994* ed. Alan Stephens (Fairbairn, Australia: Aerospace Center, 1994), 59.

⁴¹ Lieut.-Colonel N.J. Gill. *The Aerial Arm: Its Functions and Development* (London: The “Aeroplane” and General Publishing Co., Ltd, 1919), 135.

zeppelins ineffective. Their replacement came in the twin engine, G-plane or *Gross Flugzeug*, better known in English as the Gotha. From May to September, Gotha bombers from the Kagohl 3 air group waged a daylight campaign against London and South-East England, dropping some 648 bombs, killing four hundred and injuring a thousand more. Damage caused was in the vicinity of four hundred thousand pounds, a considerable sum in 1917.⁴²

**WHAT LONDON LOOKS LIKE WHEN THE AIR-HUNS COME ON
THEIR MISSIONS OF MURDER.**

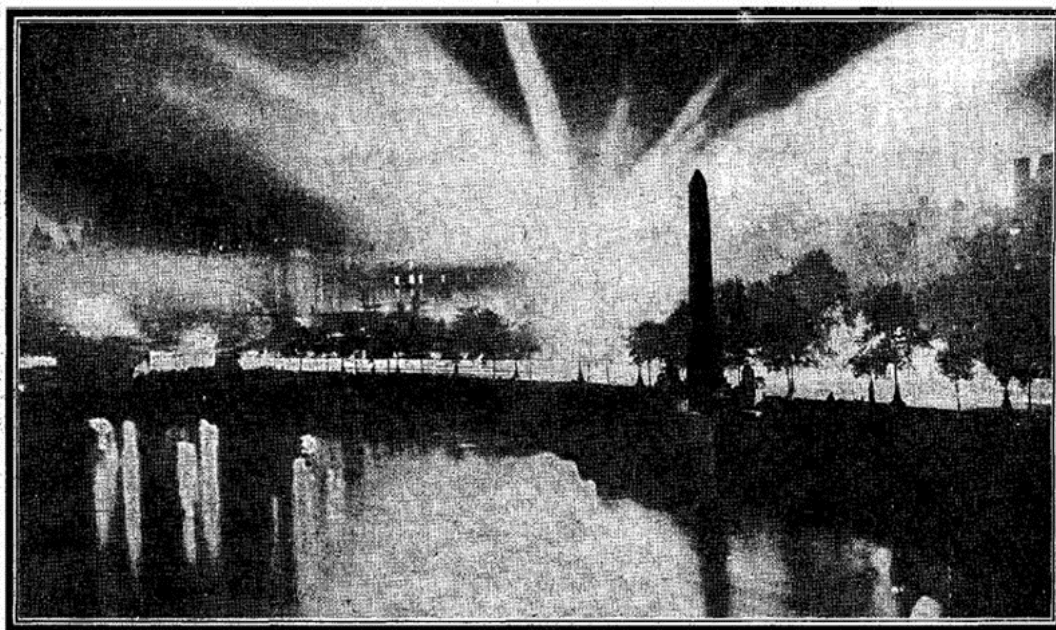


Photo from the Mirror (September 10th, 1915)

⁴² C.M. White, *The Gotha Summer* (London: Robert Hale 1986), 208.

THE SATURDAY EVENING "GLOBE" **FINAL NIGHT EDITION**

**Old English Silver
and SHEFFIELD PLATE.**
If you have any good quality
silver for sale take them to
WALTER H. WILSON
28, KING ST., W. JARVIS, S.W.1.
who will give a real fair price and
every courtesy. **TRIAL 6666**

The Globe

AND TRAVELLER. Founded 1803.

**Help the Homeless
People of Poland**
by Contributing to the
Great Britain to Poland Fund

Subscriptions will be gratefully
acknowledged by the Hon. Treasurer,
British War, Sup. St. King Street,
Covent Garden, W.C.

No. 38,063. SATURDAY EVENING, JULY 7, 1917. ONE PENNY.

GREATEST AIR RAID ON LONDON.

| | | |
|---|--|---|
| <p>REPRISALS.</p> <p>THE MAN ON THE TRAM AND TO-DAY'S RAID.</p> <p style="font-size: 0.8em;">BY A MAN IN THE STREET.</p> <p style="font-size: 0.8em;">Anger that we do not take reprisals against German cities and towns was rife everywhere to-day.</p> <p style="font-size: 0.8em;">On trams and trams, in the street, in fact wherever one went, the feeling was bitter against those who say that, what- ever we do we must not descend to the uncivilised methods of the Hun. We must do nothing in the way of hitting back.</p> <p style="font-size: 0.8em;">Meanwhile our women and children are being slain and maimed. The anger to-day at our helplessness rose to white heat among the poorer classes, particu- larly as the "come-and-see-it-again- on-the-other cheek" attitude of some of our pacifist prelates. Against those the feeling was savagely significant. A</p> | <p>AT LEAST 20 ENEMY AEROPLANES BOMB THEIR WAY ACROSS THE CAPITAL.</p> <p>"CONSIDERABLE NUMBERS" ATTACK ESSEX COAST AND ISLE OF THANET BEFORE FLYING ON TO METROPOLIS.</p> <p>FLEW SO LOW MISTAKEN FOR BRITISH.</p> <p style="font-size: 0.8em; text-align: right;">Press Bureau, Saturday. Lord French, Field-Marshal Commanding-in-Chief Home Forces, issued the following at 11.35 a.m. to-day:—</p> | <p>RUSSIAN ATTACK EXTENDING.</p> <p>VIOLENT FIGHTING IN CENTRE OF FRONT.</p> <p>PINKS IN FLAMES.</p> <p>FIRST ENEMY LINE TAKEN IN NEW GALICIAN OFFENSIVE.</p> <p>BRITISH ADVANCE WEST OF WYTSCHAETE.</p> <p style="font-size: 0.8em;">The Russian offensive has been greatly extended. A Petrograd mes- sage announces violent fighting near Pinsk, which is approximately in the centre of the Eastern front, and marks the limit of the German advance east-</p> |
|---|--|---|

In the wake of the Gotha bomber: July 1917

After the War, vivid memories of such air raids, coupled with rapid technological advancement in aeronautics caused many to wonder whether a new super-weapon had in fact been introduced – one to which would soon accrue the destructive outcome of warfare exponentially. Lessons gleaned from the experiences of 1914-18 soon appeared obsolescent as aircraft capabilities improved with each passing year. By the mid -1920s, air crews were capable of performing feats unimaginable to the pilots of the First World War, raising the question of whether the lessons of 1914-18 remained relevant to modern pilots. How could one transfer the role of a Morane Saulnier AI, first produced in 1917 with a top speed of 225 km/h, a 150 hp engine and a ceiling of 7000 meters, to the same manufacturer's 1928 model, the MS-221, boasting a top speed of 288 km/h, a 600hp engine and a ceiling of 12 000 meters? Steady improvement in aircraft design led to pure speculation on what might be achieved by a new

generation of planes during the next great war.⁴³ A key aspect of modern airpower which drew a great deal of attention was its potential to break the kind of defensive deadlock witnessed on the Western Front from 1914-18. Across Europe and America, theorists developed ever more aggressive notions of strategic bombing and of the aerial *Knock-Out Blow* as a potential war-winning force. The great unknown factor was the level of resiliency to be expected by civilian populations faced with such a weapon. This was the subject of considerable debate. Air power advocates argued that civilian morale was fragile, breakable and that its dissolution would determine the outcome of war. If air power could inflict levels of terror and physical damage in excess of that which the people could tolerate, civil strife might be expected on a scale witnessed in Russia during 1917 or in Germany a year later. The argument which placed long-range bombers above all other weapons of war was championed by Giulio Douhet, an Italian artillery officer with a particularly captious and original mind.⁴⁴ From 1921 to his death in 1930, he published a series of works stressing his conviction that the modern bomber would revolutionize warfare. *The Command of the Air* was published in 1921 and forcefully advanced the bomber's pre-eminent role over the modern battlefield. Douhet's arguments were so heavily weighted in

⁴³ Alan Stephens has argued that between the World Wars, 'it was the *idea* of airpower, as much as any demonstrated capability which played a dominant role in international affairs. This was particularly evident in the Munich crisis of 1938 when fear of the *Luftwaffe's* numerical and qualitative superiority played a decisive role in the Allies' decision to persist in the policy of appeasement toward Hitler's Germany. See Stephens, "The True Believers", p. 59. Zara Steiner provides excellent insight into the role of airpower in shaping the events at Munich in *The Lights that Failed: European International History 1933-1939* (Oxford: Oxford University Press, 2011), 714-16.

⁴⁴ Douhet was greatly interested in the airplane's ability to break the trench-based deadlocks of the First World War. During that war, Douhet had written critically to his superiors in reference to their mass ground offensives, undertaken at enormous human cost. He wrote, "to cast men against concrete is to use them as a useless hammer." (Philip Meilinger, ed. *Paths of Heaven: The Evolution of Air Power Theory*. Alabama: Air University Press, 1997), 9. In fact, Douhet's outrage, expressed in vicious missives to several government officials as of 1916 led to his arrest and court-martial for issuing false news and for "diminishing the prestige and the faith in the country and of disturbing the public tranquility" (Ibid, 5).

favor of air power over all other military services, that those who followed were often compelled to either build upon his work, or else find their own arguments in opposition to him.⁴⁵ The impact of his first and most influential publication has been extensively studied and need only concern us here regarding two specific observations.⁴⁶ The first of these is the bomber's ability to break the deadlocks of 1914-18, which he believed to have been the unavoidable result of modern technological and total war. The second is the importance stressed by Douhet on the psychological impact of the modern bombing run. In his view, cities would be defenseless against such attacks and the civilian population fully exposed to the full violence of incendiary, explosive or gas-filled ordnance. Douhet's theory placed emphasis on the importance of breaking the enemy's psychological, rather than physical resistance. He promoted the use of gas bombs against the population of major cities in order to fan the sort of mass panic which would result in growing civilian movements to end the war.⁴⁷

⁴⁵ Notable sympathizers with Douhet's theory include Louis Sigaud. *Douhet and Aerial Warfare* (New York: Putnam and Sons, 1941) and General William Mitchell (*Skyways: A book on Modern Aeronautics* Philadelphia and London, J.B. Lippincott, 1930). However, the many voices speaking against Douhetian theory were usually given wider circulation and publicity. As late as 1938, several well-publicized voices argued that Douhet, like all air power enthusiasts were gravely mistaken concerning the military potential of aircraft. Journalist Thomas Phillips wrote that the Spanish Civil War had proven Douhet wrong in all important aspects of his air theory (bombers proved unable to cut communications, demoralize citizens or produce the kind of material damage that would make the continuation of the war impossible. See Thomas Phillips, "Preview of Armageddon", *Saturday Evening Post*, March 12 1938, p.12-13, 95-100. These arguments persisted even after the convincing display of German air power in Poland. Thomas Mahoney wrote in *Popular Aviation* in April, 1940 that Douhet's predictions were in no way confirmed by recent events and that the threat of apocalyptic air power did not materialize as prophesied by the Italian strategist. See Thomas Mahoney, "Doctrine of Ruthlessness" *Popular Aviation*, April 1940, 36-37.

⁴⁶ Phillip Meilinger has written an excellent overview of Douhet's air theory, exploring the impact of Douhetian thought on air strategists across the world. See Col. Phillip Meilinger *Paths of Heaven: The Evolution of Airpower Theory* (Alabama: Air University Press, 1997). More recently, Thomas Hillper has added a much-needed analysis of Douhet's predecessors in the development of an apocalyptic air power theory while defending Douhet's lasting influence on military and aerial planning in the 21st century. See Thomas Hillper *Bombing the People: Giulio Douhet and the Foundations of Air Power Strategy 1884-1939*. (Cambridge: Cambridge University Press, 2013).

⁴⁷ Douhet argued that the air arm and poison gas were complimentary weapons. "To get an idea of the nature of future wars, one need only imagine what power of destruction that nation would possess whose

Taken together, these two facets of Douhet's theory made the claim that the continuous front, as practiced in the First World War could never serve to restrain the waves of aircraft which an enemy might choose to unleash against it. Secondly, massive bombing runs can win wars by targeting the enemy morale on the ground, located in centers of industry and population. In the future, all wars would be total wars, thought Douhet. The kind of stalemate seen on the Western Front would be repeated time and again unless new tools were applied. The modern battlefield was too easily saturated by men and mass-produced machines which together rendered movement on the ground exponentially more difficult. Airpower's revolutionary capabilities stemmed from its ability to circumvent such congestion on the battlefield, striking beyond the enemy army's reach, thereby breaking the ground-based deadlock. For this reason, Douhet dubbed airpower the *offensive force par excellence*⁴⁸, which would be delivered primarily against targets behind enemy lines. He believed the only real objective in war was to target the enemy's will to fight. This could be targeted by striking at the enemy's morale, centered in its vital centers and industrial bases, without first requiring the defeat of an enemy's army. For the bomber, the road would always be open.⁴⁹

bacteriologists should discover the means of spreading epidemics in the enemy's country and at the same time immunize its own people". Gas attacks were to permeate the target with chemicals for a prolonged period of time which "could completely wreck large areas of population and their transit lines during crucial periods of time when such action might prove strategically invaluable". Giulio Douhet, *Command of the Air* (New York: Howard McCann, 1942), 6, 21.

⁴⁸ Douhet, 15.

⁴⁹ Some German strategists had espoused similar hopes in the bomber's ability to put a swift and successful end to the First World War. In planning the Gotha bombing runs of 1917, the German High Command considered the possibility of a terroristic bombing campaign devastating enough to incite mass rebellion and the overthrow of the British government. See C.M. White, *The Gotha Summer* (London: Robert Hale, 1986), 208.

Douhet also advocated the use of aerochemical bombs on urban centers as an effective way of targeting a population's will to carry on the fight.⁵⁰ "Air power makes it possible not only to make high-explosive bombing raids over any sector of the enemy's territory, but also to ravage his whole country by chemical and bacteriological warfare."⁵¹ Douhet was convinced that to go to war without the full appreciation of air power as the decisive element in one's arsenal was to lead one's nation to defeat. "The decisive field of action will be the aerial field...To conquer the command of the air means victory; to be beaten in the air means defeat and acceptance of whatever terms the enemy may be pleased to impose."⁵² This conviction that massive bombing runs would suffice to destroy the enemy's morale remained at the center of debate throughout the 1920s and 1930s.

Many theorists agreed with and expanded upon Douhet's original argument. James Spaight, the most prolific British writer on air power in the first half of the twentieth century, wrote incisively against the danger of underestimating the bomber's ability to shatter civilian

⁵⁰ Interwar fears of the bomber were often informed by the experience of poison gas during the First World War. Douhet's vision of bomber fleets delivering gas attacks of unprecedented destructiveness did not appear beyond the realm of possibility; indeed, they reflected a growing fear among military planners. In his study of French pacifism, Norman Ingram has observed that "the 'bombing aeroplane' and gas warfare constituted the atomic weapons of the 1920s and 1930s. Writers were convinced that they spelled the end of civilisation if ever they should be released upon an unsuspecting humanity". See Norman Ingram, *The Politics of Dissent: Pacifism in France 1919-1939*, (Oxford: Clarendon Press, 1991), 127.

⁵¹ Douhet 6-7

⁵² An aerial action intended to break the morale of a nation is bound to be much more effective when its population is dense and civilised. An aerial action is ineffective, or nearly so, against a nomad people living in the desert, but it would be very effective – terrifying and dreadful – against a highly civilised people living in large centers of population. (Douhet, 251, 258-9)

morale.⁵³ In response to the argument⁵⁴ that German bombs over London between 1915 and 1918 had only stiffened British resistance, Spaight answered: “it is not altogether true that the bombing of England had no moral effect, for by moral effect is not meant only a sudden, craven desire to surrender.”⁵⁵ Regular bombing served to disrupt civilian life, slowing productivity and, Spaight argued, slowed down the enemy population in its daily operations. While abject surrender was not the immediate goal of a bombing campaign, a steady whittling down of the enemy’s sense of safety could, in the long run, achieve similar ends. “The goal is to attack the psychological and political well-being of the enemy,” he observed, “to disorganize the life and business of the enemy community...to create a feeling of depression and helplessness, to make the whole nation war-weary, *kriegsmüde, fatigué de guerre*.”⁵⁶ Spaight’s view is thus a variation on the Douhetian theme. If bombers were not able to deliver the kind of *knock-out blow* which could win a war outright, they might yet deliver the same result, in time, by a slow and steady erosion of the enemy’s willingness to resist.

For their part, Douhet’s critics signaled his overestimation of the bomber’s capacity for inflicting war winning physical and psychological damage. His preference for strategic over

⁵³ Spaight wrote several books on air power while working at the British Air Ministry between 1918 and 1937. The reference here is from *Air Power and War Rights* (London: Longmans, 1933), 8.

⁵⁴ This argument was popularized by Neon - the *nom de plume* of Bernard Acworth, British submariner and writer. It was one of many counterarguments made in *The Great Delusion* (1927) against the bold claims of air power enthusiasts. This theme was picked up and given a professional polish by British airpower theorist (and later Marshal of the R.A.F.) Jack Slessor, in 1936. See *Air Power and Armies* (Oxford: Oxford University Press, 1936), 28.

⁵⁵ Ibid.

⁵⁶ Ibid, 239.

tactical roles for aircraft has been criticized as too simplistic for the complexities of modern combined arms operations.⁵⁷ However, some of those who supported Douhet's ideas played an important role in developing air strategy on both sides of the Atlantic. In America, Louis Sigaud and William Mitchell echoed and built upon the Italian general's conceptions.⁵⁸ In Britain, Chief of the Air Staff Hugh Trenchard also supported a number of Douhet's theories. Trenchard favoured the use of strategic bombing as a means of attacking the enemy's psychological fortitude. Like Douhet, he advocated attacks on vital centers. Unlike Douhet, Trenchard identified these as industrial or centers of transportation, not masses of population.

The bulk of military theorizing on the use of airpower during the interwar period was generated in response to Douhet's bold predictions. Strategists defined their opinions most clearly by their position on the role and potential decisiveness of strategic bombing in the next European war. It was the single most important topic in the minds of strategists who, at the time, had precious little experiential evidence to either corroborate or disprove one another's contribution. Nevertheless, Douhet's writings often served as the professional military bedrock upon which a series of new titles were constructed and published. The goal of many of these

⁵⁷ Among the earliest critics of Douhet was the Italian Air Force officer Amedeo Mecozzi who questioned Douhet's basic principles and doubted whether bombers could operate effectively as an independent force. Like many of Douhet's critics, Mecozzi objected primarily to the notion that command of the air at the outbreak of war would necessarily lead to victory and that to lose command of the air 'is to be defeated'. See Rodolfo Sganga, "Douhet's Antagonist: Amedeo Mecozzi's Alternative Vision of Air Power" *Air Power History* 58:2 (Summer 2011), 6. This line of criticism was followed by many including Thomas Phillips and Thomas Mahoney (see footnote 41 above).

⁵⁸ Sigaud firmly believed that the French defeat of 1940 was due to German aerial superiority and validated Douhet's predictions. Germany's "absolute mastery of the air" was, according to Sigaud, the central factor explaining rapidity of France's collapse. See "Douhet and Aerial Warfare" (New York: Putnam and Sons, 1941.), xii-xiii. General William Mitchell developed an apocalyptic vision of air power which exceeded Douhet's own theory. "Picture what the dropping of a gas bomb will mean. Two thousand pounds of liquid gas smashes down in a street...men, women and children come rushing out and fall dead...a second bomb hits...then another and another...There is only one alternative and that is surrender." General William Mitchell, *Skyways: A Book on Modern Aeronautics*. (Philadelphia and London: J.B. Lippincott, 1930), 262-3.

works was to further develop the apocalyptic literary canon on the subject of air power. Soldier, historian and military theoretician, B.H. Liddell Hart wrote in 1925 of his belief in the fundamental points of Douhetian thought:

Imagine for a moment that, of two centralized industrial nations at war, one possesses a superior air force, the other a superior army. Provided that the blow be sufficiently swift and powerful, there is no reason why within a few hours, or at most days from the commencement of hostilities, the nerve system of the country inferior in air power should not be paralysed.⁵⁹

In 1929, American economist, social theorist and writer Stuart Chase wrote *Men and Machines*, a singularly alarming treatise on the subject. Chase's text emphasises in striking prose the doubts shared by many on whether air strikes could ever be effectively opposed:

A starting signal, an hour or two of flight – a little veering, dropping and dodging as the defence planes rise – a casualty or two as the anti-aircraft guns try vainly to fill a space one hundred miles square and four miles deep- one muffled roar after another as the bombs are dropped per schedule – and so, to all intents and purposes, the civilization founded by William the Conqueror, which gave Bacon, Newton and Watt to the world, comes, in something like half an hour, to a close.⁶⁰

Three years later, Stanley Baldwin would famously remark that *the bomber will always get through* in a terse summary of Chase's earlier warning. This was a fear which could not yet be disproven, and so intensified with each re-telling. In his recollection of this period, future

⁵⁹ B.H. Liddell Hart. *Paris or The Future of War*. (New York: E.P. Dutton, 1925), 40.

⁶⁰ Stuart Chase, *Men and Machines* (New York: Macmillan, 1929), 310.

Prime Minister Harold Macmillan claimed to have "thought of air warfare in 1938 rather as people think of nuclear war today."⁶¹

In practical terms, however, the limited battlefield use of bombers during the interwar period provided what amounted to 'mixed messages' concerning their capabilities in combat. The French conquest of Morocco, a process which had been interrupted by the First World War, was forcefully resumed as of 1920. French experience there indicated that air power was most effective against mobile targets in the countryside, shorn of the cover offered by urban centers. At the outbreak of the conflict in 1924, French strategists anticipated that their air force would prove decisive. In truth, after rebels had over-run their forward air base at Ain Mediouna, results of air operations proved disappointing. In purely offensive missions such as bombardment and ground support, French air power proved far less effective than anticipated.⁶²

If French bombers fell short in their attempt to deliver the *knock-out blow* needed to put a swift end to colonial insurrection, air power was nevertheless relied upon to perform a wide range of crucial functions in Morocco. It was found particularly effective at protecting mobile columns, spotting for artillery strikes, preparatory bombardments and in the pursuit of a retreating enemy. Several times, encircled French outposts were resupplied and defended from the air, preventing the slaughter of remote and isolated French troops. In fact, the diverse functions undertaken by the air force were so valued by soldiers and officers alike, that Marshall

⁶¹ Quoted in Robert Mackay, *Half the Battle: Civilian Morale in Britain during the Second World War* (Manchester: Manchester University Press, 2002), 39.

⁶² See Douglas Porch, "Spain's African Nightmare" in *The Quarterly Journal of Military History* (18:2 Winter 2006) 35.

Lyautey soon reported, “Nous sommes tous à genoux devant l’aviation”.⁶³ Confronted by largely undefended targets, French aviation in the Rif proved capable of lending rapid and decisive support to troops on the ground. As we will see, the Moroccan experience was important in directing French strategy toward a multi-purpose role for aircraft, which were to assume the role of “jack-of-all-trades” over the battlefield. This was a role which succeeded in the Rif where specialised offensive missions often fell short of achieving desired results.

Faced with the Druze uprising in Syria one year later, French airpower was called upon once again to provide a decisive edge against insurgents. In October 1925, French forces bombarded Damascus with a view to rooting out rebellious elements hidden within densely populated areas of the city. However, after a combined air/artillery strike which proved devastating to local inhabitants, French officers were soon convinced that their artillery had been more effective and more accurate than aerial bombing runs.⁶⁴ Once more, conflict in the colonies left French observers with the impression that in purely offensive terms, air power was less decisive than they had hoped. While capable of delivering overwhelming force in open territory against mobile targets, its accuracy and effectiveness in crowded centers appeared far less reliable.⁶⁵

⁶³ Simone Pesquies. “L’aéronautique militaire française dans la guerre du Rif” *Revue du Nord* (285: 1990) 317-367 (this page: 356).

⁶⁴ Phillip Shukry Khoury. *Syria and the French Mandate: the Politics of Arab Nationalism, 1920-1945*, (Princeton, New Jersey: Princeton University Press, 1987), 196.

⁶⁵ David Omissi observes that artillery attached to colonial infantry and to garrison troops were the preferred means by which to restore order in the French Empire throughout the interwar period. “Only in the desert did the French use aircraft as the primary policing instrument. For the control of scattered nomads in the vast, arid spaces far from the centres of cultivation, the bomber was the perfect weapon.” *Air Power and Colonial Control: The Royal Air Force 1919-1939*. (Manchester: Manchester University Press, 1990), 197.

Notions like these would alter dramatically over the course of the following decade. By the mid-1930s events in Spain and in Ethiopia gave many the impression that the age of the bomber had arrived. After several years of fighting for control of the Libyan interior, Mussolini turned his attention to the conquest of Abyssinia. This proved to be the largest colonial campaign waged by a European power between the two World Wars. The *Regia Aeronautica* was initially used as a battering ram to terrify and demoralize native resistance. However, initial success gave way to an increased tenacity by the Ethiopian military in the face of air attacks. At first panic-stricken, Abyssinian soldiers soon developed new methods to find shelter and to conceal themselves from above. As the conflict progressed, the impact of Italian air power on organized enemy groupings diminished. Just as the French had learned in Morocco and in Syria, their air power was most effective in the open against mobile, unsupported targets.⁶⁶ Italian bombers were most decisive when using poison and asphyxiating gases. Starting in 1935, under the direct order of Mussolini, the *Regia Aeronautica* began dropping bombs filled with mustard or chlorine gases. Over two thousand of these were dropped on civilian and military targets alike. Abyssinian soldiers who usually marched barefoot wearing thin cotton cloaks were all too vulnerable to these attacks. Chemical agents were also used to poison Abyssinian water sources and grazing lands, devastating local resilience to Italian aggression. Whole communities were paralysed; mules and horses, the only available means of transportation, suffered and died.⁶⁷ While the 132 sorties carrying gas bombs amounted to only 2.6 per cent of the total Italian effort,

⁶⁶ Omissi goes on to observe “rather like Napoleonic cavalry, the Italian Air Force gained its greatest success only in the pursuit of troops who had already been defeated on the ground.” *Ibid*, 205.

⁶⁷ Chris Dunning, *Regia Aeronautica: The Italian Air Force 1923-1945 – An Operational History*. (Surrey: Ian Allan Publishing, 2009), 23.

their effect was out of all proportion to their small representation of the larger Italian air war. Consistent with General Douhet's predictions, chemical weapons were decisive in the collapse of organized Abyssinian resistance in the spring of 1936.⁶⁸

The same year saw the first large-scale deployment of modern airpower since the end of the First World War. Spain's civil war quickly drew the intervention of several European powers eager to test their newest equipment in battle. In November 1936, when Nationalist hopes still ran high for a quick victory in Madrid, permission was given to the German Condor Legion to bomb the city. The subsequent bombing raids, conducted to break civilian morale in preparation for a ground assault, yielded disappointing results. Daytime strikes were dangerously exposed to Republican fighter opposition, while night-time raids were wildly inaccurate. The following year, however, German aircraft infamously achieved success by indiscriminately terror bombing the northern Basque city of Guernica, whose gates were opened to Nationalist troops without resistance only four days later. For the Condor Legion, air missions conducted ruthlessly and without restraint succeeded where limited strikes did not.

Similarly, Mussolini's mass bombing of Barcelona from March 16th to 18th, 1938, caused over 2000 casualties and enormous material damage. Franco himself condemned the raid as militarily counter-productive and demanded a cessation of the bombing. Nevertheless, the moral

⁶⁸ Ibid, 206; Sullivan, B.R. "A Thirst for Glory: Mussolini, the Italian Military and the Fascist Regime, 1922-1936" (Columbia University, Ph.D thesis, 1984), 517, 526. Chris Dunning also agrees with this assessment on the role of gas attacks in Ethiopia. See Dunning, *Regia Aeronautica*, 23.

effect of this attack was summarized as follows: “these thirteen raids, delivered by half a dozen planes at a time destroyed the whole mental life of a million and a half people for forty hours.”⁶⁹

By the late 1930s, colonial conflicts and the war in Spain served to advance theories of air power and pointed to its effective application as a terror weapon. In fact, recent experience had shown that offensive operations from the air achieved significant results *only* when conducted unrelentingly and without restriction. Military restraint practised in the name of preserving civilian life dovetailed nicely with international law, but it also significantly diminished the moral and material damage inflicted upon one’s enemy. This was made only too clear as the world observed the results obtained by Italian chemical attacks in Ethiopia. In this case, Mussolini chose to incite international opprobrium in order to wage the kind of unrestricted campaign which alone could appreciably shorten the duration of Abyssinian resistance. Similarly, it was only through unrestrained terror bombing over Guernica that the Condor Legion had achieved results akin to Douhet’s description of civilian moral collapse. On the eve of the Second World War, the bomber had proven itself most effective when used without reservation or consideration for collateral damage. It was quickly developing into the very type of weapon most feared by writers like Grahame-White, Hearne and Middleton. Their dream of hitching national air forces to the yoke of international watchdogs and regulators was resuscitated one last time before the outbreak of war. In February 1935, the French and British governments conducted a joint proposal in the League of Nations, with Italian and Belgian support, which envisioned the creation of an international aerial convention, based on the principles of Locarno. The agreement would commit the four nations to immediately intervene, using the totality of

⁶⁹ George Fielding Eliot. *Bombs Bursting in Air: The Influence of Air Power on International Relations*. (New York: Reynal and Hitchcock, 1939), 57.

their air forces, against any aggression directed against a signatory nation.⁷⁰ It was hoped this promise of mutual assistance would deter the use of the bomber as a terror weapon. Like previous attempts at international regulation of air power, this initiative quickly stalled. Each proposed signatory nation insisted on maintaining a level of diplomatic and military freedom glaringly at odds with the spirit of the agreement. In the coming years, international bodies would play no role in restricting the use of national air forces. Only the law of the jungle remained to legislate the application of air power in the skies over Europe and the world.

Part 4

The Case of France

Douhet's ideas did not find an immediate audience among the French military establishment. Over a decade would pass from the first publication of *The Command of the Air* before it received its first French translation. In 1933, the magazine 'Les Ailes' published a partial translation of the work. Among French air leaders General Tulasne and Armengaud were most vocally receptive to his ideas. Tulasne, who would eventually command the Normandie-Nieman Free French air group on the Soviet front and who was to meet his end during the battle of Kursk in 1943, believed wholeheartedly in Douhet's theories. In particular, he subscribed to the notion that all types of aviation should be subordinated to the bomber. In his introduction to the 1932 French translation of *The Command of the Air*, Tulasne wrote:

⁷⁰ Jacques Minart, *Le Drame du Désarmement Français: La Revanche Allemande (1918-1939)*, (Paris: La Nef de Paris Éditions, 1959), 87.

We cannot help but share all of General Douhet's ideas. We cannot help but study them with all the attention they deserve. After carefully reading his work, we ask ourselves, with a certain trepidation, what would become of an air force composed, for the most part, of reconnaissance, surveillance, and even fighters, confronted with an air corps which has been organised according to the theories of the Italian writer.⁷¹

General Armengaud, Commanding Officer of the fifth air region (South-East), also supported much of what Douhet had conceived, particularly in the Italian theorist's ideas on the importance of massive air strikes in the opening days of war. Armengaud believed these would be all important in disrupting enemy plans and movements, destroying resource stockpiles and disrupting communications.⁷² In 1935 colonel Paul Vauthier wrote an analysis of Douhet's theories, *La Doctrine de Guerre du Général Douhet* which spread his ideas to a wider French audience. In his study, Vauthier, already convinced of Douhet's "luminous intelligence" and "magnificent talent as both writer and theorist", argued that it was not necessary to prove the decisiveness of air power in the next war. It was enough that the threat of the aerial *knock-Out-Blow* existed to justify taking every precautionary measure against it. In Vauthier's opinion, the burden of proof fell upon the skeptics of air power, not upon its supporters.⁷³ General J.H. Jauneau who worked closely alongside Air Minister Pierre Cot from 1936 to 1938 and who was

⁷¹ Giulio Douhet, *La Guerre de l'Air: Préface du général Tulasne*. (Paris: Journal 'les ailes', 1932), 11-12. Elsewhere in his preface, Tulasne dispenses lavish praise on the Italian theorist and on his rank among modern military thinkers. "Nous estimons que Douhet est un véritable précurseur, non seulement en matière de guerre aérienne, mais en matière d'emploi total des forces nationales." 19-20.

⁷² Armengaud did not believe, however, that this central role of an independent air force would persist beyond the opening rounds of hostilities. After the first few weeks, he believed, air power would have to be marshalled to serve the needs of the army. Armengaud believed in Douhet's vision, but only for the first few days of conflict. Général Paul Armengaud, *Batailles Politiques et Militaires sur l'Europe: Témoignages 1932-40*. (Paris: Éditions du Myrte, 1948), 154-7.

⁷³ Col. Paul Vauthier, *La Doctrine de Guerre du Général Douhet* (Paris: Editions Berger-Levrault, 1935), 226-227.

instrumental in developing the early production plans to reinvigorate the French air force wrote the following:

The official thesis in France at the time was to devote all new resources toward bombers to enable us to strike back immediately at any aggressor. We therefore adopted the theory of Italian general Douhet...because it was vital for France to be able to respond to a sudden attack to which our defensive position left us vulnerable.⁷⁴

The growing prestige of Douhetian air theory in France was in many ways a curious development since these ideas still met with skepticism inside the majority of European military establishments. General Erhard Milch, architect of the resurgent Luftwaffe, observed in April 1933, "Nowhere was the strategy of air warfare heeded less than in the native land of General Douhet." Italian Air Minister Italo Balbo, declared in the same year that Douhet was being taken more seriously in other countries, especially in France, than in his native Italy.⁷⁵ The extent to which Douhet's ideas permeated the current of military thought, in France or elsewhere, is notoriously difficult to pinpoint. Frank Donnini has observed that his influence "was fundamental to the evolution of independent air forces."⁷⁶ Bernard Brodie believed, "Douhet has had enormous and enduring influence on air forces generally but especially on that of the United States".⁷⁷ On the contrary, American historian Theodore Ropp has argued that Douhet's ideas

⁷⁴ J.H. Juneaud. *De Verdun à Dien Bien Phu*, (Paris: Éditions du Scorpion, 1960), 43.

⁷⁵ Claudio Segrè, Douhet in Italy: Prophet Without Honor? *Aerospace Historian*, 26:2 (June 1979), 69.

⁷⁶ Donnini, Frank, P. "Douhet, Caproni and Early Air Power" *Air Power History*, 37:2 (Summer 1990), 51.

⁷⁷ Bernard Brodie, *The Heritage of Douhet*. (Santa Monica: Rand Corp., 1952), 2-3.

had “little immediate influence”.⁷⁸ Historians John F. Jones and Phillip Meilinger have both argued that Douhet’s theories went largely unrealized throughout the Second World War, but that they eventually found their full expression in the nuclear age.⁷⁹ The difficulty in assessing Douhet’s influence in the years immediately preceding the Second World War is found in his dismissal of air power as a tactical weapon. Nowhere does Douhet argue for airpower as support for armies on the battlefield. This omission of one of the war’s most decisive uses of airpower coupled with his insistence that air forces remain fully independent of other army branches, has raised doubts about Douhet’s status as military prophet.

Even in France, his ideas found a reception within only a limited circle inside the air force staff. Outside of the Armée de l’Air, Douhet’s predictions usually fell on deaf ears. Theories of unbridled offensive power were not popular in a military organization which had grown increasingly defensive since the First World War. French preference for defensive strategies stemmed from the opening disasters of that conflict which shook the very foundation of French tactical and strategic theory. Plan XVII and its philosophical underpinning of *l’offensive à l’outrance* had, prior to the War, placed the élan and momentum of attack in a position of highest importance. What the enemy had planned was far less important than to impose one’s own plan upon the battlefield through brutal offensive methods, in order to dictate the course of battle. These ideas animated the early French invasions of the ‘lost provinces’ of Alsace and Lorraine. By the end of August, blind faith in the offensive was shattered as France’s armies soon retreated back to their starting lines, staggered by the loss of over a quarter

⁷⁸ Theodore Ropp, *War in the Modern World*, (New York, 1962), 292.

⁷⁹ See John F. Jones, “Giulio Douhet Vindicated: Desert Storm 1991.” *Naval War College Review*, 45-4 (Autumn, 1992), 99, and Meilinger, *Paths of Heaven*, 76.

of a million men. “Gentlemen,” Foch told his staff in the wake of these initial failures. “It remains for you to forget what you have learnt and for me to do the contrary to what I have taught you.”⁸⁰ As it happened, many more offensive debacles would be ordered before the French high command began to truly embrace more cautious strategies.

By War’s end, a preference for conservative, methodical methods had permeated not only the French army but also the Armée de l’Air which by then constituted the world’s second largest air force. By 1918, this impressive extension of French military power comprised ninety thousand men and 3700 aircraft. By 1923, France and its Eastern European allies formed a military bloc which could draw upon more than twice the number of aircraft as the rest of Europe combined.⁸¹ Nevertheless, postwar efforts to develop and modernize existing theories of airpower were half-hearted at best. Tactical methods developed during the War which had contributed to victory were in many ways antithetical to the development of forward-looking tactics aimed at maximizing the air force’s most striking attributes of speed and surprise.⁸² *La Bataille Conduite* (methodical battle) had proven itself in the second half of the War both in terms of military effectiveness and in the way it served to preserve human lives. It emphasised

⁸⁰ Quoted in Brodie Bernard, *Strategy in the Missile Age*. (Princeton N.J.: Princeton University Press, 1959), 40.

⁸¹ M.W. Royse, *Aerial Bombardment* (New York: Harold Vinal, 1928), 198-99.

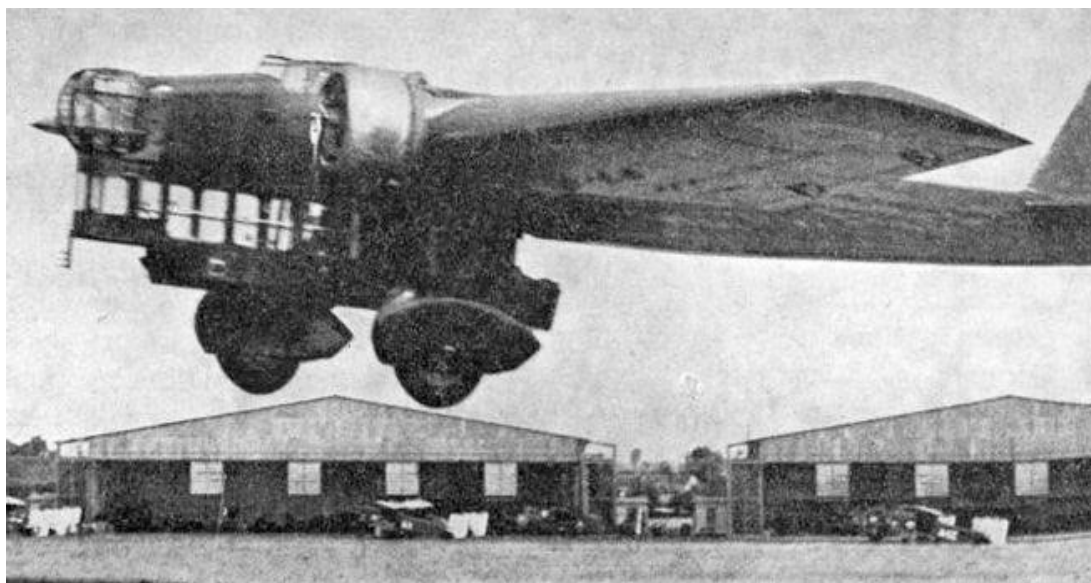
⁸² George H. Questor has argued that ambivalence reigned among French strategists during the interwar period concerning the potential of the bomber to deliver massive destruction to military or civilian centers. France’s fear of future German air strikes was always second to France’s fear of German ground invasion. The relative decline of the French air force vis-à-vis Germany throughout the 1930s is here explained as a result of an undervaluing of the bomber’s military potential among French strategists. This view is certainly supported by many comments made by the French army’s Commander in Chief, Maurice Gamelin from 1936-1940. See Questor, *Deterrence Before Hiroshima: The Airpower Background of Modern Strategy* (New Brunswick and Oxford: Transaction Books, 1986), 58-60.

forward movement in short, calculated steps covered by massive artillery support; advance was made in short increments and each gain was defended tenaciously. In accordance with this cautious approach to war, the air force usually remained tied to reconnaissance and surveillance.

As we have seen, French experience following the First World War in the Rif and Syria pointed to the development of the air power as a *jack-of-all-trades*, a force designed to accomplish a wide variety of field support, surveillance, transport and offensive missions. War in the colonies had shown the value of air support delegated widely over a broad array of tasks. It seemed clear from that experience that restricting air missions to purely offensive strikes allowed one to benefit from only a fraction of what modern air forces could achieve. That Giulio Douhet had strongly recommended this role for aircraft was not lost on French air officers already influenced by the Italian general's philosophy. In fact, Douhet's influence in French military thought was nowhere so evident as in the research and development of the multi-task aircraft.⁸³ This would be a heavily armed bombing plane capable of self-sufficiency in the air. The BCR (bombing, combat and reconnaissance) program was designed to create an aircraft which could excel in each of these missions. That France was the only country to follow this

⁸³ The BCR program was supplied with planes from Amiot, Farman, Potez, Bloch and Bréguet. This extensive industrial commitment was reflected in the 1934 "law on the organization and major mission of the air force". This formal definition enshrined the multi-purpose role of French aircraft which were to be tasked with a wide variety of roles which the BCR's unique construction theoretically allowed it to perform. As observed by many, this fusion of functionality resulted in some of the most unsightly aircraft designs of the twentieth century. See John Gooch, *Airpower: Theory and Practice*, 52. Gooch, 49 and John Geiger, 'Amiot's Angular Airframes: France Entered World War Two with Some of the Ugliest Bombing Aircraft Ever Built,' *Air Classics* 19/2 (Feb. 1983), 18-22.

particular recommendation from Douhet's writings, shows the extent to which aspects of the Italian general's thought had permeated the French military organization.⁸⁴



The Amiot 143 BCR multi-purpose aircraft (1928).

The BCR initiative was championed by Pierre Cot, French Air Minister from January 1933 to February 1934, and again from January 1936 to 1938. The energetic Cot was devoted to the creation of a strategic air force capable of long-range bombing runs. His vision marked a new direction for the Armée de l'Air and steered it away from its traditional twin focus on reconnaissance and ground support.⁸⁵ Cot thoroughly revised the methods and doctrine by which

⁸⁴ Patrick Facon has identified several French military publications from the 1930s which criticize Douhet's theories. From these sources, Facon concluded that Douhet exerted very little influence upon French air strategists. Air Minister Cot's expressed enthusiasm for Douhet's ideas however, exerted a strong countervailing force to these critics and mitigates Facon's conclusion. Patrick Facon "Douhet et sa doctrine à travers la littérature militaire et aéronautique française de l'entre-deux-guerres : une étude de perception", *Revue historique des armées*, (1, 1988), 95-96.

⁸⁵ At the same time, Cot attempted to mollify the fears of more traditionally minded military leaders by also stipulating in the 1937 Instructions that "participation in ground operations belongs to the fundamental missions

the air force would operate. He supported the notion circulated widely among the Air Force's General Staffs that France required a fully independent air force capable of striking behind enemy lines at a moment's notice.⁸⁶ In the French army manual of 1936, a section was included to reflect Cot's strategic priorities. For the first time, strategic bombing was included in the French military's official doctrine to 'attack enemy lines of communication as well as strategic enemy centers to the limit of their range.'⁸⁷ The next year's manual mentioned the targeting of enemy industry as a central objective. In defense of his rearmament plan and prioritization of the long-range bomber, Cot regularly cited Douhet's writings as his guiding principle.⁸⁸

Faced with the army's clear preference to maintain the air force's traditional roles of surveillance and ground support, Cot chose to compromise. His Plan I (1934) set rearmament equally between the construction of new bombers (474) and new fighters (480), with reconnaissance set at 411. In 1936, this was revised (Plan II) with a much greater focus on bomber production. A target of 1339 bombers was set alongside fighter and reconnaissance plane production of 756 and 645 respectively.⁸⁹ During this period, French army strategists were

of the air force." See Ministère de l'Air, *Instruction sur l'emploi tactique des grandes unités aériennes* (31 March, 1937), para 127.

⁸⁶ Richard Griffiths, *Marshall Pétain* (London: Faber and Faber, 2011), 157.

⁸⁷ Meilinger, *Paths of Heaven*, 156.

⁸⁸ Interviewed in 1935, Cot was asked the following question: "Êtes-vous partisan de la théorie du général Douhet selon laquelle l'aviation de défense serait inutile?" He answered, "J'en suis tout à fait partisan. L'aviation de défense c'est en partie du gaspillage. On ne peut pas se protéger efficacement contre l'attaque aérienne." No author, "L'avenir de l'aviation française: Interview de M. Pierre Cot" *Europe Nouvelle* 18 (January 5, 1935), 13-14.

⁸⁹ SHAA A1 112 1934 (D.1) Pierre Cot: 'Note Personel pour M. le Président du Conseil, Ministre de la Défense Nationale et de la Guerre' (undated: late 1938). See also Robert Frankenstein *Le Prix du Réarmement Français (1935-1939)* (Paris: Publications de la Sorbonne, 1982), 56, 81.

usually at odds with Cot's vision of a grand strategic air force. The army's manual of 1936 demonstrated a continued belief in the lessons learned during the colonial conflicts of the 1920s: namely, that offensive action is only one and not necessarily the most important role for modern aircraft. The 1936 manual lists the bombing of enemy targets as fourth priority for aircraft at war, behind reconnaissance, liaison and air defense.⁹⁰ The army's point of view was well summarized by its Commander in Chief, Maurice Gamelin. "The role of aviation is apt to be exaggerated...and after the early days of war, the wastage will be such that it will more and more be confined to acting as an accessory of the army."⁹¹ During this period, even the forward-looking Charles de Gaulle was not inclined to stray far from such limited views of military aviation. In 1934 he wrote, "the effects produced by bombing aircraft, terrible as they are, have something static about them. The flying machine itself cannot draw any advantage from its power...aircraft can destroy but cannot compel, cannot conquer, cannot occupy."⁹²

Cot's efforts to recreate the air force into a primarily offensive weapon, able to strike independently into the heart of the Reich, was thus at odds with the prevailing ground-based and defensively minded strategy developed by France's civil-military leadership. The enormous expense of the Maginot Line, in both time and money virtually enshrined the defensive as France's geo-political posture⁹³. This stance was buttressed by the lessons of the First World

⁹⁰ Meilinger, *Paths of Heaven*, 157.

⁹¹ Cited in Adamthwaite, *France and the Coming of the Second World War*, 162.

⁹² Charles de Gaulle, *The Army of the Future*, (Westport, CT: Greenwood Press, 1976), 169.

⁹³ Recently, Martin Alexander has established the cost incurred by construction and maintenance of the Maginot Line between 1930 and 1939 at nearly 5 billion francs. General Gamelin's own estimate was close to 6 billion francs. Paul Reynaud claimed the fortifications had cost 7 billion. Martin Alexander, "In Defense of the Maginot Line" in *French Foreign and Defense Policy, 1918-1940* ed. Robert Boyce (London: Routledge, 2005), 180.

War which had demonstrated the effectiveness of prepared defensive positions supported by massive firepower. France's political leadership aligned itself fully with the spirit and the letter of a defensive opening round to any future war.⁹⁴ Similarly, the military headed by Gamelin announced time and again its intent to remain on the defensive in the early stages of the coming conflict. At the meeting of the Chiefs of Staff of November 25th, 1938, Gamelin observed: "At the start of a conflict, our stance will be cautious, above all, we require a strong defense. Only after the English contribution reaches sufficient output can we begin to turn our attention toward attacking Germany."⁹⁵ Gamelin planned for the French army to assume the defensive and wait for the anticipated German *attaque brusquée*.⁹⁶ Once the enemy's momentum had been checked, Gamelin planned to follow this up with a year-long accumulation of Allied resources before turning to the offensive only after the summer of 1941.⁹⁷

⁹⁴ A notable exception to this was Paul Reynaud who had supported De Gaulle's proposal for a professional armoured strike force to form the skeleton of the national defense body. Reynaud and De Gaulle's views on this were not shared by the vast majority with the French civil or military leadership. See Reynaud, *In the Thick of the Fight*, 282. For his part, Edouard Daladier, Prime Minister from April 1938 to May 1940, justified his commitment to a defensive posture during his deposition at the Riom Trials of February 27th 1942. He declared that it was always his preference to have extended the Maginot Line northward to the sea and when this could not be agreed upon, he focused instead on developing the deepest possible system of defence along France's eastern borders. See Julia Bracher *Riom 1942: Le Procès* (Paris: Omnibus, 2012), 493-495.

⁹⁵ SHAT: 2N 225 *procès verbale de la réunion du 25 novembre 1938* cited in Elisabeth du Réau 'Gouvernement et Haut Commandement Français Devant la Perspective de la Guerre (Septembre 1938-Septembre 1939) *Guerres mondiales et Conflits Contemporains* (166 : April 1992), 149-165. This citation from p.153.

⁹⁶ Daladier and Gamelin were both wedded to the defensive, at least in the war's opening rounds. not least of all in response to the prevalence of pacifism among the French population. Crémieux-Brilhac has argued that the pacifist climate in France structured the nation's strategic planning throughout the 1930s "comme si la défensive était républicaine et comme si l'offensive, obligatoirement provocatrice, était la doctrine du chef réactionnaire indifférent aux pertes en hommes." J.L. Crémieux-Brilhac. *Les Français de l'an 40 : La Guerre Oui ou Non?* (Paris: Gallimard : 1990), 84.

⁹⁷ These plans were released in Gamelin's *Plan de Guerre* sent to Daladier in February of 1940. SHAT: DE 2016 SA 63. Nicole Jordan has questioned Gamelin's sincerity in this matter and argues that the French Commander in Chief had no idea when or how he would ever turn to the offensive against Germany. "While totally bankrupt of a military strategy," Jordan claims, "he bided always for more time to launch a mythical future offensive." Nicole Jordan "Strategy and Scapegoatism: Reflections on the French National Catastrophe, 1940 in *The French Defeat of 1940: Reassessments* ed. Joel Blatt. (New York: Berghahn Books, 2001), 22. Gamelin's own correspondence suggests that he did in fact have a general outline of when and where he would direct an eventual

So it can come as no surprise that Cot, the *enfant terrible* of France's civil-military leadership, was replaced by a successor whose views were more in alignment with prevailing defensive theories. In January 1938, Prime Minister Camille Chautemps shuffled his cabinet and formed a new government, appointing Guy La Chambre as Air Minister. It was by that time apparent that Cot's attempts at kickstarting France's aerial rearmament had not succeeded in reducing the gap between French and German industrial output. Moreover, Cot's promises of a strategic bomber force had failed to materialize. In the short term, France would not be able to match Germany's offensive potential in the skies. As the fighter was seen as the most effective means of air defense, it was upon this weapon that La Chambre chose to focus his attention, and the resources allotted to him by France's ever-expanding military budget. Previous production budgets had prioritized offensive bomber construction. This was quickly amended in 1938 as La Chambre's Plan V led to the construction of 948 fighter aircraft in its first seven months (January-August 1939) while only producing 35 bombers and 102 surveillance planes⁹⁸. In addition, La Chambre effectively quashed all momentum toward an independent French bomber command by restoring control of each bomber group to regional army commanders.

In the following chapter, we will take a closer look at the process of French aerial rearmament before the outbreak of war. It is enough here to conclude that by late 1939, ambiguity persisted on the extent to which air power would (or would not) dominate the next

Allied offensive against Germany. According to his plan, the French blow would have fallen on the Upper Rhine flanked by Switzerland on the right. The first objective would have been a large bridgehead in the Black Forest. SHAT DÉ 2016 SA 63.

⁹⁸ SHAA A1 11Z 12934 (D.2) Ministère de l'Air: *Quelque Chiffres destinés à caractériser la situation de l'aéronautique au début de 1939*.

European war. A number of noteworthy arguments, culminating in the work of Giulio Douhet, spread the apocalyptic notions of air enthusiasts throughout the interwar period. This chain of ideas suggested that the modern bomber would inflict unparalleled destruction and that the command of the skies had become the single most important aspect of modern warfare. Ideas like these were embraced by a limited but influential group within the French civil and military authorities. Efforts in the mid 1930s to develop a long-range offensive bombing fleet demonstrated the extent to which enthusiasm for the bomber pervaded the Air Ministry. The late switch to an almost exclusive production of defensive air power in 1938 signaled the abandonment of France's once-ambitious strategic dream.⁹⁹ This was an admission of French shortcomings in industrial output and aircraft design, failings which had handed Nazi Germany control of the skies, at least in the short-term. If Douhet's theories were to prove accurate in the coming conflict, the woeful state of France's air force would leave the country vulnerable to the kind of devastating air attack prophesied by Douhet. Having lost the *material* contest of aerial rearmament it remained to be seen what *moral* effect this shortcoming would have on the nation's military and civilian authorities.

⁹⁹ Guy La Chambre's decision to replace bomber construction in favour of light fighter aircraft was based on a sober assessment of France's current military position vis-à-vis Germany in the early months of 1938. As Robert J. Young has observed, this switch of industrial focus from bomber to fighter aircraft occurred at the nadir of French efforts to compete with German industrial output. By early 1938, the cruising speed of French fighters could barely match that of German bombers. Moreover, the output of French bombers, already thoroughly outclassed by recent German designs remained at a near standstill. See Robert J. Young, "The Strategic Dream: French Air Power in the Interwar Period, 1919-1939" *Journal of Contemporary History* 9:4 (October 1974), 72.

Chapter 2

Reconstructing the *Armée de l'Air*: 1934-1940

Part 1

Delayed on the Runway: 1934-1937

Paul Reynaud, last Prime Minister to serve the Third Republic, bitterly regretted France's delayed reaction to the Nazi party's rise to political power. "We were forewarned and should have rearmed ourselves earlier," he lamented. "We should have started as of January 1933, when Hitler came to power and began to implement his plans."¹ Maurice Gamelin, Chief of the Armed Forces, agreed wholeheartedly. "Starting in 1933-34 at the latest, at the same moment when Germany undertook its earliest efforts, we should have renewed our industrial capacity which had been left to stagnate after 1919."² Both men would also agree that French rearmament, while belated in its stirrings, was at length pursued with remarkable vigour as the German threat intensified. It began in earnest following Hitler's reoccupation of the Rhineland in March 1936. Already by this time, the nascent German air force exerted a powerful influence upon French foreign policy and military planning. Crisis in the Rhineland presented the French high command with the option to provoke a neighbour whose air power was already formidable enough to strike back. General Gamelin's notes from a meeting with President Albert Sarraut on March 10, 1936 (three days into the crisis) reveal the following:

For his part, general Pujo [Air Force Chief of Staff] remarked that in the event of our incursion onto their territory, the Germans might respond with aerial

¹ Paul Reynaud. *La France a sauvé l'Europe* vol.1 (Paris: Flammarion, 1947), 109.

² Maurice Gamelin, *Servir t.l.*, (Paris: Plon, 1946), 213.

bombardments, notably over Paris. [Pujo] then requested – quite reasonably – the mobilisation of the entire air force and air defense systems.³

Gamelin argued that French intervention in the Rhineland would have required the mobilisation of France's entire army.⁴ He based this argument on the fact that during peacetime, the army existed only in skeletal divisions, none of which was complete or operational until the entire army was called to serve. He justified this statement by claiming that no military action could be envisioned against Germany without first fully manning positions along the entire French border from the Channel to Switzerland. Thus, even the commitment of a relatively small strike force in the Rhineland would require the full deployment of the entire army. Added to this, as Gamelin revealed in his memoirs, in the event that the Germans resisted the re-occupation of the Rhineland, the entire French air force would need to be mobilised as well.⁵ Clearly by 1936, French fears of the growing *Luftwaffe* incited the high command to attribute a readiness for war far in excess of that which had actually been achieved by the German armed forces.

German reaction could take place anywhere along the front or in the air. In response to our action in the Rhine, Germany might engage in an offensive through Belgium, in aerial action over Paris or upon our military bases, in

³ Ibid, t.2, 206.

⁴ Ibid, 205-207.

⁵ R.J. Young argued effectively against this stating that limited and effective intervention in the Rhineland was certainly an available option for Gamelin in the spring of 1936. "Most of the motorized and light-mechanized forces were stationed in the frontier regions. They certainly possessed sufficient mobility and fire power to conduct devastating raids in the demilitarized zone or in the Saar valley." Young reasoned that such forces were held back due to their perceived defensive value as the only large units which could effectively counterattack at the point of an eventual German breakthrough. It was a matter of doctrine, rather than of available forces, which dissuaded Gamelin to contest the re-occupation of the Rhineland. See Robert J. Young 'Preparations for Defeat: French War Doctrine in the Inter-War Period' in *Journal of European Studies* (2:2 1972), 164.

submarine warfare or simply to begin bombardment of our cities along the Rhine, Strasbourg and Mulhouse.⁶

In response to the mounting threat to the east, calls for rearmament and modernisation of the armed forces intensified. The first large-scale governmental spending programs were inaugurated by the Popular Front coalition, brought into power in May of the same year. Although the Front had been swept into office with a strong mandate to inaugurate social programs and labour reform, the new government quickly admitted that mounting international tension would not allow for a decisive priority of butter over guns.⁷ Immediately following its electoral victory, the Front released three hundred and fifty million francs toward existing armaments programs. Four months later, in September 1936, it added another five hundred and fifty million francs. During its brief time in power,⁸ the Front also introduced an important series of social and labour reforms, two of which would particularly influence the course of French rearmament.

⁶ Gamelin, *Servir t.2*, 209.

⁷ At the Riom Trials of 1942, Léon Blum, former leader of the Popular Front defended his government's contribution to rearmament by correctly stating that he had kick-started massive re-investment into the armed forces in late 1936. Historian Robert Frank claims that the Front's decision to re-arm had been taken in cold blood, without any excessive pressure due to foreign events. "Cette fermeté était presque décidée 'à froid' : la tension internationale persistait mais il n'y avait pas de crise aigue." (Robert Frank, *Le prix du réarmement français (1935-1939)* (Paris: Publications de la Sorbonne, 1982), 37. This is not an accurate assessment of the situation in late 1936. Losing access to the left bank of the Rhine earlier that year had completely changed the political and military map of western Europe, depriving France of a direct route to Germany's industrial heartland in the Ruhr and exposing the glaring inefficiencies of French military capabilities. Events in the Rhineland had been preceded the year before (March 1935) by the twin announcements of German rearmament and obligatory military service for German youth, both in defiance of the Versailles treaty of 1919. Blum's government was quite correct in making the decision to invest heavily in rearming the nation following these events, but this policy was not pursued "in cold blood". On the contrary, it followed in the wake of an urgent crisis signalling the return in force of a traditional enemy. It is difficult to imagine any government declining to invest heavily in a renewal of the military at this time, as any other policy would have been foolhardy and irresponsible in the extreme, and it is in this tempered light that the Front's achievement is properly considered.

⁸ One year and eight days. Although short terms of office certainly characterized politics in the Third Republic, the Popular Front was unusual in its ability to legislate major societal changes in such a brief period of time.

The first of these was the establishment of the forty-hour work week. This legislation was carried through without delay following the Front's electoral victory. Demanded by labour unions since the early 1930s,⁹ the forty-hour week aimed to improve the lives of French workers while stimulating economic activity. Work hours were to be made available to the unemployed, thereby increasing the national purchasing power and hopefully offsetting the effects of economic depression. To ensure that weekly salaries remained stable despite reduced working hours, a twenty percent equalization payment was introduced, significantly elevating the hourly cost of French labour. According to Blum, this measure would increase productivity while putting many of France's unemployed back to work, all the while risking very little to the economic outlook. "To my mind," he declared in the Chamber of Deputies, "there is no necessary relation between salary levels and the cost of living." Blum's cabinet regarded the new labour law as an opportunity to significantly raise worker benefits and increase productivity by distributing employment opportunities and wealth among a wider section of the population. It constituted a lynchpin in the Popular Front's program to build "a new social and economic organization for the country."¹⁰ The law formally prohibited employers from assigning overtime, and moreover guaranteed that workers obeyed both the spirit and the letter of the legislation by denying them the right to supplement work-hours through secondary employment.

⁹ Jean-Charles Asselain. "Une erreur de politique économique: la loi des quarantes heures de 1936" *Revue Économique* 25:4 (July 1974),674.

¹⁰ *Journal Officiel de la République Française : Débats Parlementaires, Chambre des Députés*, June 12, 1936 1421-22.

Reactions against the legislation were swift and acerbic. Many questioned whether the measure constituted a boon to the unemployed or a bane to the existing ranks of workers. “The reduction of work hours has only created part-time unemployment on a massive scale,” wrote one economist. “The working class is now forced to subsidize the unemployed. That is the reality and it needs to be told to workers instead of trying to daze them with sophistry.”¹¹ Other critics cited national defense as a reason to avoid rolling back work hours. “It is remarkable that this law never received, at the time of its passing, sufficient objection based on the terrible strains it placed...on a country which wishes to elevate its citizens’ quality of life, but which also must engage in a rearmament programme to the limit of its economic potential.”¹²

In the 1960s, economic historian Alfred Sauvy forcefully argued that the Popular Front’s decision to implement a forty-hour workweek significantly hampered the French rearmament process. Sauvy had been a government insider during the last years of the Third Republic, acting as financial advisor to Paul Reynaud in 1939. Above all, he criticized the paucity of economic study and statistical analysis preceding the implementation of the legislation. He described the Front’s social and labour policies as uninformed wishful thinking. “This was such a bad mistake,” wrote Sauvy, “that a third of a century later, the extent of the losses caused by the forty-hour week is still not realised by the French public.”¹³ A recurring theme in Sauvy’s voluminous economic histories is the assumption that governments in the

¹¹ Edgar Allix. “La Semaine de quarante heures et le chômage” *Revue Politique et Parlementaire*, vol. 153, (Décembre 1932), 453.

¹² R. Marjolin. *L’Europe Nouvelle* (Octobre 6, 1937) cited in Asselain, “Une erreur de politique économique...” ,678.

¹³ Alfred Sauvy, “The Economic Crisis of the 1930s in France” *The Journal of Contemporary History* 4:4 (October 1969), 29.

1930s enacted policies based on ideologies alone, often without any regard to, or real understanding of the economic pre-requisites needed to sustain their efforts. “The politicians of whom the majority had had a legal or literary education, had no knowledge whatever of the most elementary warnings of the economy; what is worse, they were ignorant of the facts themselves.”¹⁴ Sauvy believed the Popular Front government was particularly culpable of this particular form of mismanagement describing them as “a totally uninformed government groping its way through the dark.”¹⁵ Their main oversight, he argued, was in vastly overestimating the number of fit for work, yet unemployed French citizens. That is to say that not everyone wanted steady work or was capable of performing it. Ensuring that work hours became available on a massive scale did not guarantee that there would be a sufficient number of workers willing or able to receive them.

Sauvy was not alone in believing the government had inaugurated its social programs without a sound grasp of the potential consequences to the national economy. During parliamentary debates preceding the legislation, Paul Reynaud, both past and future Finance Minister, mocked the long list of supposed benefits as predicted by the Blum government:

By forcing a worker to be idle eight hours each week, thereby compelling the employer to give those hours of work to the unemployed, the government expects...increased purchasing power, greater economic activity...lower interest rates...it is an act of faith, rather than the product of rational reasoning.¹⁶

¹⁴ Ibid, 33. J.L. Crémieux-Brilhac has argued that governments of the period similarly lacked knowledge in the basic concepts of modern industrial production. “Daladier appartient à une génération de politiques ignorants des mécanismes et des réalités économiques...Il n’a aucun conseiller pour l’éclairer sur l’organisation industrielle, parce qu’il n’y a personne, à cette époque, dans la haute administration, qui ait l’expérience de l’industrie.” J.L. Crémieux-Brilhac, *Les Français de l’an 40, vol. II: Ouvriers et Soldats*. (Paris: Gallimard, 1990),102.

¹⁵ Ibid, 29.

¹⁶ *Journal Officiel, Débats parlementaires, Chambre des Députés*. June 12, 1936, p.1418.

His opinion was seconded by the prestigious *Revue Économique* immediately following the passing of the forty-hour regulation. “The law illustrates the government’s confusion and disarray for treating human labour as an absolute concept, with predictable, unvariable properties.”¹⁷ Economist Jean-Charles Asselain has since lent his support to the accusation that the law had been pursued “without formal study of quantitative data surrounding the issue.”¹⁸ Even labour leader René Belin, key figure in the C.G.T. (Confédération Général du Travail), made reference to the legislation’s shaky empirical underpinnings. “Basically, there was nothing to justify the number of “forty” [hours of work per week], rather than thirty-eight or forty-two. We chose it because this number seemed to us simple and convenient...But it was not proposed based on valid statistics, at least, none that I know of.”¹⁹

Further criticism of the 40-hour workweek deplored that it was implemented unilaterally, unaccompanied by an international framework, as though the French economy existed independently of its trading partners. Georges Bonnet, who assumed the position of Finance Minister under the second Chautemps government (June 1937-March 1938), believed this was the oversight which ensured that the law would not succeed in alleviating state financial shortfalls, industrial underproduction, or national unemployment. “In order to have successfully

¹⁷ F. Delhorbe, *Revue Économique Internationale* (July 1936) cited in Asselain “Une erreur...” 679.

¹⁸ *Ibid*, 680.

¹⁹ René Belin. *La semaine de 40 heures et la réduction du temps de travail*. (Paris: CGT, 1937), 21.

implemented the social reforms of 1936, and in particular the law of forty hours, it would have been necessary to convince other nations to follow France's example - to establish the same legislation – but no other nation would agree to it.” The only alternative, according to Bonnet, “would have been to take full control of all rates of exchange, leading to totalitarian autarchy. This of course, would have led to an unavoidable rupture with the English and American democracies.”²⁰ Neither option was likely to occur. As a result, the Popular Front's well-meaning regulation of working hours was hamstrung from the beginning by poor implementation and a baffling misunderstanding of the ripple effect it would cause among its overseas trading partners.

The law and its corresponding increase to the cost of French labour penalised export industries which already suffered from the worldwide reduction in overseas trade. From 1929 to 1935 exports had fallen from fifty to fifteen billion francs, imports declined from fifty-eight to twenty billion.²¹ Reynaud went on to question the Blum government's understanding of basic matters of state finance.

The experiments conducted by all other nations have consisted of improving industrial conditions: that is to say increasing sale prices by raising production costs as little as possible. You, on the other hand, immediately mandate increased production costs. And while we have everywhere tried to stabilize the cost of living to avoid raising salaries...you decide to further burden an ailing economy by raising salaries by thirty five percent, as though you are unaware that salaries are the most important factor in production costs...Your proposal is truly a spectacle which must appear very strange to our neighbours.²²

²⁰ Georges Bonnet. *Défense de la Paix: De Washington au Quai d'Orsay*. (Geneva: Constant Bourquin, 1946), 33.

²¹ League of Nations, *International Trade Statistics 1930* (Geneva: 1932); *International Trade Statistics 1935* (Geneva: 1936).

²² *Journal Officiel*, Débats Parlementaires, June 12 1936, p.1418.

To be sure, Reynaud's voice was not alone in questioning the law's effects on industrial production. The *Revue Économique Internationale* regularly warned against the dangers of any law which increased production costs into the already frail economy. It suggested that solutions to unemployment were to be found by either increasing production or in lowering salaries. Increasing salaries, its writers argued "is to be excluded as it can only exacerbate the damage."²³ Despite such warnings, Blum remained true to his vision of improving quality of life and increasing leisure²⁴ time for the work force at an increased cost to employers. This limited redistribution of wealth was central to the Front's electoral mandate and had been clearly outlined throughout the electoral campaign during the spring of 1936. Using the party's own vernacular, the forty-hour law was only one aspect of the larger goal to "definitively liberate the nation from industrial and financial fiefdoms."²⁵

Some questioned whether further ambitious social reform was immediately necessary in light of recent advances won by labour groups. Following the nationwide sit-down strikes of

²³ Adolphe Landry. "Réflexions sur les théories du salaire et le chômage" *Revue Économique Internationale* 49:6 (July 1935), 1670.

²⁴ "Loisir" was a central objective in Popular Front social legislation "donné à la classe ouvrière pour lui permettre de s'élever." (Minister Albert Paulin, J.O. D.P. June 12, 1936, p.1442). This was a strongly held value across most of the political spectrum during the late years of the Third Republic. "Cette chose divine, qui est le loisir," (This divine leisure) was referenced with great regularity over the course of parliamentary debates concerning the forty-hour workweek during the summer of 1936. Paul Reynaud lamented this national preoccupation with relaxation at a time when Germany was rearming on a massive scale. "Au lieu de créer, enfin, un ministère de l'armement, ils créaient un ministère des loisirs. Seul pays dans le monde, le nôtre instituait la loi de 40 heures. Quel regard Hitler dut couler vers la France! Quelle belle proie!" Reynaud, *La France a sauvé l'Europe*, v.1, (Paris: Flammarion, 1967), 368.

²⁵ From "Le Programme du Front Populaire" political pamphlet published 1936.

1936, the *Matignon Agreements* had already raised salaries across the board by as much as fifteen percent and introduced the annual paid holiday to French workers as well as collective bargaining rights. These reforms, while improving working conditions and quality of life, had already significantly increased labour and production costs. The implementation of the forty-hour week as a fourth major labour reform in such a short period of time was to prove extremely difficult for small and medium business owners to absorb. In the Senate debates preceding the legislation, opponents reminded the Popular Front's progressive leadership that "seventy percent of French workers work in small firms of under one hundred people."²⁶ The government was called upon to explain how small businesses, already burdened by prolonged recession, could survive a series of labour reforms arriving in such quick succession.

The forty-hour workweek was, of course, a well-meaning and ambitious attempt to improve the conditions of labourers in France. Its political goals were made explicitly clear in the Front's published set of goals, widely distributed in the first half of 1936. The manifesto, entitled *Le Front Populaire contre la misère, la guerre, le fascisme, pour le pain, la paix, la liberté* ("The Popular Front against misery, war, fascism, in favour of bread, peace and liberty") lists the reduction of work hours as a political programme, not an economic one.²⁷ From the first, the Popular Front's stated objective was to reduce unemployment. To this end, the Front had little interest in exploring traditional avenues like large scale public work programs. This,

²⁶ Journal Officiel..., Débats Parlementaires. June 12, 1936, 1420.

²⁷ Political Pamphlet published by the Front Populaire, January 1936. See also Robert Frank, "Intervention étatique et réarmement en France, 1935-1939. *Revue Économique* 31:4 (July 1980), 759.

despite the fact that neighbouring Germany had, since June 1933, achieved impressive results at lowering unemployment through the Reinhardt Plan.²⁸ There, unemployment had dropped from thirty four percent to just over thirteen percent in little more than a year. In France, attempts to address the problem of unemployment took a very different path and resulted in a rise in production costs. Since overtime was made illegal, employers were no longer able to entrust their rate of production to their best workers.²⁹ Instead, they could either cut production or try to maintain the same level of output using less productive or inexperienced workers.³⁰ It was a difficult balance to strike and soon seemed to lack purpose. Unemployment numbers in France during 1937 remained relatively low in comparison to its industrially developed neighbours. British unemployment fluctuated between one and two million, while Germany's total, though steadily improving at this time, remained above a million. In France despite the government's stated prioritization of putting the country back to work, unemployment levels had only marginally decreased. The number of 470,000 unemployed in 1936 was reduced to 402,000 by the end of the Blum's second government in April 1938.³¹ Whether these modest results

²⁸ A three-pronged public works program centered around the development of key infrastructure: the *Reichsautobahn* (highways), *Reichsbahn* (railroad network) and *Reichspost* (mail service). Although some economists have questioned their long-term viability, German public works programs were at the heart of the so-called economic miracle of the mid-1930s. See Dan Silverman, "Fantasy and Reality in Nazi Work Creation Programs, 1933-1936." *The Journal of Modern History* 65:1 (1993), 113 and Charles S. Maier, *In Search of Stability: Explorations in Historical Political Economy* (Cambridge, Cambridge University Press, 1987), 97.

²⁹ Future Finance Minister and Prime Minister Paul Reynaud, a staunch opponent of the forty-hour law, claimed the legislation had damaging moral effects in addition to slowing down material production. According to Reynaud, factory culture soon thought of its forty-hour presence in terms of 30-35 hours of work." Paul Reynaud, *La France a sauvé l'Europe v.1*, (Paris: Flammarion, 1947),510.

³⁰ See James Francis McMillan, *Twentieth-Century France: Politics and Society in France 1898-1991* (New York: Bloomsbury Academic, 2009), 115-16.

³¹ B.R. Mitchell. *International Historical Statistics: Europe 1750-1993*. (London: Palgrave Macmillan, 2000), 43. Some have questioned even these modest results. In his memoirs, Paul Reynaud has stated that between

warranted such a burden on employers in terms of both labour and production costs was a topic revisited often during chamber debates of late 1937 and 1938. During this time, as the Blum government found itself increasingly on the defensive, it searched for new ways to justify its policies. Quality of life, it was now argued, constituted the real motivation of the government's labour reform. Under the Popular Front, French labour enjoyed increased leisure, it is true, but at the cost of what amounted to a minimum twenty-seven percent wage hike for all.³² The Matignon agreements of June 7, 1936 raised all salaries by seven to fourteen percent. Added to the twenty percent salary adjustment concurrent with the forty-hour workweek, employers were thus mandated to absorb an increase of salary costs ranging from twenty-seven percent to a remarkable thirty-four percent. Certainly, alternatives existed, such as adding a third or even a fourth week of paid holiday each year in lieu of such enormous nation-wide salary increases. As Asselain has pointed out, this would have been fully consistent with the Front's stated political and economic platform; it would certainly have produced a rapturous reception and, crucially, could be implemented at the significantly lower cost of a two percent or a four percent increase in labour costs to employers, respectively.³³

In any event, the forty-hour workweek, though only marginally effective in reducing the nation's unemployment figures, exercised a decisive influence on the early stages of French rearmament. It is true that the Front acted decisively to fund rearmament programmes as of mid-1936, but labour restrictions introduced within the framework of the forty-hour workweek

1935 and 1938, the number of unemployed was lowered by only twenty-six thousand, despite the forty-hour workweek. Reynaud, *La France a Sauvé l'Europe* t.1, 376.

³³ Jean-Charles Asselain, "Une erreur...", 672.

worked as a brake on increased production, and ensured that the armed forces received a minuscule return on investment. Chief among such production problems was the shortage in specialised labour. Trained specialists were of course also restricted to forty-hour weeks, thereby exacerbating what was already a major industrial bottleneck. This was one of the principal reasons why French industrial production reached its nadir during the Popular Front's government. Edouard Daladier reflected:

In order to fabricate certain machines, it was not necessary to impose longer hours on the whole workforce, only upon the specialists. Concerning this problem of workweek's duration, we have to keep in mind that if specialist labourers are not authorised or charged with working overtime, the whole factory's production will soon become clogged, and the flow of production will certainly slow to a crawl.³⁴

Criticism of the legislation came from the highest levels of both civil and military leadership. General Maurice Gamelin, Commander in Chief of the French army, offered his advice on how to address the continued delay in industrial production. "It is necessary that we either incorporate the concept of double-shifts, or that we allow special permissions for additional work hours."³⁵ According to Gamelin's calculations, unless work hours were immediately extended to forty-eight hours per week, production of essential war materiel like artillery and small arms would not reach the minimal requirements to assume war footing until

³⁴ Edouard Daladier, Riom testimony, February 27, 1942, in Bracher, *Riom 1942: Le Procès* (Paris: Omnibus, 2012), 518. See also Philippe Garraud, "Les contraintes industrielles dans la préparation de la guerre de 1939-40: la modernisation inachevée de l'aviation française." *Guerres mondiales et contemporains*. 207 (July-September 2002), 43. See also, Asselain "Une erreure...", 683.

³⁵ SHAT 1N 36, C.S.G. meeting, June 4, 1936.

1947.³⁶ Daladier, who as Finance Minister for the Popular Front government implemented the measure in August 1936, expressed marked regret only a few years later. During his wartime incarceration, he identified the reduction in weekly work hours as an important cause for the delay in French rearmament. “The forty-hour workweek was applied too forcefully and systematically at a time when the Germans were working more efficiently and for much longer hours.”³⁷ This theme was often revisited in France’s post-war inquiry into the causes of its defeat. The *Serre Commission* unearthed widespread public condemnation of the forty-hour workweek, well summarized in the words of Engineer First Class of Armaments Production, Alain Martignon:

Of all laws concerning rearmament, those which limited the workweek to forty hours were certainly the most damaging... They aimed to maintain production levels by increasing the workforce and diminishing unemployment. However, in practice, our industries were already using the totality of our trained specialists. The unemployed could not replace their work... a fully trained specialist cannot be produced in a few months... I estimate these measures decreased armaments production by 16%, even more since the law of forty hours was immediately followed by significant social disturbances.³⁸

Another crucial factor was the elevated labour costs with which managers were burdened as a result of legislation. In 1938, nearly two years after the original law restricting weekly labour hours, Blum’s second government seems to have realised the necessity of loosening the restraints on employers. Five extra weekly work hours were offered to employers in the

³⁶ SHAT G4 1K 224 15, Mesures à prendre pour mettre notre production industrielle à même de satisfaire nos besoins en matériels. January 1938, p.6-7.

³⁷ From Daladier’s *Journal de Captivité* written while incarcerated by the Germans in Itter Castle after 1942. Quoted in Elisabeth du Réau. *Edouard Daladier, 1884-1970*, (Paris: Fayard, 1993), 190.

³⁸ Assemblée Nationale, Les Événements survenus en France de 1933 à 1945; Témoignages et documents recueillies par la Commission d’Enquête Parlementaire, vol. 2. (Paris: Presses Universitaires, 1947), 216. Hereafter referred to as Serre Commission Report.

aeronautics field in an effort to kickstart what had until then been a very slow start to rearmament. Surprisingly, most industrialists refused to take advantage of the extra hours despite rapidly expanding orders from the defense ministry. It has been argued that this refusal on the part of air industry management serves to prove that the slow pace of rearmament had little to do with the forty-hour work week.³⁹ That is, if labour restrictions were truly obstructing production, why then would aeronautics firms refuse to take advantage of the government's offer to increase work hours? In this vein, Robert Frank has argued that aircraft manufacturers refused to extend their hours because their factories, as they existed in mid 1938, were unable to produce any faster, even if gifted with additional funding or work hours.⁴⁰ In truth however, employers were not able to take advantage of additional labour because the cost of each work hour was simply too high. Employment numbers in the air industry serve to illustrate this fact. Despite growing state investment, the labour force remained relatively low from the start of the Popular Front government until the cancellation of the forty-hour work week in the spring of 1939. In 1936, thirty-four thousand workers were employed in the air industry. This rose to thirty-eight thousand the following year and to fifty-eight thousand by the end of 1938. However, once the Daladier government put an end to the restrictions on work hours in early 1939, everything changed at once. The Popular Front's mandatory twenty percent equalization payment to each worker was rescinded, making the cost of labour far more affordable for employers. Within a few months, the number of total workers in the industry swelled to over eighty thousand. By September 1939, this number reached one hundred thousand. By June 1940, it had ballooned to

³⁹ See Robert Frank, "Intervention Étatique"...,752; Philippe Garraud, "La Politique française de réarmement de 1936 à 1940: Priorités et Contraintes" *Guerres Mondiales et Conflits Contemporains* No 219 (July 2005), 100; J.L. Crémieux-Brilhac *Les Français de '40* vol. II, 229.

⁴⁰ Robert Frank, "Intervention Étatique...", 753.

two hundred and fifty thousand.⁴¹ Air ministry officials predicted a further doubling of the workforce to half a million, by the end of 1941. This was considered the upper limit of what was needed for war and would also constitute the peak number of workers that the population could provide.⁴² Though certainly accelerated by the nation's state of war following September 1939, the first signs of massive additional hiring by aircraft manufacturers only started following the cancellation of the forty-hour workweek in August 1938. This had been called for earlier in the year within the Air Ministry's report to the Air Commission on March 25th.

All of our production, in effect, depends upon the work performed by a certain number of specialists. The brutal application in March of 1936, of the 40-hour work week in our aviation factories is the principal reason for the drop in production we are currently suffering through. If the application of this law had serious consequences on the development of serial production, its effects were even more serious on the development of prototypes.⁴³

Among his many criticisms of the Popular Front's economic reforms, Paul Reynaud's complaint of November 1938 deserves particular attention. "We live in a capitalist system. For it to function we must obey its laws. These are the laws of profits, individual risk, free markets, and growth by competition."⁴⁴ By directly confronting the entrepreneur's ability to both increase production and increase profitability, the forty-hour work week, with its built-in elevation of

⁴¹ Number and statistics from Frank, "Intervention étatique...", 777. See also Patrick Facon. *Batailles dans le ciel de France Mai-Juin 1940*. (Paris: Pascale Galodé, 2010), 200, and J.B. Duroselle. *Politique étrangère de la France: L'abîme, 1939-1944*. (Paris: Imprimerie Nationale, 1986), 62.

⁴² Jean Truelle, "La Production Aéronautique militaire française jusqu'en juin 1940" *Revue d'histoire de la deuxième guerre mondiale* 73 (January 1969), 90.

⁴³ SHAT 6N 325 d.2, Untitled report by the Air Ministry to the Air Commission, March 25, 1936, p.9.

⁴⁴ Robert Frank. *Le Prix du réarmement français (1935-1939)* (Paris: Publications de la Sorbonne, 1982), 271. See also Talbot C. Imlay. "Paul Reynaud and France's Response to Nazi Germany, 1938-1940", *French Historical Studies*, 26:3 (Summer 2003), 505.

labour costs and hard limits to specialist labour, ensured that the industry's labour pool remained shallow, and that production stagnated along with it. No framework within the nationalisation process existed whereby increased costs of a large-scale employment drive might be passed on to the government. And in the case of specialist labour, employers had no recourse whatsoever but to continue to under-employ irreplaceable human resources. These were circumstances that defined the aircraft industry in France throughout the crucial period from the spring of 1936 to the spring of 1938.

The second reform by the Popular Front to dramatically affect the course of rearmament was the decision to nationalize industrial sectors related to the production of war materiel. This measure was voted through the National Assembly in August 1936. It was publicised as a means to restrict *les marchands de canons* - that is, to prevent opportunistic industrialists from profiting excessively in a time of worsening international politics. The goal was to legislate "a strict prohibition of all profits of war, and notably such profits as were likely to result in time of war from the manufacture of armaments."⁴⁵ As the international situation worsened after 1936, Nazi Germany seemed a far more immediate threat than the possibility of war profiteering at home. Nationalisation of war industries was thereafter re-branded as the best means to increase production and maximize the nation's odds of resisting an increasingly aggressive Germany.⁴⁶

⁴⁵ *J.O.* August 11, 1936 *Débats Parlementaires*, p.1930. Quote made by Deputy Fernand Laurent.

⁴⁶ Nationalisation was, at first, seen as catering to pacifist influences, serving to restrict private arms manufacturing. This would change as the German menace grew and French concerns evolved from curtailing an unnecessary arms race to ensuring the defense of the *Patrie* faced with what had evidently become, a powerful neighbour with insatiable demands. See Robert Frank. *Le Prix du Réarmement Français*, p. 71; Jeffrey J. Clark, "The Nationalisation of War Industries in France 1936-1937: A Case Study", *The Journal of Modern History* 49:3

This measure was consistent with the latest swing of the French political pendulum during the mid-1930s. When the worldwide economic depression hit France in the autumn of 1931, it served to discredit long-standing traditions of state intervention. The Depression called into question France's industrial regulations since they had been unable to stem the economic crash even after several months of warning from the international economy. Converts to economic liberalism swelled in number and a new faith in the ability of free market forces to correct the ills of the economy flourished. In one article, *Le Temps* summarized the growing conviction that "if the economy is in chaos, it is because freedom has been reversed and excessive state intervention... has thrown everything off course."⁴⁷ Several measures practised before the crash – protectionism, consumer co-operatives, marketing boards, government purchases of surplus wheat and metals – were seen as interventions that had prevented timely reaction to weakening worldwide demand for manufactured goods.⁴⁸ Over the next few years, the markets were largely given free rein to attempt to correct themselves. Successive governments did virtually nothing to influence the effects of the economic and financial downturn.

But economic liberalism did not have the desired effect. Between 1932 and 1934, industrial production continued to drop, domestic and foreign sales plummeted, unemployment

(September 1977) pp 411-430 (423); Ernest R. May *Strange Victory: Hitler's Conquest of France* (New York: Hill and Wang, 2001), 123. For a contemporary view on this matter from the late 1930s, see Kimon A. Doukas . "Armaments and the French Experiment", *The American Political Science Review*, Vol. 33, No. 2 (April 1939), 279-291.

⁴⁷ Quoted in Julian Jackson, *The Politics of Depression in France, 1932-1936*, (Cambridge: Cambridge University Press, 1985), 35.

⁴⁸ See Kenneth Mouré *Managing the Franc Poincaré: Economic Understanding and Political Constraint in French Monetary Policy, 1932-1938* (Cambridge: Cambridge University Press, 1998), 31, and Frank Dobbin "The Social Construction of the Great Depression" *Theory and Society* 22:1 (February 1993), 37.

rose drastically. As matters worsened, public opinion began to swing back in favour of increased government action. In the United States and in Great Britain, unprecedented levels of government intervention, the very measures France had only recently turned away from, were leading to gradual recoveries from the shock of 1929. Meanwhile, the unfettered free market forces at play in France offered no such alleviation. Faith was quickly restored in the benefits of increased state management of the national economy. Detailed plans for such intervention were drawn up by several interest groups from both the political Left (C.G.T. labour union) and the Right (U.N.C. war veterans' union). They represented a growing number of people who had grown tired of paddling aimlessly through the economic morass of the depression-years, and now sought greater fiscal direction from its elected officials.

This reversal in the popular mindset back toward state intervention contributed to the Popular Front's victory in the spring of 1936. By this time, few voices were left to publicly defend liberalism as the economy had not yet shown signs of recovery. Upon assuming office, Blum and his cabinet enjoyed a period of enviable popular support and a mandate to enact far-reaching reforms. The decision to nationalise armaments industries was among the earliest of these. Daladier, as Minister of Finance, announced the new opportunities for nationalised production of war materials in July and August.⁴⁹ In the declaration, he was clear that the War Minister would not be called upon to make the key decisions. Rather, each of the Defense services, under the authority of their respective ministers (Air, Defense and Marine) were to

⁴⁹ *Journal Officiel de la République Française*, Débats Parlementaires. Sénat: August 7, 1936 (1099-1115); Chambre des députés: July 16 (1930-1945).

individually determine how far to press nationalisation. Of the three, only the Air Minister, Pierre Cot, would embrace the opportunity whole-heartedly to begin a total reorganization of aircraft production. Re-instated as Air Minister by Léon Blum in June, Cot had hardly finished moving back into his offices when the new opportunities for industrial restructuring were publicised. Over the next two years he worked energetically toward a thorough reorientation of the struggling French air industry away from private entrepreneurs and increasingly toward state planning and control. Cot's vision was to reassign the remainder of private industry to a primarily innovative, research-oriented role within the larger national apparatus. Private companies would be relied upon to play the roles of engineers and designers. Their expertise would be tapped for the creation and realisation of prototype designs. State-controlled factories would then take over the stages of assembly, production and testing.⁵⁰ The role for private industry, as the air minister would have it, was of research and development. Non-nationalised firms would serve as *think tanks* which would conceive the prototypes to be mass-produced in his newly modernized national factories.⁵¹

The air minister blended political goals within his framework for industrial progress. An avowed socialist whose pro-Soviet political views were well known,⁵² Cot's admiration for

⁵⁰ Robert Frank, *Le Prix du réarmement français...*256.

⁵¹ Pierre Cot, *L'Armée de l'Air, 1936-1936*. Paris: Bernard Grasset, 1939, 179.

⁵² American Ambassador William Bullitt revealed that by 1936, Cot's ministry had made information "more or less freely available" to Soviet representatives. (John Dreifort, "The French Popular Front and the Franco-Soviet Pact 1936-1937: A Dilemma in Foreign Policy", *Journal of Contemporary History* 11:2 (July 1976), 222. This is supported in the correspondence between Stalin and his chief advisor Lazar Kaganovich which makes reference to Cot's visit and proposed co-operation between the two air forces. Concerning the establishment of "more regular contact between our and their aviation and aircraft industry and on sending our officers and engineers

Soviet industrial practices, established during his state visit to the USSR in September 1932, provided a template for his reforms at home. As a committee member for the “Association des Amis de l’Union Soviétique”, Cot was openly enthusiastic about the USSR’s potential to counterbalance Nazi ambitions in Europe. “To every honest man,” he wrote, “it was apparent that the developing Soviet power was the only force that could be compared to the growing might of Hitler.”⁵³ He sought to bring home to France the “benefits of Soviet efficiency,” reorganizing industrial resources with a focus on a greater collectivism of resources and on direct application of state direction. Fueled by these ideas, efforts to nationalise the aeronautics industry were pursued to a degree unparalleled among the other ministries of national defense. Cot’s reforms addressed political and philosophical goals as much as they targeted material improvement.

To this end, Cot tackled what he perceived as a corrupt private industrial base. His goal was to establish a government-controlled infrastructure whose management was driven by

to study French aviation and the aircraft industry...We would consider it advisable to give an affirmative reply.” *The Stalin-Kaganovich Correspondence 1931-36* eds. R.W. Davies, Oleg V. Khlevniuk et. al. (New Haven: Yale University Press, 2003), 214-215. Ernest R. May speculates that Cot may in fact have been acting as a Soviet secret agent. *Strange Victory*, p. 118. This was a suspicion shared by the right-wing newspaper *Candide*, which accused Cot in its edition of September 17, 1936, of undermining the French air force on behalf of his Soviet masters. (Jillian Louise Stottor, (1984) “The French Popular Front and the Franco-Soviet Pact 1935-1938” [Unpublished M.Phil thesis] Bedford College, London, 60. Cot himself may have contributed to these suspicions with a collection of public statements of which the following is only a sample: “between 1920 and 1940 the evolution of capitalism...constituted, without doubt, a danger to democracy.” (Pierre Cot, *Triumph of Treason* (Chicago: Ziff Davis, 1944), 29. Though clearly sympathetic to the Soviet political and economic experiment, Cot’s loyalty to the Third Republic has never convincingly been called into question. Accusations like May’s or those published in *Candide* cannot raise specific instances, and lack supporting documentation which can decisively point to the air minister working clandestinely in the service of the USSR

⁵³ Pierre Cot, *Triumph of Treason*, 35. Cot was not the only high-ranking French convinced of the Soviet Union’s position as a first-rate military power as early as the mid-1930s. Georges Bonnet, who held the positions of Finance Minister (1937-38) and Foreign Minister (1938-39) had, since 1934, expressed his open admiration for the Red Army. “La Russie sacrifie tout à son armée; pour celle-ci rien n’est assez beau; et elle est en train de l’équiper avec un matériel formidable.” Georges Bonnet. *Défense de la Paix: De Washington au Quai d’Orsay*. (Genève: Constant Bourquin, 1946), 123.

concerns of national security rather than short term profit. To his mind, corruption among the managerial class was the most serious obstacle to efficient serial aircraft production. “As long as men have yet not acquired a greater sense of duty,” he explained in his 1938 apologia, written immediately following his removal from Daladier’s cabinet, “as long as the Captains of Industry are exposed to the temptations of unlimited gains, it will remain dangerous for the state to leave them in absolute liberty.”⁵⁴ In an effort to rein in the private interests responsible, in Cot’s view, for the wastefulness of resources and inefficiencies of design and production, he oversaw the creation of six national “Sociétés industrielles.” These were to absorb the twenty private enterprises which previously made up the French aircraft manufacturing sector.⁵⁵

These industrial amalgamations were dispersed around the country to achieve the twin goals of increased production on the one hand, and decentralization of the aircraft industry away from Paris, on the other. The six “National Societies of Aeronautical Construction” were named for the region to which their operations were assigned: the North (SNCAN), the West (SNCAO), the South-West (SNCASO), the Center (SNCAC), the Midi (SNCAM) and the South-East (SNCASE). In addition, a seventh society was established to improve production of engines, another sector of the industry which lagged behind international competition. This was the “National Society for Engine Construction” (SNCM) with headquarters in Lorraine and Paris. The state was to control sixty-six percent of company stocks while allowing private interests to retain the remainder. In this way, the minister hoped to retain a productive competition between

⁵⁴ Pierre Cot. *L’Armée de L’Air*, 182.

⁵⁵ It is misleading however, to describe the air industry in terms of so many competing firms, as though they all competed on an equal footing. In truth aircraft manufacturing was largely dominated by eight established companies: Bloch, Breguet, Dewoitine, Farman, Lioré-Oliver, Potez, Amiot and Morane-Saulnier.

national and private interests. Agreeing to his proposal, the Senate accorded him six months and two hundred and seventy million francs with which to buy out existing ownership and organize the new societies.

Cot favoured the younger generation of manufacturers and rewarded Marcel Bloch and Henry Potez with top management positions within the new organizations. The former assumed the post of Chief Administrator for the SNCAO while the latter took over the reins of the SNCAN. At the same time, Cot glaringly omitted the older generation of manufacturers from executive positions within nationalised societies, in order to “cut off the dead branches”⁵⁶ of the ailing industry.⁵⁷ Thus, Louis Bréguet, Robert Morane and Raymond Saulnier were passed over for leadership positions.⁵⁸ Overall, the industry’s resistance to nationalisation efforts was surprisingly tepid. Bloch and Potez were assuaged by large indemnities for their offices and airfields, ten per cent profits from their aircraft models produced in nationalised factories and an annual salary of three hundred thousand francs.⁵⁹ As for the remainder of private manufacturers, Cot believed they were too weak to resist intervention by the state. “I don’t believe I will

⁵⁶ Presumably, this description referred to Cot’s opinion concerning their willingness to cooperate with the Air Ministry’s ambitious agenda. It would be difficult to reach Cot’s assessment of their managerial qualities based solely on age as all five entrepreneurs were, in 1936, between the ages of 44 (Bloch) and 56 (Bréguet).

⁵⁷ Serre Commission Report, vol.1, p. 280.

⁵⁸ Cot’s favoritism did not pass unnoticed. Paul Reynaud later criticised the Air Minister’s methods for fostering a lack of accountability among his “favorites”. He wrote : “On avait reproché le Min. de l’Air d’avoir nationalisé les usines de fabrication de cellules d’avions dans des conditions telles que leurs dirigeants gardaient les bénéfices en se voyant déchargés des responsabilités.” Reynaud, *La France a sauvé...vol. 1*”, 438.

⁵⁹ Herrick Chapman, *State Capitalism and Working-Class Radicalism in the French Aircraft Industry* (Berkeley: University of California Press, 1990),108.

encounter much resistance from industrialists. Most of them will accept it because they know they can't avoid it and they have a stake in being nationalised with a smile and a future rather than with no smile and no future.”⁶⁰

The Air Ministry's goal was to provide larger, more modern and decentralised workspaces while at the same time reducing wherever possible, the duplication of administrative processes. Fewer management teams, it was hoped, would lead to greater focus on assembling the workforce, specialists and factory tools needed to begin serial production of aircraft. This reorganization was, of course, resisted by certain industrialists who questioned whether the state would be able to successfully manage the aircraft industry. Far from arguing about profits and the bottom line, entrepreneurs cited national security as the basis for their opposition. Henri Bouché, future director of the 'Institut Français du Transport Aérien' weighed in on their behalf, arguing that the goal of serial production was destined to stultify creativity within the air industry and was certain to use up too much of the state's limited resources. Most importantly it would require so much time to set in motion that it was doubtful whether such standardized practices would ever be ready in time for the looming conflict with Germany. Opponents of nationalization cited the importance of private enterprise in maintaining creativity within the aerospace industry. “Serial production sterilises innovation. It monopolizes too great a percentage of the limited means available for our national defense. This is true of tooling as it is of personnel. It takes so long to put into motion that it could never occur in time for the eventual

⁶⁰ R. Frank. *Prix du réarmement français*, 256.

conflict.⁶¹ Cot also met with resistance from outside of private industry. In the words of the spokesman for the Senate Air Commission, Senator Farjon: "an industry like that of aeronautics in manifest evolution, in day-to-day modification, should enjoy, if its progress is desired, a condition of the greatest freedom, which obviously cannot be found in the same degree in agencies more or less institutionalized"⁶²

Undaunted, Cot proceeded energetically toward a thorough reorganisation of the aircraft manufacturing sector. As mentioned, the air ministry's *Plan I*, approved in July 1934, called for 1365 modern planes (1023 first line aircraft and 342 support aircraft) to be constructed for use by the air force. To this end, over two billion francs were approved without coming close to achieving the stated goal. It had proven to be an impossible task for an industry currently equipped to produce an average of three hundred machines annually.⁶³ The majority of aircraft were scheduled for delivery by the end of 1935. In fact, only five hundred planes, or less than half, had been completed. Upon taking over the reins of the ministry, Cot wasted little time in revising the production schedule. His first attempt came in the form of the *Plan Q* (Plan Quinquennal) or 'five-year plan' – another inspiration derived from his visit to the Soviet Union), which was set into motion in early 1936. It was designed to update the entire air fleet, not with a new generation of machines (no such prototypes existed for mass production) but rather with existing designs, in the form of the 1932 collection of

⁶¹ The argument against serial production of aircraft in France during the mid-1930s is explored in Ladislas Mysyrowicz. *Autopsie d'une défaite: Origines de l'effondrement militaire français de 1940*. (Lausanne: L'Age d'Homme, 1973),190-196 and in Patrick Fridenson and Jean Lecuir. *France et Grande Bretagne face aux problèmes aériens* (Vincennes: Services Historique de l'Armée de l'Air, 1976),20-21.

⁶² *Journal Officiel, Sénat*. September 1936, 1103.

⁶³ SHAA 3D 494, Chossat Report, 5.

Bombardement/Combat/Renseignement (B.C.R.) planes. Five hundred and fifty million francs were to be poured into the program annually from 1937 to 1941. The first orders were set to take place in September 1936.

New obstacles emerged from the start. The launch of Plan Q coincided with the lowest period of productivity in France throughout the Depression era. Added to this, Cot's reorganisation of the entire air industry from private to semi-nationalised firms was in full motion. Facilities, labour teams, tooling and management were all in flux as the new *Sociétés* were being established in all corners of the hexagon. Not surprisingly, production stalled, and the plan failed to deliver.⁶⁴ It was absorbed, in September 1936, by Cot's revised *Plan II*, which increased the number of new first line equipment to just over fifteen hundred planes. The focus was on bomber production in order to fulfill the stated goal of "developing heavy aviation until it is in a position to compete with German offensive air power."⁶⁵ Originally, the minister called for five billion francs to complete the project over the next three years. In the end, four years was agreed upon to produce the aircraft by January 1st, 1941, but with an increased budget of seven billion francs. Once again, it was soon evident that production would fall short. In 1937 the shortfall in construction reached twenty percent.⁶⁶ Cot regularly complained that he was not

⁶⁴ In 1941 Comptroller Chossat looked back on the ill-fated *Plan Q*, stating "le plan eut en outre la malchance d'être lancé à une époque nettement défavorable à tous points de vue social, économique, financier et industriel (usines en plein réorganisation)." Ibid., p.3.

⁶⁵ Ibid.

⁶⁶ SHAA A1 11Z 12938 D3 Report by the General Staff on industrial production. p.2

receiving sufficient funds to complete his rearmament programs⁶⁷ but in truth, *Plan II* was generously funded. Bottlenecks in production reflected the turmoil set into motion by the recent nationalisation measures, rather than a lack of financial support. That Cot was able to receive such a level of financing at all is remarkable since *Plan II*, while approved by the government's Council of Ministers never received parliamentary approval. It was also never officially approved by the Minister of Finance. Cot would face similar problems with his future proposals for *Plan III* and *Plan IV*. The latter, proposed at the end of 1937 was rejected by the Haut Comité Militaire which determined that "there is currently no possibility of modifying or expanding the air force's production plan."⁶⁸ This was not to say that the military did not recognise the urgent need for more planes but was rather highlighting the perceived absurdity of Cot's latest proposal. The aircraft industry, thoroughly reorganised and nationalised, remained incapable of meeting the production goals set out in *Plan II*. *Plan IV* would call for doubling production to almost one thousand planes a year. Clearly, the minister's proposals were far beyond the immediate capabilities of the industrial sector. Prime Minister Daladier described the constant push-and-pull dynamic between the Air Minister and the Minister of Finance in the following terms: "Air Minister: Give me more money and I will produce more airplanes. Finance Minister: I will give you only as much as you are able to spend given your current industrial capacity."⁶⁹

⁶⁷ SHAA A1 11Z 12934, Efforts tentés depuis juin 1936 (report by Air Minister Pierre Cot, undated, late 1937). "Contrairement aux promesses qui avaient été faites, on n'a pas aidé les Sociétés Nationales de Constructions Aéronautique à se procurer les fonds de Trésorerie dont elles avaient besoin." (p.5).

⁶⁸ Ibid.

⁶⁹ SHAA A1 11Z 12934 D1, Note personnelle pour le Ministre de la Défense Nationale et de la Guerre (undated but between January 1937 and March 1938).

Cot's efforts to modernize the air industry became the target of enormous criticism⁷⁰ as aircraft production remained alarmingly low until the end of Cot's term, despite what appeared to be herculean efforts at increasing industrial potential and efficiency. Throughout 1937, aircraft production averaged only 31 planes per month⁷¹. Over the course of Cot's final full month as Minister (December 1937), no fighter/interceptor of any kind was fabricated (and only three Dewoitine 510s had been constructed the month prior to that).⁷² During the same month, the bomber force to which Cot had always tied his vision and reputation received only an unimpressive addition of fourteen Bloch 210s and five Amiot 143s. For the bombastic technocrat who had ambitiously reconstructed the brick-and-mortar infrastructure of the entire national air industry in the name of serial production over the course of nearly two years, this amounted to demonstrable failure.

Cot's Ministry was characterised by a steady stream of dazzling promises which invariably failed to materialise. One reason for this was the Air Minister's focus on restructuring physical workspaces while neglecting the methods used within them. Each *Société*, once

⁷⁰ French historians have been generally more positive in their assessment of Cot's Air Ministry. Robert Frank (*Le Prix du réarmement...*, 264), Fridenson and Lecuir (*La France et la Grande Bretagne...*, 41) and Patrick Facon (*Batailles dans le ciel...*, 38) each argue that Cot's nationalisation reforms were an essential building block of French aerial rearmament. Anglo-American historians, for the most part, have not been so generous toward the "much-detested pre-war air force minister" (Andrew Shennan, *The Fall of France, 1940*, (Harlow: Pearson Education Ltd, 2000, 81). Less favourable accounts are found in Zara Steiner, (*The Triumph of the Dark: European International History, 1933-1939* (Oxford: Oxford University Press, 2013), 396; Anthony Adamthwaite (*France and the Coming of the Second World War, 1936-1939* (London: Frank Cass, 1977), 71; Alistair Horne *To Lose a Battle, France 1940* (London: Macmillan, 1969), 70-73.

⁷¹ SHAA 3D 494, Rapport sur la réalisation des programmes de matériel aérien de série, p.4.

⁷² See Robert Frank, *Le Prix du réarmement français*, 317.

created, was left to its own devices, and often fell back into the same inefficient work habits which defined the older “cottage industries” which Cot had set out to modernize. The *Sociétés* operated “without technical or industrial coordination of any kind. There was no overall technical direction, no plan for tooling, no sharing of research, no exchange of results, no pooling of common experiences.”⁷³ State Engineer Albert Métral produced a report on the French aeronautics industry in early 1938. In it, he concluded:

Despite the organization of these factories on paper, they were left to operate without coordination of management and without technical or industrial liaison. Each factory competes for its own technical specialty without benefitting from the experiences of the others. Research and development are not collected or shared among factories.⁷⁴

One study conducted by the Air Ministry complained of the lack of accountability on the part of the *Sociétés’* management teams: “it is abnormal that the state should have to guarantee the manufacturer against all risks, leaving him with only the profits.”⁷⁵ “Some nationalised firms,” the study continued, “demonstrate a complete lack of initiative, leaving to the state the responsibility for essential tasks which rightly should fall upon their shoulders.”⁷⁶ In particular, the *Société* of the South-east (SNCASE) was flagged for leaving all the finishing work on its assembled planes to be completed by sub-contractors furnished by the state. “The SNCASE

⁷³ Philippe Roland. *La Crise de Matériel de l’Aviation Militaire Française* (Paris: Société d’Études et d’Informations Économiques, 1938), 43.

⁷⁴ SHAA 3D 493, L’Industrie aéronautique française, (March 1938), 1.

⁷⁵ SHAA A1 11Z 12935, Note sur le rendement général médiocre de l’industrie nationale, Septembre 1938, 16.

⁷⁶ Ibid.

continues to operate without even the semblance of modern industrial organization,” the report concluded.

Cot’s predecessor Victor Denain had already been roundly criticized for throwing money at a problem that required infrastructural upkeep before any progress could be made. Denain’s *Plan I* attempted to force through the limitations of “a poorly managed, poorly organized and poorly equipped industry”⁷⁷ by injecting financial resources into an outdated framework. This approach quickly led to backlogs in production; it became evident that money alone would not suffice to redress the nation’s industrial shortcomings. As of mid-1936, Cot’s approach to the problem was similarly one-dimensional and led to similar results. His contribution lay in reducing the number of competing private industries, establishing large national firms with a greater potential for production, and providing them with commodious workspaces. Creation of national *Sociétés* had also pursued the secondary benefit of relocating aircraft fabrication plants away from Paris. Before his first ministry, only 32% of industrial workspace was located outside of the capital. By December 1937, provincial industry had been developed to the point where it constituted 60% of the total workforce.⁷⁸ In these respects, the air minister made a considerable contribution to national security. In other areas, long-standing problems within the aeronautical sector rankled and festered, ensuring that real progress in production remained elusive.

⁷⁷ SHAA 3D 493, Metral Report.

⁷⁸ Pierre Cot, *L’armée de l’air*, 193.

Most glaring among these was the persistent need for massive investment in modern machine tools. The newly constructed national factories remained inexplicably ill-equipped for mass production of new machines. Contemporary observers noted that despite all the promises and predictions, outdated methods and equipment remained the norm. Acute shortages persisted in modern tools which were indispensable for serial aircraft production. In all the new workspaces, hydraulic presses, electrical presses, milling tools, piercing tools and rolling machines were all either in short supply or antiquated, or both.



The SNCAO, the most productive of the Nationalised factories, managed by Louis Bréguet, produced eight M.S. 406 fighters per day by the spring of 1940. Courtesy of SHAA⁷⁹

⁷⁹ État sommaire des archives d'entreprises conservées aux Archives Nationales (série AQ) à 119 AQ: avec suppléments aux fonds recensés dans le tome 1. (Vincennes: Archives Nationales, 1977).



SNCAM factory in Toulouse which only began mass producing the excellent Dewoitine D-520 fighter in early 1940. Courtesy of SHAA

Each factory's complement of modern tooling remained so low as to still require extensive hand-finishing by individual workers using primitive files of a kind incompatible with the mass production of a modern air force. Cot was not unaware of the baleful state of French industrial tooling. In December 1936, he stated to the Finance Committee of the Chamber of Deputies. "This industry is characterised by the weakness of its tooling...we don't have the tools to allow, in time of war, for an accelerated industrial mobilisation."⁸⁰ Strangely, Cot's initiatives to improve the situation came nowhere near to achieving the results required to equip the factory floors he had constructed at so great a cost. His investment in tooling to complement the new *Sociétés de Constructions* was a very modest sixty-six million francs. Such a small commitment led Prime Minister Daladier to comment, "credits earmarked specifically for the modernisation

⁸⁰R. Frank, *Réarmement...*, 246.

of factories and machine tools never factored into Cot's proposals."⁸¹ Despite this tiny investment (billions of francs were needed to truly improve the industrial situation in France) delivery of the new tooling was slow and always behind schedule. Almost all of them were sent to the newly nationalised firms to the detriment of the remaining private firms. This fact was noticed and resented not only by industrialists but also by the tooling manufacturers themselves who had long-standing relationships with private firms dating back to the First World War.⁸² Nevertheless, starting in June 1936, manufacturers within France produced as many machine tools as they could,⁸³ though they were unable to promise delivery until at least nine months later, or the spring of 1938. Even after that point, their production would be unable to supply the massively expanding French war effort. Cot imported some additional tooling, principally from the United States, spending 81 million francs in the last six months of 1936.

In total, Cot saw to the investment of 141 million francs on new machine tools as part of the construction of his new factory spaces. This represented some progress but nowhere near enough to generate a marked increase in the number of aircraft manufactured each month. Antiquated tooling still extended the construction time for airframes and engines by hundreds of work hours per unit.⁸⁴ Cot's limited reaction to this glaring obstacle to French aerial rearmament

⁸¹ SHAA A1 11Z 12934 D1, Note personnelle pour le Ministre de la Défense Nationale et de la Guerre (undated but between January 1937 and March 1938), p.9.

⁸² Joseph Roos, "La Bataille de la Production Aérienne", *Icare* 59 (Automne-Hiver 1971), 52.

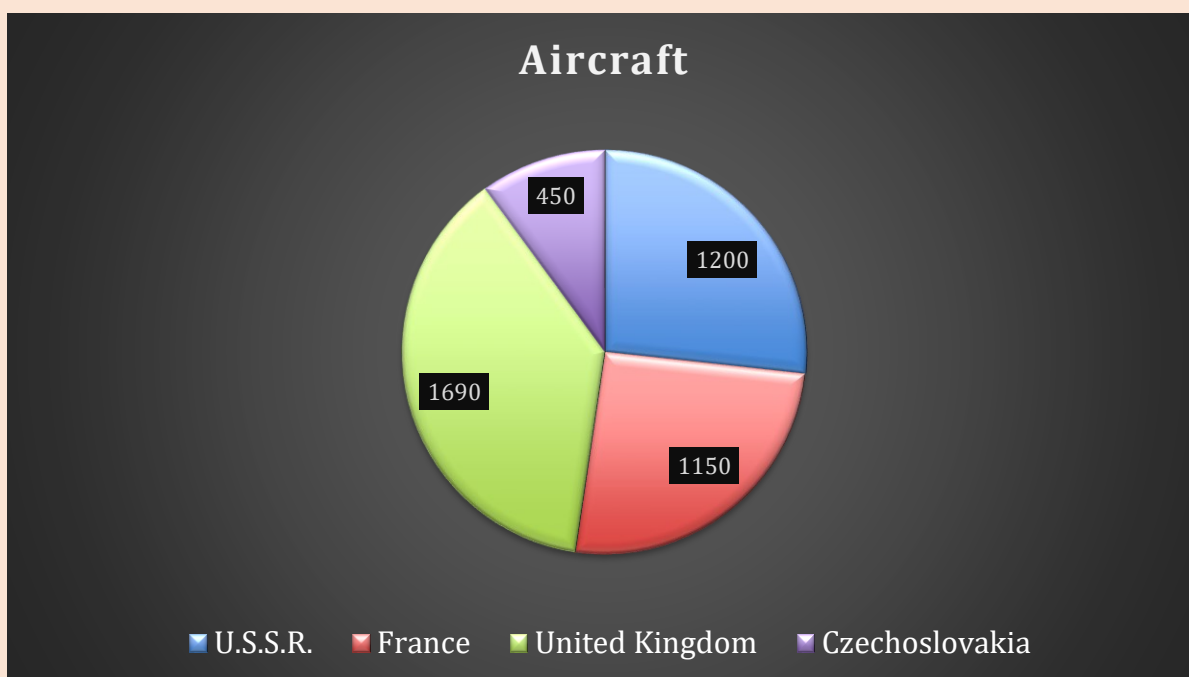
⁸³ Philippe Garraud has argued that in the final analysis, despite these efforts, France produced "pratiquement aucun" of the machine tools required for the aeronautics industry. The overwhelming majority of these were purchased abroad. See Garraud "Les Contraintes Industrielles dans la préparation de la guerre de 1939-1940: la modernisation inachevée de l'aviation française" *Guerres Mondiales et Contemporains* 207 (July-September 2002), 42.

⁸⁴ SHAA GR 1K 224 15. Air Ministry Report - Développement de l'industrie aéronautique française en fonction des besoins de guerre. 1938, p.13.

questions the extent to which he ever believed French industry capable of competing successfully with Germany on its own. The minister believed that a standing air force of fifteen hundred modern planes constituted the upper limit of French industrial potential.⁸⁵ In order to successfully challenge the *Luftwaffe*, considerable support would need to be found abroad. More than any other civil or military leader, Cot was committed to the notion that only a vast international force would suffice to defeat Germany in the event of future war. Such an alliance, tying France to its allies in central Europe – the *Petite Entente* – and to Great Britain, also factored in the essential participation of Soviet Armed forces, especially in preparing for a future air war. Cot’s vision of a pan-European alliance against Germany appeared logical on paper but it posited some wild assumptions which the modern observer cannot help but consider naïve in the extreme. Among these was the belief that an international air force composed of various nations, each espousing different priorities and defense concerns would work effectively together in conducting a joint air war against the totalitarian states of central Europe. Cot’s number crunching provided a semblance of aerial superiority over Germany which had little to do with the reality of France’s geopolitical situation. By the start of 1938, Cot imagined an international aerial *force de frappe* constituted along these lines:

⁸⁵ SHAT 2N 24. Procès-verbal de la séance de la CPDN. 8 December, 1937.

Available first line aircraft forces according to Pierre Cot, French Air Minister 1934, 1936-8



Total number of planes available: 4490. Cot argued that this number of available Soviet aircraft (1200) only represented a quarter of total first line aircraft operating in that country, suggesting a greater Soviet contribution was possible.

Enemy aircraft, in his view, numbered 2268 German planes and 1500 from Italy – a total of 3768 aircraft available for use by the two fascist states. Following this logic, to its furthest extent, Cot claimed that France had no need to cite insufficient air power as a reason for making concessions at Munich. “If war had been declared in the autumn of 1938,” he wrote, “the totalitarian states would have activated fewer aircraft than the democracies and their allies. As the war progressed,” he continued, “very quickly [Germany] would have been forced to fight, in the air, at a ratio of 2:3 or 1:2.”⁸⁶ This description assumes that all four allied air forces would be

⁸⁶ Cot, *L'Armée de l'air*, 60.

willing or able to work together in an effective manner against a single *Luftwaffe* operating under centralised command. Cot claimed that this, in fact, would be the case. “The great advantage to be found in the Anglo-French-Russian block is that it allows for the combination of operations against Germany, with forces striking from three different directions.”⁸⁷ Concerning the obvious challenge of allied co-ordination and overall leadership, Cot devised a similarly sanguine solution. In his view, France would assert itself as the chief co-ordinator of the allied air force he envisioned. “I always thought that the French air force would act as the brain to the interallied air force.” The Air Minister’s vision for French defence thus assumed British and Soviet acceptance of joint air operations directed by the French military command. “Small men with furrowed brows reproached me for not having expanded the air force by a few hundred planes,” Cot explained. “I preferred growing an international force by several thousand planes which French chiefs would have directed and conducted to victory.”⁸⁸

Despite all of Cot’s efforts to nationalise the air industry, there is a case to be argued that French aircraft manufacturing would have benefitted more by providing private industry with solutions for its two essential deficiencies: a steady and reliable number of orders⁸⁹ and a

⁸⁷ Ibid, 73

⁸⁸ Ibid, 121.

⁸⁹ A major problem for pre-nationalisation aircraft industries in France was the lack of certainty concerning future purchase orders for planes that had already been put into production. Manufacturing runs were kept modest and production methods were not substantially improved since limited orders eliminated any incentive to modernise with a view to serial production. See Robert Jacomet, *L’armement de la France, 1933-1939* (Paris: Éditions Lajeunesse, 1945), 146; J.L. Crémieux-Brilhac *Les Français de l’an 40*, Vol II: *Ouvriers et soldats* (Paris: Gallimard, 1990), 180; Fridensen and Lecuir, *La France et la Grande Bretagne...41*. Cot himself lamented this fact after his removal from office. See *L’Armée de l’air*, 191.

massive state investment in modern machine tools. The manufacturing crisis would necessarily persist until the means of production had been comprehensively modernized. For as the nation's comptroller general observed, "the machine tool is the means to wage war from the rear. Lacking machine tools during war is the same as lacking munitions and canons at the front." Robert Jacomet, the senior civil servant mandated to co-ordinate and audit the nation's financial and industrial assets was convinced that Cot's nationalisation of the French aeronautical industry was directly responsible for the persistent shortfall in aircraft construction until 1939. "The suppression of profit margins...had a generally deleterious effect on industrial modernization and on the upgrading of machine tools."⁹⁰

Before 1939 the average age of French machine tools was twenty years. The average age of German tooling was seven years, while in the United States, tools were usually three years old or less. But of the large percentage of French tools older than twenty years, a great number were hopelessly outdated given the modern task for which they were used. Of a pre-1939 total of 550,000 machine tools, 80,000 were thirty or forty years old, 35,000 were forty to fifty years old and 25,000 were older than fifty years of age. Only 20,000 or around 4% of French tools were less than ten years of age. It is for this reason aircraft factories in pre-war France have been so often termed 'cottage industries' or *artisanal*.⁹¹ The need to finish major pieces by hand prior to assembly ensured lengthy delays in production and shortfalls in the number of completed aircraft

⁹⁰ Jacomet, 50-51.

⁹¹ See Martin Thomas "French Economic Affairs and Rearmament: The First Crucial Months, June-September 1936" *Journal of Contemporary History*, Vol. 27, No. 4 (October 1992), 661; Julian Jackson, *The Fall of France: The Nazi Invasion of 1940*, (Oxford: Oxford University Press, 2003), 17; Robert Frank *Le Prix du réarmement français*, 238; Jean Daridan, *Le Chemin de la Défaite, 1938-1940* (Paris: Plon, 1980), 99.

each month. Nationalisation did not improve this situation appreciably as, for the most part, French workers were relocated into large, modern, newly constructed facilities, where the same inefficient tooling ensured that assembly continued at a leaden pace.

At the same time, Cot exasperated audiences, both civil and military, with wildly unrealistic boasts incommensurate with the disappointing rate of aircraft production. Among these was his observation to American ambassador William Bullitt in November of 1936. Cot suggested that the arms race between France and Germany had already “reached the point of absolute idiocy.” Cot’s logic was that he already possessed enough bombers to destroy Berlin and Essen instantly. By the same token, [Nazi Air Marshal Hermann] Göring had enough planes to destroy Paris instantly. Since neither country had any means of defense against those planes, any future conflict would assume a form of mutually assured destruction, which was clearly to no one’s benefit.⁹² France’s modern bombing force at that time, consisting of one hundred and twenty four Bloch 210s, nine Amiot 143s and sixteen Farman 221s was in no way capable of such force projection.⁹³ His wild prediction that Denain's original ‘Plan of 1000’, scheduled for completion by 1936, was to be achieved within three months further undermined his credibility within French civil and military leadership circles.⁹⁴

⁹² Orville H. Bullitt, ed. *For the President: Personal and Secret: correspondence between Franklin D. Roosevelt and William C. Bullitt*. (Boston: Houghton Mifflin, 1972), 187.

⁹³ SHAA 6N 325 d.2 Fabrications aéronautiques résumé.

⁹⁴ Martin Thomas, “French Economic Affairs and rearmament...”, 662. Cot never broke this habit of wildly exaggerating the opportunities created by his air ministry. Even after his removal from office in 1938, Cot wrote that thanks to his efforts, “prototypes are on the cusp of development which, once we have sufficiently

At the Comité Permanent de la Défense Nationale (CPDN) meeting of 8 December, he asserted that France would have 1500 modern planes by the end of the year (only three weeks away).⁹⁵ Total production for the year had only risen to three hundred and seventy, to be added to the previous year's five hundred and sixty-nine planes. Considering the increasingly evident limitations of the BCR planes being produced, Cot's prediction of 1500 modern planes was totally out of step with the reality of current aircraft production. As Cot's successor would testify years later: "by early 1938, aircraft issued from our factories may well have been new, but they were also completely obsolete."⁹⁶ Cot was not always straightforward in his assessment of German military potential either. In order to spread his conviction of the need to establish a strong Soviet alliance, Cot was more than willing to exaggerate the scope of the immediate German threat. Speaking to the Chamber aeronautical commission in March 1937, Cot repeated his warning that German industrial production was double that of France and that this would result necessarily in twice the number of enemy warplanes over French skies in the event of war. "This fact places certain obligations on our foreign policy – namely the search for allies capable of helping us counterbalance German power."⁹⁷ The Minister's words cast doubt on the extent to which he actually believed the French aircraft industry would ever be in a position to compete

powerful engines, will prove capable of exceeding 610 km/hr, thus surpassing all designs currently constructed abroad." No such designs existed. See Cot, *L'Armée de L'Air*, 217.

⁹⁵ Serre Commission. Tome II, 250.

⁹⁶ Assemblée Nationale. *Rapport fait au nom de la commission chargée d'enquêter sur les événements survenus en France de 1933 à 1945. Deuxième Partie.* (Paris : Imprimerie de l'Assemblée Nationale, 1947), Testimony of Guy La Chambre, 25 November 1947, 304. (Hereafter referred to as *Serre Commission Report*).

⁹⁷ Quoted in Jackson, *The Fall of France*, 236. Cot's opinion on this was not shared by many in the High Command. For his part, Army Chief of Staff Gamelin commented in 1941, "Mais que pouvait-on contre l'action toute puissante de Monsieur Pierre Cot? Et nous ne pouvions nous substituer à lui pour demander les crédits du ministère de l'Air. Ce n'est pas nous qui croyions à la toute-puissance de l'aviation de l'URSS." SHAT GR 1K 224 15, Letter by Maurice Gamelin entitled, *Mémoire de M. Guy La Chambre*, May 16, 1941 (written June 7, 1941), p.7.

with its German counterpart. In fact, Cot expressed the depth of his pessimism in this regard while reporting to the War Ministry in late 1937:

We realised at the Air Ministry that we would never be able to equal the aerial rearmament taking place in Germany...That country's industrial potential stands at nearly twice our own. Its physicians and technicians and chemists are as competent (not to say superior) to our own. Its social regime, odious though it is, allows it to consecrate more resources to its air force than any other country...All of these elements ensured that we would never be able, in France, to conduct an effort comparable to the one taking place in Germany.⁹⁸

A few weeks later, at the meeting of the CPDN on 8 December, he confessed that France currently manufactured fifty planes per month.⁹⁹ He added that monthly production stood at two hundred in Britain and three hundred in Germany.¹⁰⁰ In his view, these numbers served to confirm his argument that strong support from allied nations was absolutely necessary for the defense of France:

To compensate for this inferiority, I asked the government to pursue international agreements...after all, there exists in the world today only one country whose aeronautical program surpasses Germany's, and that is Soviet Russia. In quantity and quality, aerial production in the USSR exceeds the German effort. Military or industrial accords with the USSR would reverse, to our benefit, the current order of things.¹⁰¹

⁹⁸ SHAA A1 11Z 12934, Efforts tentés depuis juin 1936.

⁹⁹ An inflated number. The true number at that time was closer to thirty. SHAA 6N 325 d.2 Fabrications aéronautiques résumé.

¹⁰⁰ SHAT 2N 24 Procès-verbal de la séance de la CPDN. 8 December, 1937.

¹⁰¹ Ibid.

At the same meeting of the CPDN and later, within his own memoirs, Cot claimed that a lack of financing was the main reason for the persistently low rate of aircraft production.¹⁰² “The air force would have increased in 1937 if we had been afforded more credits...I repeat, France received the air force we paid for.”¹⁰³ This assessment remains debatable, however, for two reasons. First, the air minister had already announced his conviction that fifteen hundred modern planes constituted the absolute upper limit of French military potential. No amount of funding could push production beyond this figure, and as it was the target number for the existing production plan (*Plan II*) we can deduce that Cot’s true opinion was that the industrial ceiling had already been reached. Secondly, the goals of the plan, as outlined in August 1936, were fully realisable given the financial means afforded to the air ministry at that time. The plan had been originally funded with five billion francs to construct five hundred planes annually over three years. This figure was soon adjusted to reflect the weakening of the franc subsequent to its devaluation by the Blum government (September 1936) and revised to just over seven billion francs. This was a generous allotment, fully commensurate with the task of producing forty-two planes each month. Cot needed more money, not solely for aircraft construction, but mainly to complete the relocation of the nation’s aerial factories. This is why Cot maintained that his efforts were hamstrung by pusillanimous Finance Ministers, despite the fact that he was

¹⁰² Ibid. Martin Alexander has noted that for Cot, 1500 planes was the most France could produce. This was a “ceiling above which it would be purely academic to plan.” Peter Jackson has added that while increasingly on the defensive before Parliament in late 1937, Cot “attributed French inferiority to insufficient funding and argued that French production could be increased by 60% if the air ministry received the necessary credits.” See Martin Alexander, *The Republic in Danger: Maurice Gamelin and the Politics of French Defence, 1933-1940*. (Cambridge: Cambridge University Press, 2003), 156 and Peter Jackson, *France and the Nazi Menace: Intelligence and Policy Making 1933-39*. Oxford: Oxford U.P. 2000, 241.

¹⁰³ Cot, *Armée de l’Air*, 191.

receiving sufficient funds to realise his stated production goals.¹⁰⁴ In truth, funds required for the completion of Cot's production plans were available, as confirmed by Comptroller-General Robert Jacomet: "as of 1937, the maximum amount of equipment had been ordered. Never was construction or assembly of any materials for land, naval or aerial forces interrupted or delayed due to insufficient funding."¹⁰⁵ The logistical chaos inherent in the process of nationalising the air industry, and the added expense associated with dismantling and re-establishing factory spaces over hundreds of kilometers were far more significant factors in explaining continued production delay under the Cot ministry.

This was evident to many observers within the framework of France's political and military leadership. Maurice Gamelin, Commander in Chief of the armed forces, assigned to Cot a large measure of blame for France's deficiencies in air power during the campaign of May-June 1940. Cot's restructuring, he believed, sabotaged French aviation. During the battle, Gamelin wrote, "it has now emerged as the greatest gap in our national security...we are paying the price for two years of mistakes."¹⁰⁶ Later at the 1942 Riom Trials, he wrote "that the harm done which turned out in fact to be irreparable was in aviation...and the name on everyone's lips

¹⁰⁴ Other historians who have questioned Cot's correlation of low aircraft production with financial constraints include Ernest R. May, who has pointed out that although "Cot had had authority for multiyear funding, he had not made much use of it...in part because of his efforts to nationalise the aircraft industry." (May, *Strange Victory*, 124). Martin Thomas has also observed that the issue of military credits was made irrelevant during 1936-37 by the fact that ministries "simply ordered the maximum that manufacturers could supply." See Martin Thomas, "French Economic Affairs and Rearmament...", 663.

¹⁰⁵ Robert Jacomet, 146.

¹⁰⁶ SHAT 1K 224. Journal de Marche du Général Gamelin.

is that of M. Pierre Cot.”¹⁰⁷ Gamelin argued that the wholesale relocation of the aircraft manufacturing sector had been far too ambitious in both time and expense for a country faced with the imminent danger of war against a powerful neighbour. It amounted to the “mismanagement of the aviation industry’s modernization,” a task that should have been entrusted “not to a political ideologue like Cot but to a proven businessman or a military technocrat.”¹⁰⁸

| Aircraft Deliveries to the Armée de l’Air | |
|---|----------------------------|
| Year | Number of Planes Delivered |
| 1934 | 197 |
| 1935 | 494 |
| 1936 | 570 |
| 1937 | 422 |
| 1938 | 533 |

Source: *Chossat Report (August 26, 1941)*, SHAT 3D 494

Historians are divided over the merits of Cot’s achievements.¹⁰⁹ Some historians have attributed to Cot the designing of the industrial template without which no aeronautical recovery

¹⁰⁷ Gamelin’s testimony at Riom, quoted in M. Alexander, *The Republic in Danger...*, 158. Gamelin had been heard uttering similar comments since the start of the war. At his headquarters in Vincennes on September 18, 1939, he spoke of the terrible harm caused by M. Cot’s sabotaging of the aviation industry. “C’est aujourd’hui notre grande lacune. Nous payons deux ans d’errements!”. SHAT DE 2016 SA 66, Gamelin’s journal (*journal de marche*), September 18, 1939.

¹⁰⁸ Julia Bracher, *Riom 1942: Le Procès*, (Paris: Omnibus 2012), 1166.

¹⁰⁹ Fridenson and Lecuir have written, “À Pierre Cot revient l’incontestable mérite de la nationalisation... ainsi que de la première passation des commandes de machines pour les sociétés nationales... c’est lui qui a eu l’initiative de préparer un nouveau plan de réarmement aérien.” *France et Grande Bretagne face...* 34, 41. Robert Frank believes Cot’s industrial reforms led to lower production costs, greater government control of manufacturing and increased creativity in the aeronautics sector. *Le Prix du réarmement français*, 257. Less favourable accounts of the Cot air ministry have been presented by Peter Jackson and Zara Steiner. Jackson highlights Cot’s dishonesty

could have occurred. In his summary of the Riom Trials, Henri Michel argued that Cot contributed to the limit of his ability, presented with what amounted to an impossible assignment in the spring of 1936. “In truth, Pierre Cot was faced with nearly insurmountable obstacles...which the policies pursued by his predecessors had only exacerbated.”¹¹⁰ Michel’s lenient assessment glosses over the hard truth that no progress was made in terms of production or design under the Cot ministry, and that the minister’s long-espoused concept of a bomber-heavy air force was about to be scrapped and replaced by a wholly different model based on fighter construction. Cot’s lack of results is best measured by recalling the fact that he took over the ministry in mid-1936 with the set goal of raising the total number of first line aircraft to two thousand four hundred at a pace of five hundred per year or forty-two per month. Despite sweeping powers accorded to him by the nationalisations act of August, and his vigorous application of those powers, his first year’s results were modest. Monthly production dropped from sixty-two in April to an average of thirty-nine for the remainder of the year. Throughout 1937, the year his reforms should have begun to show dividends, average production was only thirty-one planes per month, and the lowest sustained rates of assembly took place at the end of the year with numbers dropping to twenty-six in October, twenty-five in November and twenty-seven in December. First-line aircraft production in France experienced no growth, and in fact

with the numbers and statistics concerning aerial production. His goal was to exaggerate German military potential while minimizing French industrial potential in an effort to increase support for his avowed goal of creating a Franco-Soviet alliance. *France and the Nazi Menace: Intelligence and Policy Making 1933-39*. (Oxford: Oxford University Press, 2000), 199-200. Steiner writes, “It must be remembered too that Cot was regarded with distaste, particularly in military and naval circles and that apart from Blum, and one or two other ministers, his advocacy of any move towards the Soviet Union was viewed with hostility.” *The Triumph of the Dark: European International History, 1933-1939* (Oxford: Oxford University Press, 2013), 396. As on most topics related to French war preparations, Alistair Horne has been the most critical, describing Cot’s time as air minister as disastrous to the *Armée de l’Air* in terms of design, construction and doctrine. *To Lose a Battle, France 1940*. (London: Penguin, 2007), 70-73.

¹¹⁰ Henri Michel, *Le Procès de Riom* (Paris: Éditions Albin Michel, 1979), 219.

entered a period of sustained regression, for the duration of Cot's term as Air Minister. In fact, production during the six months prior to the start of his reforms approached total production numbers for the first full year of his tenure (1937).¹¹¹

Problems raised by stalled production lines were only compounded by the Air Ministry's ill-advised commitment to outdated engineering. By 1936 it was clear that the BCR experiment had been rendered obsolete by competing aircraft designs. Specialised models from Britain and Germany already demonstrated their advantage over the cumbersome multipurpose planes. Single seat fighters were much faster, designated bombers were also faster and carried significantly heavier payloads. The new reconnaissance planes flew higher and afforded their pilots greater visibility. In all respects, the multipurpose plane had fallen behind. Obviously, it was incapable of providing for France's long-term defense needs. Its first generation of machines dating from 1934-35 had failed to compete with the advanced single-purpose designs pursued in England and Germany. At that point, the BCR program needed to be replaced as its problems were already insurmountable. By 1936, no engineer could rationally argue that a multipurpose aircraft would ever be able to compete with a single seat fighter. As time went on, the latter was to accrue an overwhelming advantage in speed and manoeuvrability. Cot's refusal to reorient industry away from the BCR toward smaller defensive aircraft can be understood in terms of his commitment to developing a large bomber force. More puzzling,

¹¹¹ Production from January to June 1936 was 327. Total construction for 1937 was 370. SHAT 6N 325 d.2 Fabrications aéronautiques résumé; SHAT 3D 494, Chossat Report

however, is his failure to concentrate on cutting-edge bomber designs which had already yielded interesting results in Britain, Italy and Germany.¹¹²

Falling steadily behind foreign competitors both in design and rate of production, it is difficult to understand what role the French Air Ministry envisioned for the already obsolete BCR program. Yet the program persisted for another two years. French firms continued to make improvements to existing designs. The Bloch MB 130 first flown in 1934 was continuously redesigned over the next four years. Each iteration, (the MB 131, MB 133, MB 134, MB 135) was a little faster, had slightly longer range and a heavier payload. Each improved version, however, was immediately outclassed by specialised aircraft developed elsewhere. Reorienting aircraft designs would be no small feat, as *Armée de l'Air* had long since focused its pilot training and facility production around the multi-purpose airplane. To focus on newer, more effective designs would require an enormous overhaul of the entire aircraft production cycle. This would have necessarily entailed further delays in the already disappointing rate of aircraft assembly. It would also have called for a restructured maintenance program and service infrastructure.¹¹³ Rather than risking further production delays and the ensuing impact on his political standing, Pierre Cot chose to maintain the BCR production cycle, pursuing a path that

¹¹² Designed in 1935, the Italian Cant Z 1007 medium bomber (460 km/hr, 5000 lb payload) flew at almost twice the speed of the Amiot 143 BCR while carrying a much heavier payload. Similar results were achieved with the German Heinkel He 111 (440km/hr, 12000lb payload) and the Soviet Tupolev SB (450km/hr, with a relatively small payload of only 1200 lbs).

¹¹³ Anthony Christopher Cain has argued that scrapping the BCR program at this stage was not a viable option. Such a collective shock to its basic organizational structure “probably would have spelled the end of the air force as an institution.” ‘L’Armée de l’Air 1933-1940’ in *Why Airforces Fail: The Anatomy of Defeat*, Eds. Robin Higham and Stephen J. Harris (Lexington: University of Kentucky Press, 2006), 63.

all but guaranteed long-term inefficiencies in the foundational tenets of the Armée de l'Air's material composition.

By early 1939, he had succeeded in relocating and reorganizing the bulk of French manufacturing without having in any way improved the actual production of aircraft. Cot's ministry can only be termed successful if one assumes that private manufacturers, given the proper tooling would have remained incapable of mass-producing airframes and engines. This seems decidedly unlikely after the spectacular success of France's two largest engine manufacturing firms. Gnome et Rhône and Hispano-Suiza were never nationalised and proved capable of dramatic improvement in their rate of production, quality and design, once supplied with appropriate machine tooling. It is not unreasonable to question whether some of the private airframe companies and particularly the largest, Dewoitine, Morane-Saunier, Bloch, Potez and Amiot, had the means of producing a similar turnaround.¹¹⁴

To many observers, nationalisation of the air industry had been conducted in a manner that only complicated bureaucracy and communications while retaining all the old deficiencies of antiquated tooling and insufficient floor space.¹¹⁵ One critic noted the irrational spacing of the

¹¹⁴ Herrick Chapman has argued that prior to 1936, private French aircraft manufacturers had already proven themselves incapable of modernising their assembly processes, and that as a result, nationalisation was the only viable option toward revitalising the industry. This deterministic view neglects the obvious problems present in all facets of French re-armament in 1936. The nation had only begun gearing up for war, and production of all weaponry, destined for the army, the navy or the air force, was, at that time, utterly unsuited for total war. Chapman assumes with little justification that private aircraft manufacturing firms would have remained incapable of participating in the general improvement of French industrial production, especially between January 1939 and June 1940.

¹¹⁵ Firms such as Breugel, Loire and others resented the government's intrusion and lobbied aggressively to stop Cot's meddling which they argued, only served to disorganize the aviation sector and ensure further production

Sociétés de Constructions across the country “shorn of any working capital which could be used to improve their equipment and without management dedicated exclusively to their operations.”¹¹⁶ Despite the ambitious scale with which nationalisation had been conducted, questions persisted over how these efforts would increase productivity. The *Revue des Deux Mondes* published an editorial in the spring of 1938 lamenting how the Air Ministry “simply purchased a number of existing industries with outdated equipment...despite the millions spent on nationalisation, the potential of our aeronautics industry has not increased at all: we simply relocated the same workshops, the same tools, the same personnel.”¹¹⁷

Stagnation in aircraft manufacturing and design led to a crisis by early 1938. At this time, a rash of warnings concerning Nazi air superiority came as a shock to many who yet clung to France’s legacy as a leading air power. As late as 1938, national confidence in French air power remained high.¹¹⁸ Though most observers were well informed about German re-armament, many still assumed that the *Armée de l’Air* maintained its leading position, if only by a smaller margin. That this was not the case anymore took many by surprise. “Let us remember that for the last several years, all of France’s aerial policy rested on the Franco-Soviet pact of

delays. See Anthony Christopher Cain. *The Forgotten Air Force: French Air Doctrine in the 1930s*, (Washington and London: Smithsonian Institution Press, 2002), 29.

¹¹⁶ Editorial, no author. From: “Notre Aviation: Les conditions de son redressement”. *Revue des deux mondes* 45:2 (May 1, 1938), 276.

¹¹⁷ *Ibid*, 277.

¹¹⁸ Philippe Roland, *La Crise de matériel de l’aviation militaire française* (Paris: Société d’études et d’informations économiques, 1938), 14.

May 2nd, 1935. Until recently it was taken for granted that the Soviet Air Force's five thousand first-line aircraft were at the service of France."¹¹⁹

Joseph Vuillemin, promoted to the position of Chief of Staff of the French air force in February 1938, was all too aware of the shifting balance of power. Prior to his appointment, he was already on record with statements to the effect that France's air force was currently outclassed by the *Luftwaffe* in every important respect. Less than a month following his promotion, the new Air Chief of Staff was confronted by the German annexation of Austria, Hitler's long feared *Anschluss*. The advice proffered by Vuillemin to the nation's civil and military leadership at that point, was to avoid war at all costs. In his opinion, the calamitous disparity between French and German air power rendered necessary a policy of appeasement.¹²⁰ He repeated his sullen advice more convincingly following a visit in August to Germany as official guest of the *Luftwaffe*. It was a trip which had been discouraged by both André François Poncet, French ambassador to Germany, and the French air attaché in Berlin.¹²¹ Tours of the Messerschmidt, Junkers and Heinkel factories had the effect of thoroughly demoralizing

¹¹⁹ Ibid, 64. As Norman Ingram points out, another important factor in determining the aerial balance of power was the presence of the Czechoslovakian air force which, until the time of Munich, remained in close striking distance of Berlin. Prior to September 1938, then, a German bombardment of Paris would likely provoke a quick retaliation upon Berlin. As the anonymous writer of "l'Abandon de Tchecoslovaquie" observed, "Paris was protected by Prague." See Norman Ingram, *The War Guilt Problem and the Ligue des Droits de l'Homme, 1914-1944*. (Oxford: Oxford University Press, 2019), 245, n.22. French strategic planning before Munich carefully considered the ways in which the Czechoslovak military could come to France's aid in time of need but remained vague and inconclusive on how to come to Prague's aid in the event of German aggression. The loss of Czechoslovakia's army and air force from the ranks of French allies was a devastating blow and significantly lessened the Quai d'Orsay's geo-political leverage.

¹²⁰ In this opinion, Vuillemin was not alone. General Maurice Gamelin concurred, stating that only a powerful display of air power could have made a dissuasive impact. Since France did not possess sufficient air force, either alone or with British support, the nation was forced to acknowledge its inability to intervene. See Elisabeth du Réau *Edouard Daladier, 1884-1970* (Paris: Fayard, 1993), 210.

¹²¹ Zara Steiner, *Triumph of the Dark*, 597.

France's Air Chief, convincing him that to confront Hitler before the sorrowful state of France's air force was redressed, would be to invite a national disaster.¹²²

Much might have been gained by avoiding this diplomatic blunder and keeping the emotionally fragile Vuillemin¹²³ away from first-hand perusal of German airfields. Most impressive of all, from the Air Chief's perspective, was his discovery that an ever-increasing percentage of German aircraft manufacturing was in the process of being transferred to underground factories, safe from any threat of bombers. The fact that German rearmament, especially in regard to modern air power, was being pursued more energetically than in France was not a closely guarded secret. By mid-1938, the *Deuxième Bureau*, was regularly sounding the alarm. Vuillemin's official visit did nothing to further clarify this fact, already publicised by military intelligence. The most measurable effect of the visit was to magnify the perception of

¹²² Vuillemin came to this conclusion even though he fully realised that the German invitation had been staged purposefully to intimidate the French air staff. In a private conversation following the visit, Vuillemin reflected: "J'avais le sentiment qu'ils [les allemands] pensaient – car ils étaient de leur côté parfaitement renseignés sur notre déficience aérienne – me convaincre de l'impossibilité pour la France d'accepter l'idée même d'une guerre à laquelle elle n'était pas prête." Robert Lemaigen, "Le Vuillemin que j'ai connu" *Icare* no. 59 (Autumn-Winter 1971), 58. Though able to see through the German pageantry, Vuillemin nevertheless adopted the very defeatist outlook which Erhard Milch, Hermann Göring and other *Luftwaffe* chiefs had hoped to bring about. In his memoirs, Foreign Minister Georges Bonnet noted that Vuillemin returned from Germany particularly distressed in the discrepancy between the top speeds reachable by French aircraft vis-à-vis their counterparts in the *Luftwaffe*. He remembered that Vuillemin was horrified above all else by the speed of the newest German fighters (500 km/hr), "soit 200 km-hr de plus que la nôtre." According to Bonnet, Vuillemin went on to declare, "Si la guerre éclatait et si je devais faire prendre l'Air à ces avions surannés, je serais obligé de les faire diriger par mes pilotes les plus médiocres, parce qu'ils seraient hélas certainement sacrifiés." Georges Bonnet, *Défense de la Paix: De Washington au Quai d'Orsay* (Genève: Constant Bourquin, 1946), 225-226.

¹²³ Vuillemin's longtime friend and colleague, Robert Lemaigen described the Air Chief's character as follows: "Sous un aspect volontairement discret et un peu paysan se cachait une intelligence aiguë et à très longue portée, un bon sens indéclinable, une honnêteté intellectuelle de granit; et aussi un culte de l'amitié au sens le plus élevé; derrière tout cela, et très profondément dissimulée, une extrême sensibilité. Robert Lemaigen, "Le Vuillemin que j'ai connu" *Icare*: no 59 (automne-hiver 1971), 56. At the CPDN meeting of August 23, 1939 when French leadership decided upon a course of armed resistance to German expansionism, all three defence services were asked to provide a summary of their readiness for war. Maurice Gamelin famously stated "the army is ready" while Darlan appeared eager to test his navy. For his part, Vuillemin, struck dumb by his recent visit to German airfields, refused to speak for the air force and instead allowed Air Minister Guy La Chambre to speak on his behalf. Lemaigen, *Icare*, 58.

Germany's aerial advantage. This was achieved with a series of well-conceived and carefully orchestrated tricks reminiscent of those used during Hitler's reoccupation of the Rhineland two years earlier. On March 7, 1936, the small German army had marched into Cologne and Essen, doubled back at night, and re-entered the next day, creating the illusion of far greater numbers. Göring prepared a similar deception in 1938, shuffling his air fleets from one stop to the next along Vuillemin's scheduled route of inspection. This presented his guest with a wildly inflated sense of the number of modern aircraft already constructed by the Germans and ready for battle. Immediately upon his return to France, Vuillemin confided to one of his chief subordinates that the sight of underground German aircraft factories had deeply impressed him. "If war is declared, I will resign...my spirit is crushed."¹²⁴

From then on, Vuillemin's demoralized warnings to all who would listen constituted the bulk of his contribution toward French war preparations in the final year of European peace.¹²⁵ The laconic general's participation in meetings of the central war councils were most often limited to desultory predictions of impending doom.¹²⁶ As a core member of both the *Comité Permanent de la Défense Nationale* and the *Conseil Supérieur de la Guerre*, Vuillemin's verbal participation, aside from fear mongering, was extremely limited. His priority throughout 1938 and 1939, was to try and convince the government to avoid a military conflict with Nazi

¹²⁴ General J.H. Juneaud, *De Verdun à Dien Bien Phu*, (Paris: Éditions du Scorpion, 1960), 54-55.

¹²⁵ Remembering his pre-war service, Guy La Chambre reflected that choosing Vuillemin as Air Force Chief of Staff proved a grievous mistake. Speaking with his friend and colleague, General Raymond Brohon in 1954, he confessed that General Marcel Têtu, Vuillemin's second in command should have been the one chosen for promotion to lead the air force. According to La Chambre, Têtu was "l'homme qu'il nous fallait...C'est un de mes grands regrets." Claude Paillat, *Le Désastre de 1940: La Guerre Immoblie, Avril 1939 - 10 mai 1940* (Paris: Robert Laffont 1984), 110 fn.

¹²⁶ Vuillemin's warnings were notable for their tone of hopelessness. For example, his analysis from October 1938 predicted that in case of war, some five thousand enemy planes would be met by a mere five hundred French aircraft. SHAT 5N 579-1, Note sur la situation actuelle.

Germany at all costs. This was his unwavering stance, consistently proffered whether in response to Hitler's menace toward Austria, Czechoslovakia, Poland or France itself.

Other than performing as a competent administrator, Vuillemin showed almost no sign of active leadership as Chief of Staff of the Air Force. Indeed, his qualifications were suspect to many in the high command. Prime Minister Reynaud believed that his credentials were entirely based upon his service record as a formidable bomber pilot in the First World War. Army Chief of Staff Gamelin did not think highly of Vuillemin either, having once argued that in 1914, Vuillemin was only an NCO in the artillery service. According to Gamelin, if Vuillemin had stayed in the artillery, he would by now have achieved the meagre rank of squadron leader.¹²⁷

Vuillemin's despondency deepened under the influence of American celebrity pilot, Charles Lindbergh. The world-famous aviator echoed like-minded opinions following his first-hand inspection of the *Luftwaffe* in September 1938. Lindbergh took to sounding alarm bells over the advanced state of German air forces, both in terms of numbers and technological expertise. He warned that Germany had already constructed eight thousand modern aircraft and was producing new ones at a rate of fifteen hundred per month. Lindbergh's warnings about the *Luftwaffe's* overwhelming strength particularly affected Foreign Minister Georges Bonnet. After digesting the famed aviator's "report", Bonnet, already a committed appeaser, was further convinced that peace had to be maintained at all costs. "Never has our diplomatic situation been worse, and we have no aircraft. It is impossible to conceive of war."¹²⁸ His opinion was shared

¹²⁷ Reynaud, *La France a sauvé...* 448.

¹²⁸ Jean Baptiste Duroselle. *La Décadence 1932-1939*. (Paris: Imprimerie Nationale, 1979), 354.

not only by Vuillemin but also by General Gauche, head of the Deuxième Bureau (military intelligence) who believed war was impossible to contemplate since France was currently unable to risk confronting the German air force.¹²⁹ In a letter to U.S. ambassador Joseph Kennedy, Lindbergh wrote:

Without doubt the German air fleet is now stronger than that of any other country in the world...Her air strength is greater than that of all European countries combined...with the means of destroying London, Paris and Prague. England and France together could do nothing about it because they do not have enough planes for either attack or defense or a counterattack.¹³⁰

Wild exaggerations like these voiced by such a high-profile speaker¹³¹ fanned French anxieties, especially as they followed so closely upon Vuillemin's own inspection of German air power. The British military attaché in Paris observed that "the *Führer* has found a most convenient ambassador in colonel Lindbergh, who appears to have given the French an

¹²⁹ Anthony Adamthwaite. *France and the Coming of the Second World War* (London: Frank Cass, 1977), 238, 241. Peter Jackson has concluded that French overestimation of total *Luftwaffe* strength was a longstanding habit dating back to the earliest stages of German air rearmament plan. In July 1934, the German air ministry had decided upon building the largest industrial base possible. While the majority of planes constructed were obsolete or designed for training purposes, France's intelligence agency mistakenly assumed that most German production was of first-line aircraft. Jackson concludes "The end result was a series of significant exaggerations of German air power that played a major role in the evolution of French policy after 1936." See Peter Jackson, *France and the Nazi Menace...*, 126.

¹³⁰ Quoted in Candace Fleming, *The Rise and Fall of Charles Lindbergh* (New York: Schwartz and Wade, 2020), 235-6. French air attaché to Berlin, Paul Stehlin remembered Lindbergh expressing his belief that war with Germany would lead to immediate disaster. "La Grande Bretagne serait immédiatement neutralisée par les bombardements aériens, la France serait envahie et battue par l'action combinée des chars et des avions." Paul Stehlin, *Témoignage pour l'Histoire* (Paris: Robert Laffont, 1964), 130.

¹³¹ Lindbergh gained fame by crossing the Atlantic in 1927, piloting the single-engine *Spirit of St. Louis*. This renown allowed him to pursue a lucrative career in public speaking throughout the 1930s. He was particularly active in Europe in the years following the kidnapping and death of his infant son in 1934. His assessment of German aerial construction, informed by first-hand tours of *Luftwaffe* facilities in 1937-8, however, missed the mark. The *Luftwaffe* was actually receiving less than a quarter of the number of planes signalled by Lindbergh in the autumn of 1938. See Ferenc A. Vajda and Peter Dency. *German Aircraft Industry and Production* (Danvers MA: SAE International, 1998), 41.

impression of [the German Air Force's] might and preparedness which they did not have before."¹³² During the same summer of 1938, French ambassador to Berlin, François-Poncet sent a series of reports to the Quai d'Orsay which painted an even more terrifying image of German air strength. The ambassador claimed to have received intelligence from the American military attaché, Lt.-Col. Smith. This information was said to have emerged from "the most meticulous research and careful first-hand observation" of German industrial facilities. Current German production was pegged at eighteen thousand planes per year. Monthly production was estimated at between six and seven hundred aircraft.¹³³

Demoralization among the high command could not but trickle down to the rank and file of the French Air Force. Vuillemin's unveiled defeatism compounded a material emergency with a growing crisis of morale within the Air force. "In many units," the Air Chief observed on inspection during the same year, "flight time is severely reduced due to a shortage of airplanes and morale is very low." Concerning the officer class, he wrote, 'they are aware that French

¹³² Quoted in Roy Maclaren. *Mackenzie King and the Age of Dictators: Canada's Imperial and Foreign Policies* (Kingston: Queen's University Press, 2019), 206. Lindbergh's far-right political stance was well-known and prompted President Franklin Roosevelt to declare in May 1940: "If I should die tomorrow, I want you to know this. I am absolutely convinced that Lindbergh is a Nazi." Cited in Max Wallace, *The American Axis: Henry Ford, Charles Lindbergh and the Rise of the Third Reich*. (New York: St. Martin's Press, 2003), 3. Between 1939 and 1944 the FBI kept Lindbergh under surveillance, suspicious that his public stance in favour of American non-intervention was only intended to mask his enthusiastic support for national socialism. Douglas M. Charles and John P. Rossi, "FBI Political Surveillance and the Charles Lindbergh Investigation", *The Historian* 59:4 (Summer 1997), p.831. See also A. Scott Berg's biography, *Lindbergh* (New York: Putnam, 1998).

¹³³ Ministère des Affaires Étrangères. *Document Diplomatiques Français 1932-39, 2e série, tome X*. (Paris, Imprimerie Nationale, 1976), 625 no. 347 *M François Poncet, Ambassadeur de France à Berlin à M Georges Bonnet, Min. des Affaires Étrangères*. 9 August 1938.

aviation is not what it should be. Their work has become extremely sluggish. Their morale is extremely low.”¹³⁴

This elevated conception of the Armée de l’Air’s relative weakness played an enormous role in setting French policy at the Munich conference in September. Taking place only a few weeks after the Vuillemin’s unnerving tour of *Luftwaffe* hangars, the meeting in Munich was overshadowed by the specter of the Reich’s overwhelming air power. Failure to reach an agreement with Hitler did not merely imply the possibility of conflict with Germany but rendered France vulnerable to immediate air strikes for which it was woefully unprepared. As we have seen, the previous twenty years had already seen the development of a sizeable literary tradition, stressing the increasingly destructive nature of modern air war. Widely held fears of a dreaded *knock-out blow* to be administered as a first strike in any future conflict informed much of Daladier’s conciliatory stance at Munich.¹³⁵ In his eyes, Germany’s aerial advantage was the unspoken centerpiece to the negotiations, later admitting that ‘the air situation constantly conditioned my thinking when considering our options. We always came back to the same

¹³⁴ SHAT A1 11Z 12934 D2. Letter from Vuillemin to the Air Minister, January 1, 1938. Vuillemin’s own emphasis.

¹³⁵ Not all historians agree with this argument, however. Anthony Adamthwaite has argued that the French aerial weakness did not exert such a great influence on the development of its foreign policy. He argues that air power was always held to be subsidiary to the *Armée de Terre*, and as such did not play a deciding role in determining the French position at Munich. Above all, Adamthwaite reflects, it was the horror of war and the desire to avoid another which informed government decision making. See “Reactions to the Munich Crisis” in *Troubled Neighbours: Franco-British Relations in the Twentieth Century*, Edited by Neville Waites. (London: Weidenfeld and Nicolson, 1971), 170-200. If so, this *sang froid* did not extend to the general population who lived in great fear of German air strikes throughout the Munich Crisis. Fully a third of the Paris citizenry evacuated the city in late September 1938 for fear of a sudden appearance of the *Luftwaffe*. See George H. Quester, *Deterrence before Hiroshima*, (New Brunswick, N.J.: Transaction Publishers, 1986), 98 and Col. Philip Meilinger, *Paths of Heaven*, 20.

problem, the inferiority of our aviation in relation to that of Germany.”¹³⁶ “Even while taking into account his pessimistic personality,” Daladier declared later, “Vuillemin’s opinions weighed heavily on my decisions.”¹³⁷ The *Armée de l’Air*’s inferiority to the *Luftwaffe* in 1938 was, demonstrably, the deciding factor in Daladier’s policy of appeasement at Munich. “If we had a greater number of aircraft at the time of Munich,” Daladier reflected two years later, “what a game we might have played” (*il aurait été un joli jeu à jouer*).¹³⁸ The threat of German air power continued to influence the drama unfolding in Bohemia for months after the conference.¹³⁹ When the *Wehrmacht* sent an occupation force to secure Prague in March of the following year, it was the menace of bombardment by the *Luftwaffe* which was called upon to dissuade Czechoslovaks from mounting any resistance. France’s ambassador in Berlin, Robert Coulondre, observed that the first occupying troops would be parachuted into Prague to secure the city. Were they to encounter opposition, “the Reich’s aerial forces would begin circling over the city as a reminder to the Czechs of the price of resistance.” The threat proved sufficient to ensure a peaceful occupation. Two days later, Coulondre further observed, “once again, German bombers

¹³⁶ Cited in Peter Jackson, *France and the Nazi Menace*, 279.

¹³⁷ On September 26, 1938, Vuillemin prepared an estimate for Daladier and the Air Ministry which claimed that in the event of war with Germany, forty percent of French aircraft would be destroyed in the first month. By the end of the second month, total losses of equipment would rise to 64%. SHAA A1 11Z 12934, Le Général Chef d’État-Major Général de l’Armée de l’Air à M. le Ministre de l’Air, p.2. See also Patrice Buffotot. “Le réarmement aérien allemand et l’approche de la guerre vus par le IIème bureau Air Français’ in *Deutschland und Frankreich 1936-1939*. Eds. Klaus Hilderbrand and Karl Ferdinand Werner. (Munich: Artemis Verlag, 1981), 282.

¹³⁸ SHAT 1K 224 carton 16. Lettre personnelle du Général Gamelin, May 20, 1940. Gamelin certainly agreed with this opinion. In his own memoirs he added, “si nous avions pu appuyer avec une aviation de champ de bataille puissante les attaques terrestres que nous entreprenions pour soulager nos Alliés, les conditions dans lesquelles débuta la campagne se fussent trouvées profondément modifiées.” Gamelin, *Servir* t.3,54.

¹³⁹ SHAT 5N 579-5, Conversations of the Franco-British General Staffs, December 1938. In early December 1938, French intelligence estimated the Reich’s monthly production of aircraft at one thousand per month, five hundred of which were first-line aircraft. This was almost twice as many machines as French industry produced throughout that entire year (579).

played the decisive role. They were the final argument which brooked no reply, before which buckled the Czech ministers, desperate to spare their population from horror and ravages of an air raid.”¹⁴⁰ Paul Stehlin, air attaché assigned to Berlin marvelled at how the German air threat was able to dictate the course of European diplomacy. “With only an insinuation of its power, [the Luftwaffe] was the deciding factor in determining the outcome of this conflict which had kept Europe breathless for long months.”¹⁴¹

Further complicating matters was the growing sense at Munich and up until the occupation of Prague, that Great Britain would not be willing to assist France should she decide upon military support of Czechoslovakia.¹⁴² This, too, was decisive in its influence upon the French Prime Minister who considered British aerial support an essential requirement for war with Germany. “If we don’t receive at least two hundred English fighters in France,” he declared after Munich, “we might as well ask for peace terms.”¹⁴³

In its current state, French industry was not equipped to mass produce a modern air force fit to compete with the *Luftwaffe*. This had been the obvious lesson of Air Minister Denain’s *Plan I* in 1935. By the end of 1937, faced with the failure of Cot’s reforms to improve the rate of

¹⁴⁰ Two letters from Ambassador Robert Coulombre to Foreign Minister George Bonnet (March 14 and 16, 1938). Ministère des Affaires Étrangères. *Le Livre Jaune Français: Documents Diplomatiques 1938-39*, Paris: Imprimerie Nationale, 1939. 86-87, 98.

¹⁴¹ Paul Stehlin, *Témoignage Pour l’Histoire*, (Paris: Robert Laffont, 1964),107.

¹⁴² Zara Steiner has argued that far from seeking British aid in defending France’s central European ally, Daladier was, in fact, actively seeking a way out of military action over German claims on Czechoslovakian territory. While paying lip service to the notion of honoring French commitments, he welcomed British recalcitrance as an excuse for not engaging in war over Munich. See Steiner, *Triumph of the Dark*, 566. In a similar vein, Anthony Adamthwaite has argued that Daladier chose to “follow the British governess” in order “to ensure that Britain had the lion’s share of responsibility for the abandonment of Czechoslovakia.” Adamthwaite, *Grandeur and Misery: France 1914-1940* (London: Arnold, 1995), 214.

¹⁴³ Fridenson and Lecuir, *La France et la Grande-Bretagne face aux problèmes aériens*, 188.

production, the government had to take stock of a second major problem. Not only had the promised industrial ‘take-off’ failed to occur, but the entire aeronautics industry was geared to produce insufficient numbers of obsolete aircraft. The BCRs designed from the late 1920s, which comprised the backbone of the air force, would suffer disastrous losses in a confrontation with Germany. But by the end of 1937, the entire French production system remained clogged with the carcass of the outdated multi-purpose plane program. Progress would require a complete restructuring of both the methods and designs outlined in *Plans I, II, III and IV*, the BCR procurement plans devised by Denain¹⁴⁴ and long championed by Pierre Cot.

Part 2

Fitting the Pieces Together: Guy La Chambre’s Air Ministry, 1938-1939

At long last, the succession of crises within the aeronautics sector brought about a necessary change in leadership.¹⁴⁵ In January 1938, Guy La Chambre was appointed Air Minister

¹⁴⁴ Future Air Minister, Guy La Chambre offered his view of the essential mistake made by Denain in 1934. “Il a en effet sacrifié à l’illusion d’obtenir plus vite des avions en les fabriquant à coup de main-d’œuvre qu’en les construisant à l’aide de machines. Il a ainsi omis d’acheter d’abord l’outillage pour créer les matrices de fabrication. Il en est résulté un véritable drame: en 1938 les avions qui sortaient d’usine étaient bien des avions neufs, mais, cependant complètement périmés.” See Robert Frank, *Le prix du réarmement français*, 246.

¹⁴⁵ Efforts to remove Cot from the Air Ministry had been ongoing since 1937 and were led by Edouard Daladier. An anonymous letter from within the Air Ministry, circulated in early 1937, stated: “Pierre Cot qui a une forte position dans le cabinet par suite de l’appui des communistes, a trouvé un adversaire irréductible en Daladier à qui s’est joint Yvon Delbos...Il est donc probable qu’au cours d’un des prochains Conseil des Ministres, la question sera posée de resserrer l’organisation et le contrôle des différentes branches de la Défense Nationale avec l’arrière-pensée de débarquer Cot du Ministère à la première occasion ou de ne pas le reprendre dans le nouveau government.” SHAT GR 1K 224 15, Note Confidentielle (no author), February 10, 1937, p.3.

under the caretaker government of Camille Chautemps and retained the portfolio under Edouard Daladier until early 1940. From this point, the air ministry would march in closer step with the rest of the French defence structures. As Daladier's close friend, La Chambre was able to find common ground, and receive both parliamentary approval and financial support at a level that Pierre Cot had never known.

Working within such advantageous circumstances, La Chambre nevertheless lacked the pugnacious confidence which characterised his predecessor's public image. Though working to improve aerial readiness, La Chambre harboured deep fears for the future of his country, should it enter into another war against Germany. As mentioned, Pierre Cot had told U.S. ambassador Bullitt in 1936 that the arms race had reached the point of absurdity since France and Germany already possessed the means to obliterate one another. Two years later, La Chambre revealed to Bullitt his own opinion on the matter. "German planes would be able to bomb French cities at will...the destruction of Paris would pass all imagination."¹⁴⁶ At a meeting of the CPDN on March 15, 1938, where Vuillemin predicted the destruction of France's air force in a war with Germany, La Chambre's pessimism was also on display. He stated that the rate of aircraft production as it stood was only forty per month. This would have been at the forefront of his thoughts during his conversation with Bullitt.¹⁴⁷ During the CPDN's subsequent meeting on December 5th of the same year, the critical state of French air power was universally lamented.

¹⁴⁶ Peter Jackson, *France and the Nazi Menace*, 278.

¹⁴⁷ At this same meeting, Philippe Pétain announced that Germany was producing 250 warplanes each month. Actual monthly first line aircraft construction in Germany at the time was one hundred and seventy-eight. Many prominent voices in the French military had acquired the habit of using striking exaggerations when referring to German industrial production. See Gamelin, *Servir*, Vol. II, p.326; Vajda and Dancy, *German Aircraft Industry*, 41.

At that meeting, Daladier, Gamelin, Reynaud and Vuillemin all pronounced themselves in favour of prioritizing the air force above all other factors related to French military re-armament.¹⁴⁸

Nevertheless, La Chambre's sober appraisal of the nation's military preparedness only served to intensify his efforts to remedy the situation as quickly as possible. Following Hitler's seizure of Austria in March 1938, the new Air Minister presented his *Plan V* as yet another attempt to increase the number of French warplanes. *Plan V* switched the focus of aircraft production decidedly in favour of small defensive aircraft. Single-seat fighters, particularly the *Dewoitine D520* and the *Bloch 151*, were prioritized by a ratio of two-to-one over the construction of new bombers.¹⁴⁹ These planes were less expensive to build and could be produced quicker than the larger bombers preferred by the ministry during Pierre Cot's tenure. *Plan V*, along with its variations/extensions of March and June 1939 would equip France with 4739 support aircraft and 2617 first-line fighters, bombers and reconnaissance planes. By early 1940, this was again amended to 5439 support aircraft and 3094 first-line aircraft. This would raise the number of planes available to the entire air force to 8533. Throughout all the amendments to the plan, the projected date of completion remained consistent and unchanged. The enormous construction plan was to be completed by April 1941.¹⁵⁰

By the outbreak of war (six months into the program) production had steadily increased. Industrial output numbered 1470 total aircraft, although only five hundred of these were first line

¹⁴⁸ SHAT 2N 35, CPDN meeting of December 5, 1938.

¹⁴⁹ SHAA A1 11Z 12934 d.2, Note au sujet des commandes du plan V, June 1, 1939.

¹⁵⁰ SHAT GR7N 3456 d.2. L'État de l'Armée de l'Air, February 9th, 1939.

planes (450 fighters, 50 reconnaissance and no bombers at all).¹⁵¹ To achieve this La Chambre used a far greater percentage of his allocated budget toward purchasing modern machine tools for use in the factories. The need for this measure was made clear to him in a letter from Chief of Staff of the armed forces, Maurice Gamelin. Immediately following La Chambre's appointment as Air Minister, Gamelin informed him that "we must, without delay, increase production...by modernising and developing our industrial tooling."¹⁵² Deciding to spend four billion on machine tools, the new minister wisely chose to direct a third of his total allocation of funds toward finally correcting what had long been recognised as the industry's most cumbersome deficiency. In fact, La Chambre reported to the Council of Ministers that he intended to invest all funds not already assigned to the construction of airframes, engines or necessary equipment, into the purchase of machine tools.¹⁵³ Private companies were brought into the fold, receiving three hundred and seventy million francs toward the purchase of new tooling. This support was contingent upon the commitment by non-nationalised firms to pool their resources in order to match the government total, thereby contributing a further three hundred and seventy million francs to the cause.¹⁵⁴ The immediate effect of incorporating these resources into the production process was to allow semi-skilled workers to accomplish tasks which only skilled workers had been able to do in the past, and this in a fraction of the time. The effect was an enormous release of manpower and much greater flexibility in the division of

¹⁵¹ SHAA 11Z 12938 D.3 Production des avions de guerre, March 1, 1938.

¹⁵² SHAT A1 11Z 12935 Note sur les données actuelles du problème militaire français, Février 8, 1938.

¹⁵³ SHAA A1 11Z 12934, Dépenses à envisager pour l'exécution du plan V, p.4

¹⁵⁴ SHAA A1 11 12935, Note sur le rendement général médiocre de l'industrie nationale. Septembre 1938, p.10.

labour.¹⁵⁵ In his treatise on aircraft construction, Guy de Merle, professor at the *école nationale supérieure de l'aéronautique* observed: “during mobilization and in time of war, the importance of money is second to the importance of time, and rate of production becomes most important of all. The need to acquire specialised tooling in the greatest possible number, trumps all obstacles or inconveniences placed before it.”¹⁵⁶

At last, the Air Ministry was responding to the industry's most pressing need. *Plan V* had set the bar very high, but it remained to be seen whether French industry had the ability to satisfy its demands. After six months, production was only on pace to accomplish two-thirds of its ultimate goal by the deadline of spring 1941. Nevertheless, it was clear that enormous progress had been made. At the end of Cot's ministry (December 1937), only 27 modern, first line planes per month were emerging from French factories. By September 1939, the same factories, now properly equipped, were producing around 250 first-line aircraft monthly. La Chambre's dual focus on defensive aircraft and massive investment in machine tooling was proving successful, though still more progress was needed in order to fulfill the ambitious terms laid out in Plan V.

Monthly production was not the only indicator of French industrial recovery. Since the number of workers had nearly doubled in the last half of 1939, a continued increase in the rate of production was expected over the next two years.¹⁵⁷ Comptroller Chossat remained convinced, even after the failed clash of arms, that recovery in the air industry had indeed been achieved by

¹⁵⁵ *Serre Commission Report*, tome 2, p. 306; Fridenson and Lecuir, *France et la Grande-Bretagne*, 42.

¹⁵⁶ Guy du Merle, *Constructions des avions* (Paris: Dunod, 1942), 422.

¹⁵⁷ Facon, *Batailles dans le ciel de France*, 200.

the end of 1939: “The efforts made over the previous two years were, without doubt on the verge of being rewarded...French industry, at last properly equipped for large scale industrial production would have, by 1941, reached its full potential and shown the possibilities for national recovery.”¹⁵⁸ Albert Caquot, France’s celebrated engineer and head of the Air Ministry’s *Direction Générale Technique* announced that the crisis in aircraft manufacturing had been definitively overcome.¹⁵⁹ The numbers certainly were in support of these opinions; by May 1938, factories were building a total of three hundred planes per month¹⁶⁰. Air Chief Vuillemin boasted that French manufacturing had been able to reach this milestone far quicker than their British counterparts. “In the United Kingdom, expansion of the Royal Air Force began at the start of 1936...however it was only by the end of 1938 that they began to produce 300 planes per month...We have achieved in less than two years what it took over three years to accomplish in England.”¹⁶¹ By February 1939, this rose to five hundred. It had thus taken France forty-five months to achieve this landmark production figure (from May 1935). It had taken Germany fifty-three.¹⁶²

However, just as the aeronautical industry seemed ready to achieve its production goals, a new series of slowdowns quelled the enthusiastic predictions made by Georges Chossat and

¹⁵⁸ Ibid., 201.

¹⁵⁹ SHAT 7N 3020, Rapport du directeur Caquot aux Chefs des États-Majors, Décembre 1939.

¹⁶⁰ These included both first line fighters/bombers/reconnaissance planes in addition to training planes for flight schools.

¹⁶¹ SHAA 1A 11Z 12938 d.3, La Production Industrielle.

¹⁶² Fridenson and Lecuir, *La France et la Grande-Bretagne...*,51.

Albert Caquot. By the end of 1939, and into the first weeks of 1940, new delays and design problems came to the Minister's attention. In December, total production had fallen to under 400 planes, and of these, only 223 were delivered to the Air Force.¹⁶³ Over the next two months, until March of 1940, industrial output of fully assembled aircraft would decline markedly, reaching the low point of 178 planes delivered to the air force in January 1940.¹⁶⁴ At the time, the army's Chief of Staff ordered an inquiry whose findings blamed the labour force for its perceived lack of fervor. "Production in the industries working for the Air Ministry is considerably smaller than expected...The essential blame lies with the *nonchalance* of the vast majority of workers and with the management's lack of authority."¹⁶⁵ Other reasons given for the slowdown included a worrisome increase in the number of machines deemed insufficiently completed for service in the air force. The watchdog group charged with determining whether factory issued planes were fit to be placed among the nation's hangars and airfields, the C.R.A.S. (Centre de Réception des Avions de Série) red-flagged a sizeable number of planes rolling off the assembly lines in an unfit state for combat.

This was the beginning of a significant problem which persisted until the armistice of June 1940: a shortage in ancillary parts and equipment. Many planes emerging from the factories were missing essential components, the absence of which rendered them useless for combat roles. At the Riom trials, in 1942, trial president Pierre Caous made direct reference to

¹⁶³ The remaining 177 planes were shared between flight training schools and the navy. Around ten percent, or forty planes, were refused by the C.R.A.S. due to mechanical problems or incomplete assembly of ancillary parts. SHAT 3D 494, Notes sur le rapport Chossat, ayant pour objet d'apporter une réponse à des questions posées par M. le Conseiller de la Cour Suprême de Justice Tanon, p.12.

¹⁶⁴ SHAT 3D 494 Chiffres d'avions acceptés par le C.R.A.S. – Rapport Chossat, 11.

¹⁶⁵ Facon, *Batailles dans le ciel de France...*,202.

the extensive finishing work still required on many planes issued from factories in 1939 and 1940. Many of these machines lacked armament, propellers, radio or accessory parts. “The result was that by spring 1940 a considerable number of planes were emerging from our factories but were not available for combat missions.” General Bergeret was on record saying, “the aircraft which were included in the Air Force’s registry allowed the Air Minister to boast of a brilliant achievement while the real situation from a practical point of view was very different.” To these testimonies, the president of the trial added “You see how figures can be treacherous at times.”¹⁶⁶

The matter of incomplete aircraft rolling off the production lines in unusable condition has recently attracted important scholarly attention.¹⁶⁷ The problem was rooted in Minister La Chambre’s insistence that the next generation of airframes should be mass produced at the earliest possible opportunity. The impressive production results of September 1939 had been based on the steady intensification of efforts to produce the well-established M.S. 406, and while this plane could hold its own against the latest German fighters, its top speed was significantly lower. Nevertheless, the Air Ministry had faith in the abilities of the M.S.406 to compete, even

¹⁶⁶ Guy La Chambre deposition, Bracher (ed.) *Riom* p.614.

¹⁶⁷ The topic is explored by Talbot Imlay in *Facing the Second World War*. Imlay argues that a lack of ancillary equipment was only one indicator of “the disorganized state of the French war economy.” Imlay argues that the industrial *décalage* of 1939-40 has been greatly exaggerated by some historians and that the economy “remained relatively ill-equipped to face the massive demands of war.” *Facing the Second World War: Strategy, Politics and Economics in Britain and France, 1938-1940*. (Oxford: Oxford University Press, 2003), 289. See also Greg Baughen *The French Air Force*, 158-159. In an interesting revisionist perspective, Ferris Kirkland has argued that the French air staff, attempting to maintain the flow of parliamentary funding, kept itself from being “buried under a flood of aircraft pouring from factories, conducted complex acceptance inspections and kept key components (guns, propellers, radios) separated from the aircraft of which they were to be installed.” According to Ferris, another trick to keep the surfeit of warplanes away from parliamentary eyes, was to disperse brand new combat-ready planes in remote airfields far from the battle zone. Ferris R. Kirkland, “The French Air Force in 1940: Was it defeated by the Luftwaffe or by politics?” *Air University Review*, 36:6 Sept-October 1983, 108.

with the new Bf-109E, as shown in the following analysis, presented to the air minister sometime between May 1 and May 10: “Speed is certainly one of the most important qualities for fighter aircraft, but it is not the only one. Maneuverability is a quality that is at least as important as speed. [The M.S. 406s] which are inferior in speed to the latest German planes remain greatly superior in maneuverability.”¹⁶⁸

Moreover, modifications to the M.S. 406 were expected in the coming weeks which would improve the aircraft’s top speed by thirty to forty km/h. For this reason, the air ministry announced, “it is therefore absolutely false to consider that our air force is outdated.”¹⁶⁹ Nevertheless, La Chambre’s decision was a difficult one. Was it best to produce the slightly inferior MS 406 at a pace matching or even exceeding German production, or should the Air Ministry modernise its planes in a bid to acquire a technological edge over the *Luftwaffe*? La Chambre chose the latter option and thus opened the door to a series of new production problems.¹⁷⁰ Short term delays would necessarily occur until the new production cycles were designed, tested and fully organized.

¹⁶⁸ SHAA 1A 11Z 12934, Note au Sujet de l’Aviation de Chasse. Undated, p.1. The Maurane-Saulnier 406 had a top speed of 300 mph and a ceiling of 30 800 ft. It was armed with two machine guns and a 20mm cannon. By contrast the Bf-109E could reach a speed of almost 354 mph. Its ceiling was 36 000 ft and it was armed with two machine guns and two cannons. Despite these statistics, a skilled pilot could take advantage of the M.S. 406’s superior agility to present a significant challenge to German flyers. During the battle, MS 406 pilots scored 191 confirmed kills for the loss of 150 aircraft and 83 pilots. They often registered kills when fighting outnumbered against the Bf 109E and, in such circumstances, usually succeeded in trading plane for plane. See Faris R. Kirkland “French Air Strength in May 1940” *Air Power History*, Vol. 40, No. 1 (Spring 1993), 25.

¹⁶⁹ SHAA 1A 11Z 12934, Note au Sujet de l’Aviation de Chasse. Undated, p.3.

¹⁷⁰ This decision was made in conjunction with Vuillemin, Chief of Air Staff, who argued late in 1939 that “pour l’Air, le renouvellement est incessant, au moins pour le bombardement et la chasse. Il ne faut pas attendre la perfection du prototype avant de lancer la série ; celle-ci peut d’ailleurs être améliorée au cours de son exécution. On construit actuellement des avions dont les prototypes ont volé en 1936.” Gamelin, *Servir t.2*, 368.

Faced with expanding government orders for aircraft, manufacturers relied increasingly on sub-contracting firms to produce specialised parts such as propellers, landing gear, wing spars and bombing sights. In fact, by late 1939, the Air Ministry had identified twenty-four different materials representing raw materials (wood, copper, aluminum, magnesium, etc.), semi-finished parts (forged pieces, welded pieces, adhesives, tarps, etc.) and finished parts (fuel tanks, windshields, camera equipment, etc.), all of which were provided by associated manufacturers.¹⁷¹ The newest airplane designs were particularly susceptible to production delays relating to the sub-contractor's inability to produce parts quickly enough. The move toward sub-contracting in the aerial industry had only begun in September of 1938 and was therefore still a recent practice. Before this time, manufacturers practised what the Air Ministry referred to as *vertical concentration*, whereby each manufacturer attempted to produce every major piece of their aircraft internally.¹⁷² This would allow industrialists to retain the lion's share of the assembly process. It also limited the speed with which aircraft were produced. Moreover, each of the nationalised *Sociétés* relied on the same sources for their primary materials, a situation which created a "first-come, first-served" mechanism, "where the manufacturer who placed an order first, for one reason or another, was served quickly, to the detriment of those whose orders followed at a later date."¹⁷³ Delays were thus worked into the existing supply chain. In this environment, each *Société* took to stockpiling materials, even before they had need for them, in an effort to avoid future bottlenecks in supply. This common practice of hoarding materials was

¹⁷¹ SHAA A1 11Z 12934, Position du problème industriel dans sa complexité, p.4.

¹⁷² SHAA 1A 11Z 12938 Note sur les sous-traitants. Undated, after January 1939, p.3.

¹⁷³ SHAA 1A 11Z 12938, Organisation générale de la production. Undated: late 1939/early 1940.

flagged by the Air Ministry as particularly deleterious to overall production.¹⁷⁴ While the increased stockpile of materials facilitated local construction in one factory, it produced a corresponding lack of necessary materials within all the other manufacturing plants. In an effort to improve efficiency, La Chambre's Air Ministry recruited the services of several auxiliary suppliers. Notable among these were railway construction firms (Scieries du nord, C.I.N.T), large carpentry and metalwork firms (Dubois, Cipa) and automobile manufacturers (Peugeot, Talbot). Once started, this practice quickly expanded until the aerial industry benefitted from auxiliary services from over eight hundred sub-contractors.¹⁷⁵ This led, of course, to an initial period of instability until the new supply system was properly balanced. Delays at the start of a new industrial production cycle are not unusual, nor are they necessarily long-standing. Over the previous months, French manufacturers had, following a slow start, succeeded in fully complementing the preceding generation of aircraft before it issued from the factory floor. There is little to suggest that auxiliary parts for newer aircraft would not soon have been streamlined for timely production as well, especially considering the massive increase in state funding for the aerial industries throughout 1939-1940. Nevertheless, some have cited this short-term problem in aircraft construction as proof that the aerial rearmament program was a failure and would not, in the end, be able to compete with German manufacturing.¹⁷⁶

In truth, this was a short-term problem consistent with the redesign of any large-scale production methods. The Morane-Saulnier M.S. 406 fighter, had been rolling off production

¹⁷⁴ Ibid.

¹⁷⁵ Ibid.

¹⁷⁶ See Talbot Imlay, *Facing the Second World War...*288-290.

lines in a fully assembled state for several months. The success of its production cycle demonstrated that problems with sub-contracting the manufacture of essential parts could be quickly resolved once serial production was in full swing. Dysfunctional or incomplete sub-contracting chains related to the newest aircraft models would be rectified in the very same way. Minister La Chambre soon ordered the Technical and Industrial Bureau to create a dedicated production committee tasked with studying and resolving the matter.¹⁷⁷ The problem of missing aircraft parts reached its peak in January of 1940, when the aviation inspection agency (C.R.A.S.) flagged three hundred newly assembled planes as unfit for service. This number was halved by May 10 and was halved again throughout the six weeks of battle despite the enormous strain placed on manufacturers to maintain the very highest rate of production possible. The problem of unfinished planes rolling off the factory floor was therefore short-lived and did not significantly influence the course of events to come.¹⁷⁸ For an industry which had grown so rapidly in such a short period of time, this was hardly a catastrophic state of affairs. In fact, one Air Ministry report pointed out that at no time did the number of planes in need of further equipment exceed ten percent of total deliveries. “This percentage appears minimal,” the report

¹⁷⁷ SHAA A1 11Z 12935, Questionnaire : Causes des retards apportés dans la livraison des matériels aéronautiques, p.2.

¹⁷⁸ Army Commander-in-Chief Gamelin indicated that the downturn in aircraft production in January 1939 which ultimately cost La Chambre his ministerial position, was widespread throughout French industries. He specifically cited the case of landmines. The production goal for this defensive weapon was set at sixty thousand per month, a figure that had been reached by December 1939. In January and February 1940, the number dropped to forty-five thousand. As of March, production and labour problems had been sorted out and French factories were able to produce over one hundred thousand monthly, exceeding production goals by sixty-six percent. This was the same pattern experienced by aircraft manufacturers at precisely the same time. According to Gamelin, the nationwide industrial downturn in January-February 1940 was the result of labour shortages following the mobilization of September 1939 and was only corrected after specialists were recalled from the front and female labour was fully incorporated into the national industrial complex. Thus, according to this view, industrial shortages of early 1940 should not be seen as an indicator that French industrial potential was insufficient to the task of waging total war with Germany. See Gamelin, *Servir I*, 185.

concluded, “in regard to an industry which accomplished in so little time such exponential growth and which encompasses so many diverse branches of our economy, branches which are not exclusively aeronautic but which were nevertheless essential to maintain production.”¹⁷⁹ Moreover, a post-war study by the Air Ministry declared that “all manufacturing delays in auxiliary equipment had been rectified by May 1940.”¹⁸⁰ Colonel Chatelain’s testimony at Riom indicated his certainty that the Air Force was provided with all the modern aircraft it asked for. He claimed to have been unaware of any shortfall, “having responded to the general staff of the air force with all the aircraft requested by the high command between September 3, 1939, to June 25, 1940. We fully armed and equipped over 3000 war planes.”¹⁸¹

It remains true that a growing discrepancy existed, from December 1939 to March 1940, between the number of planes emerging from factory floors and the number of planes accepted by the air force. This has been inaccurately interpreted as indicative of an escalating output of incomplete aircraft.¹⁸² In fact, it had more to do with the slowdown in testing procedures which took place every year during the cold winter months. Each plane, upon issuance from the factory, was tested by a company pilot who subsequently tagged the machine *factory complete* (*sortis d’usine*). Following this, the plane would be re-tested by an air force pilot who, if satisfied, marked the aircraft as *received by the air force* (*pris en compte*). As one Air Ministry

¹⁷⁹ SHAA 1A 11Z 12938, d.3, La Production Industrielle, (undated, after July 1940),p.1.

¹⁸⁰ SHAA 1A 11Z 12935, Situation de l’Armée de l’Air, Undated: late March, 1940, p.10.

¹⁸¹ Joseph Roos “La bataille de la production aérienne” *Icare* (Autumn-Winter 1971), 52. These numbers indicate that *Plan V* had been successfully implemented by the spring of 1940. The Plan’s ultimate goal was, after all, to have prepared the industrial base to produce 1,600 planes each month. This number was decided upon by the perceived wartime need for a standing airforce of 3,200 planes and a monthly attrition rate of fifty percent. SHAA 11Z 12934, Plan V de Guerre: Bases du Plan, p.1.

¹⁸² See Talbot Imlay, *Facing the Second World War*, 288-290.

report stated, “the Air Force’s method of accepting new aircraft largely depends on atmospheric conditions. In order to accept a machine, it must not only be flown, but must be able to take off from a suitable runway.” The unusually cold winter of 1939/40 rendered this process exceptionally difficult and caused unexpected delays. “In winter-time, hours suitable for flight are considerably shortened,” the report continued, “and the airfields surrounding factories are, for several weeks, unusable as runways. This is why far fewer aircraft were accepted by the Air Force than the number of planes issued from factories...by the end of the winter of 1939/40, this bottleneck exceeded three hundred planes.”¹⁸³ Thus, the problem of incomplete aircraft emerging from French factories was not as significant as some studies have suggested. Missing ancillary parts certainly delayed the use of some aircraft; this problem was signalled angrily by Air Chief Vuillemin in a letter to the Air Ministry in January 1940.¹⁸⁴ However, the disparity between numbers of aircraft constructed and those accepted by the military during this period, had more to do with seasonal variations than with industrial shortcomings. The Air Force could not accept planes until they were submitted to standard testing procedures, and in the winter, this took far more time. The bottleneck was quickly cleared with the return of spring weather after March 1940.¹⁸⁵

Problems with auxiliary equipment on planes emerging from the factory floor were thus limited and quickly rectified. In England, however, the same problem existed to a much more

¹⁸³ SHAA A1 11Z 12935, Situation de l’Armée de l’Air, Undated: late March 1940, p.13.

¹⁸⁴ SHAA A1 11Z 12935, Note verbale en un seul exemplaire remise par le Général Commandant en Chef à M. le ministre de l’Air, January 30 1940.

¹⁸⁵ In December 1939, the Air Force accepted 223 planes. In January 1940, this dropped to 178. The total for February rose slightly to 205 and by March, the military accepted 386. This grew rapidly as the spring advanced (426 planes in April and 628 planes in May). SHAT 3D 484, *Chossat Report*, p.12.

significant extent. By April of 1940, while French manufacturers had largely sorted out the problem, lack of ancillary equipment continued to significantly delay the production of British aircraft. The Interallied Committee for Military Studies concluded on March 30th that the contribution of the R.A.F. to France would be necessarily smaller than had been envisioned only six months earlier. The Committee determined that while airframes and motors were produced at pace, “detailed equipment and essential resources needed to bring the aircraft fully to a war footing” were still sorely lacking. Of eighteen British squadrons anticipated, only fourteen were completed and of those, only eleven would be operational by April 1st. Of nine British bomber squadrons expected to become available by that time, only four were complete.¹⁸⁶ These industrial deficiencies greatly overshadowed those taking place in France and were to limit the number of aircraft which Fighter Command and Bomber Command would commit to the battle in France after May 10th.

Despite all the challenges presented to manufacturers, La Chambre insisted on reorienting production cycles around two of the latest and most promising aircraft models. He wanted the Dewoitine D.520 fighter and the Bloch MB.174 bomber organized for serial production as quickly as possible. Both planes were able to match the best models of the *Luftwaffe*. However, the elaborate systems required for their serial production had not yet been streamlined, nor were the performance issues worked out. The newer designs had greater potential and would certainly develop into superior machines to what was already on hand, but mass production would require time. The process, begun in late 1939, of transitioning production lines toward the newest

¹⁸⁶ DE 2016 SA 66 d.2, Report by the Interallied Committee for Military Studies, April 9th, 1940.

designs met with immediate disappointment. Despite impressive early trial results, Emile Dewoitine's D.520 was not living up to its initial promise. Its air speed had been projected as high as 600km/hr but in trial runs, the actual figure proved to be considerably lower. The first machines accepted by the Air Force averaged only 500 km/hr. As for the Bloch MB. 152, it could not even reach this benchmark, managing only 475 km/hr in its test flights.¹⁸⁷

These setbacks were devastating to the rearmament process. France was already at war, and in the final months before Hitler's invasion, French industry had already shown itself capable of mass producing the M.S. 406, a proven model with a top speed of only 490 km/hr but with exceptional maneuverability. The decision to reorient production in favour of newer models was not irrational, but it came at a terrible moment, and it was taken in favour of test models which had not yet established their full potential. The Air Ministry's decision to modernise its fleet led to predictable delays following immediately upon a remarkable period of success. During the first month of war in September 1939, the air force received three hundred and eleven combat planes. From September to December, nine hundred and thirty-two combat planes were delivered, represented by three models of fighters (M.S. 406, Bloch 151-2, Curtiss P-36 Hawk¹⁸⁸), one reconnaissance plane (Mureaux), one ground attack plane (Potez 63.11), and

¹⁸⁷ All the French designs from late 1939/ early 1940 were trying to match the standard performance set by the German Bf 109E. Its top speed was around 550km/hr, and while other specifications like armament, climbing rate and manoeuvrability were of great importance, faster planes were always at the top of the air ministry's wish list.

¹⁸⁸ These were one of three American warplanes which had been purchased in several orders, starting late 1938, at a total cost of nearly two billion francs. The Curtiss P-36 Hawk, the Glenn-Martin 167-F and the Douglas DB-7 were approved for use by the Armée de l'Air, although only the first two saw extensive action in May-June 1940. SHAA 1A 11Z 12938 d.2., Commandes Americaines (undated). Total orders placed for American equipment were for 2,065 airframes, 8,340 propellers and 7990 engines. Deliveries of this equipment were promised for December 1940 at the latest, by which time, according to the Air Ministry, French industry would be in a position to fully complement its own equipment. SHAA 1A 11Z 12938, d.2, Matériel: Avions, Moteurs, Hélices, 29 Février, 1940.

four bombers (Bloch 174, Bréguet 691, Lioré 45, Amiot 350). Put into context, this single month's output of first-line aircraft exceeded the combined production totals of the combined years of 1937 and 1938.

Hindsight would show that phasing-out the older Morane-Saulnier aircraft in favour of newer models on the eve of invasion was a significant error on La Chambre's part. This is particularly true considering how the MS 406 eventually proved its worth in battle, even against faster Bf 109E and Bf 110 models. Due to its numerical preponderance, the M.S. fighter constituted the Armée de l'Air's reliable, if unspectacular mainstay. As such it contributed more than any other French aircraft to the unexpectedly high losses experienced by the *Luftwaffe* in May/June 1940.¹⁸⁹ Had production of this fighter continued unabated until May 10th, four hundred additional French fighters would have been available for missions during the opening days of the Battle of France.¹⁹⁰

However, as production numbers dropped in early 1940, and as the new models failed to live up to expectations, La Chambre was held accountable. Despite his best efforts, he had not been able to fulfill the aims of Plan V in the time allotted to him. Much progress had been made however, and manufacturers like Dewoitine, Bloch and Arsenal, were demonstrably on the cusp

¹⁸⁹ German air losses from May 10 to June 21 were much higher than expected. 1814 combat planes and 3278 servicemen were lost in action. This represented 36% of its total effectives. See Peter D. Cornwell *The Battle of France Then and Now* (London: After the Battle Press, 2008), p 479.

¹⁹⁰ This figure is extrapolated from the monthly production average of 97 machines from September to December 1939. SHAA 3D 494 Chossat Report. It should be observed that very effective use was made of outdated planes in the opening stages of the war. The Polish air force scored many victories against the Bf 109 using slow but agile PZL P.11s. Eight months later, the Dutch air force aggressively used outdated Fokker CV's (top speed of only 250 km/hr) to strafe and bomb German soldiers and artillery at Rhenan. Flying over sixty sorties, the Dutch pilots slowed down the advance of the 18th army units in Holland for two days. See Greg Baughen, *The Rise and Fall of the French Air Force: French Air Operations and Strategy, 1900-1940*. (Croyden: Fonthill, 2018), 153 and 194-95.

of a new generation of lightweight airframes. It should be noted that France's major engine producers, Hispano-Suiza and Gnome et Rhône were also ready to mass produce new radial engines which could compete with the very best of foreign competitors.¹⁹¹ But it all happened a few months too late. The parliamentary air commission held the air minister accountable for the drop in production throughout the first month of 1940 and began to seek his replacement.

In truth, La Chambre was on the brink of reaping the enormous rewards of his reorganisation of the air industry. His commitment to the acquisition of modern tooling had released longstanding constraints on the workforce and allowed for full utilization of valuable specialised labour. This, along with increased state funding, created the conditions without which the remarkable increase in production in late 1939 could never have occurred. Moreover, he had made amends for the lengthy stagnation in aircraft design which characterised the Cot era (1936-37). By the time of his dismissal in early March 1940, La Chambre had restocked the air force with a wide variety of ultra-modern designs. Two exceptional varieties among these, the Dewoitine D.520 and the Bloch MB 174, would be ready for mass production by July-August, but this too would prove a few weeks too late. Nevertheless, the pace of industrial development during La Chambre's two-year ministry was prodigious and unrivalled throughout the other branches of the French armed forces. Over two years he had presided over the revivification of the aeronautics industry from the woeful production of twenty-five planes per month in November 1937 to over three hundred by September 1939. He reimagined the design cycle almost from scratch and oversaw the development of an entirely new generation of prototypes. His managerial acumen yielded significant dividends which would be overshadowed by the

¹⁹¹ SHAA 1A 11Z 12934, Programme de fabrication succédant au Plan V, March 23, 1939, p.3.

coming disaster. The swift collapse of French resistance to Nazi invaders in the spring of 1940 would serve to obfuscate, for many years, the very significant contribution of La Chambre's policies toward French aerial rearmament.¹⁹²

Nevertheless, presented with the glaring, short-term problems of declining production in January and February, and disappointing trials for the latest aircraft models, the Parliamentary Air Commission was not inclined to applaud the Air Minister's prior record. It determined that La Chambre had failed to take the final, all-important steps toward establishing full parity with the *Luftwaffe*. As a result, he was relieved of his position and replaced on March 21st, 1940. Incoming Prime Minister Paul Reynaud chose Laurent Eynac as the unfortunate Air Minister fated to preside over the coming collapse.

From the perspective of the Parliamentary Air Commission, it mattered little that the aeronautics industry had been transformed from a backwards, 'artisanal' industry into one of the world's top tier producers in under two years' time. War was looming and the government expected tangible results, especially given the enormous sums of money recently invested in

¹⁹² La Chambre was certainly prone to pessimism and often commented on the danger of war with Germany. Until recently, historical investigations of La Chambre tended to focus disproportionately on this aspect of his character. William Shirer considered him an open defeatist along the lines of desultory Air Chief, Joseph Vuillemin. (Shirer *Collapse of the Third Republic* 388). See also Patrick Facon "Le Haut Commandement Aérien Français et la Crise de Munich" in *Recueil d'articles et études 1981-1983* (Vincennes: Services Historiques de l'Armée de l'Air 1983), 183 and Fridensen & Lecuir, *La France et la Grande-Bretagne face aux problèmes aériens (1935-mai 1940)* (Vincennes : Service Historique de L'Armée de L'Air, 1976), 99. From the 1980s, studies by Robert Frank and Ernest R. May among others, served to resuscitate La Chambre's reputation by investigating the success of his rearmament plan rather than his admittedly persistent habit of exaggerating German capabilities both military and industrial. See Ernest R. May *Strange Victory*, 206 and Robert Frank, *Le Prix du réarmement français 1935-1939*, 90. Recent historians such as Philippe Garraud have built upon this, attributing greater merit to La Chambre's achievements as Air Minister during the years 1938-1939. See "Les contraintes industrielles dans la préparation de la guerre de 1939-1940: La modernisation inachevée de l'aviation française" *Guerres mondiales et conflits contemporains* (July-September 2002, No. 207) 46-47.

aircraft production.¹⁹³ As monthly production declined in January-February 1940, and as news arrived that the latest benchmark-setting generation of warplanes was not yet living up to expectations, La Chambre's fate was sealed. It was the Air Commission's view that La Chambre had assumed far too much personal control over the workings of the air industry since early 1938. It argued that he had kept professional soldiers at a distance and rarely sought their advice on matters of design or production. The Air Commission demanded that in the future, the Air Ministry was to work closely with the Air Force's high command and in particular, with its Chief of Staff, General Louis Picard.¹⁹⁴ The Commission's disappointment reflected the government's expectation that France was to maintain its traditional status as a world power of the first rank. They were not in a position to take stock of the general improvement in production because the only matter of importance was whether France still remained vulnerable to the long dreaded 'knock out blow' from Germany. In early 1940 it appeared that this threat persisted, and that La Chambre had stalled in his efforts to improve the nation's military readiness. Success would come only when the *Armée de l'Air* stood on equal footing with the *Luftwaffe*. Anything less was failure, and it was in accordance with such terms that La Chambre was not reinstated as Air Minister under the government of Paul Reynaud.

Part 3

Too many pieces: A Mysterious Overproduction.

¹⁹³ Funding for *Plan V* required a total state investment of 17 billion francs for the year 1939 alone (SHAA A1 11Z 12934, Dépenses à envisager pour l'exécution du plan V). By early 1940, the air force was receiving higher levels of funding than the army.

¹⁹⁴ SHAA 11Z 12934, Éléments: Intervention Dignac (letter from the Air Commission to the Prime Minister), February 15, 1940, p.3.

As we have seen, the Riom Trials of 1942, staged and agenda-driven though they were, nevertheless served to bring certain key aspects of French war preparations to the light of day. One of these was the curious fact that more French planes existed at the end of the battle, after June 25th than had been available at the beginning. General Massenet de Marancour, Commander of the Third Air Region around Tours, was the first to bring this fact to the court's attention, stating:

I was in close and frequent touch with General Redempt about the excessive number of war planes which he deposited at my air schools because no cover for them was available elsewhere. I frequently listened to his complaints about planes he didn't know what to do with and which the Air Force High Command would not take from him. I know that nearly every evening General Redempt¹⁹⁵ sent to Air Force General Headquarters the list of all planes ready for delivery and this list was long.¹⁹⁶

Former Air Minister Guy La Chambre replied to these accusations during his deposition on March 5th, 1942. He explained, "General Massenet de Marancour's deposition provides concrete examples of unused aircraft, but he provides no evidence of unusable aircraft. In any case, the number of pilots was inferior to the number of machines."¹⁹⁷ It was not difficult for La

¹⁹⁵ Major-General Léopold Redempt served as Director of Military Air Materiel from June 1935 until August 1940.

¹⁹⁶ William Shirer, *The Collapse of the Third Republic, An Inquiry into the Fall of France in 1940*. (New York: Simon and Schuster, 1969), 618.

¹⁹⁷ *Le Procès: Riom*, Bracher (ed.), 627.

Chambre to effectively defend himself from charges of mismanaging the Air Ministry throughout 1938-9:

In May 1940, we recognised as ‘ready for war’ more fighter aircraft than called for by Plan V. But more time was required to train an aircrew that to construct an airplane. The general staff gave its full effort in the field of personnel, and I’m not speaking critically...but it would have required the accomplishment in 18 months what Germany undertook over five years.¹⁹⁸

La Chambre claimed that in early 1938, only a thousand trained pilots existed. These would not have been enough to operate the meagre 1500 planes called for in 1934 with the original aerial rearmament proposal, *Plan I*. This omission is particularly difficult to explain since the early rearmament plans, *Plan I* and *Plan II*, both called for the construction of aircraft alongside all ancillary infrastructure, including pilots, airstrips, training personnel, and munitions.¹⁹⁹ Yet somehow, four years had passed during which time the unacceptable rate of pilot training in France had never received its fair due of attention. And if these pilots had existed by 1938, they would have been assigned to obsolete aircraft designed in 1932 or earlier. Perhaps most telling of all was La Chambre’s painful admission that still, in January 1938, after nearly two years of industrial organization, France’s aircraft manufacturing “remained an artisanal industry, managed by discouraged leadership.”²⁰⁰

¹⁹⁸ Ibid.

¹⁹⁹ SHAA 3D 494, Rapport sur la réalisation des programmes du matériel aérien.

²⁰⁰ Ibid. France’s comptroller-general agreed with La Chambre’s assessment stating, “surtout: moyens de production trop faibles et trop tardivement accrus, telles sont les causes principales de l’infériorité en qualité de notre matériel en 1939.” (SHAA 3D 494, Chossat Report) To those in close proximity to the inner workings of the air industry, like La Chambre and Comptroller Chossat, it was clear that the 1936 nationalisation reforms within the air industry had done very little to improve the means of production.

The fact that the air force had more planes available at the armistice of June 25th than at the onset of battle was repeatedly addressed at Riom by La Chambre and Massenet. Total available air strength in September 1939 had been recorded at 2,100 planes. Remarkably, by the armistice of June 1940, this number had increased dramatically. Despite the loss of over 2,000 planes in combat, 4,328 planes were found available on the continent and another 1,800 in North Africa.²⁰¹ It presented a great mystery and reflected so poorly on the nation's conduct of the war that all mention of it was redacted from transcripts of the trial by official Vichy censors. It has become a lasting mystery which has never been satisfactorily explained. Many contemporary sources reported to have seen great numbers of unused planes awaiting requisition in hangars and storage spaces across the country. Paul Stehlin, future chief of Staff of the Air Force, recounted finding dozens of unused Dewoitine D.520s in a storage space in Toulouse on June 9th.²⁰² Colonel Jean Louveau reported discovering over 150 new planes in storage at Châteauroux. None of them appeared to have ever been flown. French ace Pierre Boillot similarly reported finding a large number of Dewoitine 520s available in a hangar in Toulouse. These were not combat ready as they lacked some basic instruments and fuel. Boillot's own squadron took it upon themselves to acquire the missing components from private sources.²⁰³ While this clearly illustrates glaring problems in supply and logistics within the armed forces, it also confirms that

²⁰¹ Shortly after the armistice with Germany in June 1940, General Redempt was commissioned by the Vichy government to assess the numbers of French aircraft currently available. His findings confirmed that a total of 4238 machines existed. 2500 of these were first line aircraft in excellent condition, having been spared any use during the battle. To this could be added the six hundred American fighters, most of which were still stored in depots in Casablanca. Total French first-line aircraft strength in June 1940 was thus, at minimum, in excess of three thousand machines. See Roger Genebrier, *Septembre 1939 : La France Entre en Guerre* (Paris: Editions Phillipine, 1982), 30.

²⁰² Paul Stehlin *Témoignage pour l'histoire*, p.268.

²⁰³ Anthony Christopher Cain. *The Forgotten Air Force: French Air Doctrine in the 1930s* (Washington and London: Smithsonian Institution Press, 2002), 132.

the missing industrial parts were, in fact, produced and available domestically. The problem lay in the faulty supply chain which had not yet been properly designed to meet the rapidly increasing output of airframes from French factories.

Such a bizarre waste of valuable resources has often been relegated to what we have already referred to as the moralist camp of historical interpretation of the events of May-June 1940. This narrative presents French airfields and hangars filled with unused aircraft as just another example of a hopelessly disorganised and disconnected military command system, one which rendered the national collapse all but unavoidable.²⁰⁴ Actual reasons for the abundance of unused combat planes are decidedly more prosaic. Writing from exile in the United States following the battle, Pierre Cot looked back on the problem of pilot shortages in France and concluded that during his time as Air Minister, he had done an admirable job at developing training centers for young flyers.

We needed a sort of nursery for young people from which the military command could select the best and brightest...Popular aviation was one of my creations of which I am most proud. We organised popular aviation centers to provide a pre-military and para-military instruction, not only for young pilots but for mechanics and communications specialists as well.²⁰⁵

²⁰⁴ This view is to be found in the earliest popular accounts of the battle. See Shirer *The Collapse of the Third Republic...*, 618 and Horne, *To Lose a Battle*, 211. It was revisited by Donald Cameron Watt who wrote, "The French failure was compounded by military incompetence and bad organization. This more than anything else is responsible for the extraordinary paradox of the pressures brought on the British Cabinet to commit the reserves of Fighter Command to the Battle of France at a time when anything up to 1500 French fighter planes were lying around central France unused." Donald Cameron Watt, *Too Serious a Business: European Armed Forces and the Approach to the Second World War*. (Berkeley and Los Angeles: University of California Press, 1975), 75.

²⁰⁵ Cot, *l'Armée de l'Air*...142-143.

“The full contribution of these measures would be apparent in two to three years’ time”, Cot concluded. In truth, Cot did inaugurate public flight schools in France but well after the creation of similar institutions like the German *Deutsche Verkehrsfliegerschule* (1925) or the British *Air Corps Training Centers* (1926). Far from the visionary stroke he describes in his memoirs, Cot’s much-needed expansion of pilot training centers merely brought France up to speed with the other major European powers. Yet, it was a modest effort, producing only six schools for the entire nation with small registration numbers. Their combined enrollment was around 2,500 students. This was far too low to support a nation whose air force was in the process of tripling in size.²⁰⁶

The shortage of pilots in 1938 was thus a numbers game that La Chambre could not win by the time of invasion in May 1940.²⁰⁷ His *Plan V* was not restricted to aircraft production but attempted to address the nation’s shortage of available pilots as well. The plan called for training 40,000 personnel and 5,000 aircrew. The need was dire. In order to fulfill the requirements for

²⁰⁶ The failure to train sufficient pilots by the outbreak of war certainly weighs heavily against Pierre Cot but future Prime Minister Paul Reynaud later attributed some of the blame to Air Chief Vuillemin (appointed in early 1938). Reynaud wrote, “il y a un homme qui, tout autant que le ministre de l’air, aurait dû avoir chaque jour sous les yeux les deux graphiques des avions sortis des usines et des pilotes sortis des écoles et contrôler leur parallélisme, c’est bien le général Vuillemin.” Reynaud, *La France a sauvé...vol. 1*, 447.

²⁰⁷ Jean Cuny and Raymond Danel’s important works on the history of French air power have decisively shown that an acute shortage of manpower was the *Armée de l’Air*’s greatest weakness in 1940. Cuny and Danel’s findings show that the French estimated a fifty percent rate of monthly losses in machines, requiring a rate of new pilot training which would not be available in France until 1941 at the earliest. See Jean Cuny and Raymond Danel, *L’aviation de chasse française, 1918-1940*, (Paris: Société Nationale Industrielle Aérospatiale, 1973), 163-166.

1940 alone, an additional 1,300 officers, 12,000 non-commissioned officers and 28,000 crewmen would be required.²⁰⁸

Development in these areas had been inexplicably slow considering the mounting concern with aircraft production in France throughout the late 1930s. In 1933, the French air force included 1,804 officers qualified as aircrewmen. By the outbreak of war six years later, this had only risen by seven percent to 1,939 officers.²⁰⁹ On May 10, 1940, there were only enough crewmen to equip a maximum of 1,675 warplanes, though over 3,200 modern planes were ready for use on May 10th 1940.²¹⁰ Moreover, no spare crews existed to support these numbers, and no crews were available for essential logistical tasks like wing command and staff aircraft.²¹¹ Material restrictions did not play the key role in establishing German numerical superiority in the northeastern front during the battle of France. An acute shortage in aircrew was far more important in answering the famous question posed in an article by Pierre Cot: “Où étaient nos avions?”²¹². The answer to this question was that an insufficient number of pilots

²⁰⁸ SHAA A1 11Z 12934, Ministère de l’Air: Étude relative à un plan de 5000 avions en ligne, January 27, 1939, p.4.

²⁰⁹ D. Gaxie, "Morphologie de l'Armée de l'Air: Les officiers," Recueil des articles et études (Paris: Service Historique de l'Armée de l'Air, 1947), 43 quoted in Faris R. Kirkland “French Air Strength in May 1940” *Air Power History* 40:1 (Spring 1993), 28.

²¹⁰ Charles Christienne and Pierre Lissarrague *A History of French Military Aviation*, (Washington D.C.: Smithsonian Institution Press, 1986), 282. See also Faris A. Kirkland “French Air Strength in May 1940”, 23 and 28. This number is supported by the findings of Jean Truelle, Chief engineer of the French air force who concluded that air force command possessed a total of 1649 active aircraft. See Jean Truelle “La production aérienne militaire jusqu’à 1940” *Revue d’histoire de la deuxième guerre mondiale* 73 (January 1969), 103. This was only the active component of a total number of 3284 modern combat planes which were deemed ready for battle. Truelle’s figures were seconded by Pierre Cot, two years later in “En ’40 Où étaient nos avions?” *Icare* 57 (Spring-Summer 1971), 37.

²¹¹ Wing command and staff aircraft played similar roles in the air as command tanks played in land battles. These were small command groups which organized and coordinated the movements of squadrons during operations.

²¹² See Pierre Cot, “En ’40 Où étaient nos avions?” *Icare* 57 (Spring-Summer 1971), 35-57. In this article, Cot blames the Air Force high command for keeping too many planes on the ground in reserve as the battle raged in May and June 1940, while avoiding the critical issue of pilot shortages, of which he was fully aware.

existed to fly the planes streaming from French factories.²¹³ *Plan V* required over 40,000 personnel to be trained of which over 5,000 were to be aircrew. At the beginning of 1938, only six schools existed in France, with a total of just 2,532 students. New schools needed to be constructed and staffed, large numbers of training aircraft would need to be built, and the industry was already strained to the limits of its production capabilities. By the last months of peace, it was already clear that pilot shortage had become the most significant bottleneck to the development of French air power. The monthly number of aircraft produced had already risen far beyond the military's ability to crew them. In March 1939, *Plan V* was revised, calling for the construction of an additional 3,000 aircraft by the end of 1940. Shortage in personnel would only allow for 300 of these to be used in combat missions.²¹⁴ As things stood, the remaining 2,700 planes were to be stored in various airfields, awaiting the training of new pilots and crews. Combat losses (injured, killed or captured) in pilots and crews were expected to be around 40% monthly. To maintain a frontline strength of 3200 aircraft, 1200 pilots would need to be trained *each month*. However, throughout 1939, only 500 fully trained pilots emerged from French schools. The high command was well aware of the gravity of the situation, and it is only by taking into account the acute pilot shortage that some of the otherwise baffling decisions taken by the Air Force at this time begin to make sense. For example, Joseph Roos recalled his experience with a team of Air Ministry officials charged with working alongside Air Chief Vuillemin with the goal of establishing new goals for monthly aircraft construction. His team

²¹³ Far from being able to man all of its aircraft, the French *Armée de l'Air* could not even fully complement air units which had been activated during the battle. Squadrons often operated with a 15% (or greater) shortage of pilots, ground crews and officers. See Anthony Christopher Cain, *The Forgotten Air Force: French Air Doctrine in the 1930s*. (Washington and London: Smithsonian Institution Press, 2002), 122.

²¹⁴ Greg Baughen, *The Rise and Fall of the French Air Force* (Croyden: Fonthill, 2018), 126.

indicated that given the extraordinary expansion of French manufacturing capabilities, new target numbers could soon range anywhere between 370 to 600 planes every month. Roos' team wanted to know precisely how many new machines the Air Chief wished to receive every month. Vuillemin answered that "forty seemed adequate,"²¹⁵ knowing full well that he had no more pilots to man the additional machines. Similarly, when asked his opinion regarding the purchase of American Curtiss-Hawk fighters, Vuillemin recommended the purchase of six hundred, rather than 1,000 machines, as proposed by the air minister. As recollected by Army Chief Maurice Gamelin, "he [Vuillemin] estimated that we would very quickly reach the upper limit to our potential in terms of pilots and crewmembers."²¹⁶ The Air Chief's point of view was made clear at the meeting of the Chiefs of Staff of the Armed Forces of June 19, 1939. There he announced: "within three or four months, we will be in a position to export fighter aircraft: forty per month at first and eventually up to two hundred machines monthly."²¹⁷ In addition to this, Vuillemin went so far as to make an official recommendation to decrease the production of aircraft. Writing to the Air Ministry and the Chiefs of Staff on February 17th, 1940, he stated, "I am disposed to give my opinion that...until the constitution of *essential replacements* has been addressed...we are to

²¹⁵ Joseph Roos, "La bataille de la production aérienne" *Icare* (Autumn-Winter 1971), 49. According to Armaments Minister Raoul Dautry, some firms were boasting that a total of 730 plans per month was already possible, with a ceiling of 1600 per month by the spring of 1941. See Patrick Facon. *Batailles dans le ciel de France Mai-Juin 1940*. (Paris: Pascale Galodé, 2010), 200.

²¹⁶ Eager to disassociate himself from the woeful state of French pilot training programs, Gamelin goes on to say "J'avoue ne pas comprendre: ne peut-on pas dresser tout le personnel nécessaire?...Mais tous mes conseils dans ce sens n'ont pas été couronnés de succès et ce domaine échappait complètement mon action efficace." Gamelin, *Servir t.2*, 389 and fn.

²¹⁷ Gamelin, *Servir t.1*, 281.

accept the reduction of monthly production numbers below the amount agreed upon by the material committee.”²¹⁸

His statements only make sense when considered in light of France’s acute shortage of trained pilots, the *essential replacements* to which he refers in his letter to the Air Ministry. This was a shortage which would take another twelve to eighteen months to rectify. Until that time, it was the opinion of the Chief of Staff of the Air Force, that anything above forty planes a month would amount to superfluous equipment best unconstructed, or else sold abroad to enrich the war chest. Only in such terms can we make sense of the relatively small number of planes actually used in battle compared to the total number of machines available for use. La Chambre had clearly indicated in April 1939 that the number of modern fighter aircraft available had already reached 1,919. By June 19, another 492 had been constructed. It is thus safe to conclude that at least 2,000 first line fighters were available as of May 10 to receive the German invasion.²¹⁹ Yet, in his deposition at Riom two years later, Joseph Vuillemin declared that at the start of the battle, 1,500 *Luftwaffe* fighters were opposed by a grand total of 580 French machines. His subordinate, general Harcourt, senior officer responsible for fighters, testified that only 418 machines were available.²²⁰ The available evidence clearly indicates that the *Luftwaffe’s* air superiority in May-June 1940 had nothing to do with superior German industrial production. French industry had already succeeded in closing the gap between the two manufacturing bases. Rather, it was the shortage of pilots which allowed for so few of the available French fighters to

²¹⁸ SHAA 11Z 12934, Sorties d’Avions Bons de Guerre, February 17, 1940, p.3. [author’s emphasis].

²¹⁹ These numbers provided by Maurice Gamelin, *Servir t.1*, 282.

²²⁰ Ibid.

take to the skies. The establishment of sufficient training schools and the training of sufficient students had remained largely ignored until La Chambre assumed office in early 1938.

However, the process of training a skilled pilot corps, sufficient in number to meet the needs of war, required two to three years, and time had simply run out for the Armée de l'Air. It had been quantitatively, if not yet fully qualitatively, supplied with sufficient machines to provide an effective defence of French skies. For enough pilots to have been on hand to properly service these machines however, energetic steps were needed at the start of the rearmament process in 1936. The lost ground could have been made good as late as mid-1937, after which time, it was simply too late to produce enough pilots to man the rapidly expanding air force. As a result, some two thirds of French fighters remained grounded during the battle for lack of pilots to fly them.

It has been argued that French aerial rearmament was a two-part process, spanning nearly five years from mid-1935 to early 1940. Pierre Cot is said to have laid the industrial foundation and Guy La Chambre is said to have found the means to make them productive. In this way, Cot and La Chambre are thought to have complemented each other, and it was only through their combined efforts that French aircraft production was able to expand so dramatically starting in 1939. According to Robert Frank, "Pierre Cot forged the instrument and Guy La Chambre added to it the essential element: tooling."²²¹ In Patrick Facon's words, "it is thus the combined effort attributed to the process of nationalisation in 1936 and the injection of considerable financial

²²¹ Robert Frank, *Le Prix du réarmement*, 269. The same argument is made in Martin Thomas "French Economic Affairs and Rearmament...", 668 and in Joseph Roos, "La bataille de la production aérienne", 47.

resources which characterized the rapid industrial development in the years preceding the war.”²²² In truth, the potential for French industry to mass produce warplanes was restrained for several years by ministerial mismanagement. Neither Cot nor his predecessor, Victor Denain, were able to clear the debilitating bottlenecks within the production cycle. Despite both having received more than enough financial backing to realise their relatively modest production plans, neither minister ever came close to achieving their quotas. Aircraft manufacturers were only able to display their full capacity after the effort to properly equip their factories had been energetically broached. This commitment was not made until January of 1938, and only reached its full stride a year later. However, nothing prevented La Chambre’s predecessors from beginning this essential process in 1936, or even as early as 1934, at the onset of French aerial rearmament. It is also true that state funding of the aircraft manufacturing sector increased tremendously during the final year before May 1940. In 1934, twenty-one percent of the national defense budget was given to aviation. By 1939 aviation received fifty-two percent of the entire defense budget. These were central factors for the spectacular eleventh-hour revivification of French aircraft development.

The six nationalised *Sociétés* established by Pierre Cot in 1936 certainly made use of these resources to greatly expand production, especially in the last twelve months before the German invasion. However, there is little evidence to suggest that the advantages gained by enlarging industrial floorspace were sufficient to offset the dislocation of both labour and materials or the squandering of nearly two years, during which time the *Luftwaffe* acquired its

²²² Patrick Facon, *Batailles dans le ciel...*,38.

daunting advantage.²²³ Cot's second term was a setback for the nation as it entered the final stretch before war with Germany. Crucial time wasted in replacing and relocating the existing aeronautical infrastructure, ensured that its benefits would only be fully enjoyed in the last months before hostilities began, by which time it was too late. Private industry as it existed before 1936, could have been rendered far more efficient using only a fraction of the expense incurred by nationalisation. Had these industries benefitted from the domestic production and foreign purchasing of much needed equipment for the factory floor, they would have been in a favorable position to begin their own internal modernization at a much quicker pace. Such a policy would have foregone the construction of Cot's spacious new factories, but it would have carried the enormous advantage of beginning two and a half years earlier. The aircraft industry would have remained largely concentrated around Paris which constituted a clear vulnerability in time of war. The dispersal of aircraft manufacturing centers was well conceived by the Cot air ministry, even though as it played out, Paris was not to be extensively targeted by Luftwaffe bombers in 1940.²²⁴ The question remains, however, whether decentralization merited the expenditures in time and financial resources attributed to it by the Cot Ministry. It is equally possible that private aeronautical industries, supported by the state in their own internal efforts at modernisation, would have identified the central obstacle to serial production far sooner. It is

²²³ Historians who have questioned this matter include Martin Thomas and Jeffrey J. Clark. For Thomas, the positive effects of nationalization, "are difficult to quantify. Many of the problems of re-equipment were solved simply by greater funding and the assurance of coherent long-term orders." *French Economic Affairs and Rearmament...*,662. Clark provides a fuller examination of the negative effects of limited government orders on the development of the French war industries. Jeffrey J. Clark "The Nationalisation of War Industries in France 1936-1937: A Case Study", *The Journal of Modern History* 49:3 (September 1977) 417.

²²⁴ Moreover, contemporary observers noted that the nationalised societies were completely ill-equipped to defend themselves against aerial attack, despite the fact that they would certainly present priority targets in time of war. Cot appears to have hoped geography alone would deter German raids on French centers of aircraft production. See Editorial, no author. "Notre Aviation: Les conditions de son redressement". *Revue des deux mondes* 45:2 (May 15, 1938), p.277.

only reasonable to posit that they would have prioritised a massive re-tooling drive inside their factories early in the rearmament process back in 1936. In this case there would have been no need to wait in virtual stagnation while minister Cot restructured and relocated the entire industry, or for minister La Chambre to finally correct the problem nearly three years later.

Cot's central error was in not following the example set by the Naval and Defense Ministries. These branches of the French armed forces tried to supplement and modernise the *existing* industrial framework rather than recreating it wholesale. Inefficiencies certainly existed in tank construction for example. Assembly of armoured vehicles similarly relied upon artisanal methods and many pieces of the turrets and chassis were hand-finished. The Schneider firm, specialising in field artillery was, by the late 1930s, still using some tools dating from before the Franco-Prussian war of 1870-1.²²⁵ By supplementing and equipping private industries as they had grown organically over several generations, rather than by legislating large-scale disruptions, the Defense Ministry was able to produce a number and a quality of armoured vehicles well in excess of what the *Wehrmacht* fielded in 1940. Most importantly, it was able to accomplish this *on time*. By 1938, while land and naval rearmament programs were producing superior equipment at an acceptable pace, heavy tanks like the SOMUA S35 or Char B1 bis were setting new benchmarks in terms of armament and firepower. Though tempered by some design flaws, the Char B1 bis is generally considered as the best tank produced by any country from 1937 to 1940. The Navy had recently ordered two new classes of fast battleships in response to increased Italian competition in the Mediterranean. Of these, the *Dunkerque* had already been commissioned while work advanced rapidly on the *Richelieu*, the *Jean Bart* and the *Strasbourg*.

²²⁵ Robert Jacomet, *L'Armement de la France*, 52.

By the start of 1938, by contrast, the air force was receiving obsolete aircraft at a very slow rate. It was noted within the Air Ministry that after eighteen months of sweeping reorganisation of the industry, it still took manufacturers two and a half times longer to construct an airplane in France than it did among her neighbours.²²⁶ Even by early 1940, when French production was beginning to outpace that of both England and Germany, assembly line methods such as those practiced in the American automobile industry, were never achieved. It is a fallacy to suggest that nationalisation of the French air industry was a necessary step toward developing a streamlined assembly method free of its old “artisanal” inefficiencies.²²⁷ The dramatic increase in production was enabled through proper equipment, better prototypes after 1938 and an increase in state funding. Nationalisation did little to address any of these pre-requisites to industrial recovery, leading instead toward stagnation throughout 1936-37, in both construction and design. The managerial talents of men like Potez, Bloch or Dewoitine might have been tapped within the existing structures of their own private workspaces, to produce greater results in a shorter period of time, following the more successful templates established by the land and naval rearmament programs. At the Serre Commission in 1947, La Chambre reflected on this matter, concluding with: "If you ask me if I think the output was better in private or nationalized firms, I would be at pains to answer: It depended essentially on the director, and not on whether he presided over a nationalized or private firm."²²⁸ If indeed the initiative and administrative skill of the company director existed as the most significant factor in determining the level of

²²⁶ SHAA 1A 11Z 12934 Situation fabrication aéronautique: volume de production, March 1, 1938.

²²⁷ The argument for nationalisation as a necessary condition for recovery in the French aeronautical industry has been advanced by Fridenson and Lecuir, *La France et la Grande Bretagne face aux problèmes...* 41. Herrick Chapman, *Working Class Radicals*, 102 and Robert Frank, *Le Prix du réarmement français...*, 257 and 269.

²²⁸ Serre Commission t.2, 324.

production, no seismic reorganisation was required to fully access this invaluable resource. It already existed in 1936 within the existing system of private manufacturing.

In fact, recovery in the French air industry as of 1938 coincided with a growing reliance on the same private companies which had been kept out of Pierre Cot's inner circle. These smaller firms received the majority of financing issued by the state for enlarging and modernizing the air industry once La Chambre was appointed as Air Minister in early 1938. Positive results were immediate in the cases of Bréguet and Morane-Saulnier. Louis-Charles Bréguet, always kept out of the loop by former minister Cot, took advantage of the new funding to acquire additional factory space in Toulouse and to develop a successful design in the Bréguet 690 bomber.²²⁹ The potential of this impressive prototype was quickly identified by the Air Ministry which fast-tracked its development as of early 1939.²³⁰ For its part, Morane-Saulnier used the newfound financial support to further refine its M.S. 405 fighter into the M.S. 406. Almost 900 of these were ordered by the Air Ministry in April 1938. Three of the nationalized *sociétés* (SNCAC, SNCAM and SNCAO) were tasked with rendering this order. However, to ensure that construction would be completed on time, the policy of excluding private companies from government contracts was quietly forgotten and ninety were ordered from the Maurane-Saulnier plant at Puteaux.²³¹ Raymond Saulnier's company had been glaringly excluded from Cot's inner circle of preferred manufacturers since mid 1936. Saulnier himself had never been offered a position within the managerial teams of the nationalised *sociétés*. Though deprived of

²²⁹ Emmanuel Chadeau, *De Blériot à Dassault* (Paris: Fayard, 1987), 334-35.

²³⁰ SHAA 1A 11Z 12938 D.3, Production d'avions de guerre.

²³¹ Baughen, 128.

government funding and technical assistance for the previous two years, his relatively small industry was nevertheless able to complete the order on time. Though this constituted only a small portion of the total order for military aircraft, the measure's real significance was in its role as a first step toward increased reliance on private manufacturing in the nation's ongoing drive toward full rearmament.

As stated, the M.S. 406 was to become the backbone of the French air force as well as the only successfully mass-produced aircraft used in the spring of 1940. These results point to the reserves of creativity and dynamism present outside of the nationalized air industry and beg the question of what might have been possible were the younger generation of manufacturers, Bloch, Potez and Dewoitine, allowed to modernize their firms free of the disruptions of nationalization.

La Chambre's focus was solely on production. While Pierre Cot had divided the industry between nationalised and non-nationalised firms, La Chambre distinguished between those which found ways to remain sufficiently productive from those which did not. Where production remained obstinately low, due to perceived managerial intransigence, the air minister was not reluctant to respond with the full power of the state. In the case of the Amiot company, whose manufacturing fell consistently short of meeting its orders, La Chambre decided to intervene decisively. In the summer of 1939, the entire company was requisitioned by the state and its management assumed by government engineers.²³² The air minister threatened to do the same for all manufacturers who continued to sell material abroad despite the urgent need for rearmament at home. Though the case of Amiot was singular, it nonetheless pointed to the very question which inspired the nationalisation process in the first place: how best to ensure that

²³² SHAA A1 11Z 12935, Situation de l'Armée de l'Air (undated, 1939), p.7.

private manufacturers prioritize national security over personal profit? For Pierre Cot, the answer was to establish national control over the industry. For his successor, the answer lay in making a firm example of the punishments to be incurred for under-production, while granting more freedom of action to manufacturers who were able to maintain their expected quotas.²³³ In May 1939, a new directive by the Air Ministry clearly explained the new culture of accountability which La Chambre imposed upon the aeronautics sector. “The minister places extreme importance upon the expectation that even the smallest delays in production are immediately brought to his attention, and that he will personally oversee the proper execution of his directives.”²³⁴ The rules for success and survival in the French air industry grew markedly simpler: “meet orders, build swiftly, stay on good terms with the Air Ministry.”²³⁵

Success in aerial rearmament went hand in hand with a process of rolling back a significant part of Cot’s industrial reforms. The strict delineation between private and nationalised firms was a conceptual error based on Cot’s stated goal of “chasing the corrupt merchants from the temple”. What he advanced as “the healthy competition between private and nationalised societies”²³⁶ was a disingenuous rationalisation since, in Cot’s own words, his

²³⁴ SHAA 1A 11Z 12938, Mesures prises pour atteindre les cadences de fabrication prévues (May 31, 1939)

²³⁵ Herrick Chapman, “Working Class Radicalism...”, 168.

²³⁶ Cot, *Armée de l’Air*, 172. Robert Frank agrees with Cot’s assessment: “La nationalisation provoquait une concentration industrielle (six sociétés au lieu de vingt entreprises) et créait une concurrence entre les sociétés nationales et les entreprises restées privées. Pierre Cot pouvait ainsi compter sur des prix de fabrication plus réduits, mieux contrôlés par l’État et sur une créativité accrue.” *Le Prix du réarmement français*. 257. This assessment neglects the fact that competition already existed in ample measure between the pre-nationalised firms. The main difference resulting from Cot’s reforms was that his preferred managers (Bloch, Potez, Dewoitine) received the lion’s share of state funding and support, thereby significantly handicapping their private competitors and rendering the playing field decidedly uneven.

goal was to strictly separate the tasks of both groups. One was to serve in terms of research and development, while the other was to provide the means of production. Finally, the claim that nationalisation allowed for greater creativity²³⁷ can never be proven one way or another since the highest achievements of pre-war French aerial designs – the Dewoitine D.520 and the Bloch MB.174 were both based on prototypes which pre-dated the consolidation of the aircraft industries under Cot's nationalisation plan.

At the public inquiries conducted in 1942 and 1947, La Chambre addressed the central problems encountered during his term as minister. Though never pointing the finger at his predecessor by name, his depositions nevertheless serve to highlight the inefficiency of Cot's reforms. By early 1938, the extent to which the Air Ministry's limited resources had been focused on the creation of *Sociétés nationales*, to the detriment of other essential tasks, was evident. Designs for next-generation aircraft were not pursued throughout 1936 and 1937. At no time did Cot's refurbished air industry progress beyond the production of 1932 aircraft models. "No appropriate prototype existed to furnish *Plan V*'s ambitious goals...And what was worse, none were even in the research stage of development. Sterility was everywhere in the fields of research and development."²³⁸ Cot had hoped to delegate these essential tasks to the remaining

²³⁷ Cot *Armée de l'Air*, 179.

²³⁸ Riou, 600. This sentiment was repeated by Controller-General Chossat in 1941. In his detailed report of the French aerial construction plans from 1935 to 1940, Chossat wrote that the early procurement plans (Plans I, II, III and IV) were only completed by 1938. By that time, the plane designs associated with these manufacturing plans were already hopelessly outdated. "Les plans seront terminés seulement début 1938 (1939 si l'on compte la sortie des Bloch 131), avec des retards tels que le terme de 'matériel moderne' ne pouvait plus s'appliquer aux avions neufs mis en service pour rénover les formations." The main reason for this continued issuance of outdated

private firms while at the same time ensuring that theirs was a marginalised environment, with far less accessibility to state funding and supply. Private industrialists anxiously witnessed the stream of nationalisation decrees in 1936-37 “issued like so many revolutionary summonses.”²³⁹ Deprived of essential workers, and swimming against the current of ubiquitous political restructuring, these private companies were left to stagnate. As a result, the conceptual prototypes developed during this period, which would be the vast majority of those ready for battle when war finally arrived in May 1940, were few in number and weak in performance. Of these, only two fighters, M.S. 406 and the Potez 63, were suitable for mass production on the eve of war. Similarly, only two bombers were capable enough for serial issue: the Lioré 45 and the Amiot 370. The latter, one of the most well-designed and effective French bombers, issued from Amiot’s second factory in Cherbourg, which he had built as compensation for the loss of his main facilities to nationalisation. Other than these, “there were no prototypes for modern bombers in any category.”²⁴⁰

A telling example of what private industry was capable of producing, left to its own efforts at modernization, was demonstrated by the nation’s engine manufacturing industry. By

aircraft into 1939 was the “absence complet de prototypes au point à commander”. SHAT 3D 494, Chossat Report, p.2 and 4.

²³⁹ Memorably stated by Jeffrey J. Clark in “The Nationalisation of War Industries in France 1936-1937: A Case Study”, *The Journal of Modern History* 49:3 (September 1977), 427. In his article Clark explores many of the concerns facing private entrepreneurs throughout the nationalisation process. He writes: “In the absence of any clearly defined policy or program, the industrialists were understandably confused and upset. Despite the contention of Jacomet that each nationalization was determined solely by the needs of the army, many were convinced that the decisions were ideological.”

²⁴⁰ Riom, 601.

the late 1930s, the firms of Hispano-Suiza and Gnome & Rhône held a quasi-monopoly on engine manufacturing in France. Both had storied histories from the First World War, and both remained largely exempt from the nationalisation reforms of 1936. Consistent with the aircraft industry as a whole however, engine manufacturing and design had stagnated since the early 1930s. By the time La Chambre was appointed Air Minister, both manufacturers had been criticized for allowing their latest designs to fall behind precedents set in Germany and Great Britain. The two firms were also producing insufficient numbers of engines to supply the rapidly expanding air force. Seeing no short-term domestic solution, La Chambre approached both Britain and the United States in an effort to increase France's number of modern aircraft engines. On June 10th, 1938, he asked for permission to seek foreign licensing agreements to remedy the situation.

Firstly, he tried to come to terms with the British government for an agreement to license the construction of Rolls Royce Merlin engine. Similarly, he sought to license the American Pratt and Whitney engine. The advantages to licensing over purchasing the engines through import were clear. Not only were additional engine manufacturing firms considered necessary in order to fill the requirements outlined by *Plan V*, but also a general boost was expected in engine manufacturing once the new technology had reached French factories. To this end, he proposed to construct Rolls Royce and Bristol engines at the Ford facilities in Poissy while American Pratt and Whitney engines would be assembled at the Talbot factories in Suresnes.

Negotiations gained momentum until the spring of 1938, despite a mountain of potential technical, legal and diplomatic obstacles. Among these was the fact that it was never clear whether the British government would allow the secrets of its prized Merlin engine to be shared

across the Channel, even to an ally. However, it was domestic French concerns over growing dependency on foreign designs which put an end to the project. In May, the *Comité de Matériel* completed its study of the proposed licensing agreement and determined: “No foreign engine orders have been approved. The Committee has decided to maintain its confidence in our national means of production.”²⁴¹

Though La Chambre’s efforts to license foreign engines never came to fruition, they nevertheless served a very important role in generating a marked improvement in both productivity and innovation within the domestic market. Frightened by the very real possibility of being squeezed out of the rearmament process by foreign competitors, Hispano-Suiza intensified their efforts to produce an engine design which could compete with the latest models from England or Germany. The collapse of negotiations in the autumn of 1939 forced the Air Ministry to turn back toward domestic production to meet its need for a more powerful engine. Made aware of the urgency to modernise, the two French engine giants did not fail in quickly developing their new generations of liquid cooled radial engines, but it was unclear whether they would be ready in time for the expected clash of arms.²⁴² Sufficiently motivated, Hispano-Suiza began testing its 1200 hp HS 12Z. Also, in the autumn of 1939, Gnome et Rhône began to produce limited runs of its GR 14R. Both engines were at the leading edge of current technology and should have propelled its aircraft to speeds of at least 600 km per hour. However, neither would be ready in large numbers before July 1940. As in so many other facets of French rearmament, the industrial and technological breakthroughs which would have set French

²⁴¹ SHAA 1B6 d.1 Procès verbal, Comité du matériel, 6 mai, 1938. See also Fridenson and Lecuir, 174.

²⁴² See Greg Baughen, *The French Air Force...*, 164-5; Charles Christienne and Pierre Lissarrague, *A History of French Military Aviation* (Washington D.C.: Smithsonian Institution Press, 1986), 74-76.

engines on par with German and British models took place a few weeks too late. It is worth noting, however, that the sharp improvement in engine design took place entirely in a de-nationalised industrial environment which had never received sufficient state support before mid-late 1939. Both Hispano-Suiza and Gnome et Rhône were largely left to their own devices as the Cot Ministry spent two years building up its nationalised engine manufacturing society, the SCNM. This remained the least productive of Cot's six societies and contributed nothing to the design or development of newer, more powerful aircraft engines. Breakthroughs in both areas followed only upon the Air Ministry's decision to shift focus toward properly tooling and incentivizing private manufacturers, starting in 1938.

Part 4

The Final Piece: Raoul Dautry and the Armaments Ministry: September 1939-June 1940.

As referenced earlier, some historians have argued that the dramatic increase in French production of warplanes as of late 1939 resulted from a combined effort by Cot and La Chambre and spanned a period of almost five years.²⁴³ In truth, we have shown that the aeronautics sector was in total disarray by the end of the Cot ministry with little promise for the future, either in terms of aircraft design or production. If the engineering and industrial turnaround was indeed

²⁴³ This argument has been made by Patrick Facon, "Bataille" p.199 and by R. Frank, *Le Prix du réarmement*, 269.

overseen in tandem, the process must then be understood in reference to the combined efforts of Guy La Chambre on the one hand, and France's belatedly appointed armaments Minister, Raoul Dautry on the other.

Prior to the war, the notion of establishing an armaments ministry was resisted across the civil/political divide as it was thought to entail too many diplomatic risks. Philippe Pétain was on record opposing any such creation, as was former Chief of the Armed Forces, Maxime Weygand, at least until such time as France found herself embroiled in a military conflict. After Munich, Prime Minister Edouard Daladier believed that by naming an armaments minister, he would in effect, be declaring that the government had given up on finding a peaceful solution to the growing tensions in Europe. Would this not play into the hands of Hitler, who might use any sign of French bellicosity as a propaganda piece? "My conviction," he wrote, "is that a ministry of armaments during peacetime, within a liberal democracy, is a completely useless creation."²⁴⁴ Guy La Chambre opposed the idea of an armaments ministry as he was eager to retain his supreme influence over the aeronautics industry.²⁴⁵ As a politically acceptable alternative, Robert Jacomet was installed as Comptroller general of the army in 1936 and retained this position until the outbreak of war. Only Maurice Gamelin, Chief of Staff of the Armed Forces, favoured the appointment of an armaments minister as early as 1938. After Munich, Gamelin was convinced that only such an appointment would be able to properly coordinate the enormous nationwide rearmament process already underway. "On several occasions I thought I had succeeded in

²⁴⁴ Edouard Daladier, Riom testimony of March 3, 1942 in Bracher, *Riom*, 583.

²⁴⁵ AN 496 AP 29. Lettre de Guy La Chambre à Edouard Daladier, 23 septembre 1938. See also, Rémi Badouï, *Raoul Dautry 1880-1951: Le technocrate de la République* (Paris: Balland, 1992), 185.

convincing him [Daladier]. After everything he shared with me on the subject, I believe political considerations are what turned him away from this project.”²⁴⁶

After September 1939, once France found itself at war, Raoul Dautry emerged as the obvious choice for Armaments Minister. An accomplished technocrat who had worked wonders to modernise and improve the national railway network over twenty-five years, he had served as director general of the *Chemins de Fer de l'État* and was later included in the administrative council of the *Société Nationale des Chemins de Fer*. Dautry took care to surround himself with strong teams of able bureaucrats and administrators. His method, used to great success in developing the national rail network, was to quickly identify the sources of inefficiencies, plan a remedy, and delegate its realisation to capable teams working under his supervision. His energy was prodigious; he slept four hours in a day and worked eighteen. He travelled the hexagon tirelessly, visiting industrial facilities, devising their improvement and instructing their management teams on how to improve methods, work conditions and labour scheduling.²⁴⁷ Dautry determined that moral conditions were just as important as material concerns in the effort to loosen existing restraints upon production. On the heels of his appointment, on October 7, 1939, he signed an accord between patrons and workers groups. Both were to understand that

²⁴⁶ Gamelin, *Servir t.1*, 204.

²⁴⁷ J.L. Crémieux-Brilhac and J.B. Duroselle have written laudably of Dautry's accomplishments as armaments minister, assigning to him the credit for the surge in French industrial production in late 1939. See *Les Français de l'An 40, vol II: Ouvriers et Soldats* pp. 140-172. Favourable accounts of Dautry's ministry are also found in Julian Jackson, *The Fall of France*, (Oxford, Oxford University Press, 2003) 15,17 and Jean Baptiste Duroselle *Politique étrangère de la France: L'abîme: 1939-1944*, (Paris: Imprimerie nationale, 1986) 75-77. For a wider view of Dautry's career, both before and after his appointment as minister, see Rémi Badouï. *Raoul Dautry 1880-1951: Le technocrate de la République* (Paris: Balland, 1992) and Michel Avril, *Raoul Dautry 1880-1951: La Passion de Servir* (Paris: France-Empire, 1993).

the most was to be accomplished with available means. He recalled as many irreplaceable specialists as he could from the front line, ensuring the censure of army chief Maurice Gamelin whose focus was on manning the front line to the fullest extent.²⁴⁸ He identified crucial bottlenecks in production and created specialised workshops exclusively dedicated to resolving these issues.

Operating his ministry from four different Parisian hotels,²⁴⁹ Dautry's impact was felt immediately. A few examples will serve to illustrate his talent for achieving results through personal intervention. Among his earliest projects was the need to address a shortage of aviation canons for the newest Arsenal, Bloch and Dewoitine aircraft models already under production. To this end, he oversaw the construction of a new factory from scratch at Brive, specifically for such weaponry, in eighty-two days. It was a pattern he repeated in similarly short time frames, across the country, concentrating on production of essential armaments which were in short supply. A munitions factory near Lyons, built in less than three months, began producing thirty thousand shells per day. Production of 20mm shells rose from 100 000 to 180 000 per month. 75mm shells were produced at a rate of 1 200 000 each month whereas before Dautry's reforms, output reached only 60 000 per month. In total, under Dautry's supervision, French armaments

²⁴⁸ The priorities of Dautry and Gamelin concerning manpower were often in direct contradiction and ensured that the two would never work together in a spirit of cooperation. The eventual military defeat led to mutual recrimination as both men pointed fingers at one another as contributors to the national disaster. Gamelin criticized the armaments ministry for setting most of its production goals for 1941 and beyond while the war needs were most acute in 1940. For his part, Dautry dismissed Gamelin's opinions, describing them as unreliable. Dautry claimed Gamelin was a diabetic and that his condition led him to vacillate equally between euphoria and listlessness. See Rémi Badouï. *Raoul Dautry 1880-1951: Le technocrate de la République* (Paris: Balland, 1992), 206.

²⁴⁹ Principally from the *Majestic* hotel. Dautry's staff worked wherever they could find room, including kitchens and bathrooms. See Badouï, *Raoul Dautry..., 189*.

production increased by eighty percent between September 1939 and January 1940.²⁵⁰

Furthermore, these impressive results were achieved after mobilization, when the total number of workers engaged in production of armaments never exceeded 75% of their pre-war figure.

The armaments ministry had the power to allocate resources as it saw fit, across the three defence sectors of land, sea and air. It was for this reason that Air Minister La Chambre remained guarded in his dealings with Dautry, as the power of both men overlapped in several key areas. However, since Daladier's government had already fully committed to prioritizing the air industry, Dautry conformed his strategy to this policy and ensured that the air force continued to benefit from the majority of new investment in resources and manpower. La Chambre and Dautry shared a number of key ideas which facilitated their cooperation. Realising the importance of the Air Minister's focus on improved machine tooling, Dautry oversaw an ever-increasing purchase of foreign made tools from Switzerland, England, America and, surprisingly enough, Italy.²⁵¹ Among these was a shared desire to restore private initiative to the aeronautics sector. Dautry believed his task was to heal the poisoned climate that currently existed between labour and management, between industrialist and government, between trade unions and capitalists. This, he revealed in a private conversation with close friend Jacques Heugel, was the legacy of the Popular Front's "revolutionary period" of 1936-1938.²⁵²

²⁵⁰ Paul Reynaud, *La France a Sauvé l'Europe* v.1 (Paris: Flammarion, 1947) 483.

²⁵¹ Ibid, 484.

²⁵² Badouï, *Raoul Dautry*..., 199.

Throughout his career, Dautry remained staunchly critical of state management in any industrial sector as it “invariably steered a course toward irresponsibility”.²⁵³ British liaison Edward Spears revealed that Dautry believed that nationalisation of the aircraft industries had severely hampered French production. He wrote, “Dautry had exposed the lack of method in the production of aircraft. The factories making the airframes had been nationalised with dire results. The companies were allowed profits but had no responsibility, and indiscipline, incompatible with efficiency, had crept in. It sounded ominous.”²⁵⁴ He lamented the manner by which the air industry had been re-organized to operate under the aegis of a governmental bureaucracy. “In 1914”, he complained to Daladier, “the industry succeeded in equipping itself almost entirely through self-financing. This is no longer the case.”²⁵⁵

Both Dautry and La Chambre focused their ministries on maximizing production. The armaments minister’s oft-repeated motto was “we have to go fast” (*il faut aller vite*). Both men preferred to find solutions within the framework of private initiative and to that end, they announced clearly that increased production in the aeronautics facilities would result in more orders, more workers and more income. However, in the event that certain entrepreneurs failed to meet this challenge, both ministers did not hesitate to use coercive measures. Threats of requisition were issued to industrialists who either openly or tacitly, persisted in limiting production. The most notable such warning was issued to the management of artillery producer, *Entreprises Arbel* in Douai. After repeated warnings, Dautry used the threat of mobilizing

²⁵³ Quoted in Crémieux-Brilhac, Vol II, 107.

²⁵⁴ Spears, Assignment to Catastrophe, vol.1, 80.

²⁵⁵ SHAT DE 2016 SA 66, Letter from Raoul Dautry to Gamelin, March 1, 1940.

Arbel's managers into the armed forces if they were not prepared to contribute more on the factory floor toward national defense. Like La Chambre, he indicated clearly, that he would not hesitate to replace private management with delegated government bureaucrats, wherever production remained unacceptably low.²⁵⁶

The message from both the Air and Armaments ministries was that industrialists were expected to strive toward the highest level of production possible, and to that end, government orders would ensure full compensation for their efforts. Failure to make this effort however, resulted in swift and harsh ministerial takeovers. While not all firms rose to the challenge, (in fact Dautry's main frustrations were centered around recalcitrant managers who continued to prefer limited production) most did live up to the new expectations and became the engines for a vastly increased production as of late 1939.

Starting from 1934, the state of French air power emerged as an issue of growing concern, fed by the general population's fear of terror bombing and the military command's fear of a potential "knock out blow". By 1936, the growing numbers of *Luftwaffe* aircraft gave form to these fears and incentivized what became a massive French rearmament program. This national effort was successful in that it eventually provided the military with a construction program which, in terms of monthly production, could match or even exceed German numbers. Had the coming conflict not been lost in its earliest round, French aerial power would have continued to grow²⁵⁷, while, according to some French estimates, German production had

²⁵⁶ AN 2W/7 Chambre des députés, Commission de l'armée. April 24, 1940.

²⁵⁷ In the summer of 1941, Gamelin wrote a series of letters defending his role in the failed defence of France. Concerning the nation's industrial potential, he had the following to say: "j'ai toujours soutenu, malgré la Direction

already reached its peak.²⁵⁸ Buttressed by an expanding British contribution, the French had every reason for confidence in confronting a well-equipped enemy over the course of a prolonged conflict. Though Germany possessed a marked advantage in its number of airplanes, this only constituted a short-term edge, according to the French high command. “Certainly, Germany maintains a numerical superiority due to its stock of machines accumulated over previous years, but this advantage is waning every day as the older models become outdated.” The Air Ministry’s position after all, was that “a modern airplane is one which is less than five years old.”²⁵⁹ Had war not broken out in September 1939, Edouard Daladier would have focused on the development of a new five-year industrial plan. This was on the table as the main objectives for the 1939 plan were already realised. “We were convinced by the figures at our disposal, that we were now capable of rapidly expanding our armed forces...this would have been the production plan of 1940-1944.”²⁶⁰ Moreover, in the near future, French manufacturers expected to entirely close the gap in quality between the latest German fighters and their own. The newest designs from Messerschmidt were not expected to greatly exceed the performance of the Dewoitine D520 and Arsenal fighters. “But in the near future,” added one Ministry Report from early 1940, “we will enjoy a clear superiority with the Dewoitine D521, D550 and Breguet

des fabrications d’Armement, que nous étions loin d’avoir atteint le plafond des possibilités industrielles et économiques de la France même en temps de paix, au point de vue des fabrications des matériels nécessaires à la guerre.” SHAT GR 1K 224 15, Maurice Gamelin: Letter to the Court of Appeal in response to the deposition of Raoul Dautry before Marshal Pétain’s *Conseil de Justice Politique*, August 5, 1941, p.4.

²⁵⁸ SHAA 1A 11Z 12941, Étude sur le potentiel de l’Armée de l’Air Allemande au 1er avril, 1940, p.19 “Celle-ci [La Luftwaffe] semble avoir atteint son plafond tant du point de vue quantitatif que du point de vue qualitatif. Ce plafond paraît pouvoir être maintenu pendant tout l’été et l’automne 1940 par le jeu des réserves existant...Par la suite, la puissance de l’Armée de l’Air allemande ne pourrait vraisemblablement être augmenté et même maintenue qu’au prix d’un effort supérieur à celui déjà réalisé dans le domaine de la production et dans celui de la formation du personnel.”

²⁵⁹ SHAA 1A 11Z 2938 d.3, Volume de la Production, March 1, 1938.

²⁶⁰ Edouard Daladier, Riom testimony of February 27, 1942 in Bracher, *Riom*, 452.

700”.²⁶¹ Furthermore, on April 25, 1940, less than three weeks before the German invasion, the Air Ministry had secured funding for its latest aerial procurement program, *Plan VI*. The goal of this program was to raise the Armée de l’Air’s equipment to levels equalling that of the *Luftwaffe*, finally achieving parity with German production totals. *Plan VI* called for a total number of 9,186 modern aircraft. These were to be composed of 3894 fighters (the vast majority of which were the impressive Dewoitine D520), 2,196 bombers and 3096 reconnaissance and support planes.²⁶² Far from having reached the limits of its productive potential, the French war machine had only started to display its capabilities and was cut short in full expansion. The success of France’s economic and industrial reorganisation was most effectively demonstrated in the manner by which production continued unabated well after the disastrous German breakthrough on the Meuse. Colonel Rinderknech, head of the Armaments Section assigned to the Chief of Staff was still proudly announcing on June 2nd, “all of the army’s required materials and munitions will continue to be produced without noticeable slowdown. We even predict an increase in certain areas so long as the factories stay online in the region of Paris.”²⁶³

The modernisation of France’s air fleet was marked by two distinct periods. The first phase began in November 1934, when the Air Ministry announced its first large construction

²⁶¹ SHAA 1A 11Z 1294, *Les Possibilités de notre Chasse*, p.5 (undated, early 1940). It was hoped that these new airframes, once equipped with the next generation of engine designs, would be able to deliver speeds of 600 km/hr by the end of 1940. A1 11Z 12934 Note au sujet des commandes du Plan V, June 1, 1939, p.3.

²⁶² SHAT 3D 494. Notes sur le rapport Chossat, ayant pour objet d’apporter une réponse à des questions posées par M. le Conseiller de la Cour Suprême de Justice Tanon, p.10.

²⁶³ Note by Col. Rinderknech to Edouard Daladier, June 2nd, 1940, presented at Daladier’s Riom Testimony on March 3rd, 1942. Bracher, *Riom*, 572-573.

plan. It lasted until the end of Pierre Cot's ministry in January 1938. This period was characterized by nationalisation of the industry and by the relocation of its physical infrastructure. Manufacturing totals during this time remained low as the Air Ministry failed to provide its new workspaces with the equipment needed to achieve serial production. The omission of pilot training centers in sufficient numbers to supply enough flight crews for the expanding air force was another key oversight marking this period.

The second phase began in early 1938 once aircraft factories were provided with the modern tools and specialised labour required to mass produce a new air force. This was an accomplishment of which Air Minister La Chambre was particularly proud, as it quickly increased production to new heights. In an official report on the progress of *Plan V*, he reminded the government that French production had exceeded, in the first eleven months of 1939, the total aircraft production of the previous five years.²⁶⁴ This, he declared, had been possible only after the Air Ministry accepted the financial burden of equipping all factories, both nationalized and non-nationalised, as well as each of their sub-contracted partners, with modern machine tools in sufficient numbers at the start of 1938.²⁶⁵ Once this costly and long-delayed hurdle had been leaped, less than two and a half years sufficed to close the gap between French and German aerial production. The nation's rearmament, overseen and coordinated by Raoul Dautry's remarkably effective Armaments Ministry hit its full stride as of the last quarter of 1939. By May 1940, industrial mobilization had provided a production base worthy of the German challenge. Resources in manpower, however, remained France's area of weakness in the air as

²⁶⁴ The year 1939 alone saw the construction of 2,277 aircraft delivered to the Air Force. The combined total for 1934, 1935, 1936, 1937 and 1938 was 2,216 planes. SHAA 1A 11Z 12938, d.3, La Production Industrielle.

²⁶⁵ SHAA 1A 11Z 12934, Plan V de Guerre: Bases du Plan, p.2.

well as on the ground. Pilot shortage, like so many other demographic disadvantages faced by the French military, could not be corrected in time to make full use of the nation's industrial accomplishment. After May 10th, 1940, the *Armée de l'Air*'s chronic shortage in manpower allowed the *Luftwaffe* to maintain control of the skies, while thousands of unused planes idled silently upon the airfields of France. Demographic weakness ensured that industrial recovery, when it finally arrived in spectacular fashion by the end of 1939, was still gearing up for war when military collapse put an end to the effort.

Chapter 3

Long War or Short War?

Part 1

The French Defensive Web

In 1914, the French War Plan, codenamed *Plan XVII*, was essentially *revanchiste* in spirit and aimed to redress the national humiliation of 1871. It proposed a massive invasion of the lost provinces of Alsace and Lorraine, relying on unrelenting waves of attack to quickly establish and maintain the momentum of battle. When these ideas failed to produce a breakthrough at a staggering cost of life, the French military was forced to reconsider its fundamental assumptions. The War's opening *Battle of the Frontiers* delivered a fatal wound to the prevailing notion of *offensive à l'outrance*. Its hemorrhaging continued until Robert Nivelle's disastrous offensive on the Chemin des Dames in the Spring of 1917. Henceforth, offensive operations would only take place in short bounds, supported by overwhelming firepower. This was the defensive *bataille de conduite* which became the new standard for the French practice of war.

By the mid 1930s, faith in the *bataille de conduite* remained unshaken and informed the manner by which any future war against Germany was conceived. There would never take place a re-occurrence of the dash to the Rhine, as seen in 1914. French strategists of the interwar period, confident in the superiority of defensive positions and artillery support, would wait for the enemy to make the first move and expose himself to concentrated firepower. The lynchpin of their defensive strategy after 1930 was, of course, the Maginot Line. The Minister of War and former army general Louis Maurin famously defended this point of view to the Chamber of

Deputies in 1935, asking: “How can anyone believe that we are still thinking of an offensive when we have spent billions on setting up a fortified barrier? Would we be so mad as to march out in front of this barrier on the way to some kind of adventure?”¹

Maurin was a vocal proponent of dominant French military conceptions as they existed during the interwar years. “The great lesson of the 1914-1918 war,” he argued, “was the predominance of firepower. Since the end of hostilities, all efforts have tended toward the protection of lives through the use of firepower.”² Maurin reflected the views of the majority of French military thinkers, operating under the conviction that concentrated firepower was the most effective means by which to resist the next all-or-nothing attack from across the Rhine: the dreaded *attaque brusquée*. Remembering how ill-prepared the nation had been for the Kaiser’s unexpected drive through Belgium in 1914, army leaders focused on readying the armed forces for an encounter battle anywhere along the eastern border. This was the continuous front, a four-hundred-kilometer curtain of fire laid down between Switzerland and the English Channel.

Hitler’s rearmament programs, starting in 1933, quickly rekindled French fears. Already by late 1934, the High Command dedicated entire meetings of the *Conseil Supérieur de la Guerre* to the study of a sudden German offensive aimed at breaking the French front in one large battle. Maurice Gamelin believed “the pace and progress of German rearmament demanded a close consideration of this hypothesis”.³ However, these studies did not lead to

¹ General Maurin from *Journal Officiel, Chambre Débats*, March 15, 1935, cited in Martin Alexander “In Defence of the Maginot Line” *French Foreign and Defence policy*, Editor Robert Boyce, (London: Routledge, 1988),177.

² Général Maurin, *L’Armée moderne*, (Paris: Flammarion,1938), 151.

³ SHAT DE 2016 SA 64, Séances: Conseil Supérieur de la Guerre, December 15, 1934. See also M. Gamelin, *Servir* t.2, 152.

actual material progress until two years later. Starting in 1936, the long process of re-armament was at last begun, in an effort to buttress and fortify the eastern border with as much modern equipment as possible. The priority at the outset would be to blunt any future German offensive. Since all else was contingent upon this primary goal, few looked beyond preparations for the defensive opening round.⁴

Perhaps the highest expression of faith in the continuous front, the swan song of a doctrine held sacred since November 1918 was written by General Louis Chevineau. His ill-timed military study, *Une Invasion est-elle encore possible?*, published in March of 1939, reinforced traditional notions that firepower and prepared defences can overcome even the most determined attacks.⁵ Yet all senior generals realised that defense alone could never be a viable long term strategy. Maxime Weygand, Chief of Staff of the Army, grew concerned by 1935 that the army had developed an excessively defensive identity.⁶ Weygand's successor Maurice Gamelin, similarly advanced the notion that defensive operations alone were insufficient as a

⁴ This conviction was maintained until the actual German *attaque brusquée* in May 1940. Only three months earlier, in February, Gamelin stated in a 42-page war plan (demanded by Daladier) that France should stay on the defensive at least until 1941. SHAT GR 1K 224 15, Maurice Gamelin: Plan de Guerre pour 1940, February 26, 1940.

⁵ Eugenia Kiesling has insightfully noted that “the companion of French defensive confidence was the belief that attacking was inherently dangerous and thus for the French soldier thinking offensively required cognitive dissonance – believing simultaneously that French defense would stop German attacks and that French attacks would penetrate German defenses.”, See Kiesling, *Arming Against Hitler: France and the Limits of Military Planning*. (Lawrence, Kansas: University of Kansas Press, 1996),140. The most detailed account yet written of the French defensive strategy is Robert A. Doughty's *The Seeds of Disaster: The Development of French Army Doctrine, 1919-1939*. (Mechanicsburg, PA: Stackpole Books, 1985), 43-74. See also, Robert J. Young, “Preparations for Defeat: French War Doctrine in the Inter-War Period” *Journal of European Studies* 2:2 (1972), 159.

⁶ See Phillip Bankwitz, *Maxime Weygand and Civil-Military Relations in Modern France*. (Cambridge, Massachusetts: Harvard University Press, 1967), 129.

strategy for war. “A strictly defensive stance” he wrote, “is usually destined for quick defeat faced with a mobile adversary...only through the offensive, can victory be achieved.”⁷

Meeting the enemy from prepared positions and grinding his offensive to a standstill was only the first objective. Following this, the far longer process of building up Allied arsenals in men and modern equipment could begin to take shape. The gradual accumulation and concentration of overwhelming force upon a specific target would characterise the offensive phase of the war. This would hopefully lead to eventual victory as Allied resources, once fully marshalled and mobilised, could never be equalled by a continental enemy. Finance Minister Paul Reynaud announced to the Chamber on December 19, 1939, that the government had signed an agreement with (British Chancellor of the Exchequer) John Simon which aimed to guarantee Allied material supremacy over the course of time. The agreement laid out that all primary materials and all finished products found in both empires would be placed fully at each other’s disposal. The French and British Empires, which together comprised over thirty-three percent of the earth’s surface, were thus united in supplying resources with which to oppose Hitler.

The Nazi-Soviet Non-Aggression Pact of August 1939 laid the foundation for a measure of economic cooperation between the two dictatorships. However, the extent of that cooperation between two avowed ideological enemies could never come close to matching the free trade now shared by the two democratic empires. “Time is neutral,” Reynaud told the Senate, “it will serve whoever is stronger.”⁸ Superior Allied reserves in supplies and material would, it was hoped, eventually provide the equipment with which to overwhelm Hitler’s armies. This was the

⁷ Maurice Gamelin, *Servir* Vol.1: *Les Armées Françaises de 1940*, (Paris: Plan, 1946), 225.

⁸ *Journal Officiel de la République Française. Débats: Sénat*, Décembre 28, 1939, 814.

significance behind the widely advertised slogan posted in public spaces across France after the outbreak of war: “*We will win because we are stronger*”.⁹



War Bonds advertisement sporting the famously optimistic Allied prediction of 1939/40¹⁰.

The Allied *long-war strategy* grew naturally from two essential factors. The first was Germany’s undeniable head-start in rearmament. Time was required to redress this imbalance and build up the required advantage in war materiel needed to contemplate offensive action from the Allied side. The second factor was the existence of the Maginot Line. This feat of French engineering once completed in 1938, served as a compelling argument for the practical application of defensive strategy. It also gave rise to an awkward contraction in priorities for the French high command as of September 1939. Following the Nazi invasion of Poland,

⁹ Although future events were to recast this slogan as a sign of misplaced confidence, Reynaud later defended the propaganda piece. “Puisque l’on a critiqué cette formule, je ferai observer que la seule manière connue de vaincre est d’être le plus fort et qu’il n’est pas d’usage que le gouvernement d’un pays en guerre dise : “Nous serons vaincus parce que nous sommes les plus faibles.” Paul Reynaud, *Au Coeur de la Mêlée, 1930-1945* (Paris: Flammarion, 1952), 343.

¹⁰ SHAT GR 1K 224 15, Photos et articles, 1939-1945.

Commander in Chief Maurice Gamelin was faced by two military imperatives which were tragically at odds with each other. The first was to come as promised to Poland's aid in the event of war with Germany.¹¹ The second was to fight a methodical battle from prepared positions as the army was trained to do, and for which the high command had long since prepared.

Gamelin's solution to this contradiction was to mount a limited incursion into Germany while maintaining actual contact with the enemy to an absolute minimum. General Réquin's 6th army occupied several villages and towns on Germany's western border but never advanced more than six kilometers. Moreover, Réquin was under strict orders to remain out of range of the Siegfried Line, a series of fortifications recently constructed along the entire length of Germany's western border. The French advance was never intended to progress beyond this point. On September 17th, Gamelin ordered the army to retreat back to the Maginot Line. The operation satisfied the letter, if not the spirit, of French obligations to Poland and demonstrated, in the clearest terms possible, Gamelin's commitment to a long-war strategy.¹² As Poland crumbled in the east, his first wartime orders, the *Instruction Personnelle no. 1* (September 9) and *no.2* (September 10)

¹¹ French commitments to Poland were based on bilateral agreements signed in 1921, 1923 and an international agreement framed by the Locarno Accords of 1925. These were defensive alliances designed as safeguards against German or Soviet expansionism. However, in 1939, Gamelin entered into a personal agreement with Polish War Minister Tadeusz Kasprzycki. This agreement, while signed by both dignitaries, remained unratified by either of the French or Polish government, though personally guaranteed by both signing officials. The Gamelin-Kasprzycki pact promised strong French retaliation in the event of German aggression in the east. Specifically, Gamelin promised a French offensive, using a majority part of the French army, to be directed at Germany within three weeks. See Gamelin, *Servir*, vol.2, 229.

¹² General Réquin, who had led the brief incursion by the 4th army into western Germany felt that his army had performed professionally and was never significantly threatened by concentrated enemy action. It was his opinion that the order to retreat back to France provided the Germans with an important propaganda victory. He worried that withdrawal to France only supported active German messaging which sought to "semer le doute dans l'esprit des français" and suggested that France lacked the will to conduct total war. By December 1939, he was concerned that withdrawal, coupled with German propaganda advocating peace may have caused his troops to underestimate the life-or-death nature of the current struggle and reminded them "chaque soldat doit comprendre en effet que s'il hésitait à tirer sur un adversaire qui lui demande de ne pas le faire, il se soumettrait ainsi à sa volonté et se laisserait dominer par lui." SHAT 1K 108/1 Général Réquin, Ordre général no. 18, December 12, 1939.

were focused on Belgium, Holland and strengthening western resistance to an eventual German attack.¹³ His decision to effectively abandon the east and concentrate his resources on defending the west was only too clear.¹⁴ This decision, fully supported by General Georges, Commander of the North East Front,¹⁵ was hidden from the Poles throughout the first several days when French assistance might have had the greatest effect. The Polish military attaché in Paris, Colonel Fida protested loudly that his nation awaited French assistance, but to no avail. “All of the Germans’ air power is set against us!” he announced to Gamelin in the first days of the conflict. “Not true,” replied the Commander in Chief, “two thirds of their squadrons are on the western front.”¹⁶

Freeing himself from eastern entanglements, Gamelin preserved his army on home soil to await the German invasion.¹⁷ This policy extended to the use of France’s limited air power as well. Prior to the war, Air Chief Vuillemin made promises to the Polish military that French

¹³ Both *Instructions* are found in Gamelin’s memoirs, see *Servir*, t.3, 62-64. See also P.E. Caton *1939-1940: Une Guerre Perdue en 4 Jours, II: Contre-Témoignages sur une catastrophe*. (Paris: L’amitié par le livre, 1974), 107.

¹⁴ SHAT DE 2016 SA 63 d10. In a letter to *Le Figaro* Gamelin explained his decision to beat a hasty retreat from Germany in early September: “Au cours de ma longue vie militaire, je ne m’étais pas montré un hésitant. Mais, tout bien réfléchi, j’ai pensé que c’était un trop grand risque où je n’avais pas le droit d’engager nos meilleures forces. Et j’eus l’impression très nette que l’ordre que je donnai – de suspendre les opérations de la Sarre – était pour tous, un soulagement.”

¹⁵ General Georges, the recipient was similarly convinced that the fight in Poland was already a lost cause. As Paul Villelume, chief military advisor to the Prime Minister recalls, “Le général Georges me confie à nouveau – ‘c’est ma conviction depuis bien longtemps – que nous sommes dans l’impossibilité de prendre l’offensive.’ Nous pourrions à son avis, résister à l’invasion mais la Pologne est perdue car nous sommes hors d’état de lui apporter une aide quelconque.” Georges felt so strongly about this that he was prepared to resign his position if ordered to mount any offensive action against the Siegfried Line in western Germany. Paul de Villelume, *Journal d’une défaite: Août 1939-Juin* (1940 Paris: Fayard, 1976) 12, 29.

¹⁶ *Ibid*, 19.

¹⁷ Gamelin never admitted to depriving Poland of the aid promised by existing military agreements between the two countries. Rather, he always maintained that he had honoured the spirit of France’s contract to Poland by advancing six miles into the Saar region and thereby tying down an important number of German divisions to the western front.

bombers would be immediately sent out against German targets.¹⁸ Furthermore, Polish transport ships were scheduled to collect forty Morane-Saulnier MS-406 fighter planes at the port of Marseilles. This constituted a significant material aid to supplement Poland's small and outdated airforce. Gamelin, however, strongly disagreed with Vuillemin's provision of French aviation to the Poles. "The situation in Poland was already far too compromised to be rectified by French aircraft. It would have had value only as a symbolic gesture." To him, any large-scale aerial effort for the benefit of the Polish war effort would only activate total war in the air on the western front. "A symbolic gesture would have unleashed an unlimited air war which could have had heavy consequences for the rest of the campaign."¹⁹

Gamelin worked to restrict measures of support to Poland on land and in the air to an absolute minimum. Even during the limited incursion into the Saar region, he ordered that air strikes were to be avoided at all costs. German fighters were only to be engaged in self-defence. Paramount to the Commander-in-Chief's strategy throughout September 1939 was the need to avoid provoking German retaliation in the air for as long as possible. The fear of air power was the final argument in favour of a defensive strategy. France would let Poland fall, rather than risk more active involvement which would invite reprisal by the *Luftwaffe*. Gamelin feared that any air strike against the Reich would cause immediate reprisals, particularly against the steel industry in Lorraine. There, six steel factories operated from locations east of the Maginot Line.

¹⁸ Earlier French promises to Czechoslovakia during the Munich Crisis a year earlier rang just as hollow. As Norman Ingram observes, while French agreements with the Czechs and Poles assumed that these Allies would rush to the aid of France in the case of Nazi aggression, the reciprocal notion of an early and powerful French military response to German aggression in the east was in no way the priority in French strategic planning. See Norman Ingram, *The War Guilt Problem and the Ligue des droits de l'homme, 1914-1944*. (Oxford: Oxford University Press, 2019), 243-45.

¹⁹ Gamelin, *Servir*, t.3, 53.

In this regard, Air Chief Vuillemin seconded Gamelin's concerns, adding that airfields and factories around Paris would suffer immediate and devastating bombardment were the Germans provoked into a full air war.²⁰ At the *Comité de Guerre* meeting of March 11, Vuillemin recommended waiting two months before considering air strikes against Germany, by which time the *Armée de l'Air* would be in a better numerical position to challenge the enemy. Three weeks later, on March 30th, he told the Committee that it would be wise to wait three more months before considering an air strike against Germany, extending the period of inaction, rather than shortening it as time passed. Vuillemin's indecisive *wait and see* attitude swayed the Committee and, in the end, informed their decision on the matter. Its report on the debate concerning immediate air strikes on the Reich, including a British proposal to mine the Rhine River, was conclusive. "Considering the actual state of our air force, the *Comité de Guerre* judges that the enemy's probable reprisals, notably upon our aircraft factories, would lead to losses far in excess of any gains to be expected by such operations."²¹

The months of relative frontline passivity between September 1939 and May 1940 saw an intensifying debate over how best to pursue military goals in the unusual operational landscape of the Phoney War. Some historians have argued that Allied planners, aware that time was not working in their favor, gradually shifted from a long-war strategy toward more aggressive notions of winning a quick war. According to this view the Nazi-Soviet pact of August 1939 guaranteed that Germany was already receiving the vast majority of the resources it

²⁰ SHAT 2N26 d.2, Réunion: Comité de Guerre, March 11, 1939.

²¹ SHAT 2N26 d.3, Réunion : Comité de Guerre, March 30, 1939.

required to wage a prolonged conflict. The Allied economic war against Germany, based on naval blockade, was thus doomed to fail. Each passing month only increased relative German power vis-à-vis the Allies, rendering necessary a conceptual about-face among French and British strategists. New ideas on how to conduct a successful short war were now preferred over the traditional long-war strategy.²² This argument is constructed on a partial understanding of Allied fears concerning Germany's military potential. French leaders did indeed fear that the period of Phoney War played into the enemy's hands, but only insofar as this time allowed the *Wehrmacht* to put an ever-increasing number of men into uniform. By contrast, the upper limit of French manpower had already been called to the national colors and the army could not look forward to a sizeable increase in overall numbers. "Germany can recruit eleven million men," Gamelin wrote to Daladier in January 1940. "Until now, only half of their available manpower has been tapped, while we have already reached the upper limit of our metropolitan effort."²³

However, French inferiority in long-term human resources did not extend to the material business of war. Allied planners were very confident of their ability to achieve superiority in equipment over Germany which would allow for offensive operations by 1942 at the latest. French policy makers did not pursue the war in early 1940 convinced of their steadily worsening military/economic situation *vis-à-vis* Nazi Germany. On the contrary, a wealth of documentation exists to confirm that the Allies never conceived of, planned for, or attempted to execute any

²² Talbot Imlay has argued "by early 1940, the French had effectively abandoned the long-war strategy in favour of a short-war one. Although never as pessimistic about the shifting balance of power, the British also came to question the long-war strategy and its underlying assumption that time was an ally." See Talbot Imlay, *Facing the Second World War*, (Oxford: Oxford University Press, 2003), 9. Anthony Adamthwaite agrees, stating "the waiting game was flawed in two vital respects: it assumed that time would work for the allies – in fact Germany gained more from the breathing space. See A. Adamthwaite, *Grandeur and Misery: France 1914-1940*. (London: Arnold 1995), 226. See also Richard Overy, *The Origins of the Second World War*, 3rd Edition, (London: Routledge, 2008), 32.

²³ Gamelin, *Servir t.3*, 154.

strategy counter to their long-standing vision of a lengthy war of attrition. It was a plan from which they never wavered, as Pierre Cot explained: “Mr. Hitler and Mr. Mussolini knew it; their adversaries knew it as well. None of the military chiefs held the slightest doubt about the matter. All the studies and wargames had concluded that Germany and Italy could never prevail in a long war.”²⁴

Armaments Minister Raoul Dautry was vocally disappointed in what he perceived as the botched industrial mobilisation of France since September 1939. His criticism has been used to illustrate a mounting pessimism with the nation’s ability to sustain a protracted state of war.²⁵ Dautry was in a position to keenly appreciate every shortage, every backlog, every slowdown in the entire French manufacturing infrastructure. In his view, the mobilization of essential capital had not taken place as efficiently as in 1914, and as a result, France could expect industrial delays until well into 1941. His pessimism, at times, led him to speak in exaggerated tones. In November 1939, he expressed his belief that the “war was already lost”.²⁶ However, Dautry’s mercurial nature led him to make devastating criticisms of most industrial sectors over which he presided at one time or another. Dautry was a perfectionist and a detailed statistician. His pursuit of efficiency and maximum production was insatiable; these traits led him to criticise any shortcomings in hyperboles. In reference to the steel foundries, he lamented: “It’s absolutely unacceptable. The current management is absolutely disastrous.”²⁷ Though Dautry’s concern

²⁴ Pierre Cot. *L’Armée de L’Air 1936-1938* (Paris: Editions Bernard Grasset, 1939), 36.

²⁵ Talbot Imlay, *Facing the Second World War...*296-297.

²⁶ Rémi Badouï. *Raoul Dautry 1880-1951: Le technocrate de la République* (Paris: Balland, 1992), 199.

²⁷ J.L.Crémieux-Brilhac. *Les Français de l’an 40: vol. II: Ouvriers et Soldats* (Paris: Gallimard: 1990), 120.

was doubtlessly well-informed, we must still qualify the Minister's indignation with the countervailing fact that steel production²⁸ was already in the midst of a spectacular upswing, the likes of which France had never before witnessed. Dautry had long since become the nation's most accomplished administrator by demanding much of his subordinates and by never allowing himself to be satisfied with the current situation. In truth, Dautry was convinced that the war would be a long one. Victory, he believed, would follow only if France maintained its ability to fight the Reich armed with a war economy capable of continuing the struggle over several years. His referrals to France's "failed industrial mobilisation", made at the opening of 1940, were not meant to signal that the nation could never produce war materials at a pace that would allow for a lengthy and victorious struggle, nor that a long-war strategy was impossible to successfully execute. Dautry knew that France's industrial ceiling had not yet been reached, and that it was his role to find solutions to the procedural and managerial inefficiencies still restraining the nation's manufacturing potential. His was a call for increased activity and more efficient planning, not an admission of defeat.

There exists a third significant argument which has been used to advance the case that Allied planners had given up on the long-war strategy by the end of 1939. It concerns the conception of far-flung offensives across the continental map, designed to strike at German resource-gathering pipelines. These plans have been interpreted as indicators that the Allies now sought to force a quick decision to the conflict before German resources, regularly increased by new trade deals with the Soviet Union, could further outstrip their own. Again, this argument is

²⁸ See below (186-187) for a closer study of the renascent French steel sector during the Phoney War period.

not supported by the available evidence. In addition, it misinterprets the wartime goals envisioned by those who supported limited expeditions to Finland, Salonika or Baku. The latter was the proposed location of a spectacular raid to which we will turn our attention first.

Part 2

Baku

Immediately following the Nazi-Soviet pact of August 1939, a curious plan was developed by General Staffs on both sides of the Channel. On August 30, 1939, only days before the start of the War, General Gamelin sent a telegram to his predecessor as Commander in Chief and current Commander of the Syrian front, Maxime Weygand. In response to a request from the British High Command, Gamelin requested the development of attack plans on Soviet oil fields in the Caucasus.²⁹ The original idea suggested a gathering of British and French bomber squadrons, operating from Djezireh (Al-Jazeera province), in Syria. Gamelin envisioned a sudden, powerful strike to achieve greater results. His impression was that a short, concentrated attack, operating in one or two waves, would be more successful than a prolonged series of smaller attacks.

French studies had already concluded that Allied bombers could disrupt Soviet oil production to such an extent that Germany would lose the benefit of petroleum imports from its new economic partner. To this end, Gamelin proposed the bombing of oil fields in Baku and Batoum “to seriously impede the resupply of fuel to Germany”³⁰ The plan was discussed from

²⁹ SHAT GR 1K 224 15, Action en mer noire et en Transcaucasie. Undated (October 1939-March 1940).

³⁰ SHAT GR 1K 224 15, Letter from Gamelin to Daladier, March 16, 1940.

October 1939 until March 1940 as a potentially effective way of striking at German war capability from an unexpected direction. Nine bomber squadrons (approximately 108 airplanes) were envisioned for the attack of which four were to be provided by the *Armée de l'Air* forces stationed in Syria. The remainder were to be provided by the Royal Air Force.

It is easy today to point out the obvious danger in provoking a showdown with Soviet Russia while already at war with Germany. However, recent history did not inspire confidence in the military capability of the Soviet Union. In 1904-05, the Russian Empire had been defeated by Japan, suffering losses to its navy which required nearly a decade to recoup. Its inability to sustain the enormous strains of the First World War had led to revolution in 1917 and its exit from the war. The new Soviet regime had narrowly avoided defeat after invading Poland in 1919 and, by 1921, had been forced to accept a *status quo* agreement to end the fighting with its much smaller neighbour to the west. In a similar way, Soviet operations in Finland, though ultimately successful by March 1940, had come at enormous cost and revealed significant organisational deficiencies within the Red Army. Moreover, Stalin had only recently decimated his cadre of senior officers, including three of his five Marshals. For all of these reasons, Soviet military capabilities were held in very low esteem. Gamelin himself took little account of the Soviet military's preparedness for war. In 1937, he had refused the Soviets permission to attend French autumn manoeuvres. In April 1938 he declared that Soviet neutrality would benefit France more than a military partnership. In September, at the height of the Munich Crisis, he advised Daladier that the USSR could only be of secondary importance in the defence of

Czechoslovakia.³¹ Similar opinions regarding Soviet military capabilities were widespread among French officers. Gamelin wrote:

One must remember that the conviction of ‘Russian impotence’ had taken hold among us. I’m not the one who invented this term. One of the most informed French officers wrote from Moscow saying, “even if he wished, Stalin could no longer declare himself in opposition to the Reich. He would, in any case, only have his powerlessness to offer us.”³²

During the same period, (October 1939-March 1940) French leaders studied another proposal for intervention along the geographical peripheries of Europe. Finland’s prolonged resistance to Soviet aggression had encouraged many to support sending large-scale military assistance to the beleaguered Scandinavian state. In late 1939, Charles de Gaulle was hoping for promotion that would place him in command of an expeditionary force to Finland. He and Paul Reynaud expressed the belief that a motorised corps under de Gaulle would “sweep away Russia’s disorganised hordes and soon march on Leningrad.” Around the same time, General Weygand assured the Minister of War that given “a few reinforcements and two hundred planes, he would seize the Causasus and slice through Russia like butter”.³³ Weygand believed that action against the USSR should constitute an essential part of the French war effort. “For my part, I believe it of capital importance that we break Russia’s back in Finland...and elsewhere.”³⁴

³¹ See R.J. Minnery, *The Private Papers of Hore-Belisha*, (London: Doubleday,1960), 120-121; Maurice Gamelin, *Servir t.2* 346; Donald Cameron Watt, *Too Serious A Business: European Armed Forces and the Approach to the Second World War*. Berkeley and Los Angeles: University of California Press, 1975), 119.

³² Gamelin, *Servir t.3*, 194.

³³ Henri de Kerillis. *De Gaulle Dictateur*. (Montreal: Beauchemin, 1945), 363-364.

³⁴ Quoted by Gamelin in *Servir, t.3*, 199.

An aerial force to support the expedition was soon being assembled and placed under the command of Captain Paul Stehlin, who later recalled the following from an evening at Air Chief Vuillemin's headquarters:

General Bergeret, assistant to Vuillemin, brought me to his office and uncovered, from behind a curtain, a map of Eastern Europe and the Middle East. It bore the word "secret" in enormous letters. I leaned on a chair and listened.

"Russia is now associated with Hitler's Germany and provides him with valuable resources, and this provides us with an opportunity to distance the war from our borders. General Weygand has at his disposal in Syria and Lebanon, armed forces which will drive in the direction of Baku to interfere with the production of petroleum; from there they will be redirected north to meet up with the armies from Scandinavia and Finland, already marching toward Moscow."³⁵

Stehlin recalled a map of Eastern Europe and the Middle East hung in the office of Vuillemin's HQ. Upon it, two arrows had been drawn indicating the projected course to be taken by Allied armies. One arrow departed from Finland, the other from Syria, joining each other in an area east of Moscow. Vuillemin's Chief of Staff explained that Weygand's army in Syria was tasked with occupying the Soviet oil fields and eventually linking up with the allied forces coming from the North.³⁶

The documentary evidence clearly indicates that plans to bomb Baku were only one part of a larger plan to conduct vast operations against the Soviet Union. Gamelin admitted as much in saying, "operations against Baku should be aircraft-based, supported by land and naval

³⁵ Paul Stehlin, *Témoignage pour l'Histoire* (Paris, Robert Laffont, 1964), 214.

³⁶ Paul Stehlin "De la Diplomatie au Renseignement et à l'escadrille" *Icare: Revue de l'Aviation française* (1939-40 La Bataille de France: Vol. II La Chasse, deuxième partie), no 55 (automne-hiver 1970), 44.

actions. These could consist of submarine attacks upon petroleum transports in the Black Sea, requiring an agreement with Turkey to obtain free passage and the installation of bases of operations.”³⁷

Plans to bomb the Caucasus oil fields reflected obvious contempt for the Soviet military establishment as it existed in 1939-40. They also highlight the overdeveloped expectations, shared by French and British military leaders, of the bomber’s capability to deliver a knock-out blow over long distances. The strategy as it was advanced, suggested that a hundred planes flying two sorties, would be sufficient to destabilise Soviet oil production to the point where it could no longer supply Germany with petroleum exports. It would be inaccurate, moreover, to relegate this plan to the position of a mere intellectual exercise, devised by restless military leaders who never really planned to carry it out.³⁸ In fact, French studies on the proposed attack were encouraged by British and American interests who considered the plan entirely feasible and likely to deliver a crippling blow to German supply chains. French ambassador to Turkey, René Massigli, sent a telegram to the Quai d’Orsay stating that a recent American study of the situation delivered promising findings. “American engineers have determined that the soil around Baku is so saturated in petrol, that a single fire would spread rapidly throughout the entire region. It would require several months to extinguish and years to resume exports.”³⁹ Despite his later statements to the contrary, Gamelin supported the proposed attack on Soviet oil fields,

³⁷ Ibid, t.3 216.

³⁸ Philip Nord has recently questioned the sincerity of those who advanced plans to bomb the Caucasus, writing of plans to intervene in both Norway and Baku: “the Soviet gambit was the more hare-brained of the two, but of course, nothing came of it.” Philip Nord, *France 1940: Defending the Republic*, (New Haven: Yale University Press, 2015), 77.

³⁹ Cited in Paul Reynaud, *Au Coeur de la mêlée, 1930-1945* (Paris: Flammarion, 1952), 369.

declaring on March 12th in a letter to Daladier, “Personally I believe that we have interest in quickly pursuing studies on an attack on Baku and Batoum, especially by aviation. Such operations could serve as a productive complement to operations in Scandinavia.”⁴⁰ In the war plan he prepared for Daladier a month earlier, Gamelin suggested it was possible to “bring about the definitive failure of the Soviet invasion of Finland.” This, he determined, could be achieved using an expeditionary force which “could act in conjunction with another force acting out of the Caucasus, in order to bring on the total collapse of the USSR”⁴¹ This, he suggested, could be accomplished by a total force of ten divisions. “France and Great Britain are at war with Germany; not with the USSR,” he reminded the government. “However, if we allow Germany the time to organize and methodically exploit Soviet resources, then the USSR will become an important part of this war...An effective way to blockade Germany is thus to provoke and accelerate the collapse of the Soviet Union.”⁴² Gamelin believed that Soviet supply of raw materials to Hitler’s Germany was far more dangerous to the Allies than the Red Army itself could ever be. Let us repeat here that Gamelin considered ten French divisions sufficient to scatter the Soviet army to the four winds. It was his growing conviction that the supply chain from Moscow to Berlin must be interrupted, even if this incurred the risk of war with the USSR.

To fully appreciate the concern shared by senior French military planners on the subject of modern air power, one need only refer to the results they expected from a small-scale bombing run over the southern Soviet oil fields. Nine squadrons of twelve aircraft each were deemed sufficient to neutralise that country’s entire petroleum industry. By applying the same

⁴⁰ Ibid.

⁴¹ SHAT GR 1K 224 15, Plan de Guerre, February 26, 1940, p.22.

⁴² Ibid, p.23.

expectations to the *Luftwaffe's* thirteen hundred bombing aircraft (as of spring 1940), one begins to understand the apprehension under which the French defence strategy was conceived. Finally, the plan was to serve one final purpose: to serve notice to the neutral countries of Europe that the Allies were not merely reacting to German military initiative. "The experience of six months of war has shown us that neutral countries fear Germany. Without appearing to threaten them in the same manner, we must nevertheless provide them with a display of our strength."⁴³

The case has been argued that plans to attack German interests on the peripheries, away from France's northeast front arose from a growing awareness that time was not playing in the Allies' favour. Some historians⁴⁴ have presented the argument that the Allies had in fact, given up on their long-held vision of a protracted war with an opening defensive stage followed by offensive operations once material superiority had been amassed. The growing clamour for peripheral actions in Scandinavia, Salonika⁴⁵ or the Soviet oil fields is presented as proof for this growing conviction that each passing month only served to increase the existing German advantages in soldiery and equipment. If the war was to be won, so the argument goes, the Allies would have to strike at the Axis' supply lines before Germany's growing material strength rendered it all but invulnerable to attack. The central flaw to this thesis is that there exists no documentary evidence to support it. French military minds can be nowhere cited as advancing

⁴³ SHAT GR 1K 224 15, Gamelin to Daladier, *op cit*.

⁴⁴ Talbot Imlay has argued that "by early 1940, the French had effectively abandoned the long-war strategy in favour of a short-war one. Although never as pessimistic about the shifting balance of power, the British also came to question the long-war strategy and its underlying assumption that time was an ally." See Imlay, *Facing the Second World War*, 9. Anthony Adamthwaite agrees, stating "the waiting game was flawed in two vital respects: it assumed that time would work for the allies – in fact Germany gained more from the breathing space. See Adamthwaite, *Grandeur and Misery*, 226.

⁴⁵ General Weygand, Commander in Chief of the Levant was the first to propose an Allied landing in Salonika. During the first week of war (September 9, 1939), he wrote a letter to Gamelin, suggesting the early development of a new theatre of operations in Southeastern Europe.

such a point of view. For his part, General Gamelin confessed: “My opinion was *always* that the position we found ourselves in would prevent us from taking up the offensive before two years had passed: either 1941 or 1942.⁴⁶ Moreover, specifically referencing the need for secondary fronts, he added, “the war would be a long one...the last War already showed us the necessity of combining operations in various theatres, very distant from one another. Fortified areas greatly limited the possibilities for manoeuvre and supported this notion all the more.”⁴⁷ Paul Reynaud does not mention his commitment to anything other than a long-war strategy in over two thousand published pages of personal memoirs. In addition, Reynaud admitted that he was convinced by the High Command’s opinion by March-April, 1940 that “we have no chance of winning this war militarily until such time as we are assured of the cooperation of a new ally...without the aid of a third partner, it was perfectly vain to hope to find a military solution to this war.”⁴⁸ Reynaud would later add, “since this third army was nowhere to be seen, we were forced to seek to defeat the Reich through asphyxiation.”⁴⁹ Furthermore, Army Chief Maurice Gamelin never tired of reminding politicians that the *hollow years* of smaller army graduation classes would come to an end in 1941. After this time, the number of soldiers and officers

⁴⁶ Gamelin, *Servir t.l* p.33. This statement is true. Gamelin had given precise explanations on delays expected in manufacturing war materiel essential to the invasion of Germany in a letter to the government in early 1938. The most important deficiency was in the 105mm artillery as well as fuses and shells for this weapon. According to Gamelin, no serious forward movement into Germany was conceivable without an ample supply of 105mm guns necessary for the reduction of modern fortifications. SHAT GR 1K 224 15, Mesures à prendre pour mettre notre production industrielle à même de satisfaire nos besoins en matériels. January 1938, p.3. In his *Plan de Guerre* of February 1940, he repeated this belief, stating: “Ce ne sera qu’en 1941 que nous aurons des disponibilités d’artillerie lourde et les engins nouveaux, actuellement envisagés, nécessaires pour l’attaque de la ligne Siegfried.” SHAT GR 1K 224 15, Plan de Guerre pour 1940, February 26, 1940, p.9.

⁴⁷ Ibid, t.3, 47.

⁴⁸ Reynaud, *La France à sauvé...v2*, 21.

⁴⁹ Reynaud, *Au Coeur de la mêlée...382*.

available to France would be largely augmented, “providing a serious increase to our national security.”⁵⁰ From the High Command’s perspective, any thought of decisive offensive action was unimaginable until this stage had been reached.

Reynaud’s interest in peripheral actions were not indicative of his desire to reach a quick decision to the war. As of April 1940, he considered another military expedition, this one in Norway, to be the best hope to slowly starve Germany of important war materials. A maritime operation like this would also incorporate British forces in a way that would maximize their military potential. “It would be the best way to reinvigorate this semi-lethargic force which was our mastery of the sea, to find a way for a meaningful British contribution, and to try to ‘asphyxiate’ the German war machine in a way the blockade of 1914-18 had never been able to accomplish.”⁵¹ Again, we see that Allied interest in opening new theatres of war, wherever possible, did not signify a departure from their long-war strategy, but rather constituted one of its essential components. This was equally understood by many in the German High Command as observed by Erich von Manstein:

It became palpably clear that the Western Powers intended to wage a war of attrition in as many different theatres as possible until such time as they had attained the clear preponderance which would allow them though in no case before 1941, to launch an offensive in the west. Although OKH could not at the time in question know of this Allied war plan, it was only too likely that the Western Powers would fight a long-term war in the sense indicated.⁵²

⁵⁰ SHAT DE 2016 SA 63, General Gamelin: Note concernant nos fortifications sur la frontière Belge. (Undated)

⁵¹ Ibid.

⁵² Erich von Manstein, *Lost Victories* (Novato, California: Presidio, 1955), 90.

The only significant voice within the Allied High Command who publicly advanced hopes for a short war came from François Darlan, Chief of Staff of the French Navy. Darlan spoke energetically about the prospect of ending the war quickly through multiple attacks on Germany's flanks. He wrote to Daladier stating his belief that the Allied goal should be to avoid a lengthy war of attrition, the outcome of which was impossible to predict. Rather, the plan should be to attack everywhere possible – Finland, Norway, Sweden, the Black Sea, the Caucasus – without worry about opening hostilities against the USSR.⁵³ Darlan's opinion, if it were common within the French or British high commands, would support the argument that Allied strategists were indeed drifting away from the long-war concept and toward plans for a short war. However, Darlan was a lone voice in this regard. No other significant voice within Allied civil or military leadership spoke in such terms.

Apart from Darlan's dissenting voice, French strategy never strayed from the long-term war envisioned since the early 1930s. All proposals for military action away from the crucial French Northeastern front aimed only to chip away at Germany's supplies of essential materials of war. They were an extension of the blockade strategy which had proven ultimately successful from 1914-1918. In early 1938, French ambassador to Germany, Robert Coulondre clearly advised the Foreign Minister that "The Germans' weak spot is found in their limited stocks and

⁵³ J.L. Crémieux-Brilhac, vol.1, 221.

provisions...a weakness which renders impossible the notion of their sustaining a lengthy war.”⁵⁴

It was a conviction from which French strategists never wavered.⁵⁵

For his part, Prime Minister Paul Reynaud did not envision a short war, but rather an active one. In supporting peripheral expeditions around Europe, Reynaud was not attempting to shorten the war but to raise the level of active involvement and to generate a combative spirit into the rank and file, which he feared was becoming lethargic from months of relative inactivity. He wanted to conduct war in earnest, “rather than allow the nation to slide in a sort of pseudo-belligerent attitude, waiting for victory to arrive as though by miracle.”⁵⁶

Another consideration which provoked the Allies to seek peripheral engagements with the enemy in early 1940 was the perceived need to project an image of strength to the neutral nations. The importance of this factor was highlighted publicly by the nation’s top civil and military leaders. In March, Daladier observed “the need to redress our position in the world...in the eyes of the neutrals...compels us to take the initiative, without delay, to re-establish the moral and material equilibrium which the Finnish conflict served to unbalance.” He went on to declare, “the end of Finnish resistance and the impression that we were powerless to support her, is today presented by the Germano-Soviet press as defeat for our side...causing neutrals to doubt

⁵⁴ Letter by Robert Coulondre to Georges Bonnet, March 19, 1938. Ministère des Affaires Étrangères. *Le Livre Jaune Français: Documents Diplomatiques 1938-39*, (Paris: Imprimerie Nationale, 1939), 110.

⁵⁵ The German high command would have fully agreed with this assessment. Hitler’s rush to attack the west as soon as possible following the collapse of Poland was a symptom of his conviction that time was working in the Allies’ favour. He revealed his concern to his generals in October 1939, “The danger, in case of a prolonged war, lies in the difficulty of securing from a limited food and raw material base [enough to sustain the] population, while at the same time securing the means for the prosecution of the war”. See Williamson Murray, *Luftwaffe* (Baltimore, Maryland: The Nautical and Aviation Publishing Company of America, 1985), 33.

⁵⁶ Minart, Jacques. *PC Vincennes Secteur 4*, t.1. (Paris: Éditions Berger Levrault, 1945), 229.

our energy, our initiative and our resolution.”⁵⁷ Eleven days later, Prime Minister Paul Reynaud wrote the British government with the following concern: “we are experiencing the backlash of the Finnish capitulation. The way enemy propaganda highlights our impotence, and our indecision weakens our allies’ faith in a final victory...” He warned that “in a war whose outcome depends on moral factors as much as material ones, this drop in confidence leads to immediate and lasting consequences, which we would be foolish to underestimate.”⁵⁸

Reynaud was not demanding action from the perspective that only a short war could be won by the Allies and that time was working in Germany’s favour. The Prime Minister had long carried the appellation of *belliciste*, or warhawk, within the Assembly and consistent with his parliamentary record, he continued to call for action for action’s sake in the winter of 1939-40. Above all he wished to position the Allies so that they would stop reacting to enemy movements and by acting decisively, wherever they stood a chance for success, force the Germans to respond to Allied initiative. Also, he saw military action as essential in maintaining the French image abroad, especially to the neutrals. These concerns drove Reynaud’s thought on the war during the *Sitzkrieg* of October-May 1939-40. Reynaud never expressed concern of losing an economic war to Germany and certainly never used such ideas to support his call for quick and forceful action on the peripheries of Europe. Benefits to the Allied cause like depriving Germany of Swedish iron or Soviet oil products, while interesting, were not considered *essential* to winning the war and were never discussed as such in either the C.S.G. the C.S.D.N. or the Interallied Council. Claims that the Allies had, by early 1940 switched to a short-war policy,

⁵⁷ Telegram from Edouard Daladier to French ambassador to Britain, Charles Corbin (March 14, 1940). *Serre Commission Report*, Part 2, 350.

⁵⁸ Paul Reynaud, letter to the British government, (March 25, 1940), *Serre Commission Report*, Part 2, 352.

convinced of Germany's superior economic position, are therefore inaccurate. By the spring of 1940, both England and France remained wholly committed to their traditional concept of a two-stage war of long duration, starting with a defensive round and building up, hopefully with substantial American aid, toward an offensive stage, beginning in 1941 or 1942.

Furthermore, if the Allies had convinced themselves that they were losing the armaments race against Germany and that a short war was their only hope for victory, no such conclusions had been reached inside the Reich. Hitler and his strategists were keenly aware of their country's limitations in supply of essential war materials. The German concept of lightning war, or breakthrough theory, based on concentrated force upon a single point of the enemy's front (*Schwerpunkt*), offered an obvious strategic advantage. It aimed to prevent the enemy from exploiting Germany's dependence on imported materials over the course of a prolonged conflict.⁵⁹ The German High Command conceived their plans in full awareness of the limitations to their ability to pursue war over a period of years. General Erich von Manstein, architect of the *Sickelschnitt* plan to attack France through the Ardennes, was clear on this point.

If we were to wait till 1942 to penetrate the Maginot Line, the Western Powers would in all likelihood have caught up with our lead in arms production... Without any doubt, the struggle would have petered out inconclusively into trench warfare. Such could not be the aim of German strategy... The fact of the matter was that from a military point of view, the spring of 1940 was not only the earliest but also

⁵⁹ See Gerhard Schreiber, "Les structures stratégiques de la conduite de la guerre de coalition Italo-Allemande au cours de la Deuxième Guerre Mondiale." *Revue d'histoire de la Deuxième Guerre mondiale*, 30e Année, No. 120, (October 1980), 11.

the latest occasion on which Germany could have hoped to fight a successful offensive in the west.⁶⁰

The Allied High Commands never formulated plans in response to a growing belief that theirs was a steadily weakening military situation. Such a misinterpretation would have represented a singularly mysterious case of self-imposed delusion, contrary to all available facts.⁶¹ In truth, all official reports prepared by the French High Command repeated the need for a long-war strategy, even after the collapse of Poland. At the meeting of the Chiefs of Staff on November 5th, 1939, General Roton summarized the collective view in the following terms:

Time is not working in Germany's favour but for allowing it to increase the manpower of its army; in the areas of materiel and above all, aviation, their margin of superiority cannot be maintained... We determine therefore that the German High Command will desire to accelerate events, even if success does not seem assured.⁶²

Roton's analysis reflected the final important reason why the French remained dedicated to the concept of a long war. That is the fact that only a prolonged conflict would enable the

⁶⁰ Von Manstein, *Lost Victories*, 83. Hitler too believed that an attack on the west would need to occur by the spring of 1941, after which time the Allies would be able to outproduce the Reich in war materials. See Claude Paillat, *Le Désastre de 1940: La Guerre Immobile, Avril 1939 - 10 mai 1940* (Paris: Robert Laffont 1984), 227.

⁶¹ Talbot Imlay has argued, "Reynaud found himself in early 1940 engulfed in a financial crisis triggered by rising foreign purchases – a crisis that only reinforced his fears about French weakness... Reynaud's dilemma helps to explain his enthusiasm for military action once he became premier in March 1940. Only by striking a decisive blow against Germany could the war be brought to a rapid end and impending financial disaster avoided." Imlay, *Facing the Second World War: Strategy Politics and Economics in Britain and France, 1938-1940*. (Oxford: Oxford University Press, 2003), 293. The current study questions both pillars upon which this assessment is made. Firstly, France's financial situation was sufficiently robust to engage in a long war (see below p.185-189) and secondly, peripheral actions in Baku, Salonika or Finland were never planned as decisive, war-winning blows against Germany.

⁶² SHAT E 2016 SA 68, Note sur les possibilités pour l'Allemagne, November 8, 1939.

Allies to first reach parity with, and subsequently to exceed, German aerial production. By the start of 1940, this was expected to take place by the start of 1941. At this time, Allied aircraft production was expected to surpass German totals. More significantly, the Air Ministry believed they were poised to take a technological lead over Germany with their latest designs, the Dewoitine D550, Arsenal VG 33 and Breguet 700. These planes were set to be mass produced by the last quarter of 1940, signalling the end of the *Luftwaffe*'s significant design advantage over the French.⁶³

The sense that time was working on the Allied side was not limited to military circles. The general sentiment in France during the first months of 1940, according to Simone de Beauvoir, was one of optimism that Germany had already missed its chance to catch the Allies by surprise during the previous year. She recalled the popular impression in the West that each passing month made German success less likely. "Germany was short of food, steel, petrol, indeed of everything. The German populace had no wish to get themselves wiped out; they couldn't stand a war; the Reich would collapse."⁶⁴ Support for this mounting optimism was found in the tangible evidence of a French economic revival in early 1940. We have already seen how industrial production was exploding in France during this time. The simultaneous financial revival was no less significant and contributed to the popular notion that France was well situated to withstand the expected German assault, whenever Hitler chose to make his move.

Part 3

⁶³ SHAA 1A 11Z 1294, *Les Possibilités de notre Chasse*, p.5 (undated, early 1940).

⁶⁴ Simone de Beauvoir, *The Prime of Life* (Harmondsworth: Penguin, 1965), 377.

Financial Recovery: October 1939 – May 1940

In his important work, *Facing the Second World War*, Talbot Imlay argues that “in the political-economic dimension, France failed the test of war.”⁶⁵ This position is supported by two key arguments which we will examine one at a time. Firstly, the fact that French foreign trade existed in a deficit state is used to explain how “France found itself in a financial and economic crisis”⁶⁶ by early 1940. Secondly, armaments production had been increasingly entrusted to private industrialists at the expense of state planning. This “left France’s developing war economy relatively ill equipped to face the massive demands of war.”⁶⁷

Firstly, it is correct to point to a financial and economic crisis existing in France at the onset of 1940. This was a crisis generated and steadily intensified by the enormous demands of war, and it was experienced to varying degrees in all belligerent countries, but perhaps *least of all* in the case of France. Since Paul Reynaud announced his financial reforms in November 1938, recovery had been rapid and shared among vast sectors of the French economy. Central to his *politique de confiance*, which aimed at restoring investor confidence, was rescission of the Popular Front’s mandated forty-hour weekly limit on labour hours. Within a few months of this measure, national production figures rose sharply by 13 percent. Steel production rose from 541,000 tons to 668,000 tons per month; the textile index rose sixteen percent; the metallurgical index rose by

⁶⁵ Imlay, *Facing the Second World War* 298.

⁶⁶ Ibid, p297

⁶⁷ Ibid, 288.

twenty-two percent.⁶⁸ Wage increases exceeded the cost of living. Long term indicators of solid recovery included a thirty-six percent increase in tax revenue over the last eight months of 1939. Bank notes in circulation had long been stable at around 111 billion francs. By March 1939 this rose to 115 billion, climbing further to 123 billion in July and 130 billion in August. To clarify the importance of this recovery on the possibilities for rearmament, one must remember that the entire budget for aircraft rearmament swelled to 24 billion in late 1939. This was only possible due to the increase of national currency by almost twenty billion during the same period. Moreover, this new issuance of currency was not, as might have been expected, congruent with a general movement toward inflation. In fact, the increase in prosperity was largely unfettered by rising prices or a higher cost of living. Industrial indices (measured in percentage numbers correlating to pre-depression totals) entered 1939 at a rate of 86. Throughout each of the first six months of 1939, this rose to 90 (January), 92 (February), 95 (March), 95 (April), 98 (May) and finally 100 (June). We can say that the Depression ended for France at this time and that all markers pointed to continued prosperity for the near future.⁶⁹

The same months saw the national unemployment figures decline dramatically as well. From January to August the number of unemployed receiving some form of relief fell from 416,000 to 302,400. What made France exceptional during this period of active European rearmament was that its workers were finding equally expanding opportunities for employment both within and without the armaments sectors. Unlike Britain where construction in most other

⁶⁸ United States Bureau of Foreign and Domestic Commerce. *Economic Review of Foreign Countries, 1939-1940*. (Washington: United States Printing Office, 1941), 2, 312-313.

⁶⁹ The two major published analyses of French economic recovery in 1939 are found in Alfred Sauvy, *Histoire économique de la France entre les deux guerres (1931-1929)*. Paris: Fayard, 1967, 325-347., and Robert Frankenstein, *Le prix du réarmement français...* 201-212.

fields was largely neglected in favor of pursuing re-armament needs, the French index of building activity rose steadily in each of the first six months of that year. This resulted in greater steel production which rose from 470,000 metric tons at the low point of the depression in 1932, to 593,000 metric tons in January 1939. By the summer of the same year, this had risen to 763,000 metric tons. This was an enormous boon to the French economy as steel production (a central indicator of economic performance at the time) was necessarily supported by a large number of ancillary industries, most importantly, coal and iron mining, all three of which were important sources of employment for French labourers.⁷⁰

Agriculture, another essential sector of the economy, proved its resilience to the strain of war and mobilization after September 1939. There was much worry over the state of French farm fields that autumn.⁷¹ The call to arms had deprived many farms of labourers required to sustain French agriculture. This was a matter of personal importance to Prime Minister Edouard Daladier. His rural background in the Vaucluse engendered within him a deep sympathy for the plight of agriculturalists. These feared watching their harvests rot in the fields for lack of manpower.

⁷⁰ Improvements in steel and iron production were especially important to military rearmament. Army Commander in Chief Gamelin believed that Reynaud's corrective measures saved the French economy following what he saw as mismanagement by the Popular Front. "Mais la diminution des heures de travail était essentiellement une faiblesse, non seulement pour la défense nationale, mais pour l'économie générale du pays. Quand commença la réaction en 1938, on s'en aperçut vite et d'heureuse façon. Les revenus des Français passèrent à 267 milliards et l'indice-or du coût de la vie passa à 68, pour s'abaisser à 60 au début de 1939. Gamelin, *Servir t.2, Annexe II*, 475.

⁷¹ Martin Alexander has unearthed records of heated discussions between Prime Minister Daladier who favoured the release of agriculturalists from the army during harvest season and Gamelin who reminded him that "France faced the possibility in a very short time of Germany swinging back [west] with all her forces." Already short on manpower, Alexander argues that Gamelin would not allow farmhands to be released from active duty, even at the cost of a disastrous harvest year. See M. Alexander, 355-56. In his memoirs however, Gamelin claims to have largely conceded to Daladier's requests to help French farmers. "J'ai donné des ordres pour que, *dans la zone des armées*, les commandants de régions fassent donner le plus large concours aux travaux agricoles, en utilisant à cet effet les hommes des dépôts..." This was a satisfactory compromise which allowed for a successful harvest in 1940. See *Servir, t.3*, 225-26.

However, since the return to power of the *Parti Radical* in mid-1938, the Ministry of Agriculture had made strides to reorganise methods of production, stocking and provision of wheat and meat. The industry proved itself capable of maintaining the nation's food supply throughout this period of fundamental change to its operating practices. As a result, and despite fears to the contrary, there were no food shortages in France during mobilization and throughout the *Phoney War* period. Food supply remained uninterrupted until the collapse of the Republic in June 1940.

The fate of France's agricultural network was only one of many essential considerations which complicated the all-important week of mobilisation between September 3-10, 1939. Gamelin tried to delay the declaration of war against Germany for as long as possible, buying the government, and his own commanders, precious hours to execute the complex procedures of mobilisation before the threat of enemy fire further complicated matters. The importance of fully mobilising one's armed forces before the start of hostilities had recently been confirmed on the western borders of Poland. At the behest of French ambassador Léon Noël, the Polish high command delayed its mobilisation until the last possible moment. This resulted in the absence of over one and a quarter million soldiers from the decisive opening battles.⁷² Gamelin had no intention of conducting war against Germany from an undermanned position. "If war must begin at this hour, we must ensure that all the land, sea and air forces can take part. It is particularly essential that the Royal Air Force intervene immediately."⁷³ Gamelin prioritized mobilisation to such an extent that he was unwilling to bend to British pressure for a declaration of war on September 1st or 2nd. The opening round was to be fought almost entirely with French soldiers and

⁷² Paul Armengaud. *Batailles Politiques et Militaires sur L'Europe: Témoignages*. (Paris, Éditions du Myrte, 1948), 106.

⁷³ Jacques Minart. *P.C. Vincennes, Secteur 4* vol.1. (Paris: Éditions Berger Levrault, 1945), 10.

French materials and he was not about to risk subjecting the army, in a vulnerable state of mobilisation, to the danger of German air assault. Although an unwavering anglophile⁷⁴, Gamelin nevertheless considered English pressure for a quick war declaration as inappropriate, given the existing balance of forces on the continent. Even in the crucial area of air power, British contributions would remain noticeably slim for the opening few days. “They want us to declare war today” he observed sourly as German forces crossed into Poland, “but they are only going to send their aircraft tomorrow.”⁷⁵

Part 4 The Polish Experience

By the time France declared war on Germany at 17:00 on September 3rd, *Wehrmacht* soldiers were already deep within Polish territory. This was the first large-scale demonstration of German methods and equipment since the Condor Legion’s participation in the Spanish Civil War. And while the Poles expected imminent French military support from the West, they were instead sent a team of high-ranking military advisors. This group, headed by Louis Faury, former chief of the General Staff Academy in Poland, was sent, in theory, to offer services and counsel in co-ordinating resistance to the German juggernaut. In practice, however, they were able to accomplish very little in this regard, as French officials were never given detailed access to Polish defence plans. Although Commander-in-Chief Gamelin claimed to have been privy to Polish military planning, his claim has been challenged by another senior member of the French

⁷⁴ Gamelin praises Great Britain’s contribution to the war frequently and lavishly throughout his memoirs and considered Winston Churchill as an exemplary wartime leader. “Il demeurera sans conteste, un des plus grands noms de l’histoire.” (*Servir vol 2 p.238*).

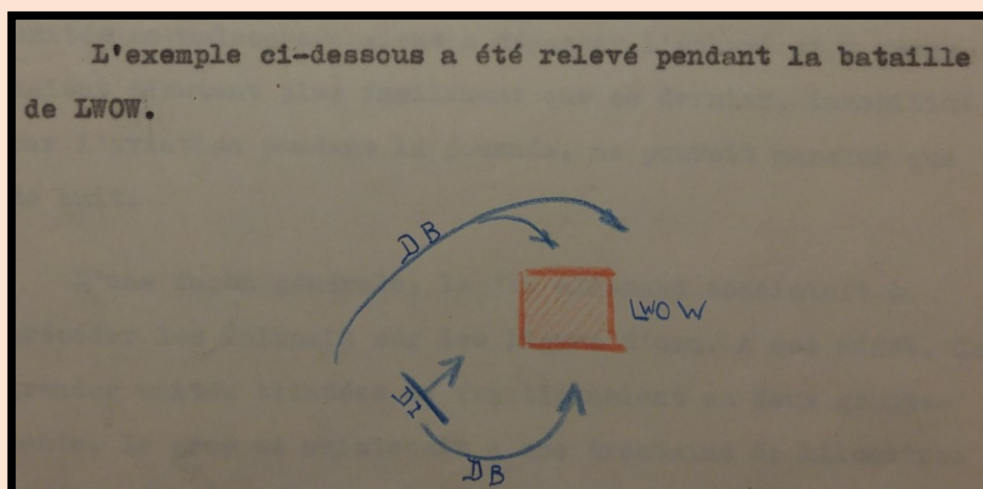
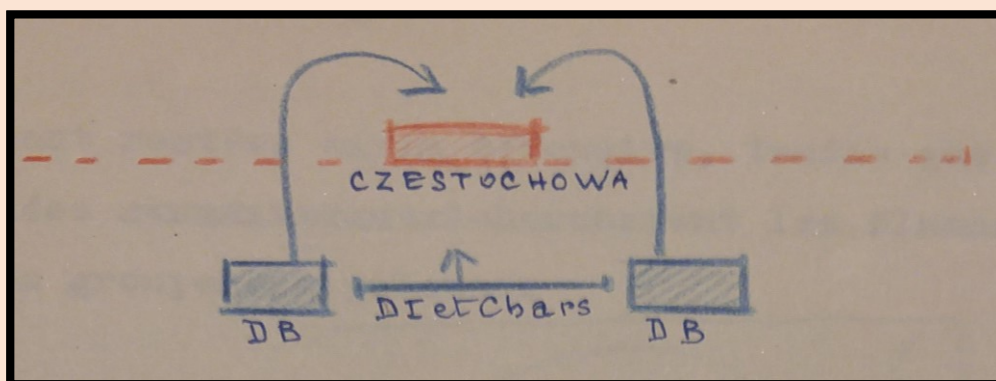
⁷⁵ Anthony Adamthwaite. *Gradeur and Misery...223*.

military mission to Poland, Paul Armengaud. In his vivid post-war recollections, Armengaud claims the French advisory group was sent to Poland without any knowledge of existing defense plans for that country. “Gamelin did not mention a single word on the Polish war plan or the strategic conduct of the battle”, he remembered. “Almost certainly, he did not know anything about them.”⁷⁶

The group’s main task then, was to accumulate as much first-hand knowledge of German military capabilities and tactics as possible and relay them to the Quai d’Orsay and to Gamelin’s headquarters in Vincennes. To this end, they were very successful, sending each day’s observations back by airmail to Paris via Riga or Bucharest.⁷⁷ Within the first week of battle, Faury’s group of advisors had accurately identified and described the methods used by the German armed forces, enabling rapid breakthroughs to occur everywhere along the Polish border.

⁷⁶ Paul Armengaud, *Batailles...* 96 and 115. French ambassador to Poland, Léon Noël also noted in his 1947 memoirs that the French High Command was completely uninformed of the Polish strategy for national defense. See *L’agression Allemande contre la Pologne*, (Paris: Flammarion, 1947), 467. In his own defense, Gamelin wrote “Il a été dit au procès de Riom que nous n’avions jamais obtenu des Polonais d’être au courant de leur plan d’opérations. On voit que cette assertion est inexacte...le général Smigly-Rydz m’avait demandé de ne pas parler de ces questions aux représentants de nos diplomaties respectives...ni à nos attachés militaires.” *Servir*, t.2, 229.

⁷⁷ Jacques Mordal *La Guerre a commencé en Pologne*. (Paris: Presses de la Cité, 1968), 205.



First Glimpse of the Blitzkrieg: Two examples of German tactics used in Poland, as described by French military advisors. They constitute the first wartime description of armoured encirclements which characterised the Blitzkrieg. These sketches were made before September 14th, 1939 and demonstrate how effectively Faury's team was able to analyse and interpret the innovative German methods. SHAT GR 1K 224, d.15.

German methods of co-ordinated thrusts using concentrations of armour and aircraft were summarized in simple and effective terms. These reports were invaluable sources of information, allowing the French high command to make sense of the unexpectedly swift German success in the East. Throughout their observations, French advisors in Poland remained impressed by the very high morale and effectiveness of their Polish allies. “Officers and soldiers display solid professional qualities,” observed one French report. “German infantry,” stated another, “is clearly inferior to Polish infantry as it gives way to direct assault and charges.”⁷⁸ A third report, this one penned by Faury himself, observed “Everywhere where there was a rough parity, Polish troops were victorious.” A fourth was even more decisive in its evaluation of the quality of Polish soldiery. “Any [German] attack by infantry against Polish infantry failed miserably (most often in Silesia). Tank accompaniment was almost always necessary for success.”⁷⁹

Unfortunately for the beleaguered Poles, few encounters were conducted from a position of “rough parity” with their opponent. Seemingly everywhere at once, the German air force was involved from the earliest stages “with machine guns and with bombs firing on columns of soldiers marching along roads and on the confused masses of civilian refugees.”⁸⁰ Wherever the *Wehrmacht* encountered stiff resistance, *Luftwaffe* fighters and bombers were called in to intervene. “Air Power is everywhere decisive,” observed one French report.⁸¹ Wherever Polish

⁷⁸ SHAT GR7N 3006, Untitled report from the French Military Mission to Poland, September 12, 1939.

⁷⁹ SHAT GR7N 3006, Note au sujet des renseignements tirés des combats en Pologne. September 23, 1939.

⁸⁰ SHAT GR 7N 2913 Enseignements sur la guerre aérienne en Pologne du 1er au 10 septembre, 1939 – Observations personnelles du Chef d’escadron Choisy”.

⁸¹ SHAT GR7N 2914, Emploi des parachutistes dans l’armée allemande (October 1939).

resistance appeared poised to take the upper hand, aerial interdiction was called in, reversing the situation to the Germans' advantage. French observations were replete with eyewitness accounts of such events, two of which will be cited here in order to demonstrate the wide-ranging impact of German air power during the Polish campaign.

One particularly telling report describes the fate of a powerful Polish counter-offensive taking place between Lodz and Kutno, in central Poland. There, the German Eighth Army fell under increasing pressure from remnants of several Polish divisions regrouping west of Warsaw. The Polish advance was so rapid that *Luftwaffe* General Richthofen was compelled to begin firing from his command post window by the time his 8th air corps arrived in support. Instantly, the tables were turned as fighters strafed the advancing Poles, forcing them to seek shelter within the nearby forests. From there, they were bombed incessantly for three days. Finally, incendiary bombs were dropped to smoke out the remaining soldiers. "If any Pole emerges, fighters are there to machine gun them. Finally, parachutists are dropped in near the forest to clean up the mess."⁸² This action, remembered as part of the *Battle of Kutno* (September 9-19, 1939) stressed that the real power of the German air force was found not only in its striking force, but also in the diversity of its capabilities. In Poland, German air units were capable not only of staving off defeat when ground operations went awry, but also of winning these operations largely on their own.

Secondly, the French military mission stressed the demoralising effects of German terror-bombing. From the earliest stages of the invasion, reports of aerial terror attacks on non-military or predominantly civilian targets were commonplace. On the first day of the conflict, a passenger

⁸² Ibid.

train conducting the evacuation of personnel from a hospital near the German border was repeatedly machine-gunned along with its patients and caregiving nurses from the Sisters of Charity.⁸³ By the second week of operations, the Polish capital was subjected to repeated bombings which would eventually leave eighty five percent of the city destroyed. Every building was a legitimate target as the Germans made no distinction between civilian and combatant. The goal was to reduce the city to rubble, regardless of civilian casualties.

Taken as a whole, these reports seemed to confirm longstanding fears of the dreaded aerial “knock-out blow”. Most of the central tenets present in Giulio Douhet’s apocalyptic vision of modern air war were, with the exception of mass use of poison gas, put on display for the world to see in September 1939. To French observers, the Polish campaign was decided by unstoppable waves of aircraft which, once established as masters of the air, devastated enemy military and civilian targets at will.

Just as Douhet had predicted, infrastructure behind the front lines was targeted for early destruction. Attacks on the enemy communication centers, transportation and industrial centers, residential areas, large cities, major intersections and railways characterised the majority of German aerial sorties during the first days of the campaign.⁸⁴ Surprisingly at the time, these attacks did not have the devastating effect predicted by the Italian general upon Polish civilian morale.⁸⁵

⁸³ Ibid.

⁸⁴ SHAT 7N 3006. Untitled report from the French military mission to Poland, September 12, 1936.

⁸⁵ An early example of the phenomenon often observed during the Second World War, that the will to resist persisted and sometimes measurably increased, after subjection to conventional bombing. Bernard Brodie points out that Douhet’s vision of destroying an enemy nation’s morale entirely by use of air power was only vindicated following the development of the atomic bomb. See Brodie, *Strategy in the Missile Age*, (Santa Monica: Rand, 1959), 102-106. In the case of Poland, French observers routinely noticed that despite a series of significant military reverses

Their effects upon the Polish army's ability to mount an effective resistance, however, was devastating. Everywhere Polish units attempted to concentrate, they were disrupted, disorganised and scattered by aerial intervention. "Polish reserves are assaulted in their concentration areas as their forward units begin to arrive. All supporting units must then abandon the bombed-out railways and only arrive on foot in small groups. In addition, they are only able to march at night for fear of air attack."⁸⁶

Not only was the *Luftwaffe* cited for its combat effectiveness, but it was also noted how effectively it had performed its ancillary roles of surveillance and information gathering. Note the superlative tone with which the following French observer describes German aerial surveillance during the battle:

German aviation acts with an extraordinary boldness. It conducts reconnaissance in a perfect manner, rendering all daytime movement impossible for fear of immediate aerial reaction. Action taken in the rear areas are informed by radio or by aerial signalling with exactitude, speed and precision.⁸⁷

Notwithstanding the devastating impact of concentrated German armour and aviation, particularly during the opening engagements, French observers saw time and again how vulnerable German ground troops remained to their highly motivated opponents. As mentioned, *Wehrmacht* troops broke time and again before Polish charges. Great numbers of German panzers were put

and continuous punishment meted out by the *Luftwaffe*, confidence remained high, and resistance only stiffened until Soviet entry into the war eliminated all hope of a defensive victory.

⁸⁶ SHAT 7N 3006, Note au sujet des renseignements...September 23, 1939.

⁸⁷ SHAT 7N 3006, French Military Mission to Poland Report, October 2nd, 1939.

out of action by the WZ. 35 anti-tank rifle, which proved very effective against the thinly armoured Pz I and Pz II. On the 13th of September, 2nd *Panzer* division had outrun its fuel supply and was successfully cut off and immobilized by Polish defenders.

In fact, Polish resistance grew in intensity and effectiveness as its radius of action shrank before the German advance. By the time it had been reduced to the area surrounding Warsaw, many of the German advantages were minimized, especially the air force's ability to interdict large scale movements of the Polish army. In the first days of battle, the Polish strategy was to defend the entire border region using large, highly mobile reserves units able to strike quickly wherever they were needed most. As the French military mission reported, "The Polish high command had counted on maneuvering its reserves, with which it had hoped to either recoup and reinforce its admittedly thin first line forces or to counter-attack the enemy from the flanks. In this, they were grievously disappointed."⁸⁸ Since Polish attempts to move reserves from one area to another were regularly interrupted by the actions of the *Luftwaffe*, their defense plans quickly shifted toward improvised counter-attacks within the general framework of retreat toward Warsaw. After two weeks of fighting, the central sphere of action of Polish resistance had been reduced, and concentrated, around the capital. Large manoeuvres were no longer attempted by the Polish commanders who opted now to stand their ground at all costs. Fighting from static defensive positions proved far more successful than attempting a mobile defense under the eyes of the *Luftwaffe*. According to General Faury, head of the French military mission, "just as the

⁸⁸ SHAT 7N 3006, Report by General Faury to General Gamelin, October 9, 1939.

Bolsheviks began their intervention [September 17th], the Poles had at last succeeded in holding their armoured adversary in check.”⁸⁹

Far from failing to benefit from the Polish experience, French observers learned a great deal on the Nazi regime’s approach to war. Transmissions by the French advisory group correctly identified the German tendency to concentrate armour, pierce the front line, and conduct encirclement operations in the enemy’s rear. This was described as both highly effective and indicative of what to expect when war came to the West. The French military mission summarized the situation as follows: “The game played itself out far too well for them in Poland. We must expect them to conduct the same plays again.” However, the use of concentrated armour as displayed in Poland did not present a grave concern for most French strategists. With the exception of a very few voices,⁹⁰ most expressed confidence in their army’s ability to counter German land tactics in a way that had not been possible in Poland. Faury concurred, stating: “we must conclude that in the West, similar actions involving light armoured divisions would be either impossible or would lead to the destruction of the units involved.”⁹¹

⁸⁹ SHAT GR 1K 224, Général Faury: Rôle joué par les grandes divisions blindées dans la campagne de Pologne.

⁹⁰ Charles de Gaulle was the most famous voice warning of the potential for concentrated armour to revolutionise warfare, even against the French-style continuous front. See *Vers L’Armée de Métier* (Paris: Bureau d’information de la France combattante, 1946), 10-14. Other voices who expressed similar concerns prior to war included General Edouard Réquin who conducted the largescale French Army wargames in the summer of 1939. These detailed exercises resulted in disaster for the mock French army tasked with holding the line against just such a concentrated use of armour. General Jamet, head of the 3^{ème} Bureau (Transportation) also advised for the creation of armoured divisions as early as 1936. (*Note sur le problème militaire français*, June 1st 1936, SHAT 5N 584) Otherwise, most senior generals were of the opinion that France was not especially vulnerable to the German *Panzerdivisionen* and that concentrated firepower would prove superior to concentrated armoured mobility. The classic text reflecting this opinion remains Louis Chauvineau, *Une invasion est-elle encore possible?* (Paris: Berger-Levrault, 1940).

⁹¹ SHAT 7N 3006, Faury...

This confidence did not extend to the prospect of air war against the *Luftwaffe*. The most direct impact upon French military thought to have emerged from the war in Poland was an increased sense of vulnerability to German air power. Building on conclusions first made during the Spanish conflict,⁹² French reports stressed the powerful impact exerted by low flying bombers on the course of battle. Observations like these were revisited, on a much larger scale, during the fighting in western Poland. What most impressed the French High Command in September of 1939 was the extent to which Polish reserves were denied movement to sectors where they were needed most. German aviation first discovered the enemy's location through accurate reconnaissance. It then intervened in the battle and paralysed the enemy's movements. "We must insist on the extremely significant consequences of these types of actions" advised one report from the military mission to Poland, "they are the cause of all the Polish High Command's troubles."⁹³

Continuous movement of large reserve units had been central to the Polish defense plans. However, on the urging of French ambassador Léon Noël, Polish General Smigly-Rydz had delayed mobilization until the last possible moment. This finally took place on August 31st, only hours before the German invasion. It was a fatal error which played a decisive role in the coming battle. Two days earlier, on the 29th, Ambassador Noël, along with Foreign Minister Georges Bonnet warned the Polish government that posterity, and the historical record, would judge Poland harshly, if it were the first nation to mobilize its armed forces. "It would be wrong

⁹² General Jean Duval, had written his observations in 1938, stating that air strikes on defending troops prior to ground battle in Spain had caused little material damage, but were seen to have inflicted a profound psychological impact. Jean Duval. *Leçons de la guerre d'Espagne*. (Paris: Plon, 1938), 83.

⁹³ SHAT 6N, 3006, *Leçons de la campagne en Pologne*. (October 1939).

to underestimate the historical impact of such a decision,” lectured the French Minister. “In the search for war guilt for the coming conflict, Poland’s decision to mobilise first, would attract the same derision as that attributed to Russia in 1914.”⁹⁴ Heeding the French advice, the Polish army had only seven hundred thousand soldiers activated to confront the initial onslaught. Had it been mobilized earlier, the Polish army would have fielded a maximum of two million men with which to oppose the 1.2 million Germans committed to the battle. Once the battle was joined, however, the Poles were never able to activate their remaining forces as concentration areas were ceaselessly bombed and strafed by the *Luftwaffe*. Essentially, whatever pieces had not been placed on the chessboard before the opening round, were never to be played at all. It was a lesson the French High Command would consider very carefully.

All reports from Poland quickly found their way to the desk of Maurice Gamelin, Commander-in-Chief of the French army. Throughout the first three years of his command (1936-39), Gamelin regularly downplayed the potential of massed armour to perform the kind of breakthrough hoped for by German planners. Prior to the war in Poland, Gamelin held a similarly restrained view of the potential for air power to determine the course of battle. At a meeting of the CPDN on February 23rd, 1939, the General was asked about the threat of air power against French troops in Tunisia. “What can aviation do,” he asked, “against men who

⁹⁴ Léon Noël. *L'Aggression Allemande contre la Pologne*, (Paris: Flammarion, 1946), 464-465. In his memoirs, Noël doth protest too much of his innocence regarding the disastrously late Polish mobilisation. Stating that the Poles were very hesitant to mobilise, his warnings only served to nudge them in the direction they were already leaning toward. However, his work also repeatedly mentions the confidence and belligerence of Polish military leaders and their willingness to fight for Danzig. It seems unlikely that such a pugnacious high command would hesitate to mobilise, given Poland’s dire military situation at the end of August 1939, unless urged to do so by its strongest military ally.

have dug themselves into the ground?”⁹⁵ General Armengaud, a key member of the Mission to Poland expressed the following in his post-war memoirs.

General Gamelin has claimed to have always recognised the importance of modern aviation...I occasionally had the opportunity to discuss such matters with the future généralissime...not once did he express an opinion on the matter, neither favourable nor critical, as though the topic of air power itself was of no interest.⁹⁶

Events in Poland compelled the Commander-in-Chief to reconsider his core assumptions concerning the role of modern air power. At a meeting of the Allied Chiefs of Staff, held only a week after the start of the German invasion, Gamelin made direct mention of his growing appreciation for the *Luftwaffe's* capabilities. He reminded British General Ironside that whenever the expected German attack took place in the West, the first task would be to grind the *Panzers* to a halt. Once this had been accomplished, it would be the Allies' turn to consider offensive actions of their own. The principal danger to these eventual operations, Gamelin argued, would not be enemy armour, but rather “the difficulties which would be presented by the *Luftwaffe*.”⁹⁷ Thus one week of war sufficed to remodel Gamelin's appreciation for air power. Recast from a secondary, tangential consideration in the overall course of a battle, it now assumed the highest level of tactical and strategic importance. German air power suddenly presented itself as the greatest obstacle to the successful pursuit of future Allied operations. The

⁹⁵ Jean Baptiste Duroselle. *La Décadence 1932-1939*. (Paris: Imprimerie Nationale, 1979), 395.

⁹⁶ Ibid, Paul Armengaud. *Batailles Politiques et Militaires sur L'Europe: Témoignages 1932-1940*. (Paris: Éditions du Myrte, 1948), 106.

⁹⁷ Patrick Fridenson et Jean Lecuir. *La France et la Grande-Bretagne face aux problèmes aériens (1935-mai 1940)*. (Vincennes: Service Historique de l'Armée de l'Air, 1976), 189.

Polish experience was indeed a crash course for French military strategists in the impact of modern aviation upon battlefield operations.

Political leaders were similarly impressed. Prime Minister Daladier was so unnerved by reports of German aerial dominance over the skies of Poland, that he began to fear for his nation's survival. Only eight days into the German invasion of Poland, Daladier confessed the extent of his fears to U.S. ambassador William Bullitt.

He said that he felt that his political life and probably his personal life as well could not last more than three months. He expected Hitler, as soon as the Polish attack should have been completed, to launch the entire German Air Force against France. The bombardments of France would be so terrible that the French people would blame him for the lack of French planes and would drive him from political life and indeed would probably kill him. He did not consider that the lack of planes was his fault, but he would be blamed for it.⁹⁸

British Prime Minister Neville Chamberlain was similarly impressed by the *Luftwaffe's* display of strength over Poland.

To my mind the lesson of the Polish campaign is the power of the Air Force when it has obtained complete mastery of the air, to paralyse the operations of land forces. The effects in this direction seem to me to have gone much beyond anything that we were led to expect by our military advisers.⁹⁹

As we will see, the fighting in Poland also exerted enormous influence on General Gamelin's strategic thought. However, before exploring the striking unorthodoxy of Gamelin's

⁹⁸ Orville H. Bullitt, ed. *For the President: Personal and Secret: correspondence between Franklin D. Roosevelt and William C. Bullitt*. (Boston: Houghton Mifflin, 1972), 373.

⁹⁹ A.D. Harvey, "The French Armée de l'Air in May-June 1940: A failure of conception". *Journal of Contemporary History* 25:4 (Oct 1990) 447-465.

response to the *Luftwaffe*'s exploits in the East, we must take a moment to clarify the French plans for national defense as they existed prior to September 1939.

Part 5 The Forward Defense

Since the end of the First World War, French military planners envisioned a move into Belgium at the onset of any future conflict with Germany. At a 1927 meeting of the *Conseil Supérieur de la Guerre*, Marshal Pétain stressed the advantages of a pre-emptive move into Belgium. The Marshal argued that creating a buffer between the front lines and France's northeastern industrial heartland was crucial in waging a war against Germany. At the meeting of the *Conseil Supérieur de la Guerre* in May 1932, he repeated his opposition to the idea of setting up a defensive line along France's border with the lowlands. Staunchly defending the French border would allow less flexibility, jeopardise industrial production and alienate the Belgian government. It was his official position that intervention into Belgium was the only way to ensure a close cooperation between the two national armies.¹⁰⁰ Pétain's arguments, backed by his personal reputation, were influential, and played a central role in coupling French strategy with a forward defence in Belgian territory. This plan would never be seriously challenged until the outbreak of war. This remained true even after Belgian King Leopold II's decision to reinstate his country's strict neutrality in 1936. The plan to take the fight into Belgium was upheld, even though communication between the two armies, or any form of joint staff talks, were now prohibited by international law. French strategists continued to envision an eventual

¹⁰⁰ Gamelin, *Servir II*, 70.

“rescue” of the Belgian army, putting distance between the front lines and France itself. A month following Pétain’s petition, at the C.S.G. meeting of June 4, 1932, another motion to prepare fixed defences along the French border was defeated by the narrowest of votes. The item in question was whether to extend the network of fortifications from Montmédy to the English Channel, thereby ensuring a steel barrier along any possible German invasion route.¹⁰¹ Both Gamelin and Weygand voted in favour of this proposal which was entirely feasible, despite financial and technological challenges.¹⁰² Chief among the latter was the fact that much of the terrain opposite Belgium shared the same topography as the lowlands: water-logged soil which required substantial draining before construction could begin. At the 1947 Serre Commission Inquiry, Daladier claimed such engineering obstacles were the decisive factor in the C.S.G.’s decision not to extend fortifications to the sea by a vote of 7 to 6. This missed opportunity to erect a solid line of modern defenses from Switzerland to the sea was France’s best chance to successfully resist Germany in any subsequent war. One cannot envision how the *Blitzkrieg* or any variation of massed armour tactics could have succeeded in penetrating a Maginot Line designed to funnel the invader into narrow killing zones surrounded by mutually supporting big guns, saturated in minefields and, most importantly, obstructed by 12 foot thick concrete walls.¹⁰³ Engineering obstacles to the project based on watery terrain would have certainly

¹⁰¹ The motion was introduced by Adolphe Messimy, President of the Army Commission in December 1931. Messimy’s proposal included the following observation, “Pour défendre au frontière même le bassin Lorraine du fer, vaut au même titre pour défendre à la frontière même le bassin charbonnier du Nord et du Pas de Calais, dont l’importance militaire est exactement équivalente.” SHAT DE 2016 SA 66, Note sur les préparations militaires concernant la défense terrestre, Oct. 1938.

¹⁰² SHAT 1K 224 15, À monsieur le president et messieurs les conseillers composant la cour suprême de justice (note from Gamelin’s written statement at the Riom Trials, 1942), p.8.

¹⁰³ The ingenious design of the Maginot fortifications included thinner rear facing walls which were vulnerable to most artillery. These were conceived to facilitate the re-conquest of any bunker lost to a German frontal attack while maintaining its defensive value along the crucial east face.

increased the cost of construction, however such an increase would only have signified a 10%-15% increase in overall expenditures.¹⁰⁴ This was a sizeable increase, to be sure, but hardly unreasonable considering its potential return in defensive security. Cost for the proposed extension was estimated between six and seven billion francs and might have constituted a very cost-effective portion of the one hundred and thirty-six billion spent on national rearmament between 1934 to 1939. The technical difficulties presented with sinking concrete fortifications into land with high water levels were hardly insurmountable and have been overestimated by historians for many years.¹⁰⁵ Edouard Daladier regretted the decision to leave the Line unfinished. Following the war, he reflected: “the goal of extending our fortifications from Longuyon and the Lorraine all the way to the sea would have been easily achievable,”¹⁰⁶ from a technical viewpoint. Daladier claims that the idea was opposed chiefly by the military leaders in the C.S.G. He claimed that since 1932, Weygand, who originally favoured Maginot Line extension plans, began leaning back toward the long-established strategy of a forward defence in Belgium. Any subsequent discussion on the matter of extending eastern fortifications ran into Weygand’s growing conviction that the defence of France was inseparably linked to the defense of Belgium. Political considerations then, rather than engineering or financial obstacles, were at the core of the decision to maintain an open border in the Northeast.

Most importantly, the construction of a fully extended Maginot Line was the only option consistent with the prevailing French defensive strategy. It was the only possible course of

¹⁰⁴ SHAT DE 2016 SA 66, Note sur les préparations militaires...

¹⁰⁵ See Martin Alexander, *The Republic in Danger*, 174; Julian Jackson, *The Fall of France*, 27; Ernest R. May, *Strange Victory*, 288.

¹⁰⁶ SHAT DE 2016 SA 66, Note sur les préparations militaires...

action to fully express the High Command's commitment to resisting an *attaque brusquée* before embarking on the process of assembling sufficient men and materiel to take the offensive. Once Belgium had withdrawn from its military accords with France, the best option for resisting a German offensive was an extension of the Maginot Line. Quite apart from tremendously increasing French defensive strength in the Northeast Front, such a decision would have, at long last, liberated France from its unsustainable commitments in eastern Europe. At the political cost of renouncing offensive action for the sake of Czechoslovakia, Poland and Yugoslavia (steep costs which France eventually incurred in any case); invaluable concrete might have been poured to barricade the northeastern border. Both Sedan and Dinant, the most obvious routes of egress from the nearby Ardennes Forest, would have benefitted from the same level of defence found at Mulhouse, Strasbourg or Metz. However, the decision to fully fortify the French border was never made. By a narrow margin, the idea of supporting the Belgians by advancing into the lowlands at the outbreak of war was maintained. The high command re-committed itself to the forward defence strategy with the twin goals of supporting the Belgian army, and ensuring the front lines were as distant from the French border as possible. By the autumn of 1939, this strategy had been developed along two separate lines: the *Escaut Plan* and the more ambitious *Dyle Plan*.

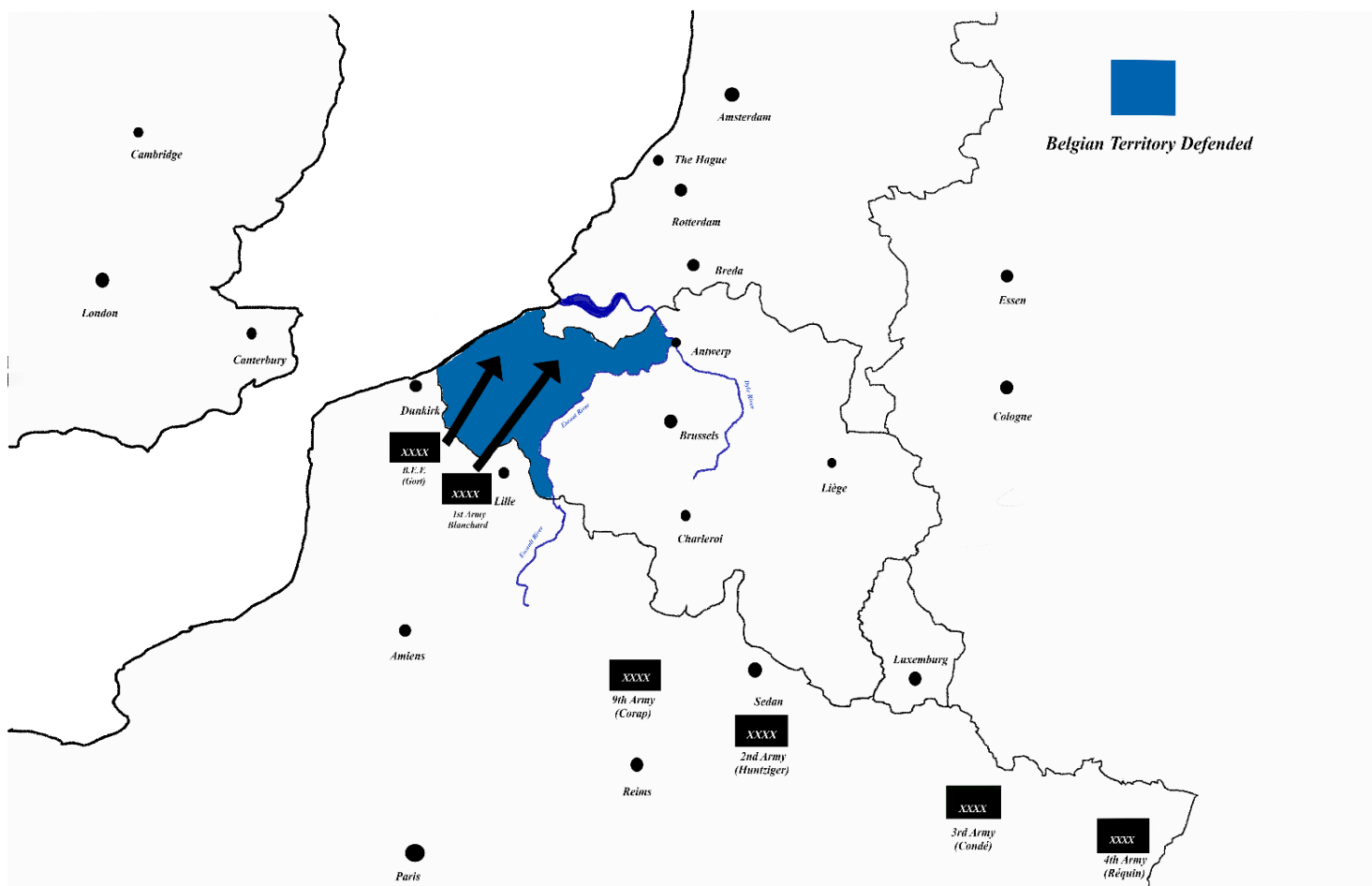
The *Escaut Plan*, or *Plan E*, was a forward movement to the Scheldt River, hinging on the cities of Antwerp in the north and Ghent in the center. Its advantages included a greater depth of defense, meeting the German forces at a distance from France's vital industrial northeast. The Escaut Plan would also allow France to incorporate the retreating twenty-two

Belgian divisions following their initial resistance on the Albert Canal. Finally, it would provide a strong defensive line behind the river which the Belgians would be encouraged to fortify. This was a modest intervention into Belgium which would screen a narrow strip of coastline and a few ports to the west of the Scheldt River. The bulk of Belgium's territory would remain unprotected and presumably sacrificed to Germany, at least for the opening stages of the war.

The inherent risk within the plan was that the French high command would remain unsure of the extent of Belgian preparations. Belgium's return to neutrality in 1936 prohibited the sharing of military preparations with France or any other country. As a result, French strategists prepared to make a stand in Belgium while still uncertain about the state of defensive works in the areas they intended to occupy. The only information which trickled down to the French high command came from informal channels and secretive communications between Gamelin and Belgian Chief of Staff, Édouard van den Bergen.¹⁰⁷ But to all intents and purposes, the plan to set up a defensive line in Belgium rested on wishful thinking. Until the event of a German invasion, French planners were not able to verify the level of fortifications which awaited them on the west bank of the Scheldt River. Nevertheless, any footrace with the German army into Belgium would be aided by the fact that every location along the proposed line of defence, including Antwerp, the furthest point of advance from the French border, was closer to France than it was to Germany. This was an acceptable risk, even in light of the recent demonstrations of German mobility in Poland.

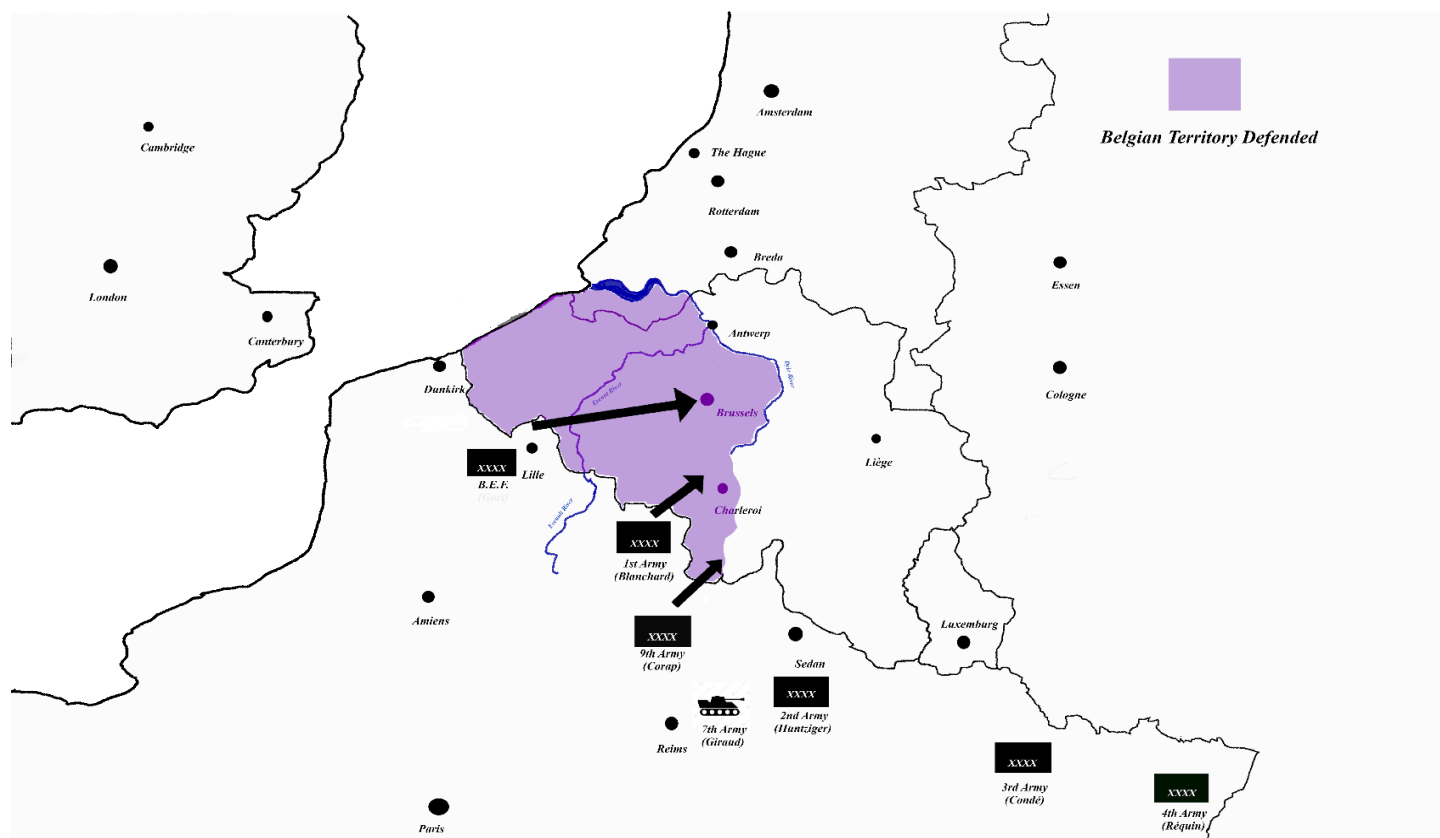
¹⁰⁷ Gamelin had a high degree of confidence in this contact despite the fact that few of the expected works had been completed by the Belgians by May 10, 1940. See Gamelin, *Servir t.2*, 186 and Pierre Le Goyet, *Le Mystère Gamelin*, (Paris: Plon, 1957), 217-220.

Plan “E” – The Escaut Plan



In November 1939, Gamelin expanded the scope of Belgian intervention by developing the *Dyle Plan* or *Plan D*. This consisted of a deeper push into Belgium, with a view to taking up positions on the Dyle river line where it joined the Meuse.

Plan “D” – The Dyle Plan



The Dyle Plan offered the advantage of shortening the front line of defence from 750km to 680km¹⁰⁸. It also aimed to preserve the majority of Belgian territory from being overrun while simultaneously depriving Germany of some important Channel ports. This last consideration was a matter of primary interest to France’s allies in Britain. Another advantage offered by this more ambitious excursion into Belgian territory, was that future offensives against Germany,

¹⁰⁸ Gamelin, *Servir I*, 90-91.

which Gamelin had in mind for 1941 or 1942, would begin from a shorter striking distance to the industrial Ruhr region¹⁰⁹.

Such advantages were noteworthy, but the Dyle Plan failed to take into account a number of fundamental risks which should have, according to French military doctrine, dissuaded Gamelin from adopting the maneuver. First, the Dyle Plan was considerably more adventurous in the amount of distance it required the armies to traverse. Some units from the French 1st and 9th army as well as the British Expeditionary Force were expected to advance some 60km further than allocated in the Escaut Plan.¹¹⁰ The motorized and mechanized units within these armies were capable of conducting such a headlong rush but even these mobile units were trained to act in accordance with the tenets of the plodding, cautious, methodical battle from the moment they disembarked from their transports.

Both plans required a rapid advance into Belgium by the northernmost French armies. It is not the case, however, that this signalled a conceptual swing toward greater mobility in French military methods. Gamelin envisioned no such break from the principles of the methodical battle. Rather, the rush into Belgium was intended only as a rapid redeployment to new defensive lines. Upon encountering the enemy, French units were expected to resume the practice of methodical battle, moving at the pace of infantry, and supported by lengthy artillery

¹⁰⁹ Gamelin, *Servir I*, 105-6.

¹¹⁰ It was for this reason that the Dyle Plan met with opposition among some of France's senior commanders. Among them General René Prioux, who as head of First army's Cavalry Corps was in charge of defending the Gembloux gap. Prioux officially objected to the Dyle Plan. Other high-profile objectors were General Corap, commander of 9th army and General Blanchard commander of the 1st army. General René Prioux, *Souvenirs de Guerre* (Paris: Flammarion, 1947), 35.

barrages.¹¹¹ Large motorized groups under fire by enemy air forces were expected to leave the road and travel over country. If French units were challenged by the *Luftwaffe* anywhere *en route* to the Dyle, off road travel would have reduced speed considerably. In such conditions, French units would be hard pressed to reach the Dyle ahead of German spearhead units.

General Georges, Gamelin's second in command and Commander of the Northeast Front, perceived a threat to the French center posed by the *Dyle Plan* and objected to the deployment of so many divisions into Belgium. He presented his opposition to the plan on November 30th in a letter to Gamelin. This document stated, "In case of an enemy attack in strength on the center of our line...we could be deprived of the necessary means to strike back."¹¹² Undeterred, Gamelin deliberately excluded Georges from meetings in which he attempted to convince military and civilian leaders of the merits of his *Dyle Plan*. At a meeting of military chiefs in November 1939, Gamelin "sold" his idea to Billotte (Chief of First Army Group), Giraud (future commander of the Seventh army) Darlan (Admiral of the Fleet) and D'Astier (Chief of Air Operations in the North) while neglecting to inform Georges of the meeting.¹¹³ Gamelin's single minded focus on the northeast theatre, to the detriment of adequately preparing the French center was also challenged by General André Corap, Commander of the Ninth army, charged with

¹¹¹ *Servir I*, 235-6, 286. Here Gamelin claims that, properly executed, the methodical battle could have been very successful against the German invasion. In his opinion, there was nothing wrong with the doctrine outlined in "his" *Instructions sur l'Emploi Tactique des Grandes Unités*. Gamelin, *Servir I*, 236. Gamelin uses the possessive pronoun in referring to this manual (*Servir I*, 235), which was referred to as the "Gospel of the army". See Doughty, "De Gaulle's Concept of a Mobile, Professional Army", *Parameters*, 4:1 (1974), 26. Rather than finding fault in "his" doctrine, Gamelin spends several paragraphs outlining how his subordinates failed to properly execute his orders.

¹¹² Minart, *P.C. Vincennes I*, 103.

¹¹³ Gamelin, *Servir*, t.2, 82-83; Gunsberg, *Divided and Conquered*, 131.

defending the French “hinge” near the Ardennes. On April 15th, Corap once again pleaded the Commander in Chief to address the obvious weakness of this region’s defensive preparations, to which an irritated Gamelin replied, “The Meuse? The Meuse! That doesn’t interest me now!” To his mind the “B” divisions charged with defending the region opposite Sedan and Dinant “while of lower value...were perfectly appropriate to hold the less dangerous parts of the front.”¹¹⁴

This area was, however, of great interest to General Georges who never tired of reminding his superior of its importance to the overall solidity of the French front. Unlike Gamelin, he recognised a danger to the entire defensive effort should the German hammer blow fall upon the region between the Meuse and Oise rivers. “Enemy success in this sector could lead to the outflanking of our northern armies from the east, and of our armies in Lorraine from the west,”¹¹⁵ he advised.

What was Gamelin trying to accomplish by this risky forward dash into Belgium? In essence, his concept of modern warfare was of a mass of men and machines thrown into a limited space, where maneuverability became difficult and where movement was measured in yards, rather than miles. Everywhere in his military and personal writings, Gamelin refers to this concept as *saturation* of the battlefield. It was his belief that the *attaque brusquée* could be halted by constricting the movement of German soldiers and *Panzers* within a limited area,

¹¹⁴ SHAT DE 2016 SA 66, d4, Maurice Gamelin: Sommaire des forces disponibles, May 10, 1940.

¹¹⁵ Cited in Tournoux. Général P.E. *Défense des Frontières: Haut Commandement – Gouvernement 1919-1939*. (Paris: Nouvelles Editions Latines, 1960), 275.

delineated by natural obstacles. The continuous front was really an organization of men and equipment whose objective was to continually funnel more ever more resources into a confined area, thereby rendering the enemy's movement slow and costly.

Time and again, as reports of newly developed German armoured divisions reached his attention, Gamelin tried to steady the nerves of political and military leaders by returning to his conceptualization of the modern, saturated battlefield. The *Panzerdivisionen*, he believed, would not find the room to execute the same vast encirclement maneuvers they had conducted in Poland. Where open and flat grasslands sped their progress in the east, German tanks would only find a deadly morass of steel and soldiers to prevent their ingress to the west. He only warned against diluting the forces available to him in the northeast. "When the defender lacks the materiel to effectively 'hold' the front, if he is spread out too thinly, he is generally destined for a rapid defeat faced with an opponent who is focused on the use of mobile warfare." Elsewhere he advised, "it is important that the terrain to be defended is not too large for the forces deployed there. Their effectiveness is maximised when we can 'saturate' these spaces."¹¹⁶ Gamelin believed that the sheer size of the German *Panzerdivision*, stretching out for miles when advancing in columns was its Achilles heel. The great spaces needed to properly deploy such an enormous asset would limit its possibility for manoeuvre and contribute to saturating the battlefield all the more quickly. In response to requests by General Flavigny for the creation of a third light armoured division in early 1939, Gamelin replied: "Stop bothering me with your *Light Mechanised Divisions!* We already have two. That's more than we need. Besides, there won't

¹¹⁶ Gamelin, *Servir t.1*, 225.

be enough room between the Maginot Line and the sea to manoeuvre them.”¹¹⁷ Asked by the National Defense Commission why France could only count on three armoured divisions to counter the nine German *Panzerdivisionen* available in July 1939, Gamelin offered the following reply:

It is not because the Germans are committing an enormous error that we should feel inclined to imitate them. Please understand that there will never exist a field of battle large enough to allow for the development and use of several large divisions like these.¹¹⁸

The concept of a saturated battlefield that would effectively neutralise the German practice of mobile warfare was not a peripheral or complementary aspect to General Gamelin’s military philosophy. The regularity with which he made reference to this idea in both private and official forums demonstrates its foundational influence on the development of his strategy. Wherever the Germans chose to press their attack, they were to be first slowed and then ultimately halted by an ever-increasing number of men and equipment. The all-important element of mobility which informed so much of the new German motorized doctrine of war, would be effectively countered by congesting the roads, intersections, and open fields directly ahead of the *Panzerdivisionen*. After removing the enemy’s ability to maneuver, it would be the turn of French artillery to whittle down the invader’s strength and put an end to the long feared *attaque brusquée*. This was the Commander-in-Chief’s idea on how best to win the opening defensive round of the war, creating a stalemate which would gradually shift in the Allies’ favour

¹¹⁷ Personal account provided by General Demetz on January 29, 1969. Quoted in Pierre Le Goyet, *Le mystère Gamelin*, (Paris: Presses de la Cité, 1975), 90.

¹¹⁸ *Serre Commission*, vol. vii, p.2229.

as they amassed an ever-increasing amount of resources over the course of 1940 and 1941. “We will aim to deliver, as early as possible, an offensive battle; but one which in the beginning will take on aspects of a modernised battle of the Somme.”¹¹⁹

Saturating the battlefield would, of course, depend largely on the number of soldiers at Gamelin’s disposal, with which to man to continuous front. In early 1917, France occupied the northeast front with 2,910,000 soldiers. By early 1940, the nation was only able to put 2,330,000 men into uniform to accomplish the same task. Taking into account the release of a further 160,000 soldiers to increase security around the Italian border, France had 760,000 fewer soldiers to face a German assault in 1940.¹²⁰ Fully aware of the demographic shortfall, Gamelin sought to maintain as many units on the front line as possible. To this end, he vigorously resisted attempts by the civil government to whittle away divisions here and there on matters which did not directly involve the defense of the Northeast Front. These included proposed military expeditions to Finland, bombing runs over Soviet oil fields, and proposed operations upon newly opened fronts in Scandinavia or Salonika.

With so much documentary evidence of Gamelin’s faith in his ability to saturate the paths of invasion and safeguard the entry routes into France from German aggression, we can appreciate with greater clarity the fine points of his strategic planning. Success in blunting the

¹¹⁹ Gamelin, *Servir t.2.*, 345. This optimistic view was not shared by Prime Minister Edouard Daladier who did not believe France and Britain alone would ever be able to amass the resources required to invade Germany. In a letter to President Roosevelt dated September 8th 1939, he wrote: “If we are to win this war, we shall have to win it on supplies of every kind from the U.S. We can hold for a time without such supplies; but England and ourselves cannot possibly build up sufficient production of munitions and planes to make a successful offensive possible.” See Orville H. Bullitt, ed. *For the President: Personal and Secret: correspondence between Franklin D. Roosevelt and William C. Bullitt.* (Boston: Houghton Mifflin, 1972) 368.

¹²⁰ Jacques Minart, *PC Vincennes, Secteur 4 t.1* (Paris: Éditions Berger Levault, 1945), 58-59.

German attack would depend upon confronting it with sufficient force to clog the advance and congest its corridors of movement. Haunting Gamelin was the possibility that an insufficient number of divisions were at his disposal to realise this goal. "If our forces were sufficient in number to 'hold' the spaces assigned to them...they were too few to permit us to 'saturate' those spaces. Therefore, a defensive strategy in 1940 would require a very delicate planning and called for a *supreme degree of manoeuvre*."¹²¹

The French army's maneuvering was to take place chiefly in the far north where it would advance to defend Belgium. Crucially, however, its ability to remain mobile in the heat of battle had recently been called into question following the devastating display of German air power over Poland. Events in the east had clearly shown French observers that with the advent of modern air interdiction, reserves could no longer be counted on to reach their concentration and staging points. They saw that German air supremacy, once won, resulted in the near total paralysis of large military units as they attempted to move along roads, railways or open fields. The Polish experience informed Gamelin that the process of funnelling a continuous stream of reserves onto the battlefield (the essential component of his *saturation* strategy) could be disastrously impeded by the enemy's air force. If the battlefield could not be sufficiently constricted and maintained as such through the steady Verdun-like rotation of fresh soldiers and equipment, irreparable breakthroughs such as those inflicted in the east could conceivably be forced upon the French continuous front. His study of the events in Poland showed his concern

¹²¹ Gamelin, *Servir t.1*, 310. According to Gamelin, France reached the absolute upper limit of its ability to recruit soldiers into the armed forces by the end of 1936. The total number of large French units would not be increased until after 1941 when the nation's demographic decline, a legacy of fallen birthrates following the First World War (the so-called *années creuses*), was at last reversed. SHAT GR 1K 224 15, Maurice Gamelin: Mémoires 6: Pièce 118. (Personal notes on the deposition of Raoul Dautry), August 5, 1941, p.2.

with the immobility of Polish reserves once targeted by the *Luftwaffe*. “These troops could not receive any support and Polish counter-attacks were rendered impossible. Soldiers were nailed to the ground as soon as they began to relocate by a cloud of aircraft.”¹²²

Paul Armengaud, key member of the French military mission to Poland had already warned Gamelin of just such a danger:

I told Gamelin not to consider a maneuver like Joffre’s retreat to the Marne. Given the mobility and air support of the German army, any great retreat would soon become a rout...if a battle on the borders was lost due to a German breakthrough, through which they sent the bulk of their armoured divisions, preceded by their air force, the battle of France would be irredeemably lost.¹²³

It was a new aspect of modern war, one which threatened the very heart of the *Generallissime*’s strategic thought for the defence of France. Over the next several months, up until the breaking storm of May 10th, 1940, Gamelin would respond to these new circumstances, by conducting a series of fatal reorganisations of the French army’s disposition.

Part 6

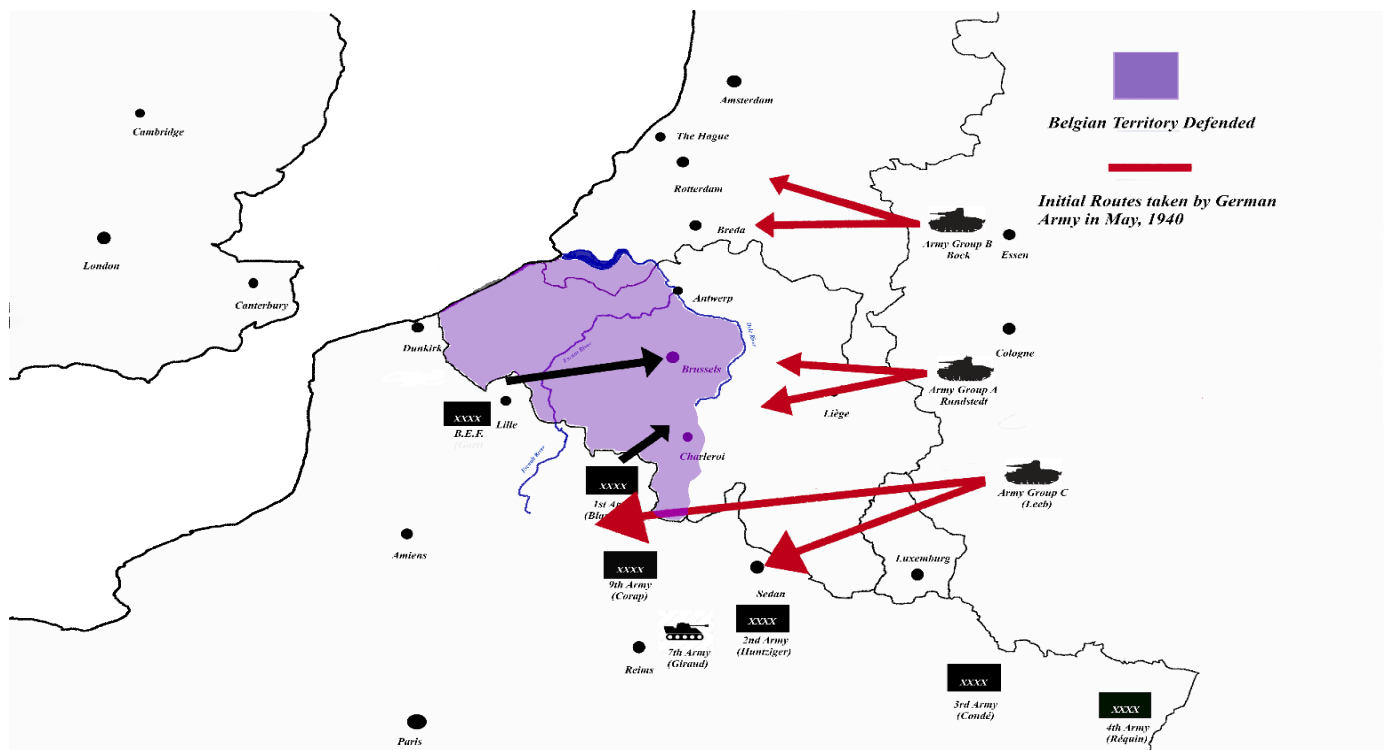
Scattering the Reserves: September 1939 – April 1940

Gamelin expected the decisive encounter to take place in the Gembloux Gap, a long swath of unobstructed flatlands in central Belgium followed by invading armies westward since antiquity. There, a narrow gap between the Meuse and Dyle rivers creates a straight shot of

¹²² Ibid, t.3, 492-493.

¹²³ Armengaud, 213.

grassland fields heading directly toward Valenciennes and Cambrai in Northern France. This was ideal territory for armoured operations, and it was there that Gamelin made plans to blunt the German offensive. To that end, he favoured the more ambitious of the two existing plans for Belgian intervention: the *Dyle Plan*. This set his front line directly west of the Gap where he could confront the *Panzers* at their most likely point of incursion. Moreover, this area was confined by natural obstacles (Sambre, Meuse and Dyle rivers) to the south and north. It provided the very type of battlefield for which Gamelin devised his strategy: an enclosed area where he could pour enough men and equipment to deprive the German army of its mobility.



The Seventh Army, commanded by General Henri Giraud was initially stationed just east of Reims. It was a position that would have allowed it to rapidly challenge the eventual German attack towards Sedan.

Before the invasion of Poland, Gamelin believed he had enough forces to saturate the Gembloux Gap and still keep the rest of his continuous front secure from unforeseen events. The *Dyle Plan*, in its original conception, involved ten French and five British divisions. These would advance into Belgium and take positions along the river's west bank. The vast majority of France's remaining divisions remained integrated in what Karl-Heinz Frieser has aptly referred to as the "safe French tree trunk"¹²⁴. Reserves at this point were considerable, including the Seventh army, an elite, mobile and cohesive unit, stationed near the center of the French line, near Reims.

After the brutal lessons of the war in Poland, Gamelin began to alter his conception of the *Dyle Plan*. In late September, he increased the number of divisions on his left wing from fifteen to twenty-two. This included many of his most mobile units. This was further amended on October 11th, just five days after the Polish army laid down its arms. At this time Gamelin ordered the Seventh army removed from the strategic reserve and moved to the army's left wing near Antwerp. There its commander, General Henri Giraud, would remain, ready to act as operational reserve. This now increased the forces involved in the dash through Belgium from twenty-two to twenty-nine divisions.

The importance of these reforms cannot be overstated. They were taken in direct response to the events which had only just taken place in Poland. Specifically, they reflected Gamelin's growing conviction that the German air force had the means to prevent his reinforcement of threatened sectors once hostilities began. This decision served to reset the

¹²⁴ Frieser, 92. "The safe French tree trunk" refers to the static defenses of the Maginot Line. North of the Line, the mobile parts of the French continuous front would be the ones taking part in the forward movement into Belgium (1st, 9th and 7th armies, alongside the B.E.F.) which, to pursue Frieser's analogy, would constitute the more vulnerable "branches" deprived of the advantage of well-prepared battlefields.

chessboard, placing his most powerful and mobile reserves as close to where he expected the fighting to take place as possible. It essentially redefined the reserve units into frontline units. This was especially important in the case of the Seventh army which had been removed from its position at Reims, a location where it might have played a crucial, if not decisive role in events to come, and repositioned it on the French army's far left.

Thus, during the period of September-October 1939, as detailed and accurate reports began to flood back to Paris, outlining the tactics and efficacy of the German air force, Gamelin felt the need to redeploy his army. His growing concern was the effect of modern aircraft upon the nerves and morale of unseasoned troops. This worry had been repeatedly raised by French military intelligence since the Spanish Civil War. One report from May 1938 made it perfectly clear:

The use of aviation creates a war of paroxysm from the very start. We need only recall the nervous deficiencies observed in the opening days of the last war during the great German operations upon French and Belgian fortifications to measure the effect upon inexperienced soldiers which we can expect following the use of German aviation which can be used to its maximum effect from the first day of battle.

Take for example, one of our divisions formed in one particular province somewhere in the interior. Imagine it is nearing its area of concentration. It has never heard an enemy bullet nor the firing of his canon. During its opening manoeuvres, on its first line of defense, 200, 300 planes may descend upon it. It would receive in just a few minutes tens of tonnes of bombs, thousands of bullets. It would emerge from peacetime to enter all at once into another "Verdun", short, brutal and terrible."¹²⁵

¹²⁵ SHAT DE 2016 SA 68, Remarques sur les opérations en Espagne, Report by the 2ème Bureau, May 5, 1938.

His goal was to reposition a number of reserve units from areas in the rear and integrate them within the front line. “The defense of our territory rests on our ability to resist, from the start, the enemy’s effort at a sudden brutal offensive. In this regard, all that is not already in place runs the risk of playing no role whatsoever in the battle”.¹²⁶ Or, as he wrote to Georges on October 14, 1939, “at the moment of the enemy’s attack, the immobility of our armies will provide the greatest security against aerial bombardment”.¹²⁷

This was a striking departure from established traditions within the French army which had long favoured the sweeping movement of massive reserve units. Ever since the crushing defeat of France’s smaller, professional army by Bismarck’s overwhelming number of hastily trained reserves in 1870, the importance of secondary units was paramount to French army dispositions. In 1914, General Joseph Joffre placed enormous reserves behind his armies to compensate for any unforeseen setbacks. As the focus shifted from offensive to defensive priorities after 1915, this reserve force grew to comprise half of the available French divisions (forty-seven out of ninety-eight).¹²⁸ Only the existence of such a safety net had saved France from the *Schlieffen Plan* and later, from disaster at Verdun. As a result, maintaining a strong strategic reserve grew into a central precept in the French concept of warfare. After the last large-scale French wargames prior to hostilities in June of 1935, the high command published its conviction that careful use and constant replenishment of large reserves forces were among a

¹²⁶ SHAT DE 2016 SA 66, Note sur les préparations militaires concernant la défense terrestre. October 1939. (Gamelin’s emphasis).

¹²⁷ SHAT GR 1K 224 15, Note au Général Georges, October 14, 1939.

¹²⁸ Paul Reynaud, *Au Coeur de la Mêlée*...440.

Commander's top priorities. This became official doctrine of the French army and was published in the following year's army manual:

The Commander exerts his will principally through the use of units held in the rear and of reserves...he controls their entry into the battle as well and directs their actions as reinforcements to feed and sustain the battle. He concentrates his final reserves in order to obtain decisive results in the area of his choosing. As he engages them, he works toward gathering together new reserves. He constantly replenishes his reserves with forces from the rear or gathered from another point of the theatre of operations...constantly aware of the need to reconstitute new reserves.¹²⁹

Until 1939, the notion was never challenged in any published work, nor was it ever questioned in any of the civil/military committees: the *Conseil Supérieur de la Guerre*, the *Haut Comité Militaire* or its successor after 1936, the *Comité Permanent de la Défense Nationale*. Gamelin's revolution in the deployment of French military forces thus took place without precedent and solely on the Commander-in Chief's personal initiative.¹³⁰ This process reached its peak in March 1940, with the *Breda Variant*, Gamelin's final gambit to increase his army's forward strength to its greatest possible limit.

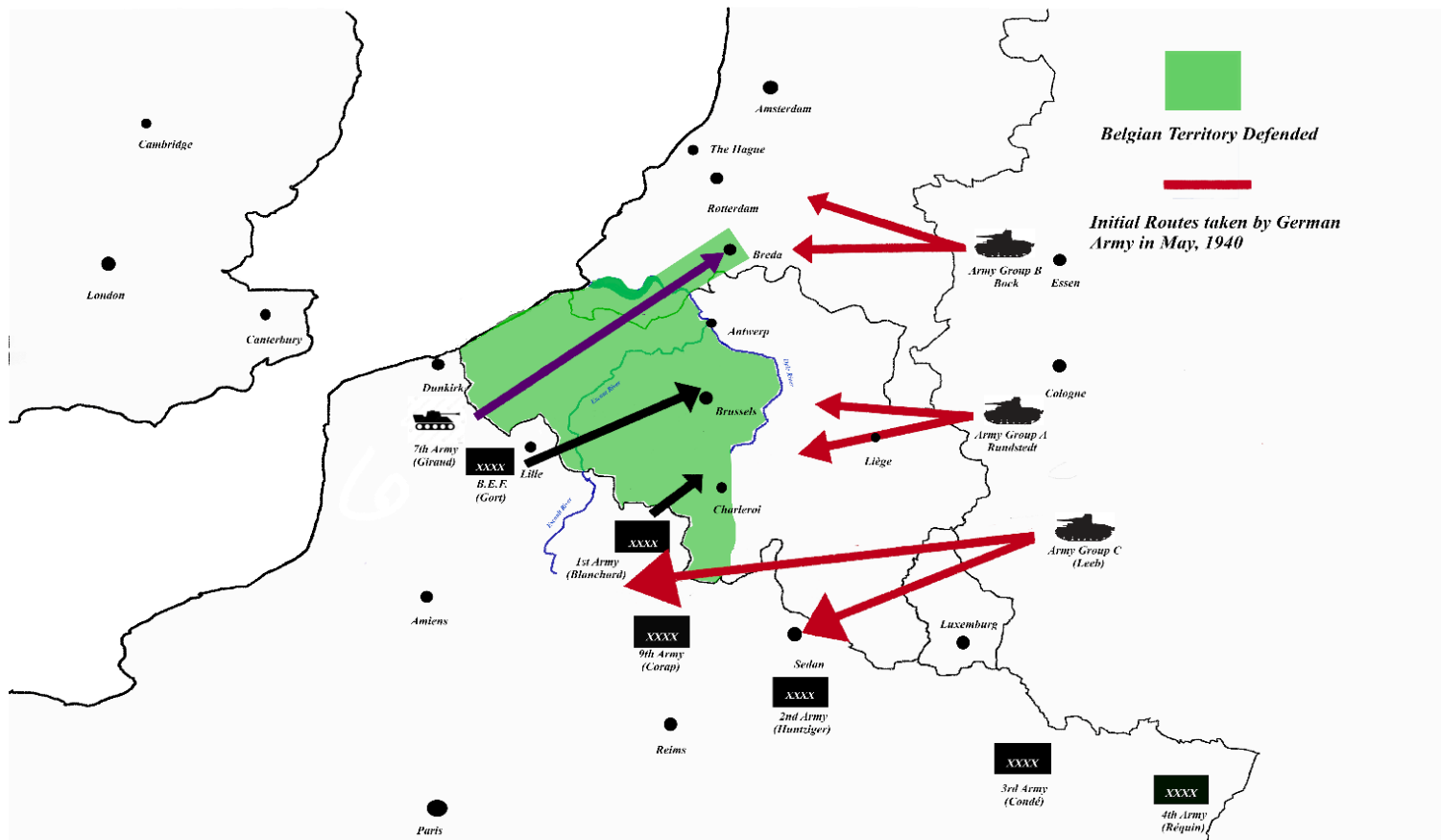
Part 7 The Breda Variant

¹²⁹ SHAT GR 7N 4025 d.12, Notions stratégiques suite aux manoeuvres générales du 24-29 juin, 1935. (Undated, mid 1935).

¹³⁰ At the Parliamentary Commission of 1947, General Félix-René Altmayer accurately summarized the French army's traditional emphasis on powerful reserves behind the front lines: "Pendant la bataille, quand un chef n'a plus de réserves, et ne peut pas s'en reconstituer, il a perdu sa 'liberté d'action' et sa faculté d'initiative; il n'est plus qu'un spectateur, capable seulement de surveiller...Il ne peut plus, faute de moyens, imposer sa volonté à l'adversaire, sur la direction et au moment voulus." Testimony of General Altmayer (May 11, 1950) entitled "Note sur le réduit Breton". Assemblée Nationale. *Rapport fait au nom de la commission chargée d'enquêter sur les événements survenus en France de 1933 à 1945 : Deuxième Partie*. (Paris : Imprimerie de l'Assemblée Nationale, 1947),382.

Until March 1940, General Henri Giraud's Seventh Army had been designated as the strategic reserve. Highly trained and mobile, the Seventh Army had originally been stationed in Reims, near the geographic center of the continuous northeastern front where it would be well positioned to respond quickly to a threatened sector anywhere along the line. The mobility and cohesiveness of this army would allow it to quickly reposition itself anywhere along the border regions. The High Command believed Seventh Army capable of quickly redeploying to either end of the Northeast Front in case of need. That is to say that from its initial base at Reims, it could rapidly move to support the armies in Belgium or, conversely, to react swiftly against German activity on the southern wing, opposite Switzerland.¹³¹ In the case of enemy pressure in the Ardennes, it was already ideally positioned to deliver a timely and powerful counterattack.

¹³¹ SHAT 7N 3697, État-Major de l'Armée: Missions des armées et des groupes d'armées – Mission de la VIIe armée (réservée) (Undated, early-mid 1939).



The Breda Variant placed 7th Army at the far left of the Allied front, shouldering the English Channel.

The plan would situate Giraud's forces as far as possible from the center of the German attack in May 1940

Seventh Army consisted of one DLM (light armored division), two motorized divisions and three class "A" infantry divisions.¹³² In the immediate wake of the Polish campaign, Gamelin made the decision to redeploy this large unit to the far-left wing of the French front line.

¹³² The battlefield strength of a French DLM versus the German *Panzerdivision* can be challenging to assess. The designation "Light" division did not refer to its armament but rather to the fact that it could deploy quickly and cover a considerable distance before needing to resupply. A DLM consisted of 190 tanks accompanied by its own dedicated support vehicles and artillery. The considerable strength of the DLM is best appreciated in light of the 1st DLM's performance at the battle of Hannut, Belgium (May 12-14, 1940), where it stopped the 3rd and 4th *Panzer* divisions cold.

This would greatly weaken coverage of the center, in favour of strengthening the forward-moving left flank. Over the next six months of *Phoney War* Gamelin devised an increasingly active role for Seventh Army. In his *Instruction Personelle et Secrète no. 11*,¹³³ issued on March 12th, Gamelin ordered the unit to not only advance alongside the forward units as they rushed into Belgium, but to race ahead of them into Holland. There they were to link up with Dutch forces in Breda and attempt to weld a common front of French, Dutch and Belgian forces. This was the Breda Variant, which ensured that the number of reserve forces available behind the continuous front would be perilously thin.

The Breda Variant immediately met with strong opposition from General Georges, the Commander of the Northeast Front who was responsible for moving the pieces on Gamelin's chessboard. Georges preferred to move the British Expeditionary Force to the extreme left flank, against the North Sea. This would allow him to reclaim the Seventh army. In his view, it was better to preserve the Seventh army in its role as a strategic reserve. He also wanted a second strategic reserve, General Touchon's Sixth Army, to take position behind the right flank near Dijon. In this way, both ends of the Northeastern front would be solidly backed up by cohesive forces, trained to act together and well positioned for rapid response to unforeseen developments. Gamelin was not impressed with the suggestion and declared his belief that Seventh Army's participation in the thrust towards Belgium served important military and political goals. "For me," wrote Gamelin, "my decision to place on our left flank one of our best, certainly the most brilliant of our generals, Giraud, was taken in consideration of the interallied war effort; I

¹³³ Gamelin, *Servir* III, p.177.

decided upon this delicate task not only as strategically important but also vital in terms of morale and psychology.”¹³⁴ In his mind, sending Seventh army forward in a mad dash to Holland was key in fortifying the morale of the BEF, Dutch and Belgian armies operating throughout the region. This, he believed, was more important than maintaining a strong strategic reserve which might not find itself able to join the battle in progress, when called upon, due to German air interdiction.

Like General Georges, General Billotte, Commander of the First Army also signalled his concern over the plan. In his “Study on the possibility of an intervention into Holland”, Billotte warns that the operation would only be possible if France’s allies were all equally committed to its execution. “The establishment of a continuous Franco-Belgian-Dutch front in the region around Breda can only be imagined if the Belgians and the Dutch formally commit to specific positions of resistance.”¹³⁵ Such coordination with France’s allies had not been prepared and would never be seriously attempted. Gamelin would rely on hope that when the time arrived, all three armies would be successful in coordinating their actions and movements while under fire. In the margins of Billotte’s report, General Georges jotted “it’s a wild adventure. The Dutch are not prepared to defend themselves. We have no agreements with the Belgians. Give up the dream!”

General Giraud, Commander of the Seventh Army, who would be charged with executing the Breda Variant, also prepared a report outlining his initial concerns. Like Billotte, he stressed

¹³⁴ Gamelin, *Servir t.3*, 164.

¹³⁵ SHAT DE 2016 SA 68, General Billotte: Étude sur la possibilité d’une intervention en Hollande, Novembre 30, 1939.

“Dutch and Belgian participation must be fully assured. Timetables, mission locations and available forces must be made common knowledge ahead of time.” Upon reading this report, General Georges wrote his impressions on the margin of the page, commenting: “All this is fantasy since there still exists no possibility of concluding any agreements”.¹³⁶

Giraud’s report was analysed by the *3e Bureau* in charge of army operations. In early January, it produced a bleak assessment of the plan’s chances for success:

The operation planned for the VII Army would send it two hundred kilometers from the French border and only eighty kilometers from the German border... This manoeuvre wrongly assumes a strong understanding exists between the Belgians and Dutch to act in concert with one another... In addition the materiel devoted to this mission are greater than those we can spare while still conducting our principle manoeuvre to the Dyle River and Gembloux Gap... In conclusion, there is no reason to pursue these plans for the VII Army and instead to re-attach it to the First Army Group.¹³⁷

General Georges never altered his conviction that the Seventh army should retain its role as a mobile reserve army. On April 14th, he wrote to his superior officer the following suggestion: “We could recover substantial forces by reconsidering the mission assigned to the left wing of our disposition. This would allow us to replace the Seventh army with a smaller corps of two divisions.”¹³⁸ Gamelin responded the next day, signalling his intention to “maintain the mission assigned to Seventh army as it appears impossible to me to completely abandon Holland.”¹³⁹ Gamelin’s belief in the feasibility of the manoeuvre defies logical analysis. Both

¹³⁶ SHAT DE 2016 SA 68, General Giraud: “Étude sur une intervention éventuelle de la VIIème armée en Hollande méridionale (région Bréda), December 3rd, 1939.

¹³⁷ SHAT DE 2016 SA 68, Synthèse du G.Q.G. 3ème Bureau January 7th, 1940.

¹³⁸ SHAT GR 1K 224 15, Extraits d’une lettre du Général Georges, April 14, 1940.

¹³⁹ Gamelin, *Servir*, t.3 342-343.

senior officers entrusted with the operation had already formally expressed their opposition to the plan. In addition to this, a dire and detailed warning was prepared by the *3ème Bureau* to inform the High Command of the inherent dangers to any intervention in support of Holland.

Such an operation...conducted so near to German aviation's zone of action, within very limited territory, upon soil which prohibits the digging of trenches and shelters, runs the significant risk of turning into a catastrophe. Conclusion: The operation contains serious risks which seem incommensurate to the benefits which we might anticipate.¹⁴⁰

The last significant voice from the high command who spoke out against a manoeuvre into Holland came from General Maurice Blanchard, head of the First Army. Blanchard focused his critique on the operational difficulties of the proposed intervention. He noted that it would require between ten to twelve days to dig in properly after reaching Breda. "We cannot then ignore the possibility of an encounter with the enemy before preparations are complete. The army would be thus taken in *flagrante delicto* and forced to deliver battle under unacceptable conditions...an encounter battle of the riskiest sort."¹⁴¹

The addition of Blanchard's objection presented Gamelin with a solid wall of resistance to the Breda Variant voiced by every senior commander under whose responsibility the operation would be conducted. To this could be added opprobrium from the Commander of the Northeastern Front and the Army's Bureau of Operations. Such unanimous criticism for the plan was insufficient, however, to deter Gamelin from setting his vision into motion. Only twelve days later, on February 23rd, he confirmed the Breda Variant in his *Instruction Personnelle et*

¹⁴⁰ SHAT DE 2016 SA 68, Synthèse du G.Q.G. 3ème Bureau January 7th, 1940.

¹⁴¹ SHAT DE 2016 SA 68, Note by General Blanchard: Objet: Hypothèse Canal Albert, February 11, 1940.

Secrète No. 10. This was repeated on March 12th in his subsequent *I.P.S.* wherein he added “the VII Army and the forces it has recovered, will establish its position east, at Breda. Such a manoeuvre can obviously not be staged in advance since we are unable to share in Dutch or Belgian preparations. This I am working steadily toward achieving.”¹⁴² These orders were written only a few days after the French Intelligence Office issued a report confirming “the Belgians are and will continue to be for the foreseeable future fixed on refusing all contact or communication with the Dutch.”¹⁴³ The Intelligence Service had already determined that for their part, the Dutch were similarly reticent to break the letter or spirit of neutrality. “Close inspection of the Dutch preparations show that they are in no way inspired by the idea of coordinated action with the Belgian army.”¹⁴⁴

Nevertheless, Gamelin placed his hopes on two events, neither of which would come to pass. Firstly, he hoped to succeed in engaging in staff talks with Dutch and/or Belgian officers with a view to establishing coordinated defense plans. Secondly, in referring to the “VII Army and the forces it has recovered”, it is clear that he hoped to add retreating Dutch and Belgian soldiers to the Seventh army’s ranks, thus swelling its numbers as it moved forward. In the end, he failed to establish any meaningful communication with either Allied nation before the storm broke on May 10th. Additionally, his hopes of absorbing retreating Dutch soldiers into the ranks of Seventh army were in vain as Dutch plans for retreat directed them to the north towards Amsterdam, away from advancing French soldiers. Accepting all the risks associated with his

¹⁴² SHAT DE 2016 SA 67, Gamelin, Instruction Personelle et Secrète no. 11, March 12, 1940.

¹⁴³ SHAT DE 2016 SA 68, 2^{ème} Bureau: Rapport à l’État-Major de L’armée de Terre, February 20th, 1940.

¹⁴⁴ SHAT DE 2016 SA 68, 2^{ème} Bureau: Note sur les mesures militaires prises par la Hollande, October 3, 1939.

plan and hoping for the best, Gamelin finished his *Instruction* with the advice: “Under these circumstances, it will fall upon the general commanding VIIth Army to do the best he can.”

Concerns about France’s allies were not the only factors governing Gamelin’s line of thought. “I insisted on my conviction that our support to Holland would serve to initially immobilise a considerable part of the enemy’s forces and especially their aviation. Their engagement would greatly facilitate our forward movement into Belgium.”¹⁴⁵ This was the only military advantage cited by Gamelin as justification for the Breda Variant. In the clearest of terms, he settled the argument by deciding that Seventh army was most useful in the role of bait offered up for the *Luftwaffe*’s attention.¹⁴⁶ He hoped this diversion would spare French and British armies from sustained air attack as they advanced into Belgium. This was the logic which fed the Breda Variant from concept to implementation despite near unanimous opposition within the French high command.¹⁴⁷ Distilled to its essence, Gamelin decided to gamble his only cohesive, mobile reserve in order to draw the enemy’s eye toward Holland, minimizing German air attack upon his all-important columns advancing toward the Dyle river.

¹⁴⁵ Gamelin, *Servir*, t.3 344.

¹⁴⁶ In his memoirs, Paul Reynaud also claimed that the Breda Variant was principally designed to occupy a large number of German forces “notamment en avion”, during the French army’s forward dash into Belgium. See *La France à sauvé...v1*, 621.

¹⁴⁷ General Georges, Commander of the Northeast Front preferred ‘a wise restraint’ before committing any French forces beyond the national borders. He recommended staying put on French soil in order to preserve the army’s freedom to manoeuvre in response to threats in the north, center or south (Switzerland). General Billotte, Commander of the French First Army and General Giraud, Commander of Seventh Army tasked with carrying out the *Breda Variant* were all on record opposing Gamelin’s strategy, each claiming that it virtually ensured the kind of unplanned encounter-battle which the French military establishment had long since committed itself to avoiding at all cost. See Testimony of General Alphonse Georges (February 5th, 1948), *Serre Commission Report, Vol. 3*, 685 and Général P.E. Tournoux *Défense des Frontières: Haut Commandement – Gouvernement, 1919-1939*. (Paris: Nouvelles Editions Latines, 1960), 299.

Gamelin's purpose in ordering the Breda Variant was motivated, not only by events in Poland and Norway, but also from an important source of information which reached the French high command in January 1940, some two months earlier. In Mechelen, Belgium, two downed German pilots had allowed German invasion plans for the West to fall into the hands of Allied military police. The documents they carried suggested that the brunt of the German offensive would take place in central Belgium. Additionally, the plans made it clear that the *Luftwaffe* was to be used in massive waves to decimate French attempts at defending the lowlands. The German air fleet was tasked with destroying the bulk of French air power on the ground, in aerodromes or on runways. After this initial attack, German fighters and bombers would turn their attention to the advancing French columns. The goal was to pin them to the ground under constant strafing and low-level bombing, rendering their forward movement impossible. In the meantime, a division of parachutists would be dropped behind the advancing French armies to compromise supply and communications. This information had a profound effect on the French high command as it appeared to justify the long-standing assumption of a German attack into Northeast France through Belgium similar to the route taken by the Kaiser's troops twenty-six years earlier. Gamelin fully expected the German High Command to take full advantage of its current situation which was in many ways strategically superior to that of 1914. Freed from restrictions in the east, the German army would be able to attempt a modernized *Schlieffen Plan* using all of its available forces, without significant fear of a Soviet threat in the east. This, in addition to the added firepower and manoeuverability offered by the new armoured divisions, would tempt German generals to envision another grand encirclement of Allied forces through the traditional invasion routes in central Belgium.

Crucially, however, the documents found at Mechelen convinced Gamelin and the French High Command of the importance of stationing the lion's share of French aviation on the army's left flank. There it would be in a position to support the advance into Belgium and Holland, and to counter what appeared to be the *Luftwaffe's* main effort. A massive aerial reinforcement of the First and Third armies along the French left flank took place over the following weeks¹⁴⁸, further denuding the center and the Ardennes region of the material means with which to offer a staunch defense, should the German stroke fall there. The Breda Variant thus disastrously weakened the French center of mobile reserves and, perhaps even more importantly, of its dedicated aerial support.

Four days after the plane crash at Mechelen, urgent reports began to arrive at Gamelin's headquarters at Vincennes. The Belgian military attaché personally sent information that the German offensive was almost certain to begin on January 14th. This led to a partial mobilization along the entire northeast front, giving Germany a clear indication of the general outlines of Allied strategy.¹⁴⁹ Gamelin was roundly criticized for tipping his hand to the Germans in this way, sacrificing secrecy for the quick response required to reach his Dyle-Breda objectives before the enemy.¹⁵⁰

¹⁴⁸ Minart, *PC Vincennes* t.1, 121.

¹⁴⁹ Prime Minister Paul Reynaud maintained until his death in 1966 that the so-called *Mechelen Incident* was deliberately orchestrated by the German military to cause panic and mobilization of forces in France and Belgium, all of which were closely watched by German intelligence. The goal was to gain information on the Allied order of battle and the extent of French commitment to intervention in the low countries. See Reynaud, *La France à sauvé...v1*, 624. Reynaud's conviction was refuted by German generals Erich Von Manstein and Heinz Guderian, both of whom claimed that the crash was unintentional and served to cause considerable consternation within the German High Command. See Erich von Manstein *Lost Victories* Novato, (California: Presidio, 1955), 118 and Heinz Guderian, *Panzer Leader*, (Boston: De Capo Press, 2001), 68.

¹⁵⁰ Jacques Minart 134-35.

Gamelin would later minimize the importance of the Breda Variant to the outcome of the Battle of France. He describes the dash to Breda as an “hors d’oeuvre”¹⁵¹ of little importance to the French defence incorporating over a hundred divisions. He argues that the misallocation of such a relatively small portion of available resources cannot be blamed for the disaster which befell the French army on the Meuse. His argument that the maneuver involved only three divisions¹⁵² can only be interpreted as deliberately disingenuous as Giraud’s army was composed of six elite divisions (1st light mechanised, 25th motorised, 9th motorised, 60th infantry, 68th infantry and 21st infantry). Furthermore, this army comprised the bulk of the strategic reserve for the Northeast Front. Its formal designation, until the adoption of the Breda Variant was *1st Army Group Reserve*¹⁵³. By removing this unit from behind the lines, Gamelin forced his subordinate General Georges to replace them with whatever was left of the existing reserve. Thus, to back up First Army’s crucial blocking of the Gembloux Gap, Georges replaced the departed Seventh Army with the 1st and 2nd DCRs, the 43rd Infantry Division and the 1st North African Division. Now all of the best trained and most mobile of the reserve divisions were incorporated into the forward movement into Belgium, leaving very little to cover the centre of the continuous front in the Ardennes sector.

¹⁵¹ Gamelin, *Servir I*, 98-99.

¹⁵² Ibid.

¹⁵³ Don Alexander. “Repercussions of the Breda Variant”, *French Historical Studies* 8:3 (Spring 1974), 485.

The Breda Variant presented other important risks to the French defensive line. One of the *Dyle Plan*'s chief advantages was in its shortening of the French line of battle. This was among the main selling points which had allowed Gamelin to have the plan officially adopted by the Conseil Supérieur de la Guerre. It facilitated Gamelin's central preoccupation with saturation of the projected battlefield, allowing him to concentrate the French First Army and BEF into a smaller geographical space where they could, in theory, receive the German attack from a position of greater strength. However, by ordering the Breda Variant, Gamelin was now extending the line again by another 50 kilometers, thus, removing the principal advantage gained by the *Dyle Plan* over its predecessor (*Escaut Plan*) while simultaneously increasing the risk of an encounter battle with advancing German units. He spent considerable effort within his memoirs in the attempt to minimize this decision's importance to the overall conduct of the battle. However, it was in his discussion of army reserves that he came closest to providing posterity with a glimpse of his strategic thought on the matter.

Initial operations of 1914 indicated to us that if the French soldier is inherently brave, he is also impressionable. The Germans' first strikes are always powerful, violent, carefully prepared and solidly organized... We needed to remain cautious before moving on to more audacious concepts once the immediate danger had passed. One of the most delicate elements in the art of war, and therefore one of the most uncertain, is in "feeling" how much one can "dare": and here we must wade through imponderables. This necessity, not for caution but for wisdom, applied directly to our reserve formations.¹⁵⁴

In his characteristically abstract and meandering prose, Gamelin explains that he was particularly interested in exploring the limit to how much a strategist can "dare" to use his

¹⁵⁴ Gamelin, *Servir* t.3, 33.

reserve forces. In the case of his *Breda Variant*, Gamelin accepted a very high level of risk, daring to use his reserve forces as a vanguard to link up with the Dutch army. If all worked out, soldering the Belgian and Dutch armies to the defensive line would add thirty divisions to the cause, greatly strengthening Allied forces and justifying the elimination of the strategic reserve of only six divisions. The reward was potentially far greater than the initial sacrifice. This was the enormous gamble which characterised the Commander in Chief's overall strategy, the failure of which was to all but guarantee the one-sided nature of the approaching clash of arms. It was a mad gamble, but one consistent with the general's strategic concepts. In his view, he lacked sufficient French divisions to properly *saturate* the battlefield, thereby necessitating the addition of allied forces in the lowlands. Gamelin reasoned that the best way to ensure this cooperation was to send his mobile reserves as a forward liaison to weld together a combined multinational resistance to Germany. In his own words, "the 90 divisions at our disposal on the North-East front (800 km...) were insufficient, not only to saturate the theatre, but even to hold it effectively. *We had no option other than mobile warfare.*"¹⁵⁵ Lastly, Gamelin hoped that his ever-increasing commitment to a forward defense in the Lowlands would serve to finally convince the Belgian government to reverse their policy of neutrality. By expanding the number of forces committed to the operation and furthering their level of penetration to defend the greatest amount of Belgian territory, he hoped to sway the Belgians to take a side in the brewing conflict. During the Phoney War period, he tried to convince Daladier that a stronger French commitment to Belgium could bring about the long-awaited call for aid from Brussels. This would of course, allow the French First and Seventh armies, as well as the B.E.F., to set up

¹⁵⁵ Gamelin, *Servir* t.3, 36.

defensive positions as a deterrent to German invasion, rather than as a reaction to it. “The Belgian government may be swayed,” he wrote in April 1940, “if we offered the assurance of setting up our defense on the Albert Canal–Meuse line.”¹⁵⁶ This idea would have extended the French lines even further east and provided defense for the vast majority of Belgian territory. “I entered into communication with the Belgian military attaché, Maurice Delvoie, clearly explaining to him our point of view. I told him, “A new series of opportunities will open up for us all, if your country would agree to the proposals of France and England”.” Thus, plans for the forward defence in Belgian were inextricably linked to the hope of recruiting the Belgians into the Allied camp before the start of war. “I finished by telling him,” Gamelin concluded, “that I hoped with all my heart that the Belgian army would seize the opportunity we are presenting.”¹⁵⁷ Despite Gamelin’s efforts, this proposal failed to convince the Belgian Parliament, which continued to hold firmly to their country’s official position of neutrality.

When all the reshuffling was done in March of 1940, the center of the French line, which had once been backed up by Giraud’s powerful and mobile Seventh army stationed around Reims, was now essentially deprived of anything beyond local reserves. These were mostly “B” divisions¹⁵⁸ of questionable reliability. The Breda Variant all but ensured that General Georges

¹⁵⁶ SHAT GR 1K224 15, Maurice Gamelin: Letter to Edouard Daladier, April 12, 1940.

¹⁵⁷ Ibid.

¹⁵⁸ “B” series divisions were usually composed of older reservists (thirty years at least). They had few active officers assigned to them, depending instead on older reservist officers. Their armament and equipment were usually incomplete, meaning they made do with fewer artillery, anti-aircraft and anti-tank guns than proscribed by army regulations at the divisional level.

would be unable to rush sufficient forces to plug the breach around Sedan when German tanks began to stream over the Meuse on the 12th of May. This is why Gamelin's memoirs must be read with scepticism when he dismisses the Breda Variant as "merely an appetizer". Similarly, his writings miss the mark in claiming that General Georges had 28 reserve divisions at his disposal with which to counter any German breakthrough.¹⁵⁹ "I do not see, therefore," Gamelin told a newspaper in 1948 immediately after repeating his claim that 28 divisions were stationed behind the center of the French front in May 1940, "how one can say that we were not prepared for a German attack from Sedan to Dinant."¹⁶⁰

These post-war observations by the former Commander in Chief are demonstrably false. In fact, Georges did *not* possess enough reserves geographically positioned to guarantee the center of the French line.¹⁶¹ This was because his Commander-in-Chief had already sent the best and most mobile elements available to the far left of the French order of battle before rushing it headlong into Holland. This was as apparent to the German military staff as it was to the beleaguered General Georges. *Wehrmacht* staff reports in the final weeks before the battle state a clear understanding of this fundamental weakness in the French order of battle. "the wide distribution of reserves gives us the impression that in the event of a breakthrough on the Meuse,

¹⁵⁹Gamelin, *Servir I*, 98-99. Elsewhere in his memoirs, Gamelin blames Georges for the thin line of defence around Sedan. "Je regrettais seulement: Qu'il n'eut pas serré plus nettement vers le front certaines divisions réservées, en arrière de la 2e et de la droite de la 9e armées." Gamelin, *Servir I*, 316. It is difficult to pinpoint where Georges would have found such reserves in Gamelin's order of battle.

¹⁶⁰ SHAT DE 2016 SA 63 d.10, Unnamed article from the *Dépêche du Midi*, (day/month unknown, 1948).

¹⁶¹ Gamelin refers here to the inexplicably high number of divisions positioned behind the Maginot Line. Despite the fact that the massive fortifications were designed to free up divisions for action elsewhere along the front, the presence of nearly thirty divisions behind the Line remains unexplained. Gamelin claimed this was Georges' oversight (*Servir I*, 316), while Georges claimed that he had always "deplored this excessive strength behind the Maginot Line" and attempted to correct the problem in the days leading up to May 10th. See Gunsberg, *Divided and Conquered*, 142 for an account of Georges' long-winded and unconvincing explanation.

the enemy would have, on this front, no strategic reserve available to oppose us.”¹⁶² Gamelin was alone in believing this was a risk worth running in order to confront the enemy in Belgium with the maximum possible force.

Gamelin was responsible, particularly after 1938, for taking the longstanding French strategy of a forward defense in Belgium, and expanding it conceptually, until this operation comprised the flower of the French army and the vast majority of its motorised and armoured forces. Embedded within the plan, however, was the obvious risk of making such a large commitment to a nation with which France had no formal military agreement. By the start of war, Belgium had been diplomatically and militarily neutral for over three years, though Gamelin circumnavigated formal obstacles and regularly communicated with Belgian Chief of Staff Van den Bergen. From this source, the French military leadership received assurances that Belgian defences would be ready to receive French armies on the Dyle river and that the Gembloux Gap would be fully equipped with anti-tank obstacles, minefields, ditches and blockhouses. Gamelin took Van de Bergen at his word. It was a leap of faith which is difficult to justify when unsupported by official agreements. Like the Breda Variant, the Dyle Plan assumed that France’s allies would act in a way that would assist in implementing French strategy, even though the content of this strategy had never been formally shared with them. General Laurent, the French ambassador to Holland added a wrinkle to Gamelin’s evolving plan: what would the Allies do if Germany was to attack Holland alone? Laurent sought assurance that in such a case, Belgium would at least allow Allied troops to cross through its territory. Would the Belgians

¹⁶² Cited in Crémieux-Brilhac vol II, 536.

march in support of Holland alongside the French? “What exactly has been agreed to?” he asked. In response, Gamelin only asked for more time to fashion a coordinated plan.¹⁶³

Until the outbreak of war in September 1939, Gamelin maintained a public charade about his intention to send assistance only if sufficient time was given to French armies to move safely into Belgium. After Belgian neutrality was announced on October 14, 1936, Gamelin made it clear that any call for French assistance would have to be made during peacetime. He indicated that French soldiers would “only enter Belgium if they find themselves with a good line to hold when they get there.”¹⁶⁴ Above all, he wanted to ensure that the French army did not rush headlong into an encounter battle conducted in unpredictable conditions.¹⁶⁵

The Breda Variant was a bizarre reversal of this policy on Gamelin’s part. Instead of ensuring layers of reserves, consistent with French army doctrine, he incorporated the bulk of his reserves into the front line. Furthermore, the Dyle-Breda Plan substantially increased the risk of an encounter battle with German spearheads thrusting westward through Belgium. Official French doctrine clearly stated that a commander should at all costs avoid such an engagement, choosing instead the pre-planned methodical battle. *Instruction sur l’Emploi Tactique des Grandes Unités* stipulates an important detail justifying this preference, one which should have been of particular interest to Gamelin in the winter of 1939. It stressed the danger of an encounter battle, particularly for unseasoned soldiers facing an enemy which had already

¹⁶³ SHAT GR7N, d.4, Letter from General Laurent to Edouard Daladier, March 13, 1940.

¹⁶⁴ Martin Alexander, *The Republic in Danger...* 193.

¹⁶⁵ Colonel Villelume recalled listening to Gamelin forcefully expressing this opinion in April 1937. See Villelume, *Journal*, 155.

experienced battle.¹⁶⁶ Often accused of conservative military thinking, Gamelin in fact embarked on an increasingly aggressive and risky deployment of his army which was in obvious contradiction to the existing doctrines of the French army.¹⁶⁷ After the Polish campaign, the Commander-in-Chief saw fit to radically alter his army's disposition in response to the shocking displays of the *Luftwaffe's* capabilities. This was a lesson soon to be forcefully revisited on Norwegian shores.

Part 8

The Lessons of Norway

The ill-fated Allied intervention into Norway in the spring of 1940 only served to reinforce Gamelin's increasing anxiety over the capabilities of the German air force. From the beginning of operations there, the *Luftwaffe* imposed its will upon Allied forces and regularly determined the course of events. Captain Paul Stehlin, who commanded the *Roussillon* fighter group observed: "I saw that the expeditionary corps' situation was very precarious. Since its

¹⁶⁶ *Instructions* (1937), 90. Gamelin knew that his army was largely untested and would be facing a battle-hardened German army. This was precisely the circumstance in which French doctrine stressed the importance of avoiding encounter battles. The risky Dyle Plan thus contradicted a fundamental tenet of French military practice and must be seen as a radical departure from official doctrine.

¹⁶⁷ General Pierre André Bourget, military historian and confidant of Maxime Weygand wrote a detailed analysis of how the French military failed to implement its own doctrine during the battle of May-June, 1940. Bourget concluded that "l'intention offensive de l'adversaire ne faisait aucun doute et personne ne s'attendait certainement à ce que les allemands après avoir envahi les territoires hollandais et belge s'arrêtent pour faire tête et ajustent leurs feux d'infanterie et d'artillerie. C'est bien plutôt le Commandement français qui comptait opérer ainsi... Dans de telles conditions et si l'on ajoute que, pour se porter avant, nos forces, peu préparées à une telle aventure par les huit mois précédents, quittaient des positions organisées, il est bien permis de prétendre que, délibérément, la doctrine de 1936 n'a pas été appliquée. On n'a pas recherché *la bataille conduite*". SHAT DE 2016 SA 69, Général Bourget: La Doctrine Française et la Guerre de 1940, p.6. (Undated)

arrival, it had been subjected to violent bombardments which deeply affected the morale of both the troops and their commanders.”¹⁶⁸

German air superiority in Norway cut to the heart of Allied confidence in two important ways. Firstly, it invalidated an oft-repeated western chauvinism implying that the kind of crushing defeat witnessed in Poland could not be repeated in the west.¹⁶⁹ Events showed, however, that British and French troops were hardly more successful in denying the *Luftwaffe* its control of the skies. And just as Polish units had found themselves pinned down and largely immobile, so too did the Allied expeditionary force in Norway find itself unable to move inland from the beaches under the constant pressure of German air assault. Secondly, the Allies were shocked to discover that the British Navy, that country’s chief military contribution in the early stages of the war, was essentially helpless to defend itself against air attack and was quickly forced to withdraw from Norwegian waters entirely. Gamelin observed that “fighters based in England are too distant to contribute, and English maritime aircraft are not sufficiently powerful or numerous... The British Fleet cannot endure the harsh punishment it is enduring on the Norwegian coastline much longer.”¹⁷⁰ This double blow to Allied morale served as confirmation, if any was still needed, that a new and decisive instrument of war was at work and that the enemy possessed this weapon in far greater numbers.

Two years later at the Riom trials, General Eugène Mittelhauser remembered the terrible impact made by the *Luftwaffe* upon Allied morale during the Norwegian expedition:

¹⁶⁸ Paul Stehlin. *Témoignage pour l’histoire* (Paris: Robert Laffont, 1963), 244.

¹⁶⁹ General Didelet, military attaché to Berlin, concluded in his very influential report of December 1938, that the *Kriegsakademie*’s preferred tactics based on speed and mobility were not appropriate for operations in the West, faced with modern fortifications and armies. See Jackson, *France and the Nazi Menace*, 344.

¹⁷⁰ SHAT 5N 580-11, Letter from Gamelin to Daladier, April 26, 1940.

Aviation had been the most dramatic aspect of our preparation for war...in any case, the events in Poland had already opened our eyes to the impressive development of German air power. We did not yet have any direct experience against it...but I remember when the British fleet retreated after the landings in Namsos and Andalsnes...faced with the terrible losses inflicted to its ships by the Stukas. The impact of this action was enormous and deeply affected the French government and High Command. It was at that moment that we felt for the first time, the advent of a new power, the direct intervention of the airplane in battle, conducted with a precision which we had until then never thought possible.

The revelation of the Stuka's power was made clear to us...when we saw the British fleet withdraw before Trondheim on April 23, 1940. We had the feeling of having witnessed something altogether unprecedented and of a technological innovation which seemed decisive; I was convinced that the Stukas had, from our first encounters with them, struck deep into the hearts and imaginations of our men, because in war, morale has a very powerful role to play.¹⁷¹

By late April, these lessons were becoming clear to many in the Allied High Commands.

In an interallied meeting with Gamelin on April 26th, Churchill stated that “we have severely underestimated the consequences of the enemy’s aerial retaliation”. At the same meeting, Admiral Sir Dudley Pound added “it is not possible to react effectively, confronted with the enemy’s aerial superiority.” French Air Chief Vuillemin, once again overwhelmed by the display of German air power, remained silent and offered no opinion. In the words of one observer, “Vuillemin, silent and stupid as ever, kept quiet as we heard about the *Luftwaffe*’s shocking efficiency in Norway.”¹⁷² Meanwhile, the British ambassador confirmed that the Royal Navy was losing one ship per day and that the RAF fighters based in Norway had all been destroyed on the frozen lakes they had been using as airfields. All this amidst reports that only one tenth of total *Luftwaffe* strength was present in the Norwegian theatre.

¹⁷¹ Riom testimony of General Eugène Mittelhauser, March 18, 1942, in Bracher, *Riom*, 826-7.

¹⁷² Paul Baudoin, *Neuf Mois au Gouvernement*...36.

Gamelin agreed, summarizing “the decisive factor in determining the outcome of the Norwegian expedition was the superiority of German aviation.”¹⁷³ Following the evacuations at Trondheim, he was again confronted with the fact that German air operations had proven to be the decisive factor in determining the course of battle. “Even though we were entering into a period of impressive industrial productivity and could now envision a prolonged battle...our undeniable weakness remained the state of our aviation. Our experience in Norway showed us the importance of the matter.”¹⁷⁴ His response to this latest demonstration of the *Luftwaffe*'s capabilities was to once more reinforce his front line, at the expense of his few remaining reserve units. “The enemy's superiority in aviation, like its concentrated use of armour, should encourage us to bring our reserves even closer to the front line of battle.”¹⁷⁵

Part 9

The State of Reserves on the Eve of Battle

The French Northeast Front was delineated into three geographical regions: The North (Belgium), Center (Maginot/Ardennes) and South (Switzerland). Each of these sectors had, by the early spring of 1940, been denuded of its reserves. This situation was particularly dangerous

¹⁷³ Villelume, *Journal*, 306, 308; Gamelin, *Servir t.3*, 365, 370. Privately, Gamelin was concerned that the British military leadership appeared so awestruck by the *Luftwaffe*'s performance in Norway, confiding in his journal: “Les Britanniques craignent énormément l'aviation allemande et ne cachent pas leurs inquiétudes sur l'opération à Trondjheim. SHAT 1K 224/10 d.4 *Journal de Marche*, April 27, 1940.

¹⁷⁴ SHAT 5N 580-11, Letter from Gamelin to Daladier, April 27, 1940.

¹⁷⁵ Gamelin, *Servir t.3*, 386.

opposite the Belgian Ardennes. As the “hinge” between the mobile operations taking place in the north and static fortress soldiers in the Maginot Line, this area lacked a definite task, other than to “hold out”. Its ability to do so was questionable from the start. Two divisions, the 52nd and 71st were designated as “B” infantry divisions, which means that the troops assigned to them were older reservists with minimal training. Certainly, they were not expected to effectively resist and repel a determined German attack in their sector, but rather were intended as a strong screening force of thirty thousand men. In case of contact with the enemy, their task was to resist until help arrived. As such, this made them unique along the French continuous front. This was the only sector which was not considered self-sufficient in the event of active engagement with the enemy. The First Army group to their north, tasked with the advance into Belgium, possessed the strongest equipment and the most proficient soldiery. Failure on its part to blunt the German advance would, in all likelihood, ensure a fatal German breakthrough into the open fields of northeastern France and rapid defeat.

The fortress soldiers of the Maginot Line, though static in their bunkers, were assigned a similar “conquer or die” role in the upcoming battle. Their task was to rebuff any attempt to breach the fortifications spanning the Franco-German border along Alsace and Lorraine. Their success in this assignment was imperative to the nation’s ability to stay in the fight. Enemy breakthrough in this sector was sure to signal a devastating moral and strategic defeat from which it would be all but impossible to recover. Great care was taken to ensure that the bunkers and guns were in good order in the early months of 1940 as spectacular rumors circulated of German plans to break the fortifications using new and terrifying chemical weapons. One report from the French military attaché in Rome warned of an approaching German attack using a new form of gas which induced long term sleep upon its victims. German stormtroopers were to

follow up this attack, protected by newly designed masks, and infiltrate French fortifications as their defenders slumbered. This, the attaché included in his warning, “from an informer of the highest credibility.”¹⁷⁶

Historians have long questioned Gamelin’s decision to place an excessive number of divisions within the Maginot sector. On May 10th, 1940, thirty-nine divisions of infantry manned the fortifications. Many high-ranking generals were convinced this was a gross misallocation of resources, given the fact that the Maginot Line’s essential purpose was to minimize the number of troops required to defend the Franco-German border, thus freeing up manpower for operations elsewhere. However, the fortress troops assigned to this area were among the least mobile of French units, allotted a relatively small number of trucks and armoured cars compared to other units further north. Essentially marching on foot, these units would be as vulnerable to German air attack as the Polish soldiers were in late 1939. Units like these caught on the roads by *Luftwaffe* squadrons would be quickly strafed, bombed and dispersed. Just as the Commander-in-Chief placed all of his northern armies near the front line, so too were the central armies behind the Maginot Line moved forward to provide the strongest point of contact with the enemy. All along the Northeastern Front, from Dunkirk to Mulhouse, Gamelin engaged in the aggressive gamble of receiving a German Blitzkrieg with the strongest front line he could muster. And in fact, in almost every sector, this strategy succeeded in creating powerful fronts which could meet the German offensive with confidence. The only area which remained understrength was the Ardennes, which remained inexplicably vulnerable to the expected *attaque brusquée*.

¹⁷⁶ SHAT GR7N 2914. Emploi des gaz par l’armée Allemande, 23 novembre 1939.

Soldiers manning the “hinge” of the Ardennes sector did not have the same sense of clear purpose allotted to the other army groups. They were not endowed with the northern armies’ sense of the urgency to advance at all costs. Nor were they trained to stand their ground to the last man, as had been the fortress troops of the Maginot sector. They did not expect their sector to be especially active. They were, moreover, well aware of their own status as “B” divisions and fully expected to be speedily reinforced should they come into contact with the enemy in strength. In such a case, their role in the threatened sector would quickly become a secondary or support role behind the “A” divisions sent to reinforce their positions. Thus, the Ardennes sector was unlike any other insofar as it was both static *and* unprotected by the Maginot fortifications. As such, it was the only part of Gamelin’s continuous front which depended on reserve forces in case of enemy contact. And yet, this was precisely what was no longer available following the *Généralissime*’s steady strengthening of his left flank, to the detriment of available reserves. This shows how strongly Gamelin expected the main German effort to take place through Belgium on the one hand, and how unlikely he considered an armoured assault through the Ardennes on the other.

How many reserves remained available to the French High Command after Gamelin had completed his reordering of the front lines? This question was explored in depth at both the Riom Trials during Nazi occupation (1942) and at the Commission of Inquiry following the war (1947). In both cases, a satisfactory answer remained elusive. Gamelin wrote in his memoirs that on May 10th, 1940, twenty-eight reserve divisions were available on the Northeastern Front to reinforce threatened sectors or to respond to unexpected enemy pressure. It should be noted that French military tradition encouraged the commander to “draw upon reserves from forces

deployed along non-threatened sections of the front. This was the classic method by which to utilise defensive reserves along large fronts, particularly when one did not have the means to saturate these areas.”¹⁷⁷ Gamelin’s elevated figure of twenty-eight reserve divisions on the Northeastern front probably reflect this alchemical notion and represent not only the actual divisions which existed but also those which he believed possible to relocate in the heat of battle. In any event, his figure of twenty-eight reserve divisions is demonstrably false and has never been supported by civil, military or academic investigation over the last eighty years.

General Georges, Commander of the Northeastern front claimed that he had only eleven reserve divisions at his command by the time his commander’s reshuffling had been completed. Of these, none were fully allotted with men and material but were still in formation, nor would any have been sufficiently mobile to reach the Sedan sector in time to change the outcome of the battle. For their part, historians have sided more closely with Georges’ estimates. Philippe Garaud has estimated fifteen reserve divisions existed on the eve of war. However, these were spread out evenly among three separate fronts leaving five in the north (where they were needed), five in the center (Maginot Line) and five in the South-Central (facing Switzerland).¹⁷⁸ François Delpla concluded that General Georges had only three divisions which he assigned immediately upon engaging the battle. A further three reserve divisions existed under the direct command of General Gamelin, but these had already been deployed to the Swiss sector and were thus unavailable to contest the breakthrough at Sedan from May 12-14.

¹⁷⁷ Gamelin, *Servir t.1*, 316.

¹⁷⁸ Philippe Garaud. “Le role de la ‘doctrine défensive’ dans la défaite de 1940: Une explication trop simple et partielle” *Guerres mondiales et conflits contemporains* No. 214 (Avril 2004), 112. pp. 97-123; François Delpla, *Les Papiers secrets du général Doumenc (1939-1940)*, (Paris: Olivier Orban, 1991), 270.

What remains clear is that the French strategic reserve had been fatally weakened over an eight-month period between September 1939 and April 1940. Every step in this process was conducted as a reaction to German air power. The *Luftwaffe*'s ability to immobilize soldiers on the ground, a lesson first learned in Poland and revisited in Norway, convinced Gamelin of the need to develop a risky and untested order of battle. By the spring of 1940, it appeared as though the Germans had developed ground support bombers into weapons capable of delivering the kind of *knock-out* blow feared by so many throughout the interwar years. Theirs was not, however, the devastating strategic bombing campaign described by Giulio Douhet in the 1920s. Rather, it was a method of tenacious, low level ground support which proved decisive wherever aircraft were deployed in sufficient numbers. Not only did Gamelin know of his army's vulnerability to these tactics, but also that as things stood in the spring of 1940, he could never assemble sufficient aircraft of his own to counter the German threat. Lacking an air force strong enough to guarantee that his army was not deprived of its mobility, he risked an unprecedented front-line defence, packing nearly all available forces as a breakwater against the first German wave of attack. It was his intention to *saturate* those areas where he felt the coming battle most likely to occur. This was in the lowland countries, and it was there that he sent forces sufficient to the task, leaving other areas dangerously exposed to German assault.

Chapter 4

Gamelin's War

I can still hear you, flown over ceaselessly by enemy aircraft, submitted to constant and demoralising bombardment which shook the whole body and threatened, in the end, to consume your energy and the will to fight. You screamed with one eye on the hostile skies above: "where are our pilots?"¹

General Blanchard, Commander of First Army.

Part 1

The High Command

Gamelin's audacious eleventh-hour redeployment of French reserves toward the front lines was only the first of two important changes wrought upon the army by its Commander-in-Chief during the months of the *Phoney War*. During the same period, Gamelin also tasked himself with a complete reorganisation of the composition and organisational hierarchy of the French high command. In the first case, he strove to push forward as many reserve divisions as possible toward the likeliest point of contact with the enemy. In the second case, his goal was to create distance between his personal headquarters and operational command for the upcoming battle. From the outbreak of war in September 1939, the *Grand Quartier Général* was located at La Ferté-sous-Jouarre, under the joint command of Gamelin, as Commander-in-Chief of Land Forces and General Georges, Commander of the Northeast Theatre of Operations. However, on January 18th, 1940, there took place a fundamental reorganization of this command structure.

¹ Paul Reynaud, *La France a sauvé...*v1, 436.

The G.Q.G. now reported solely to Gamelin and was re-located thirty kilometers away in Montry. General Georges was promoted to Commander-in-Chief of the Northeast Front, and would receive his own HQ staff which was distinct from the G.Q.G. This meant separating the bureaucratic apparatus responsible for conducting the war into two distinct staffs, each reporting to a different commander. Both HQs would now possess their own detachments of three of the four “bureaux”². Henri Gauché, chief of the *Deuxième Bureau*, described the inconveniences suffered by his staff as a result of the new command structure. Each morning, an officer would be sent to make the thirty-kilometer trip from La Ferté to Montry. Late at night, the officer returned with important documents compiled by the branch at Montry. Each of these needed to be studied and re-approved by the *Deuxième Bureau* at La Ferté before it was distributed to its intended recipients. The loss of time and duplication of effort in each day’s work is striking in its obvious inefficiency. Each HQ had its own Chief-of-Staff. These two men, General Gauché at Montry and General Baril at La Ferté, were required to schedule frequent meetings to ensure consistency between the two branches of command. Two hours of travel time were required for each of these meetings.³

² The French army’s “bureaux” or *offices* consisted of the 1er bureau (Organization), 2ème bureau (Intelligence), 3ème bureau (Operations) and 4ème bureau (Transportation). The 4ème bureau was considered indivisible due to logistical responsibilities which spanned the entire armed forces. Of the four bureaux, it was the only one that remained fully headquartered with Gamelin at La Ferté, under the direct command of General Doumenc. Thus, transportation of large units during the battle was not overseen by General Georges, who was allegedly commanding the Northeast Front.

³ Général Gauché, *Le Deuxième Bureau au Travail, 1935-1940*. (Paris: Amiot-Dumont, 1953), 201. Douglas Porch has conducted research demonstrating how the decentralization of the G.Q.G. had the effect of “preventing intelligence from speaking with a common voice and allowed preconceptions and fears...to substitute for a reasoned study of the facts.” Porch, *The French Secret Services*. (Oxford, Oxford University Press, 1997), 160. This theory presents another possible reason for the French tendency to exaggerate the extent of German re-armament throughout the Phoney War.

Gamelin's explanation for the reorganization of the French command structure in December-January 1939-40 is rambling and unclear. An entire chapter on the subject within his memoirs spans nearly forty pages and yet offers no direct statement of purpose in undertaking such an unprecedented restructuring. Allegedly, the move was in part designed to allow Gamelin to personally take over France's multiple "theatres of command". These included the Northeast Front, the Southeast Front, North Africa and the Levant. In so doing, he claimed to be relieving Prime Minister Daladier from many of his more burdensome tasks. Other than this, Gamelin offers no direct comment on the advantages to be gained by such a shuffling of command structures. His written explanation evokes, in his reader, the same bewilderment described by Marc Bloch upon first hearing of the reorganization:

When a division of functions had been arranged between these last two – General Georges and General Gamelin – I was once present at a lecture staged by GHQ with the object of explaining the new organization. The speaker made himself as clear as he knew how. I was not, however, the only one there who entirely failed to get any clear-cut idea of what he was trying to bring home to us. There was confusion and overlapping at every turn.⁴

Despite misgivings by the rank and file, Gamelin faced no direct challenge to his plan. Many of his senior officers expressed their concern, however, with the obvious dangers of restructuring the high command while already in a state of war. In General Georges' opinion, the program was ill conceived and delivered at the worst possible time. As he saw it, at least two months would be necessary to create a secondary high command and integrate it functionally within the existing command framework. Eight weeks of reshuffling would be needed before

⁴ Bloch, *Strange Defeat...*, 97.

normal operations could resume. If a German attack took place during this time, “we would be exposed to the worst dangers.”⁵ Gamelin’s successor as Commander-in-Chief of Land Forces, Maxime Weygand held a similar opinion. “Such a clumsy organization would inevitably become, in time of war, the source of great difficulties and serious consequences.”⁶ On January 28th, Pétain wrote to General Georges, offering him the following advice: “Whether one likes it or not, organisation of the high command will have to be readdressed. No one is in their proper place, responsibilities are scattered, it is anarchy.”⁷ In the words of one colonel stationed at the central headquarters,

General Gamelin was far too well advised to have not seen himself the deep flaws present in the new organisation of the high command of which he was the keystone...avoiding as much responsibility as possible, he put to work all the resources of his exceptional intellect to justify formulas which no one else could make sense of.⁸

General Georges, upon whom fell the responsibility of organizing an effective defence within such a convoluted command structure was aghast at its obvious inefficiencies. Confiding to his personal memoirs the following evaluation: “ridiculous measures planned for the G.Q.G...separating officers by thirty kilometers, or by sixty kilometers...Chiefs without offices...offices without chiefs...Madness!”⁹

⁵ Paul de Villelume, *Journal d'une Défaite : Août 1939-Juin 1940* (Paris : Fayard, 1976),151.

⁶ Weygand, *Rappelé au Service*, 84.

⁷ Claude Paillat, *Le Désastre de 1940: La Guerre Immoblie, Avril 1939 - 10 mai 1940*, (Paris: Robert Laffont 1984), 381.

⁸ Jacques Minart, *PC Vincennes*, t.2, 37-38.

⁹ Georges would later elaborate on his misgivings. “Pendant tout le mois de décembre, je m’efforçai de réagir avec vigueur contre ce projet qui allait me priver de la collaboration permanente du major-général, rompre l’unité indispensable du GQG, disperser dans l’espace les organes de travail, accroître les difficultés des liaisons, réduire le

The question, then, is why did Gamelin embark on a reorganization of the chain of command which baffled everyone, and which received the opprobrium of the vast majority of his most highly placed subordinates?¹⁰ Was he alone able to glean benefits from this plan which has managed to elude investigators over the last 70 years? In 1942, President of the Riom Court, Pierre Caous, tried in vain to force Gamelin to explain what he had hoped to gain by shuffling the chain of command. “One wonders,” he asked, “why the sudden, pressing need?”¹¹ Gamelin remained silent throughout the trial, refusing to explain himself and ultimately taking the secret with him to his grave. It was, and remains, a mysterious and fundamentally uncharacteristic action on the part of the Commander in Chief. Until the opening weeks of 1940, Gamelin’s long service record provided no indication of any tendency toward administrative clumsiness. If somewhat uncombative by nature, his organizational skill had been noticed and praised from his earliest days at St. Cyr military academy. Joffre wrote of him: “He was for me the most precious contributor on my staff. At no time did I ever observe the slightest deficiency in his conduct or organization.”¹² Of all his talents, this was the most cited by military instructors and

rendement et jeter le trouble dans l’esprit des échelons subordonnés qui ne comprennent plus rien à l’organisation du haut commandement.” See Paillat, 364 and 377.

¹⁰ Among these were Commander Charles Huntziger, Commander of the Second Army and René Prioux, Commander of the French cavalry who would spearhead the advance into Belgium. Huntziger commented in his diary: “[le G.Q.G.] s’installe à mi-chemin entre Vincennes et La Ferté! C’est un défi au bon sens. Effet désastreux produit chez les états-majors.” See Max Schiavon, ed. *Les Carnets secrets du Général Huntziger, 1938-1941*. (Paris: Éditions Pierre de Taillac, 2019), 104. See also René Prioux, *Souvenirs de Guerre: 1939-1943*. (Paris: Flammarion, 1947), 41-42. Concerns over the restructuring of the French High Command were expressed from British observers as well. Edmund Spears, British liaison to the French army noted, “When Foch became Supreme Commander in 1918, he had had a small staff of some 20 officers who worked out general plans. Duties were not duplicated, nor responsibilities confused. Each Allied Commander in Chief had a complete staff which enabled him to make his plans and move his troops accorded to the role allotted to him by Foch...things have not improved since then.” Sir Edward Spears, *Assignment to Catastrophe, vol. 1*, (London: William Heinemann Ltd., 1955), 47.

¹¹ Riom testimonies, March 3, 1942. Bracher, *Riom*, 594.

¹² SHAT GR 13 YD 1279 d.2. Dossier du Personnel, Maurice Gamelin.

commanding officers alike. Historians have concluded that he was indeed a competent bureaucrat and a capable administrator, if not an inspiring leader of men. Martin Alexander defined his study of Gamelin as an endeavor “to focus attention...on Gamelin’s positive contribution to French national security and political-military cooperation.”¹³ According to this study, Gamelin used his gifts as conciliator to “eradicate the confrontational atmosphere that [his predecessor] Weygand bequeathed... in 1935-36.”¹⁴ Similarly, R.J. Young, while not as devoted to the rehabilitation of Gamelin’s reputation, nevertheless praises Gamelin’s talent for providing “a cheery word of compromise” in his relations both civilian and military.¹⁵

The reorganization of the high command in early 1940 was in no way indicative of Gamelin’s ability to bring together the various commanding voices of his army into a cohesive whole. In truth, Gamelin’s intention was not to improve the efficiency of the French command system, but instead, to install a series of buffers between himself and the eventual conduct of the war. It was another example of what he referred to as “a smokescreen in case things go badly.”¹⁶ “The move into Belgium, it’s all on you,” Gamelin told Georges as French troops began pouring over the border on May 10th.¹⁷ Such a comment failed to take into account Gamelin’s central role in planning French strategy. Jacques Minart, Gamelin’s own *aide de camp* suspected “everything about the restructuring of the G.Q.G. had the effect of allowing the Commander-in-Chief to assign blame for any reverses to General Georges while allowing himself to take credit

¹³ Alexander, *The Republic in Danger*...1.

¹⁴ Ibid, 396.

¹⁵ R.J. Young, *France and the Origins*...181.

¹⁶ Gamelin, *Servir I*, 272.

¹⁷ Villelume 336.

for any success.”¹⁸ Indeed, when the German armored divisions began crossing the Meuse on May 12th, Gamelin pointed the finger at his beleaguered Commander-in-Chief of the Northeast Front. “Personally, I have no reserve forces,” he replied to Lieutenant Col. Lanquetot, who noticed with outrage the absence of strong units positioned in the rear to counter the German breakthrough at Sedan. “All of our resources are in the hands of General Georges, who has full control over the Northeast Front.”¹⁹ As Weygand observed with characteristic asperity, “While [Gamelin] was the one to conceive the maneuver which led France to ruin, and who had ordered its execution, he nevertheless saw fit to announce that the resulting battle was, in fact, General Georges’ battle”²⁰.

Moreover, it was soon manifestly clear that Gamelin felt free to over-ride Georges’ authority at any moment, issuing direct orders to the individual army commanders without bothering to inform General Georges of the content of these directives. The Commander in Chief would thus make suggestions or enact changes without informing his own *Grand Quartier Général*, or George’s headquarters at La Ferté. Consequently, the officer responsible for conducting the coming battle was forced to rely on his liaison officers to try and piece together

¹⁸ Minart I, 70

¹⁹ Pierre Le Goyet, *Le Mystère Gamelin* (Paris: Presses de la Cité, 1975), 311.

²⁰ Weygand, 84. Since mid-1938, Gamelin had been defending his role in the High Command as one of “co-ordinator” rather than commander. The role of the co-ordinator, he insisted, was to oversee the totality of preparations, to identify and resolve inefficiencies, and duplication of responsibilities. However, once all assignments had been fixed, “il n’a pas à intervenir dans l’exécution, à moins qu’un nouvel ajustement ne devienne nécessaire.” This, like so many other facets of Gamelin’s command hierarchy, was designed to allow him to intervene only in those matters which he felt drawn to, while leaving the bulk of responsibility for the conduct of the battle, upon the shoulders of his subordinates. SHAA 1A 11Z 12941, Gamelin, Note pour le ministre de la Défense Nationale, April 1, 1938.

as much information as they could. Having missed the subtleties which always formed the real content in Gamelin's speech, such efforts often relied on speculation and best guesses.²¹

Georges would later admit that he had been relegated to the role of executor, admittedly one of very high rank, but a functionary, nonetheless. It fell upon him to put into action a plan that he had not designed and of which he did not approve. General Billotte, commander of the 1st Army Group seconded this opinion, according to General Fagalde of the Seventh Army: "Inside my car, general Billotte told me that all the decisions had been made by Gamelin and that Georges was only tasked with carrying them out while given little room for personal initiative."²²

Unable to conduct the battle according to his own will on the one hand, and unsure of his superior officer's full vision of the battle on the other, General Georges expressed his concerns in a letter to Gamelin.

You and I have clearly defined missions. Your responsibility is to determine our global strategy and questions of national defense. Mine is to command the armies operating in France. There only exists one instrument of command in France, and that is the General Staff Headquarters...this is the only instrument qualified to command the armies of the Northeast. It was created precisely for this purpose. It is therefore illogical that you take for yourself this General Staff which is not constituted to contribute to your particular tasks but rather perfectly suited to assist in my particular tasks. Nor is it logical that you leave me with only a reduced staff that will not permit me to properly execute my responsibilities.²³

Political concerns also played no small role in Gamelin's decision to reshuffle the High Command in January 1940. By then, he and Prime Minister Daladier had become an inseparable

²¹ Max Schiavon, *Le Général Alphonse Georges: Un Destin Inachevé* (Parçay-sur-Vienne: Éditions Anovi, 2009), 294.

²² SHAT, 30 N180, Journal de Marche du Général Fagalde, 14.

²³ SHAT DE 2016 SA 66, Journal de marche du Général Georges, December 11, 1939

team within the French corridors of power. Each man's reputation and political standing was largely dependent on the other's continued support, and as one's star waxed or waned, so too did the other's. For his part, Daladier was convinced that Georges was clandestinely involved in a right-wing political alliance led by Maxime Weygand. Given this suspicion, the Prime Minister was committed to preventing Georges from reaching the top of the military hierarchy. He was also convinced of the need to prevent Georges from appointing generals to positions of high command. "I do not wish to involve him in questions of staffing, since he belongs to the clique, of which you are quite aware," he told Gamelin in 1938.²⁴ Gamelin later reflected that "[Daladier] wished that I remained responsible for choosing general officers in fear that new appointments might fall under the influence of General Georges, whom he always suspected of belonging to a political clan."²⁵ The result, as noted by British liaison Edward Spears, "was that the Generals considered Gamelin to be their Commander rather than Georges who gave them their instructions."²⁶

A crisis of command had thus been created within the French military command only a few months before the German invasion. No one was sure who would be actually calling the

²⁴ Gamelin, *Servir t.I.*, 61.

²⁵ Ibid., 68. This suspicion was considered serious enough to have been brought to the attention of visiting British Generals at the Inter-Allied Conference of February 1, 1940. To Admiral Pound, General Ironside and Air Marshal Pierse, the following information was given by Lt-Col Poudenot: "Il y a une grande cabale qui vise M. Daladier et le Général Gamelin...Le Sénat s'agite beaucoup et c'est le Général Georges qui mène l'affaire sciemment ou non. Pourtant, c'est en termes simples mais nets qu'il se fait le détracteur du Général Gamelin dans le domaine de l'organisation de l'Armée française. Aux militaires qu'il voit, il dit 'tant que je suis là, je vous soutiens et m'occuperai de vous.' Faites très attention, car, si je vous le dis, c'est que nos renseignements sont très sûrs. Je pourrais vous citer des noms!" SHAT GR 1K 224 15, Minutes of Inter-Allied Conference, February 1, 1940), 4.

²⁶ Spears, *Assignment to Catastrophe*, vol.1, 50.

shots when hostilities erupted; common soldiers, divisional generals and army commanders were all equally unsure of the precise mechanism by which the chain of command was to operate under fire. Fundamentally, no one was certain who would command the battle itself, Gamelin or Georges. Even Georges himself could not definitively answer this question and was forced to ask for clarification which he never received. When at last the storm broke on May 10th, Gamelin's awkward bureaucracy proved itself structurally and procedurally incapable of responding to events in a timely and effective manner, with disastrous consequences to the nation.

Part 2

The Battle – Gamelin's Plan in Action

As the conflict raged in Poland throughout September 1939, Gamelin yet expected to convince the Belgian government of the wisdom of inviting Allied soldiers inside their borders ahead of the anticipated German invasion. As time went on, their continued refusal increasingly rankled the *Généralissime* and stoked him to thinly disguised exasperation. In a letter to Daladier, he wrote "Belgian neutrality is playing directly into German hands...Only through Belgium can we find suitable routes for offensive action...only by that route can we bring powerful, effective and rapid help to Poland."²⁷ In his personal journal, he added, "The Belgians have rendered a great service to the *Boches*. Too bad for them." Following the collapse of Poland, the General's scorn turned to open contempt: "The Belgians are playing a vile role:

²⁷ SHAT DE 2016, SA 66, Letter to Daladier, September 11, 1939.

untrained soldiers, short-sighted policies, total mediocrities, shopkeepers perverted by commerce...”²⁸

Similar sentiments were wide ranging among Allied leaders. General Georges told Gamelin that the real opportunity to enlist Belgian cooperation was lost by not making the stakes clear to King Leopold III’s government before the declaration of war. “We had to tell the Belgians, “Either you let us in now, or we must let you fend for yourselves if you are attacked.””²⁹ Paul Reynaud believed that Belgium’s role in weakening Allied resistance to German expansionism was pivotal. “There had been a chance to avoid war. In breaking with the Allies, and refusing them passage, the Belgian king stripped humanity of this opportunity. He gave to Hitler the means to destroy Poland first, followed by Belgium and France at a time of his own choosing.”³⁰ At a meeting of the British War Cabinet on September 12th, Winston Churchill expressed his own impatience with Belgian intransigence. “The attitude of the Belgian government is indefensible,” he declared. “The Belgians owe us for everything; the preservation of their colonies depends entirely upon our eventual victory.”³¹ The Germans too did not fail to appreciate the advantages presented to them by the Belgian government’s reluctance to commit itself fully to the Allied camp. At Nuremburg, General Alfred Jodl, *Wehrmacht* Chief of Operations Staff, declared,

Had the Belgians called the Anglo-French forces into Belgium before the Germans attacked Poland, the Germans would not have been in a position to

²⁸ SHAT DE 2016, SA 67, Gamelin: Journal de Marche.

²⁹ Letter to Gamelin from the personal archives of the Georges family. Cited in Paillat, *Le désastre de 1940...*, 173.

³⁰ Reynaud, *La France à sauvé l’Europe*, v.1, 399.

³¹ Paillat, 240.

declare war at that time, and the Allies would have gained a year. If war had not been avoided, time at least would have been gained during which the RAF would have been strengthened, the effect of compulsory military service in England would have begun to tell and the French would have had a chance of training their newly formed armoured divisions.³²

In the end, permission to cross the Belgian border was only granted at dawn on the 10th of May. Despite threats to the contrary³³, France's highest ranked soldiers immediately committed themselves to the long-prepared rush into Belgian territory. General Georges called Gamelin upon first hearing of the German invasion:

“So, General, our manoeuvre is to the Dyle?”

Gamelin replied, “Since the Belgians are calling for our aid, do you see how we can do otherwise?”

“Obviously not.”³⁴

During that first day, Gamelin radiated confidence from his headquarters at Vincennes.³⁵ Nevertheless, his greatest concern at the outset of battle, was for the safety of his advancing

³² Sir Edward Spears *Assignment to Catastrophe*, volume 1. (London: William Heinemann Ltd. 1955), 36.

³³ Since 1937, Gamelin used a “carrot and stick” method to alternately woo and/or threaten the Belgian government into abandoning its neutral stance. Promises made through his secret channel to the Belgian military, Lt-Col. Van den Bergen, always reinforced French pledges to assist when called. However, these were supplemented by public statements claiming French aid was contingent upon the completion of Belgian fortifications and, above all, upon receiving enough time to establish their defensive positions (i.e., before the German invasion). See Gamelin's comments at the Serre Commission, tome 2, 743.

³⁴ Gamelin, *Servir*, t.3, 389.

³⁵ The Commander in Chief's visible optimism was observed by many on May 10th. Captain Beaufre observed “Gamelin arbore le long des corridors à un air martial et satisfait.” Beaufre, *La Drame de 1940* (Paris: Plon, 1967), 180. Paul Villelume, secretary of the Comité de la Défense Nationale described the general sense of elation among Gamelin's staff when it was first reported that the Germans were attacking in strength through the Low Countries: “Quant aux officiers de son entourage, ils triomphent bruyamment. Ils voient, en effet, dans cet

armies, exposed as they were to the threat of German air power. This danger, “to our forward movement seemed to me to present the greatest threat...having neither superiority, nor even equality of forces in the air...could not the enemy disrupt our advance? It was a matter of crucial importance.” Gamelin realised that the pace of advance must be slowed in order to shield the first army and B.E.F. from German air assault. “The first solution that came to my mind was to operate only by movement at night.”³⁶ This decision remains difficult to justify given that his strategy rested entirely on the First Army’s ability to outpace German forces to the Dyle river, a contest which promised to be run very tightly, even in the best of circumstances. In the end, Gamelin’s fears did not materialise, and the First Army was not subjected to the kind of bombardment he had feared. “Though our fighters were unable to meet our expectations, the army’s movement was almost completely unhindered by German aviation, occupied as it was on its various other missions. This allowed our advance to proceed even during the daytime.”³⁷

Why would the Germans fail to use their chief advantage, their preponderance in aircraft, to interfere with the cream of the French army, advancing into Belgium? Gamelin’s relief concerning this matter was quickly met with skepticism from more astute observers. Paul de Villelume, advisor to Paul Reynaud, addressed the Prime Minister’s office with his concerns upon returning from a brief visit to army headquarters at Vincennes. He was “very anxious”

événement la condamnation de l’affaire de Norvège. ‘On voit comment le général avait raison de n’attacher d’importance qu’au front nord-est! Villelume *Journal d’une défaite*, (Paris: Fayard, 1976), 330. Colonel Minart of Gamelin’s own staff wrote, “Son visage ne décèle aucune émotion apparente, aucun trouble intérieur...il demeure optimiste.” Minart, *P.C. Vincennes* t.2, 101.

³⁶ Gamelin, *Servir. t.1*, 96.,

³⁷ *Ibid*, 97.

about the lack of German air power on display in Belgium and wondered “doesn’t it seem as though they are letting us rush into an ambush?”³⁸ However, even after the war, Gamelin refused to entertain the notion that he had been duped. “I know well that many have said: *you fell into a trap. The enemy was happy to goad you into committing powerful forces in the north, while he made his principal effort at Sedan and Dinant.*” Gamelin denied that he fell victim to a German masterstroke insisting that “this hypothesis can only be described as childish”. He claimed that the Germans were, unfortunately, aware of the French deployment along the Belgian border due to a powerful fifth column of informers and infiltrators. Even so, Gamelin believes it was impossible for the German High Command to believe that they were likely to break through the French front at Sedan and roll up the Allied flank at Dunkerque. “Even if they were informed of all our intentions and knew our entire order of battle, how could they be aware that the Commander of the North-Eastern Front [General Georges] would be so late in calling up the reserves at his disposal, located behind the “hinge” of Sedan and Dinant?”³⁹

Gamelin’s observation fails to take into account the role played by his decisions to mobilize the French army repeatedly during the Phoney War. These false alarms exposed the French intention to move into Belgium in force at the onset of battle. As such they were very instructive to the German OKW, as testified by German leaders central to designing the

³⁸ Paul Baudoin, *Neuf Mois au Gouvernement (Avril-Décembre 1940)*. (Paris: Éditions de la Table Ronde, 1948),50.

³⁹ Gamelin, *Servir t.1*, 97 (Gamelin’s emphasis). Daladier echoed this sentiment during his time as prisoner of war in Germany. “Si les lignes Sedan-Mézières étaient dégarnies, si les renforts ne les ont pas consolidées à temps, si le matériel n’y fut pas rassemblé, quel est le coupable si ce n’est le général qui commandait en chef cette région et l’ensemble du Nord-Est?” Edouard Daladier, “Journal de Captivité”, (Paris: Calmann-Lévy, 1991), 182.

Wehrmacht's strategic and operational successes on the western front.⁴⁰ One German reconnaissance pilot remembered the sense of pride in his military leadership's successful prediction of the French army's disposition and the intentions of its high command:

Flying reconnaissance over Monthermé, he and other pilots noted that the roads behind the front, toward Lyons were all completely clear of military traffic. "Truly," he thought, "the enemy has thrown all of his forces toward the North and has completely misjudged the center of gravity of our attack"⁴¹

Gamelin's faith in the security of the Sedan region was utterly misplaced. Even before the German invasion had begun, significant warnings were sounded concerning the weakness of prepared defences in the area. On March 21st, Deputy Pierre Taittinger visited the area and sent his report to both Daladier and Gamelin. "Urgent measures are immediately required," he wrote. "Defensive organization seems impressive until one reaches...the area around Sedan. In this region, exaggerated importance is given to the natural obstacles of the Ardennes and the Meuse." Taittinger hoped to remind his readers that "the Germans showed in 1914, that they were masters at using forests to conceal their movements and we could see this repeated to provide us with a bitter surprise." Furthermore, he did not believe the Meuse to be a significant obstacle to the

⁴⁰ Gamelin himself admitted that the many false alarms, particularly that of January 15, 1940, had revealed Allied plans most clearly to German observers. On January 15th, during one such alarm, Gamelin believed that Belgian king was on the verge of calling for French assistance. Mobilizing his army, Gamelin realised that he was accepting a large risk: "l'ennemi va certainement connaitre nos mouvements par son aviation, en tous cas, par son espionage. Nous perdons donc l'avance que nous eussions pu gagner – que l'ennemi soit déjà prêt à déclencher son offensive, ou que notre mouvement en avant ait une chance de le surprendre." In the end, the Belgian Parliament decided against the King's initiative and refused to call for French aid. The Allied order of battle, however, had already been fatefully revealed. SHAT GR 1K 224 15, Maurice Gamelin: Letter to General Decamp, January 15, 1940.

⁴¹ Reynaud, *La France à sauvé...v2*, 86.

predicted German offensive. “In the last war, the Germans crossed the Marne on several occasions, and that river presented far greater difficulties to cross.”⁴²

Furthermore, Gamelin’s claim that General Georges was slow to implement the reserves at his disposal merits a closer inspection. As mentioned, Gamelin claimed twenty-eight reserve divisions were available to reinforce the threatened sector on the Meuse.⁴³ However this number has never been corroborated by any subsequent investigation. Perhaps the most informed source on the actual number of reserve units available on May 10th has come from Gamelin’s Chief of Staff, General André Doumenc who was directly responsible for organizing and ensuring their supply.

The large reserve units immediately available to the high command on May 10th were very few in number. General Georges had three divisions which he immediately assigned, and General Gamelin set aside three divisions which would not be sent to the Northeast without his permission, because he envisioned sending them to reinforce the Swiss theatre.⁴⁴

Gamelin expected the continuous fortified front to successfully contain the German *attaque brusquée*, quickly saturating the battlefield and taking away the *Wehrmacht*’s ability to conduct mobile warfare. In his mind, almost all available reserves should be positioned very tightly in the rear of the armies. This would minimize the *Luftwaffe*’s ability to disrupt their participation in the battle. On September 19th, he advised General Georges that the lessons from

⁴² SHAT 29N27, Rapport de M.P. Taittinger (Undated) p.2.

⁴³ Gamelin, *Servir t. I*, 98.

⁴⁴ Delpla, *Les Papiers Secrets du Général Doumenc*, 117.

Poland were clear in this regard, “that movements required by reserves to reinforce a threatened sector of the front need to be reduced to an absolute minimum”.⁴⁵ His strategy was to place all reserves “in immediate proximity to the front”⁴⁶, convinced as he was that their movement would be severely compromised by enemy air forces once battle had begun. This was a significant departure from the traditional notion of a free-standing reserve army well in the rear of the front lines, ready to be mobilised in support of a threatened sector once the danger had been properly identified. Such a flexible response was no longer considered possible, faced with the *Luftwaffe*'s demonstrated power to neutralise troop movements, even in rear areas far from the front lines. After the initial attack had been blocked, Gamelin envisioned the constant reissuing of reserve units by borrowing from quiet sectors and transferring them quickly to more active areas. In October 1939, Gamelin issued another directive to Georges, which further clarified his views on the matter. “There must be no movement on the battlefield to attract the enemy's attention. Immobility is the best strategy faced with the threat of bombardment by the enemy's aviation.”⁴⁷

Some historians have condemned Gamelin for playing no significant role in commanding the armies of France during the early days of the battle.⁴⁸ In his own defence, Gamelin's personal writings claim that his attention was fixed on events in Holland. During the opening

⁴⁵ Ibid, 245.

⁴⁶ Ibid, 246.

⁴⁷ From a note by Gamelin to General Georges, October 14, 1939. *Servir t.1*, 247.

⁴⁸ See Jackson, *The Fall of France*, 58-59; Duroselle, *L'Abîme*, 172-179; Horne, *To Lose a Battle*, 102.

days, he “intervened incessantly”⁴⁹ in the unfolding battle in the lowlands, calling for an ever-increasing number of French and British aircraft to support the advancing First Army. He called for repeated air strikes on the German armoured columns as well as trying to concentrate Allied bombing on the breakthrough points on the Albert Canal. Here is where the majority of France’s *Armée de l’Air* was employed from May 10-14. Gamelin ensured that Holland was the R.A.F.’s center of attention as well, calling upon British sorties without pause in the opening round of hostilities.⁵⁰ From May 12th to 18th, other than writing a few reports, he busied himself with anecdotal directives to naval and air forces. In short, his intervention amounted to nothing from the moment when operations visibly took a turn for the worse.⁵¹ In the last few days of his command, Gamelin’s participation was, in effect, reduced to pleading for more British aircraft. Personal requests to this effect were sent to Churchill on May 15th, 16th and 17th.⁵²

That the Commander in Chief focused on the Allied left flank is hardly surprising since he had personally decided upon relocating the army’s strategic reserve to that location, committing it to a mad dash into Dutch territory. Once arrived, Giraud’s Seventh Army did not fare well in the lowlands. Its goal was to link up with units of the Dutch army retreating southwest under German pressure. Unsurprisingly, given the fact that no staff talks ever took place between France and Holland, this plan was not at all consistent with existing Dutch

⁴⁹ Jacques Minart. *PC Vincennes* t.2, 122.

⁵⁰ *Ibid.*, 122-127.

⁵¹ Villelume, 343.

⁵² SHAT 5N580, Rapport du Grand Quartier Général, May 19, 1940.

strategy. The Dutch army intended to withdraw *northward* toward Amsterdam, actually moving away from Giraud's intended rescue. Giraud's Seventh Army would not meet with its intended host, and instead found itself isolated on foreign soil, thrown into an encounter battle in the worst circumstances possible. General Giraud had no practical familiarity with the territory and lacked information on the strength or location of the approaching enemy. The Breda expedition was disastrous for two reasons. Firstly, it placed the French army's strategic reserve far from where it might have helped to contest the developing German breakthrough further south on the Meuse. Secondly, it fixated Gamelin's attention on the left flank of the Allied armies throughout the crucial period of May 10-14.

In the end Giraud's army was pushed aside by the advancing Ninth *Panzer* division. Although achieving some local successes⁵³, Giraud's army was quickly forced to withdraw to a safer location. Gamelin's response to this was to order whatever aviation could be made available to slow down the enemy's pursuit. Hoping to facilitate Giraud's retreat, he demanded bombing runs over the bridges in Breda and Dordrecht. In fact, calling in airstrikes all over the lowlands was the near totality of Gamelin's contribution to the battle after May 10. Only in the form of air power, could Gamelin find the flexibility and rapid response power needed to keep up with the sweeping pace of events. His conceptual journey from casually asserting that, if necessary, "we will simply fight without aviation"⁵⁴ in 1938, to focusing exclusively upon the coordination of Allied air strikes two years later, is breathtaking. Under the strain of a rapidly

⁵³ General Giraud's own memoirs speak very briefly of the events in Holland, and with little detail. His subordinate, M. Lerecouvreux wrote a lively description of Seventh Army's action near Breda in which he describes how Giraud's forces were able to maul elements of 9th Panzer Division before receiving orders to retreat. See M. Lerecouvreux, *L'Armée Giraud en Hollande (1939-1940)*, (Paris: Nouvelles Éditions Latines, 1951), pp. 92-99.

⁵⁴ François d'Astier de la Vigérie. *Le ciel n'était pas vide*. (Paris: René Julliard, 1952), 21, 56.

crumbling military situation, Gamelin had at last become convinced of the pivotal role of air power in modern warfare.

Meanwhile, as the German breakthrough steadily expanded from the towns of Sedan and Dinant, it was apparent that no infantry divisions were near enough, or able to travel quickly enough, to challenge the irrupting *Panzers*. The only hope for striking back rested in the three heavy armoured divisions (*Division Cuirassée de Réserve*) which had only been cobbled together in January. These units had been designed to stop any incursion by swift moving *Panzerdivisionen* with a combination of heavy firepower and unmatched armour. Slow and dangerously fuel-consumptive, these D.C.R.s were designed to exploit the weaknesses of German tanks which had been developed with a focus on speed at the expense of armour. It had been Gamelin's personal decision to place these "rare and precious"⁵⁵ units far in the rear and to transport them where needed by rail. In this way, as long as their conveyance was carefully managed by the army's transportation service (the 4ème Bureau), they could be concentrated quickly to make a sudden appearance wherever needed most. Rapid rail transit would minimize their risk of being intercepted *en route* by the *Luftwaffe*.

This concept of how to use the heavy armoured divisions ran counter to the advice given by the *Conseil Supérieur de la Guerre*. On June 21st, 1939, the council noted the "relative vulnerability of the Ardennes region and recommended, "Three regions must be allotted with their own armoured divisions. The forested region of the Ardennes requires two armoured

⁵⁵ Gamelin, *Servir*, vol.2, 301.

divisions. The Jura and Chablais region [near the Swiss border] require another two divisions of armour.”⁵⁶ This plan would place two powerful armoured divisions in a very advantageous position from which to confront the invading *Panzers* after May 10th. The Council’s advice, however, was quickly dismissed by Gamelin. Instead, throughout the early months of 1940, he stationed the heavy armoured divisions on railcars, far in the rear, awaiting deployment to threatened sectors once the fighting started. This was another devastating mistake as the rail-based transportation of such large and weighty equipment proved too much for the French Transportation Service, the 4^{ème} bureau. The *Bureau’s* effectiveness had been gravely compromised by its recent relocation to Bondons, separate from both General Georges’ and Gamelin’s headquarters. This had been another consequence of Gamelin’s reorganization of the high command structure earlier in the year. The extra time required to coordinate transportation orders issued by General Georges from his headquarters at La Ferté, some thirty kilometers distant, ensured that in each case, deployment of these irreplaceable armoured units occurred a few hours too late.

All three DCRs proved surprisingly ineffective considering the relative quality of their equipment.⁵⁷ Poor logistics defeated these powerful units before they had a chance to perform. Cut off from its fuel trucks, the 1st DCR battled the 5th, 7th and 8th *Panzerdivisionen* commanded by Erwin Rommel, with predictable results. On May 15th, the 2nd DCR was being unloaded

⁵⁶ SHAT 7N 2293 d.3, C.S.G. Au sujet de l’organisation des Divisions Cuirassées, June 21, 1939.

⁵⁷ The Char B1 *bis’s* armour was triple that of the *Panzer IV* (60mm and 20 mm respectively). Both tanks were mounted with a 75mm howitzer but the Char B1 *bis* employed a second main gun: the 47 mm anti-tank cannon. This was the most effective tank-killing gun in the world in 1940.

piecemeal from rail-stations in Nouvion, Hirson and another disembarkation point south of the Aisne River. It would have been difficult to further disperse a large combat unit whose strength rested entirely on the concentration of its equipment. The lengthy process of unloading was interrupted by the surprise appearance of elements from no less than four separate *Panzer* divisions: the 1st, 2nd, 6th and 8th. On May 16th, spread out and deprived of fuel, the 2nd DCR was annihilated, a victim of slow communication and poor planning by the army's transportation office.

The 3rd DCR was squandered by General Flavigny south of Sedan. Despite orders received on May 14th to attack the *Panzer* columns at the earliest possible moment, Flavigny chose to disperse his tanks along a wide expanse in support of local infantry. He ordered the placement of five tanks at every major intersection of roadways throughout the area, ensuring that his heavy armoured division would play no role whatsoever in the battle.⁵⁸

The failure of the three powerful *Divisions Cuirassées de Réserve* can be directly attributed to inefficiencies in communication between the Commanding Officer of the Northeast Front (Georges) and the units tasked with carrying out his orders. Army intelligence and communications were managed by the *Deuxième bureau* headed by Colonel Maurice-Henri Gauché. This branch of the French military has been roundly criticized for its inefficiency

⁵⁸ Flavigny had the chance to counterattack the growing beachhead west of Sedan from the southwest. Had he done so, as he was directly ordered to do repeatedly by General Georges, he would have struck Guderian's tank divisions just as they had swung north in their drive for the Channel – that is to say, from the rear. Such an attack would have struck first at the crucial (and not immediately replaceable) supply units trailing just behind the armoured spearhead. The results might have been devastating had the *Panzers* been deprived of their fuel and ammunition. Karl Heinz Frieser has called Flavigny, “the real loser of the battle of France” for misusing this powerful tool given to him at precisely the right place and precisely the right moment to jeopardize the entire German operational plan. See Frieser, 201-203.

during the battle and is often cited by historians as a principal reason for the French army's remarkably poor performance in May-June 1940.⁵⁹ However, the 2ème Bureau was operating in difficult conditions following Gamelin's reordering of the high command. Productive use of military intelligence in any form is, of course, predicated upon its rapid transmission to army decision makers. This was no longer possible after Gamelin reorganized the *Bureau* so that it was divided into two services, one serving his HQ directly at Vincennes, and the other in the service of General Georges' HQ thirty miles away at La Ferté. After the separation of these two offices, intelligence gathering was characterized by unnecessary delay, duplication of effort and risk of misunderstanding. These combined to ensure slow responses to the rapidly changing military situation. Gamelin must be held personally responsible for this weakness in the French army's operational capacity. A single intelligence gathering apparatus, located entirely within the headquarters of General Georges, who in theory was tasked with commanding the battle, was required. "Enemy movements could have been tracked minute by minute allowing for the rapid drawing of conclusions" and a punctual response to unforeseen events.⁶⁰ Instead, the two truncated sections of the *Deuxième bureau* were forced to compare notes at a distance, await verification by telephone (Gamelin's headquarters was not equipped with radio transmitters) and hope to reach consensus on what both offices were reporting. Such inefficiencies were responsible for the disastrous deployment of the three irreplaceable heavy armoured divisions. The tragic comedy of the 1st DCR and its complement of two hundred of the worlds most powerful tanks, fighting at a complete standstill, deprived of fuel, demonstrates the supreme

⁵⁹ Robert Doughty, Julian Jackson and Ernest R. May have all made this claim. See Doughty, *Breaking point*, 334; Jackson, *Fall of France*, 224 and May, *Strange Victory*, 459.

⁶⁰ Jacques Minart, *PC Vincennes* t.2 146.

command's inability to track the speed of the German advance. So too does the destruction of the 2nd DCR while still disembarking from its train wagons. And yet, tracking the progression of German armoured divisions as they moved at an average of thirty-five km/hr was hardly beyond the capabilities of the *Deuxième bureau*. Rather, it was the lengthy process of communicating from one HQ's independent intelligence-gathering office to another which resulted in delayed French reactions to German manoeuvres. French replies to German incursions, particularly in the first 10 days of the battle, were always too slow by a matter of hours. This delay was caused by the division of the High Command into two parts, conceived and enacted by Gamelin alone.

In the case of the ill-fated DCRs, rapid communication had been essential to their hopes of success. These powerful armoured divisions outclassed the *Panzers* in both armour and firepower. Their weakness lay in their limited range of action. The Char B1 *bis*, France's most powerful tank⁶¹, weighed thirty-two tonnes propelled by a three hundred and twenty horse-power engine which consumed sixty litres per hour. As a result, the operational time of these tanks were limited to approximately five hours before needing to be refueled. Commander Bourgin of the 14th battalion of Char B1 *bis* lamented the battlefield consequences of this limitation.

The B1's lack of autonomy was felt most painfully by its 'forward' operation time of only two and a half hours...Anxiety over this fact constantly preoccupied us. This restriction weighed heavily on every mission...If we failed to take it into account, we risked being forced to abandon this precious equipment to the enemy.⁶²

⁶¹ When used properly, the Char B1 *bis*, was able to dominate the battlefield. This fact was put on display most prominently during combat in the village of Stonne (May 15-17) where Captain Pierre Billotte's vehicle "Eure" proved invulnerable to German weapons, taking over one hundred and forty hits by anti-tank guns and successfully destroying thirteen *Panzers* before withdrawing safely from battle.

⁶² Testimony of Commander Bourgin, *Serre Commission Report, Part 2*, 301. General Yves Montjean, officer of the 3e Bureau (Operations) observed the limitations of French heavy armour first-hand on May 15th when he accompanied elements of the 2nd DCR into combat. "Cette division," he remembered, "fut alerté à 8h30 pour mener une contre-attaque contre l'ennemie qui tentait d'exploiter sa percée. Il a fallu plus de quatre heures pour avancer

Moreover, refuelling these machines was a process which took nearly two hours to complete. Thus, the Char B1 *bis* could serve as a decisive weapon for two and a half hours, after which time it would require a slow refuelling process which effectively removed it from the battle. For this reason, the location from which it began its operations needed to be chosen with extreme care to avoid debilitating fuel shortages. This is precisely what proved impossible once the German breakthrough had been conducted on the Meuse and the front lines were redrawn hourly toward the west. French heavy armoured divisions could not be deployed in a manner that allowed them to reach the enemy fully fueled as the High Command was usually unable to pinpoint how far the *Panzers* had already advanced. The speed of communication between battlefield commanders and army headquarters was precisely the asset of which Gamelin had deprived General Georges, by dividing the army *Bureaux* into separate, independent, and less efficient parts, spanning three different headquarters over wide distances. The effects were catastrophic. Following the failed attempts by the D.C.R.'s to seal the breach west of Sedan, the road lay open to either Paris or the English Channel. All nearby infantry divisions proved incapable of covering the necessary ground and never made contact with German armour. The only large unit which would have been able to do so, General Giraud's Seventh Army, was currently retreating headlong from Holland, as far as possible from where it was needed most.

huit kilomètres et commencer les opérations.” Jean Montjean, *L'Étrange Capture, Mai 1940*. (Paris: Editions Pierre de Taillac, 2019), 19.

The effects of Gamelin's reorganization of the *Grand Quartier Général* reverberated throughout the army command structure. From the earliest stages of the battle, communication was irregular, even at times non-existent, between the front lines and the High Command. During the first two days of fighting (May 10-11) no news from the front reached Gamelin's headquarters concerning the state of the advancing French armies. Only at 18:35 on May 11th, after two full days of combat, did the first significant report reach Gamelin's desk. This was an account prepared by General Mittelhauser, a confidant of Gamelin, who used his personal acquaintance with the Commander in Chief to cut through the layers of bureaucracy and deliver his report in person.⁶³ So convoluted and inefficient had the communications system become that after two days of fighting, no one in the high command was certain if the First Army had successfully reached the Dyle river. Establishing a firm position on this natural obstacle constituted the foundational tenet upon which rested Gamelin's entire defense strategy. Yet after 48 hours, he remained ignorant of whether or not the manoeuvre had been completed.

Personal initiative was now necessary to circumvent the convoluted chain of command and ensure that information reached the *Grand Quartier Général*. On May 16th, after six full days of battle, General Ruby of the Second Army broke protocol and phoned directly to Gamelin's office, bypassing the G.Q.G. staff entirely. This, according to Jacques Minart, a member of Gamelin's staff at Vincennes, was the first news received by the Commander-in-Chief concerning General Huntziger's Second Army since the start of the battle. Also on the 16th, the Second Army's Chief of Staff, witnessing the disaster on the Meuse first-hand, resorted

⁶³ Minart, P.C. Vincennes...131.

to similar methods, calling Gamelin's office directly rather than allowing his information to trickle along the bureaucratic trail.⁶⁴

According to several accounts, the effects of the breakdown in communication weighed heavily on General Georges, Commander of the Northeast front. Gamelin remembered his shock at the disorganization and confusion which characterised his subordinate's headquarters at La Ferté-sur-Jouarre.

On the ground floor there were four rooms: a narrow waiting room; to the right, a small area for the army's railway transportation; to the left, two larger rooms. In the first, total disorder. The Chief of Staff is most often found there; but I could not understand how he could work; everything was in flux.

Chief of Staff of the *Grand Quartier Général*, Aimé Doumenc was so concerned by the disfunction within George's command post that he appealed directly to Gamelin, saying "General Georges has always been fair with me, and I owe him a great deal. But it has become necessary for you to take direct command of the situation." Gamelin responded, "Understood, inform me of the proper time and the occasion."⁶⁵

The historical record concerning General Georges' ability to rise to the challenge of battle has, for the most part, been written by those whose own legacy would clearly benefit from placing the outcome of the battle on Georges' shoulders. The memoirs of Doumenc and

⁶⁴ Ibid, 155-156.

⁶⁵ Gamelin, *Servir t.3*, 415.

Gamelin have both contributed greatly to the myth of Georges' supposed mental and emotional collapse during the first week of battle. In a letter to the *Figaro* in late 1945, Gamelin wrote:

My own personal opinion concerning General Georges is that his character did not rise to the heights of his intelligence. He had a tendency to abdicate from his responsibilities. He had the soul of a staff officer, not a war leader...his belief in the power of defense was excessive and unjustified.⁶⁶

Insinuations like these describing General George's emotional collapse after May 10th, 1940 have long been disputed by the Georges family. Intent on preserving his reputation, the family has argued that Georges' orders, like his copious written instructions and directives from this period (May 10th -19th) show no evidence of deterioration in the Commander's self-control. In fact, as pointed out by historian Claude Paillat, his personal notes taken during the course of battle display a high level of activity on the general's part and suggest no obvious weakening of his command in comparison to the calm periods preceding the German invasion.⁶⁷ For his own part, Georges defended his conduct during the battle, pointing out that his efforts were hamstrung by the unwieldy and dysfunctional command structure imposed upon him from above. "To implement Gamelin's orders, I did not have, or I only had in part, and inconsistently, the necessary communications. I did not have under my direct command, a *3ème Bureau* and had only a fraction of a *2ème bureau*." These departments representing transport and intelligence respectively, were out of the hands of the General responsible for conducting the battle. "The rest of the G.Q.G., the bulk of it, stayed under the order of the Commander of Land Forces

⁶⁶ SHAT DE 2016 SA 63, Letter from General Gamelin, December 9, 1945.

⁶⁷ Paillat, *Le Désastre de 1940*...384.

(Gamelin). He was to come to my rescue, in grave circumstances, with the use of mobile teams.”⁶⁸

However, Gamelin’s own acts of command during the opening days of the battle demonstrate how blurred and confused had become the chain of command under his watch. As stated, Gamelin’s focus from May 10th to 14th was primarily on directing operations in Holland and Belgium. In particular, the Commander in Chief was busy calling in endless appeals for air support in one sector or another. At no time, according to the documentary evidence found in either general’s *journal de marche*, were these interventions made in conjunction with General Georges, the Commander of the Northeastern Front, who was officially responsible for the conduct of the battle. Neither did Gamelin directly contact General Billotte, army commander responsible for the 1st army, whose task it was to occupy the Belgian positions on the Dyle River. Neither did he contact Joseph Vuillemin, Chief of Staff of the *Armée de l’Air* or his top aide, general Marcel Têtu, who acted as the liaison between French and allied air forces. Unilateral acts of command like these were not unprecedented in French military history. However, such moves from the highest echelon of command, needed to be communicated, perhaps discussed, even cursorily, with those responsible for coordinating the larger battle in play. Gamelin’s independent orders only deepened the bewilderment and the sense of being overwhelmed by events, reported so often by those close to the High Command during those frightful days.

⁶⁸ Reynaud, *La France a sauvé...*, 470.

Yet Gamelin never considered the role played by his fracturing of the High Command in contributing to General Georges' bureaucratic nightmare. When Gamelin was eventually relieved of command on May 19, his earliest advice to his successor contained the following: "Go see Georges...see that he begins to improve the organisation of his command. He is currently working in an atmosphere of total disorder. He is doing too much of the busy work personally, he is exhausting himself."⁶⁹ Following the battle, Gamelin would add:

What General Georges lacked was a well-organized working environment, which would have left him greater personal freedom of action. He was never able to assert control over matters and gradually wore himself out: night after night without sleep. No 2ème Bureau [military intelligence] team stationed alongside him to filter the steady stream of contradictory reports. How could he not be overwhelmed? Along with General Roton, he took to composing nearly every order himself. He discussed with General Doumenc the movements of every single division.⁷⁰

In truth, Gamelin had pruned the branches of Georges' administration to the point where personal micromanagement became necessary. Operating from his headquarters at the Château Bondons, Georges was served by only a skeleton of his former *Grand Quarter Général*. With much of his former staff dispersed between the other two headquarters at La Ferté and Vincennes, Georges was unable to effectively sift through the avalanche of reports descending upon his Command Center during the first days of battle.

⁶⁹ Gamelin *Servir t.3*, 433.

⁷⁰ SHAT GR 1K 224 15, Gamelin's apologia, p.3.

Part 3

The Last Few Days: May 16-19

“The real crime”, Daladier lamented on May 16th, “the inexcusable crime was to send so many soldiers into Belgium.”⁷¹ In truth, it was not the great numbers sent into the Lowlands which sealed the fate of the French army, but rather the distance of their sprint eastwards. Even faced with a widening breach through the center of his disposition, Gamelin was slow to pull back these excellent units. Certainly, he remembered the haunting warnings issued by General Paul Armengaud who, after watching the devastation in Poland only eight months earlier, had warned against the dangers of retreat. He had “advised Gamelin not to consider a maneuver like Joffre’s retreat to the Marne. “Given the mobility and air support of the German army, any great retreat would soon become a rout...and the battle of France would be irredeemably lost.”⁷² The French mission to Poland had also observed the German habit of sending armour behind retreating Polish units. This tactic had been extremely effective at cutting off supplies to retreating soldiers and rendering them ineffective. Such warnings are certain to have played a part in delaying the withdrawal of forces from Belgium even though the need for such an order had been apparent since the 13th. Nevertheless, Gamelin waited until the 15th before issuing orders to remove the 1st army group from its positions in Belgium. It was the beginning of the end. Though maintaining his calm demeanor, Gamelin began to show signs of a creeping fear.

⁷¹ Paul Beaudoin, *Neuf Mois au gouvernement*, 56.

⁷² Armengaud, 213.

“He took to virtual isolation alongside his staff and aide-de-camp...depressed and idle, inspiring a profound sense of pity, he moved to and fro between his staff officers and assistants, searching for any bit of news to cling to. No one dared approach him.”⁷³

His gamble had failed. The long process, first joined in October 1939 to integrate his reserve units into the front line had created powerful sectors in Belgium and along the Maginot Line. These were, to all intents and purposes, safe from the threat of immediate breakthrough. Gamelin was able to “saturate” both areas with enough soldiers and equipment to ensure that several large and lengthy battles would be required before any decisive advantage was gained by one side or the other. To ensure the security of these two regions, he accepted a higher level of risk to the Ardennes sector, the only vulnerable spot along the continuous front. This liability had been, for many months, woven into the fabric of Gamelin’s overall strategy. For years Gamelin had stated his conviction that the Sedan region was relatively safe from early action in a coming conflict. He publicly testified to this effect at the Senate’s Army Commission of 1936, and again in 1937. On both occasions, Gamelin declared that he considered the Ardennes to be an area of low priority.⁷⁴

Military conservatism and over-confidence in the strategies and tactics which had proven effective in 1914-1918 have commonly been cited as long-term problems in French military

⁷³ Jacques Minart, *PC Vincennes* t.2, 148, 163.

⁷⁴ As we have seen, Gamelin minimized the importance of calls to reinforce the Sedan sector from a few of his top subordinates including General Corap (Commander of 9th Army) and General Huntziger (Commander of 2nd Army). See also Paul-Emile Tournoux. *Défense des frontières: Haut Commandement – Gouvernement 1919-1939*. (Paris: Nouvelles Éditions Latines, 1960), 61-69.

thought leading to the disaster of May 1940.⁷⁵ This was the *cult of the defensive* which French historians, in particular, have criticized as a case of military atavism in a time of rapidly developing military technology.⁷⁶ In truth, Gamelin's defensive plans had nothing in common with these traditional assertions. General Aimé Doumenc, Gamelin's Chief of Staff, was able to observe the *Généralissime's* strategy from a particularly close vantage. The absence of a strategic reserve was so far removed from French military tradition as to utterly baffle the chief of the G.Q.G. Current doctrine as established in the 1937 field manual⁷⁷, and the culture of the French army as it had developed since the bloodletting of 1914-18, demanded the presence of large and powerful mobile reserves. Doumenc observed:

Gamelin wasn't fighting the previous war, he wasn't even prepared to do that. To wait for an attack from the enemy without knowing where the main effort will take place and to not have reserves ready to move as soon as this information was discerned, or at least to not even consider this a priority, that is what would have stupefied leaders from 1914-18, especially Foch.⁷⁸

⁷⁵ Eugenia C. Kiesling has argued that the French army was so traumatized by the cost of victory in 1918, that it could only imagine waging future war with the greatest of caution, eschewing all unproven theories until thoroughly studied, tested in army wargames, and finally codified in official doctrine. *Arming Against Hitler: France and the Limits of Military Planning*. (Lawrence, Kansas: University of Kansas Press, 1996), 117.

⁷⁶ See J.L. Crémieux-Brilhac, *Les Français de L'An 40*, vol 1., 129-132; Jean-Baptiste Duroselle, *La Décadence*, 243-249.

⁷⁷ This was the *Instructions Provisoire sur l'Emploi Tactique des Grandes Unités*, written under Gamelin's personal supervision. This manual highlighted the superiority of firepower over mobility and emphasised the use of methodical combat over decentralised improvisation on the part of individual field commanders.

⁷⁸ François Delpla. *Les Papiers Secrets du General Doumenc: Un Autre Regard sur 39-40*. (Paris: Olivier Orban, 1992), 291. Philippe Garaud has written convincingly of Gamelin's radical departure from French military tradition, observing that "Au cours de la Première Guerre Mondiale, des réserves générales nombreuses ont constitué un élément décisif dans la capacité de l'armée française à résister avec succès aux grandes offensives allemandes. Mais en mai 1940, la situation est bien différente. Le résultat de la répartition des moyens adoptée par le haut commandement français en fonction des différentes hypothèses retenues fait que les réserves sont particulièrement faibles ou beaucoup trop éloignées pour pouvoir intervenir rapidement. Ce qui signifie qu'en cas de 'surprise' (et l'attaque allemande, comme la manoeuvre Dyle, en accroissent inévitablement et dangereusement la possibilité), directement ou indirectement, le commandement est très largement dépourvu de moyens de faire face rapidement." Philippe Garaud, "Le rôle de la doctrine défensive dans la défaite de 1940: Une explication trop simple et partielle" *Guerres Mondiales et Conflits Contemporains*. no. 214 (Avril 2004), 112.

Indeed, Foch's conception of how reserves should be used were in direct contradiction to those adopted by Gamelin in 1940. "Reserves must be spread out, in layers and deployed in such a way to ensure quick and decisive intervention", Foch advised the Polish army in 1920. "They must be available for use in any eventuality and their means of transportation must be organized in detail ahead of time...and in the center of the country, a large strategic reserve."⁷⁹ This was the expression of France's orthodox military theory which proved so successful, particularly in stopping the German offensives in the spring of 1918. Far from cautious then, Gamelin's plan was, if anything, overly audacious, risking the entire battle on a forward defense which he felt had become necessary in the age of modern air power. His strategy was neither cautious nor confident, but rather accepted a high degree of risk from a sense of pronounced insecurity over his army's ability to contest the *Luftwaffe's* presence over the battlefield. Years of apocalyptic predictions on the future role of aircraft coupled with compelling examples put on display over Poland and Norway, convinced France's top soldier to disastrously re-think his order of battle.

Following the battle, Gamelin stated his belief that a German breakthrough, along the same lines as that which took place at Sedan and Dinant, would have likely occurred wherever the Germans had chosen to apply their main effort. Any point along the French continuous front was at least as vulnerable as the Ardennes sector, Gamelin argued, to the impact of several divisions of massed armour. He concluded that by the spring of 1940, no last-minute reshuffling

⁷⁹ SHAT GR1K 95 4, Letter from Foch to General Henrys, March 3, 1920.

could have prevented the breakthrough.⁸⁰ Even if this were true, it was the absence of reserves available for immediate counterattack which ensured the German breakthrough had fatal consequences to the Third Republic. As early as May 16, only three days after the defeat on the Meuse, the hastily assembled *Military Cabinet for the Defense against Enemy Armour* reported “Everywhere we have attempted to stop the *Panzers*, Montcornet, Marle - the chief handicap has been a lack of reserves.”⁸¹

By then, Gamelin knew only too well that his wager had failed. His behaviour during the last few days of command revealed an increasing despondency over his inability to redress the situation. During the opening days of battle, he attempted to impose his will over the course of events by coordinating the application of Allied air power. Once the German breakthrough had widened into catastrophe on May 14-15 however, Gamelin’s acts of command dwindled in number; his waning involvement ultimately declined into a state of virtual silence. General Georges remembered that on his final day as Commander in Chief, May 19th, Gamelin “did not make any command action at all.”⁸² On that day, General Doumenc, chief of the G.Q.G. in Montry was convinced of the pressing need for Gamelin to intervene directly.⁸³ Doumenc telephoned the *généralissime* and sent General Koeltz to pick him up by car. It was only after

⁸⁰ See Jacques Minart, *PC Vincennes* t.2, 171. Some historians have agreed with Gamelin’s assessment in this matter. J.L. Crémieux-Brilhac writes, “Gamelin, avec deux fois plus de chars et d’avions, aurait sans doute couru aussi bien à la défaite.” Crémieux-Brilhac, vol. II, 60.

⁸¹ SHAT 5N580-1, Observations: Cabinet Militaire sur la défense contre les engins blindés (Early June 1940).

⁸² No author, “Interview avec Général Georges” *Résistance: La voix de France* (July 17, 1946), 1.

⁸³ Francois Delpla. *Papiers Secrets du General Doumenc: Un Autre Regard sur 39-40* (Paris: Olivier Orban, 1992), 248. Gamelin’s only reference to this “acte de commande” is found in the opening pages of his memoirs where he writes, “Le 19 mai, j’avais l’impression très nette que mon intervention était devenue nécessaire.” Gamelin, *Servir* I, 20. He makes no mention of Doumenc or Koeltz’s participation in his account.

this effort by two subordinates to involve him directly in the battle that Gamelin sat down to write his *Instruction Secrète et Personelle no.12*. This was to be his final written command.

Much has been written about *Instruction no. 12*, but what is most important about this hastily written note, is that it had no basis in reality. While its content was theoretically sound, consisting of a plan to pinch off the German armored spearhead with simultaneous British and French attacks from both north and south, the resources for such an attack were clearly unavailable. Nowhere was the necessary equipment assembled and available. This fact was clearly conceded by General Roton, Georges' Chief of Staff, the officer responsible for preparing, supplying, and transporting the resources required to enact the proposed two-pronged attack. He wrote, “[Gamelin’s] instructions contained only *suggestions*. They added nothing new to the operations which were already underway. In short, by May 19, the game had already been played.”⁸⁴

As Gamelin finished the *Instruction* with the words, “everything depends on the next few hours,” it is unclear whether the General believed his plan could have been acted upon. Certainly, the situation maps on General Georges' walls, updated hourly, would have informed him that no such attack could be mounted according to the timescale he proposed. In any event, this letter was an anomaly in that it was the only *Instruction Personelle et Secrète* to be prepared by his own hand. The usual procedure was to have his personal staff prepare the directive and submit it to the G.Q.G.⁸⁵ When he had finished composing the letter which he presented as a suggestion, rather than a direct command, Gamelin placed the folded paper on a table near

⁸⁴ General G. Roton, *Années Cruciales: La Course aux Armements (1933-1939), La Campagne (1939-1940)*, (Paris: Charles Lavauzelle, 1947), 302.

⁸⁵ Minart, I, 213.

Georges. “I’m going back to Vincennes,” he said, “you will read this after my departure.”⁸⁶ This request constituted an inexplicable waste of time and casts further doubt on Gamelin’s sincerity in drafting *Instruction no. 12*. Rather than developing his plan in greater detail during that crucial morning, he left Georges to muddle through, alone with his insufficient staff at La Ferté.⁸⁷ For his part, general Georges described the *Instruction personnelle no. 12* as a “Parthian Shot” from Gamelin who already knew he was about to be replaced, and who wanted to unload as much responsibility on Georges as he could.⁸⁸

The curtain fell on Gamelin in the afternoon of May 19th when he received a telegram from Prime Minister Reynaud thanking him for his years of service to France. The missive went on to inform him that his successor, Maxime Weygand, would arrive to assume command of the Supreme Headquarters on the following day. That same day, Charles Huntziger, Commander of the Second Army wrote : “Weygand has replaced Gamelin. A wave of relief passes through the whole army.”⁸⁹ An official communiqué was not distributed until two days later. It did not fault the general for poor leadership, but only cited Gamelin’s advancing age (sixty-seven in May,

⁸⁶ Le Goyet, 341.

⁸⁷ Gamelin opens his memoirs by defending this *Instruction* to Georges. He claims: “Si je n’avais pas été remplacé dans mes fonctions le 19 en fin d’après-midi, je comptais voir, le 20 au matin, avec le général Georges comment il avait conçu l’exécution de mon ordre.” Gamelin *Servir* I, 15. This of course, would have meant another two-hour round trip to Georges’ headquarters. If everything was to “depend on the next few hours” as he claims in the *Instruction*, one can only wonder why he left La Ferté on the 19th, asking his subordinate to delay reading his order until after his departure, rendering necessary another meeting nearly a full day later. Gamelin goes on: “Personnellement, je pense qu’il aurait dû, dès le 20, se rendre dans le Nord pour veiller lui-même au développement de la manœuvre à réaliser. C’est du moins ce que j’eusse fait à sa place.” Considering Gamelin’s conspicuous absence from command from May 12th to the 19th, this statement is at best doubtful.

⁸⁸ Reynaud, *La France a Sauvé L’Europe*, vol 2, 141.

⁸⁹ Max Schiavon, ed. *Les Carnets secrets du Général Huntziger, 1938-1941*. (Paris: Éditions Pierre de Taillac, 2019), 131.

1940) as the basis for the decision to place him among the ranks of reserve officers, effective immediately.⁹⁰ His newly appointed successor, however, was to assume command at the age of seventy-three.

Upon their final meeting, Gamelin informed Weygand of his plan to attack the *Panzer* columns from the north and south simultaneously as outlined in his *Instruction Personnelle no. 12*. However, after a few hours spent in study of the military situation, Weygand decided this was not the highest priority. To his mind, the first order of business was to embark upon a rapid reconstitution of the army's strategic reserve. The new Commander-in-Chief was fully in agreement with a report hastily prepared by the army's general staff only a few days earlier. "We must quickly regroup all that remains of our available forces in order to deploy in the center of our defensive front, a strategic reserve in preparation for another great tank battle."⁹¹ Weygand added, "since our original reserve was wasted on our left flank," he announced, "we need to reconstitute a reserve force."⁹² Ordering, rather than suggesting, as had been Gamelin's habit, Weygand soon re-established a strategic reserve consisting of four divisions to be made available in the next three days. These were to be joined by seven more divisions reconstituted from the large units dispersed during the German breakthrough, and which still held most of their equipment and supplies. This powerful reserve of eleven divisions was to be operational by mid-June at the latest. Weygand's decision places in high relief the unorthodoxy of Gamelin's plan. The glaring absence of strategic reserves struck Weygand as the army's obvious Achilles' heel;

⁹⁰ SHAT GR13 YD 1270, Letter from the 'Direction Général de l'administration de la guerre et du contrôle', June 22, 1940.

⁹¹ SHAT 5N 580-1, Rapport de l'État-Major de l'Armée, May 14, 1940.

⁹² Serre Commission Report, Vol.2, p.409.

the redesignation of such a force was its most pressing need. This was his first significant act of command after May 20th, putting an end to Gamelin's unique and ineffective vision of incorporating reserves into the front line. Addressing his army in the clearest of terms, Weygand announced: "the coming battle will have us at a numerical inferiority of two against five. The remains of our army will be further weakened by the loss of an enormous amount of irreplaceable material due to the complete absence of reserves."⁹³

Part 4

The Air War

We have already seen how the French aeronautical industry was ultimately successful in ramping up the output of aircraft to the point where it could challenge and even exceed German production. By May 1940, French aeronautical production exceeded five hundred planes per month, and there was still room for further growth. Suppliers had not yet fully corrected the shortage of ancillary aircraft parts (propellers, gun sights, landing gear) due to outsourcing of these components to regional manufacturers. French production would surely continue to climb over the next several months as disparate partners sharing in the assembly process further streamlined their working relationships. Simply put, the French had not yet reached their industrial peak, though the numbers of aircraft already rolling out would ensure that the battle could be engaged with confidence. The great shortfall was in trained pilots. This deficiency set

⁹³ Ibid.

a hard limit to the number of aircraft that could be fielded at any one time during the battle. Czech and Polish pilots had already arrived in large numbers and helped to offset the shortfall of French-trained air crews. Czech pilots were not immediately serviceable however, as most had no working knowledge of the French language. Rapid communication by radio was standard practice in the air, and recently arrived Czech pilots could not at first be relied upon to safely participate in French patrols.⁹⁴ However, even bolstered by the enlistment of foreign pilots, the French Air Force remained critically short on manpower.

Scarcity of pilots explains why so few French planes were present to contest the German crossing of the Meuse from May 12-14. Their small number ensured that French air crews were tasked with an overwhelming demand for their services. General Jean d'Harcourt, attached to the First Air Army remembered:

Our pilots were extremely fatigued. I saw them spread out upon the airfields under my inspection, lying in rows on the ground – trying to recoup their energy in between missions. Our numerical inferiority had the consequence of forcing our pilots to complete two or three missions per day, not counting the added exhaustion brought about by constantly relocating to new airfields in response to fluctuations in the land battle.⁹⁵

At the opening round, the French air force could muster one hundred and nineteen squadrons on the crucial northeast front. This represented only one fourth of total available aircraft. The remainder were unused due to lack of personnel. Squadrons in need of new

⁹⁴ Minart, *PC Vincennes* t.1 63.

⁹⁵ d'Harcourt. Général Jean. "Les Chasseurs ont fait tout leur devoir" *Icare: Revue de l'aviation française (1939-40 – La Bataille de France, vol. 1: La Chasse)* 54 (été 1970), 45.

machines were told to make their way to Toulouse, where new, unused aircraft lay waiting upon the airfields. “Throughout the battle,” remembered General Henri Hugo, captain of the 7th fighter squadron, “we were continually sent to Toulouse, every three or four days, to bring back new aircraft in order to recoup our losses in action.”⁹⁶ Lieutenant-Colonel Henri Dietrich could not believe his eyes when he first saw the number of new aircraft sitting unused at the height of the battle:

Very soon, after two or three days, we had lost eight pilots killed in action... We did not have many undamaged planes left at our disposal. We were sent to Cazaux [south of Toulouse] and that is where I experienced my greatest surprise of the war: airplanes, so many airplanes just waiting to be put into use. They told us with a kind of bitter indifference: “Choose some...if you find one that pleases you, take it.”⁹⁷

Paul Stehlin, Commander of the *Roussillon* squadron (who would eventually become the Air Force Chief of Staff in 1960), experienced the same shock upon seeing the multitude of new and powerful machines lying unused due to the nation’s shortage in trained pilots. “I will never forget,” he recalled, “the memory of those marvellous airplanes lined up by the hundreds – yes, by the hundreds...armed and fully equipped in front of the hangars.” Far from observing planes in an incomplete state of equipment, Stehlin found each plane fully complemented and ready for immediate action. “Choose! They told us simply. And every one of us took turns sitting in several planes, trying to select the best one...but they were all equally new, equally perfect.”⁹⁸

⁹⁶ Général Henri Hugo. “Une expérience inestimable” *Icare: Revue de l’aviation française* (1939-40 – La Bataille de France, vol. 1: La Chasse) 54 (été 1970), 93.

⁹⁷ Lieutenant-Colonel Henri Dietrich “Point de Vue d’un réserviste” *Icare: Revue de l’aviation française* no (1939-40 – La Bataille de France, vol. 1: La Chasse), 54 (Été 1970), 122.

⁹⁸ Stehlin, “De la Diplomatie au Renseignement et à l’escadrille”...46.

Under such circumstances, it is hardly surprising that the planes available at the armistice, following six weeks of battle, exceeded in number those on hand at the start of combat on May 10. Still, had the high command correctly assessed the danger presented by the *Panzers* emerging from the Ardennes region, hundreds of planes might yet have been sent to the sector. In his own words, Gamelin was fixated on events in Holland during this period, and it was there, over the northern left flank, that the bulk of France's air force was concentrated. Gamelin's mobile 1st army group was exposed to the kind of air attack which had proven so effective in Poland and Norway. Throughout the opening days of the battle, these units were to receive the aerial support of as many planes as Gamelin could provide. Fearing for the safety of the forces entering Belgium, Gamelin determined to deprive the *Luftwaffe* of its ability to roam the sky unchallenged, disrupting Allied units and preventing their movement. He believed the left flank's forward movement rendered this the most vulnerable sector of the front and would remain so until the Dyle River had been reached and its positions fortified.

Thus, the reinforced drive into Belgium not only committed France's best and most mobile divisions, as well as the strategic reserve, but also, catastrophically, it absorbed the vast majority of the air force's newest and most effective defensive aircraft. The Dyle-Breda Plan could not have denuded the Ardennes region of any more of its allotted strength. Gamelin's over-riding concern with protecting the advancing units in the north all but ensured that troops further south, around Sedan and Dinant, would receive the coming German armoured incursion with the fewest possible troops and the least air cover available.

“We lost the war because of air power. There may have been other important factors, but that one, in all of its tragic evidence, haunts the souls of Frenchmen.”⁹⁹ Anatole de Monzie, Minister of Public Works from 1938 to 1940 had no doubts concerning the principal reason behind France’s humiliation. However, though outnumbered, French fighters were unexpectedly effective versus the *Luftwaffe*. Many pilots reported their surprise at the lack of training displayed by many of their German adversaries. *Luftwaffe* pilots were regularly observed showing signs of inexperience in basic tactics and shooting precision.¹⁰⁰ French fighters scored nearly one thousand aerial victories while suffering only three hundred and six losses to German fighters.¹⁰¹ Despite their technological limitations, particularly in reference to maximum speed, French planes and pilots proved more than a match for their adversaries, wherever a rough parity in numbers could be achieved. Despite this admirable performance, however, the *Armée de l’air* was incapable of effectively protecting the skies over France; it possessed the machines but lacked sufficient trained pilots and crews. For the rest of his life, Gamelin was convinced that this had been the deciding factor in the struggle. “I never wavered from my conviction that our defeat in 1940 was, above everything else, the victory of German aviation which enjoyed a

⁹⁹ Quoted in Patrick Facon. *Batailles dans le ciel de France Mai-Juin 1940*. (Paris: Pascale Galodé, 2010), 233.

¹⁰⁰ SHAA 11Z 12941, Les Possibilités de notre Chasse, p.5. This report by the Air Ministry pointed out that over the first few months of the war, the *Armée de l’Air* had downed far more German planes than it had lost. The Ministry attributed this to the greater maneuverability of the M.S. 406 and to training practices within the Air Force. Inspector-General of Fighter Aviation, General Bernard d’Harcourt, had established a policy of only sending “supremely trained” (*archi-instruits*) pilots into combat. See Colonel Marice Tallent, “Garder le Moral,” *Icare: Revue de l’Aviation française* (1939-40 La Bataille de France: Vol. II La Chasse, deuxième partie), no 55 (automne-hiver 1970), 83; Lieutenant-Colonel Henri Liautard, “Combats dans le ciel, et retraits au sol,” *Ibid*, 95.

¹⁰¹ Immediately after the battle, Air Chief Vuillemin provided these numbers in his official report. Total German losses, he claimed, were 982 planes of which 778 were shot down by French fighters and 204 by artillery. SHAT DE 2016 SA 70, Un bilan de la bataille aérienne sur le front Français, July 29th 1940.

crushing superiority, not in quality, but in number, over our own.”¹⁰² General Georges, Commander of the Northeast Front, held the same opinion. “Out of all our weaknesses,” he commented in early 1941, “it was certainly the state of our aviation which was felt most powerfully on the field of battle.”¹⁰³

The true victory for German aviation came not from its numerical superiority, but rather from the way the threat of its capabilities determined the course of French strategy in 1940. Every major redeployment conducted by the French high command after the fall of Poland, was taken in response to the unexpectedly effective use German aircraft in September 1939. The manner by which German air attacks prevented the movement and concentration of Polish reserves so impressed the French high command, that it soon took steps to prevent a similar disruption of its mobile left wing. Every major change enacted by Gamelin during the *Phoney War* had the twin results of strengthening the armies intended to rush into Belgium on the one hand, and correspondingly weakening the French center opposite the Ardennes, on the other. Thus, throughout the period, his orders, intended to counter the spectre of German air power, served primarily to facilitate the fatal breakthrough which was to occur on the Meuse as of May 13. As such, it was the *threat* of Nazi aircraft, rather than its eventual performance, which contributed most to the stunning German success in the spring of 1940. Even before the invasion began, the *Luftwaffe* had unintentionally accomplished its most important role: denuding the French center of its strategic reserve and most of its supporting aircraft. The German operational

¹⁰² Gamelin, *Servir t.3*, 461.

¹⁰³ SHAT GR 1K 224 15, Mémoire de M. Guy La Chambre du 16 Mai 1941.

plan to pierce Allied defences near Sedan was brilliant in its unorthodoxy and daring; but it was only able to meet with such complete success because Gamelin had ensured it would meet with the least possible resistance. It was a reaction based on twenty years of growing fears of the German aerial *knock-out blow*, fears which appeared to have been realised over the open plains of Poland, and which threatened to be replayed in the West. In assessing the causes for the German victory on the Meuse, Gamelin's decision to incorporate most of the French reserves into the front line, assumes a level of importance at least as significant as the bold German plan itself. If not solely responsible for the French collapse, it provided the conditions necessary to rapidly transform a local defeat into strategic disaster.

Chapter 5

Gamelin's Burden

Joffre and Foch showed us how important it is to keep a flaming heart and a cool head...and we must not join the ranks of those who let themselves get swept away by the tide of battle, and with each crisis, throw in all one's reserves!

*Maurice Gamelin, Graduation speech at St. Cyr.
March 19, 1938¹*

In 1967, historian Philip Bankwitz pointed to the deep divisions which strained relations between civil and military leaders in France during the early-mid 1930s. Bankwitz argued that the material needs of the French military were increasingly sidelined during the period, partly in response to Weygand's incessant criticism of France's political leadership, and of Edouard Daladier in particular. This, coupled with the steadily worsening economic situation following 1929, led to a period of under-funding and stagnation in the armed forces.² Weygand, it is argued, personified the royalist, Catholic and hierarchical ethics which republican politicians feared and despised. It has been customary, since Bankwitz's influential work, to attribute the tension between France's political and military leadership to the irascible Weygand's inability to accept compromise.³ The early 1930s are seen as a standoff period between the Commander-in-

¹SHAT DE 2016 SA 63, Graduation speech given by Gamelin to the "Eidelweiss" class at St. Cyr, March 19, 1938.

² Bankwitz claims that in 1933 and 1934 Daladier could rely on constant resistance to his attempts to cut military costs from both Weygand and Pétain. Daladier's defeat at the CSG while trying to pass the cost-cutting *Bernier Laws* (July 17, 1933) was one of the greatest humiliations of his life and cemented his adversarial stance toward Weygand for the remainder of his political career. See Phillip Bankwitz, *Maxime Weygand and Civil-Military Relations in Modern France*. (Cambridge, Massachusetts: Harvard University Press, 1967), 88-92 and 104.

³ See Anthony Adamthwaite, *France and the Coming of the Second World War*, 31; Martin Alexander, *The Republic in Danger*, 28-33; Jean Doise and Maurice Vaisse, *Politique étrangère de la France, Diplomatie et outil militaire, 1871-1991*, (Paris: Imprimerie Nationale, 1987), 407-408; Robert J. Young, *France and the Origins of the*

Chief who incessantly raised the alarm for new funding, and the government ministers who sought to restrain military spending against the backdrop of global economic depression.⁴ In several accounts, Gamelin's rise to prominence owed largely to his co-operative nature and marked interest in developing more cordial exchanges between military and government.⁵ In truth, this notion makes the twin mistake of overestimating both Gamelin's amiability and Weygand's truculence. Civil-military relations were fraught with tension during Weygand's tenure as Chief of Staff because this period saw the priorities of both sides trending in opposite directions. While the army called for increased funding and development of a new generation of

Second World War, (London: Macmillan, 1996), 72-73; Robert Doughty, *The Seeds of Disaster, The Development of French Army Doctrine, 1919-1939*, (Mechanicsburg, PA: Stackpole books, 1985), 126-129.

⁴ Peter Jackson has observed that "by 1933 the prevailing atmosphere of financial austerity and the politics of disarmament combined to threaten the military with even greater reductions and, worse, the possibility of total restructuring." Jackson argues that the French military "perceived a threat to its very existence" and sought to increase its allocated state funding by regularly exaggerating the size and scope of the growing German military threat. This conduct soon cast suspicion on the validity of army intelligence's assessments of Nazi rearmaments, and "compromised the reliability of intelligence reports in the eyes of civilian officials." See Peter Jackson "French Intelligence and Hitler's Rise to Power" *The Historical Journal* (September 1998) 41:3, 803-804. This despite the fact that the War Ministry had been following the development of conscientious objection sympathies throughout France and, like Daladier himself, came to believe in the possibility of mass refusal of state mobilization papers in the event of war. The combination of an exaggerated perception of German strength on the one hand, and fears of reduced French recruitment on the other, only exacerbated tensions between the nation's civil and military leadership. See Norman Ingram, "The Circulaire Chautemps, 1933: The Third Republic Discovers Conscientious Objection." in *French Historical Studies* 17:2 (Autumn 1991), 392-394.

⁵ Martin Alexander has described Gamelin's ability to co-operate with the civil government as a testimony to his strength of character. "Demonstrating an iron will, therefore, Gamelin resolved to prevent a new outbreak of civil-military confrontation". Alexander's description is certainly unique among historians in attributing "an iron will" to the oft-defamed general. See M. Alexander, *The Republic in Danger: General Maurice Gamelin and the Politics of French Defence, 1933-1940*. (Cambridge: Cambridge University Press, 1992), 85. Anthony Adamthwaite has argued that Gamelin's mildness of character was his greatest asset following years of confrontation during Weygand's tenure as Commander-in-Chief. "His self-effacing manner and modesty of ambition made him indispensable at a time when the army was under great stress... Gamelin's activity was essentially political. His role was a peacekeeping one. In fact, he was much easier to get on with than Weygand and he was the one man who seemed capable of holding the army together." Adamthwaite, *France and the Coming of the Second World War*. (London: Frank Cass, 1977), 167-168. Lloyd Clark has revisited this notion, stating "In a system that... favoured procedure over flexibility and dynamism, it was hardly surprising that competent but uninspiring officers with good staff skills – men such as Gamelin and Vuillemin – rose to the top rather than charismatic leaders." Lloyd Clark, *Blitzkrieg: Myth, Reality and Hitler's Lightning War*. (London: Atlantic Books, 2016), 38.

aerial and armoured equipment, the government held fast to the spirit of Locarno and the hope that disarmament might still, in the end, allow peace to prevail.⁶ Faced with such incompatible agendas, rising tension between civil and military leadership was unavoidable. In his first year as Chief of Staff, Weygand saw the army's military budget slashed by over two billion francs.⁷ Thereafter, it stagnated until 1935, the last year of his command. Taking over the role of Chief of Staff in 1936, Gamelin saw the budget raised by nearly two billion francs each year until 1938, after which time it ballooned two hundred and fifty percent to fifty-three billion in 1939.

Weygand's volatile personality was not the cause, nor did it set the pace to the exhausting tug of war which developed between Parliament and the army brass in the early 1930s. By the same token, the massive rise in state funding for the military after 1936 was not the result of General Gamelin's relative agreeableness. It has been argued that despite his limitations, Gamelin rose to prominence because he offered a conciliatory finesse in his dealings with the government which Weygand lacked.⁸ In exchange, this same geniality played a part in loosening governmental purse-strings for military funding. There is scant documentary evidence to support this theory. In fact, it was the steadily worsening geopolitical situation which alone stimulated an increase in support for the army. Starting with the Rhineland crisis in May 1936,

⁶ Conan Fischer has argued that such optimism was not misplaced, at least until 1932. Fischer claims that the French government "continued ultimately to trust Berlin and maintained an intimate and positive relationship with Germany into the spring of 1932." Until this time, Germany too was "prepared to engage constructively with Briand and offer the prospect of European unification organized around a Paris-Berlin axis." See Conan Fischer. *A Vision of Europe: Franco-German Relations during the Great Depression, 1929-1932*. (New York: Oxford University Press, 2017), 50-55. See also Norman Ingram's review of this work in *The American Historical Review*, Volume 124, Issue 4, (October 2019), 1528-1529.

⁷ Government funding for the army in 1930-31 was 10.1 billion Francs. For the period 1931-32, this had been cut to 7.8 billion. See Robert Frank, *Le Drame du réarmement...* 303.

⁸ J.L. Crémieux Brillhac has noted: "Flandin a confié en 1935 le pouvoir militaire a Gamelin pour son loyalisme républicain et pour une souplesse qui en faisait le général le plus apte à éviter les tensions dans l'État-Major. See Crémieux-Brilhac II, 72.

proposals for increased defense spending proliferated in both senate and parliamentary debates. Shortly after the Munich crisis of September 1938, government spending for the armed forces reached an annual total of 15.2 billion,⁹ an amount unmatched since 1919. This level of funding alone did much to improve civil-military relations, quite independently of the Commander in Chief's personality. The charged atmosphere between soldiers and politicians before 1936 was less attributable to Weygand's combative nature than to the pressing needs of a cash-starved military, desperate for modernisation in the face of a mounting external threat. Gamelin rose to prominence at a period when prior tensions were quickly defused by the state's ever-growing financial commitment to re-armament. One can reasonably question the extent to which Gamelin's conciliatory personality played a part in the process of healing the wounds between military and civil policy makers. Flooded with state funding, to the very limit of the nation's financial capabilities, Gamelin's army knew very little of the institutional atrophy which rankled Weygand ceaselessly.

Certainly, Gamelin's comparatively genial stance was well received by ministers who were long accustomed to arguing tooth and nail over every aspect of policy relating to military funding. Restrained, refined and subtle, his conversation was always aimed at compromise and cooperation with his partners in the republican government. As we will see, his quiet diplomacy played no small role in facilitating his rise through the ranks of the French army over a forty-year period. This characteristic was often cited within the many sterling commendations referencing his self-control, his organizational talents, and his strategic imagination. As this model officer aged, and particularly during the 1930s, his conceptual and diplomatic talents were increasingly

⁹ Frank, 303.

offset by observations of physical lethargy and diminishing involvement with the army's rank and file.

Part 1

The Uncombative Soldier

From his earliest days at St-Cyr military academy, Gamelin distinguished himself as a remarkable student noted for his organizational capabilities, strong leadership and above all, his brilliant intelligence. Graduating first in his class of four hundred and forty-nine students in 1894, he seemed already destined for a remarkable career. "He is an elite student," one instructor noted in his personnel dossier. "Small in stature, with no need to shave, he appears as a child...but has never ceased to demonstrate the highest professional qualities." After only two years of service in the army, another instructor added, "I could not praise this young officer sufficiently for the highest service he provides to the General Staff." Soon, Joseph Joffre, Commander of the French Army would sing similar praises for the young Gamelin: "He continues to be, from all points of view, the perfect officer."

Repeatedly, Gamelin was commended on the energy he displayed in command. Reference was made to his "vigour", his "zeal", even his "fanaticism".¹⁰ As he matured, these traits would soften into an unflappable, inexpressive exterior, fashioned deliberately in the mould of Joffre's renowned *sang-froid*. Gamelin's calm and courteous demeanor allowed him to maintain excellent relations with the changing governments of the 1930s. His ascension to

¹⁰ SHAT GR 13 YD 1279-3. Notes by General Ambresini (October 23rd, 1896).

position of Commander in Chief was received approvingly both at home and abroad.¹¹ Similarly, Gamelin's avowed republicanism came as a welcome alternative to Weygand's royalist sympathies and fervent Catholicism.¹² The emotionally volatile Weygand was the "man of the right" while Gamelin, the "unrepentant Cartesian"¹³, preferring hard logic to messy sentimentality, was usually perceived as the "man of the left".¹⁴ "Neither fascist nor royalist, unlike many generals,"¹⁵ he was proud of his stance as an open *Dreyfusard* early in his career when the artillery captain's trial polarised the nation.¹⁶ His beliefs, whether political or religious, were subject to the same inconsistencies and contradictions that defined so much of his military thought.¹⁷ In all aspects, Gamelin's speech was circuitous and non-committal. His stated

¹¹ Ludwig Beck, German Chief of Staff, visited France in 1937 and was impressed by Gamelin's intelligence and poise. See von Manstein, *Lost Victories*, 102. German newspapers were equally laudatory of the new French military Commander. The *Frankfurter Zeitung* wrote "À Weygand, sec et agressif, succède Gamelin, l'homme amiable, correct et réservé." Another article declared, "Le Général Gamelin est un des soldats les plus remarquables que la France n'ait jamais connu...le choix du Général Gamelin représente pour l'armée française un immense avantage." The source of this second article is translated in Gamelin's personal dossier as the *Journal de Berlin*. Both articles (already translated into French) appear in Gamelin's "Dossier Personnel", SHAT DE 2016, SA 64.

¹² Although perhaps too much has been made of this contrast championed in 1959 by Philip Bankwitz ("Maxime Weygand and the Fall of France", *The Journal of Modern History* 31:3 (September 1959), 225-6) and later revisited by Adamthwaite (*Grandeur and Misery*, 153). Gamelin was often seen practicing his Catholic faith, attending mass at Notre Dame at the start of the war and regularly seeking the advice of a local priest during his wartime captivity at the Itter Castle in Austria. His republicanism too may not have run as deeply as is often assumed. In his own words, he was moved to scoff at Daladier when the latter compared himself to the Bourbon kings of old. "Le 20 août, je retrouvais le président Daladier, seul à seul. Il me dit – et le mot est demeuré précis en ma mémoire: "Je suis dans la situation de Louis XV, la veille du premier partage de la Pologne..." J'eus presque envie de sourire. Je ne voyais guère le président Daladier en Louis XV." (Gamelin, *Servir* vol.2, 444-445.) Ernest R. May has argued "Privately, [Gamelin] was as much a monarchist as Weygand and as devout catholic." May, *Strange Victory*, 130.

¹³ Maurice Gamelin, *Servir* vol 1, (Paris: Plon, 1946), XI.

¹⁴ D'Argenson, Marquis. *Pétain et le Pétainisme: Essai de psychologie* (Paris: Editions Tristan, 1996), 74.

¹⁵ Daladier, "Journal de Captivité" in *Riom 1942: Le Procès*, Julia Bracher, ed...,169.

¹⁶ Gamelin, *Servir t.2*, xxvii.

¹⁷ Despite earlier accounts of Gamelin's religiosity (see footnote 12 above), Edouard Daladier presented a differing opinion. He remembered that it was only after 1941, as a German captive at Itter castle, that Gamelin, heretofore predominantly secular in lifestyle and tastes, experienced his religious revival, calling for a priest to provide him with communion at Easter. "Gamelin communique pour la deuxième fois, la première à Pâques. Un prêtre mutilé est venu en voiture à 8 heures avec un autel portatif comme on en avait au front. Ce serait émouvant si Gamelin était

opinions were often contradictory from one day to the next, giving one the impression of “sand running through one’s fingers.”¹⁸ “I am unable to understand,” wrote former Prime Minister Albert Sarraut, “or even to tolerate with indifference the contradictions and constantly fluctuating convictions held by General Gamelin.”¹⁹

Gamelin was capable of strategizing with great imagination and subtlety, perhaps to excess. “I do not know if the General’s thoughts lack coherence or are instead presented with abnormal subtlety”, Daladier observed. “In any case, their meaning vanishes into nuance.”²⁰ He could make difficult decisions and adhere to them in the face of adversity. His genius for organization and logistical planning, clearly displayed since his days as a student at St. Cyr, was never challenged. However, his character was flawed by an inability to communicate effectively. He rarely convinced his senior generals of the merits of his strategy, particularly after the outbreak of war. With age, he was increasingly unwilling, or incapable, of overseeing the execution of his own plans, even from a distance. This tendency, absent from his remarkably

sincère. Avant la guerre, il ne pratiquait pas et m’a souvent dit son amitié pour Sarraut; il ajoutait que s’il avait été dans la vie civile, il aurait été radical... ‘Mon père,’ demande Gamelin, ‘donnez-moi une courte prière que je puisse réciter le soir et méditer.’ Le prêtre assez embarrassé répond : ‘il y a le Notre Père, disons-le ensemble’; mais Gamelin l’avait oublié.” Daladier, *Journal de Captivité* in Bracher, *Riom...*217.

¹⁸ This quote has been cited often although its source remains unclear. Paul Baudoin, under-secretary of state to the Prime Minister in Reynaud’s cabinet, accorded it to Edouard Daladier. When speaking to Weygand, Daladier reportedly said, “Quand vous parlez, il reste quelque chose, tandis que Gamelin, c’est du sable qui coule entre les doigts.” Paul Baudoin, *Neuf Mois au Gouvernement. (Avril-Décembre 1940.)* (Paris: Éditions de la Table Ronde, 1948), 21. Paul Reynaud attributes the quip to Maxime Weygand (*Au Coeur de la Mêlée*, 351). Peter Jackson has pointed to the general’s habit of “unfailingly presenting both sides of every issue in all of their complexity” and concludes that his reports tended to confuse rather than elucidate. See Peter Jackson, *France and the Nazi Menace: Intelligence and Policy Making 1933-1939* (Oxford: Oxford University Press, 2000), 111.

¹⁹ Testimony of Albert Sarraut, February 3rd, 1948. *Serre Commission Report, Vol. 3*, 615.

²⁰ Sarraut’s statement, made in October 1939 was remembered by Edouard Daladier, see Villelume, *Journal*, 65.

successful command of the 11th infantry division in 1917-18, was however, noted by others as early as the mid-1920s. Henry de Jouvenel, High Commissioner in Syria, was among the first to discern Gamelin's growing habit of retreating from direct leadership over his soldiers. During the Druze uprising in 1926-27, Jouvenel observed what he described as an "administrator, rather than a leader of men...He has all the qualities of a great military leader, except for a spine."²¹ In 1935, Maxime Weygand opposed the decision to promote Gamelin to the position of Commander-in-Chief, citing Gamelin's "lack of character".²² Military Chiefs were left unimpressed by his penchant for non-committal, conciliatory answers²³ whenever his opinion was called for in meetings of the *Conseil Supérieur de la Guerre* or the *Comité permanent de la Défense Nationale*, and by the "well known limpness of his handshake."²⁴

Civilians and politicians, however, were assuaged and even charmed by the "extreme affability" of his character and the confidence he radiated.²⁵ He possessed a Napoleonic conviction in his destiny to rise to great heights and spoke of a faith in his own star. Gamelin was an open devotee of the philosophy of Henri Bergson, with whom he cultivated a mutually flattering epistolary relationship.²⁶ Gamelin was particularly attracted by Bergson's notion of

²¹ J.H. Jauneaud, *De Verdun à Dien Bien Phu*. (Paris: Éditions du Scorpion, 1960), 78.

²² Crémieux-Brilhac vol. II, 375.

²³ Former Prime Minister Albert Sarraut observed, "Par ailleurs, le général Gamelin n'avait indisposé personne. Avec sa courtoisie permanente, qui était d'accord avec sa physionomie, il ne s'était pas fait beaucoup d'ennemis." Testimony of Albert Sarraut, February 8th, 1948. *Serre Commission Report, Vol.3*, 670.

²⁴ Minart, *PC Vincennes*, t.1, 74. "La molle poignée de main de Gamelin m'a toujours frappé", wrote Edouard Daladier in a private journal on June 1st, 1941. *Journal de Captivité*, 217.

²⁵ Minart, t.1, 74.

²⁶ In one of these letters, written in early February 1940, Bergson suggested that if Hitler had not yet attacked the West, it was only because his preparations were not yet complete. Bergson argued that the *Führer* was incapable of indecision, and that he was likely waiting for the perfect moment to strike. He speculated that a German attack awaited only the completion of some surprise weapon, such as a series of tunnels under the Maginot Line, or perhaps,

élan vital. This concept, developed by the philosopher in 1907 had swept through the French officer class of the pre-1914 years and served as an intellectual pillar to the notions of *offensive à l'outrance*.²⁷ As a strategist, Gamelin adapted the theory to reflect a commander's unshakable faith in his strategy, once developed, and his dogged pursuance of stated goals, despite the opposition of colleagues and subordinates.

The true business of a military leader is to conceive an idea and to see it implemented. Careful and lengthy consideration must first take place in order to defend one's ideas in the face of unexpected opposition, obstacles or consequences. From this is created an unshakeable will, an aura of sorts, almost hypnotic in nature, which serves to galvanize and fortify those tasked with the idea's execution. At times, it even serves as a force with power to subjugate fortune itself, to dominate the course of events.²⁸

Notwithstanding his intellectual vigour, there remained a physical lethargy to Gamelin's mannerisms which often failed to impress. General André Laffargue who served with Gamelin in both World Wars, was among one of many who noticed the remarkable decline in his assertiveness and composure during the 1930s.

I was never able to relay any of General Gamelin's effete phrases without adding to them a more vigorous accent...His thoughts were all too often tied together in

a longer tunnel which would exit deep inside French territory. SHAT GR 1K 224 15, Letter by Henri Bergson to Maurice Gamelin, February 3, 1940.

²⁷ Though interpreted by French strategists as an expression of vitalism and the predominance of the individual soldier's spirit on the battlefield, Bergson's notion of *élan vital* has since been re-assessed. In particular, Gilles Deleuze's 1966 study entitled: *Bergsonism* recast the notion in terms of a generative life-giving force, rather than the application of pure will upon an object. See Gilles Deleuze, *Bergsonism*, (New York: Zone Books, 1991), 91-113. Deleuze's influential argument does not find any support in the correspondence between Bergson and Gamelin however, who both regularly used the term *élan vital* in reference to a mystical energy to be harnessed in battle, similar to ancient Roman descriptions of the *furore gallico* (Gallic fury).

²⁸ SHAT 1K 224 15, *La Formation du Chef*, essay written by Gamelin while incarcerated at Itter Castle, 1943-44, p.11.

insignificant combinations! From where did this sweaty and anxious atmosphere which surrounded him, and which I had never before observed, come from?²⁹

Certainly, by early 1940, Gamelin was no longer a decisive leader. Even his most senior subordinates grew irritated by the increasingly evident decline in their commander's ability to lead. Their mounting concern was not founded upon Gamelin's strategic thought; the Commander-in-Chief's strategy, though often privately opposed, was never officially challenged. Evidently, the vast majority of French civil and military leaders remained willing to follow Gamelin's strategy, despite holding serious reservations about some of the particulars.³⁰ What they could no longer abide, however, was the obvious and growing tendency by the *Généralissime* to avoid his responsibilities, to delegate the near totality of his workload to his subordinates, and to retreat from the daily grind of managing the French armed forces. One eminent voice from the military, that of Charles Huntziger, leader of the Second Army stationed opposite the Maginot Line, confided to his diary on February 26th: "Everyone has lost patience with Gamelin, who no longer acts with the slightest energy, not in Paris alongside the government, not in directing our military production, not in organizing our air power."³¹ Another voice, this time from the highest echelons of civilian leadership, expressed very similar concerns. Armaments Minister Raoul Dautry wrote, "we must support the president in his desire to rid us of Gamelin. That general is incapable of willpower, incapable of issuing a single order.

²⁹ André Laffargue, *Fantassin de Gascogne: de mon jardin à la Marne et au Danube*. (Paris: Flammarion, 1962), 138 and 174.

³⁰ This was especially true in terms of the Breda Variant in early 1940 and of the Commander in Chief's restructuring of the high command in January of the same year. See Chapter 3 of the present work.

³¹ Max Schiavon, ed. *Les Carnets secrets du Général Huntziger, 1938-1941*. (Paris: Éditions Pierre de Taillac, 2019), 105.

His terror of responsibility is all too evident.”³² Prime Minister Paul Reynaud assembled a condemnatory dossier with a view to dismissing Gamelin at the earliest possibility. A high-ranking member of Reynaud’s cabinet commented:

The Prime Minister’s opinion on General Gamelin is clear. His inertia, his evasion of responsibility, the total lack of interest he brings to the Norwegian affair are so evident, and their consequences so dangerous, that the Prime Minister has, since early April, spent considerable time observing the general’s conduct and taking notes.³³

The steadily crumbling military situation in Norway throughout April served as a final break between Reynaud and his military Chief of Staff. Although, the Prime Minister called for decisive action, Gamelin believed restraint was necessary. “It had already been a long time since Mr. Paul Reynaud could not stand my presence,” Gamelin later remembered.

His quick, but flitting intelligence, always in motion, was never in accordance with my preference for serious solutions and quiet contemplation. Moreover, when he took power, he never forgave me for staying loyal to Mr. Daladier. As for the affair in Norway, he wanted to throw in several French divisions. Aside from the fact that this was impossible (we did not have enough transport vessels, nor the means to protect them against enemy submarines or aviation) I felt that the German attack was imminent, and likely to come through Belgium and Holland, for which we would need all our available strength.³⁴

Finally, on May 9th, Paul Reynaud was determined to put an end to the Commander-in-Chief’s career. Visibly ill with the flu, Reynaud spoke to the Chambre des Députés, allowing for no interruptions as he steadily built up his case for Gamelin’s dismissal. Former Minister for Public Works, Anatole de Monzie witnessed the event and provided the following description:

³² Baudoin, *Neuf Mois...*33.

³³ Ibid, 38.

³⁴ SHAT GR 1K 224 15, Notes Personnelles, Gamelin’s apologia for the military defeat (undated), p.3.

“He speaks in a low and raspy voice, visibly sustained by a considerable force of will.” Monzie pointed out that Reynaud’s doctor had advised postponing the speech, though the Prime Minister insisted on carrying out his task. “All cigarettes are extinguished, and no one moves.

Lamoureux whispers into my ear: ‘it’s an execution.’ Yes, it is a speech before a firing squad, lasting over an hour. Finally, Reynaud closes his briefcase and is silent.”³⁵ During the speech, Parliament fell into a “glacial silence.” Reynaud spoke “under the furrowed stare of Edouard Daladier who continually shrugged his shoulders with his jaw set tight.”³⁶ Daladier, who supported and defended Gamelin for over four years and whose reputation was so closely tied to the General’s own political stature, offered a feeble defense upon the conclusion of Reynaud’s lengthy indictment.³⁷ “I do not agree,” he muttered before the Chamber of Deputies fell into a few moments of contemplative silence.

Fully aware that Daladier would continue to support Gamelin³⁸, it was Reynaud’s intention to provoke a governmental crisis over the matter. He planned to dissolve his government and wait for President Lebrun to invite his return, flanked by a new cabinet which would certainly exclude his long-time rival. However, the timing could not have been worse. When the Germans attacked at dawn the next day, Reynaud abruptly cancelled all motions against the beleaguered Commander-in-Chief and forwarded him the following message: “*Mon général*, the battle has

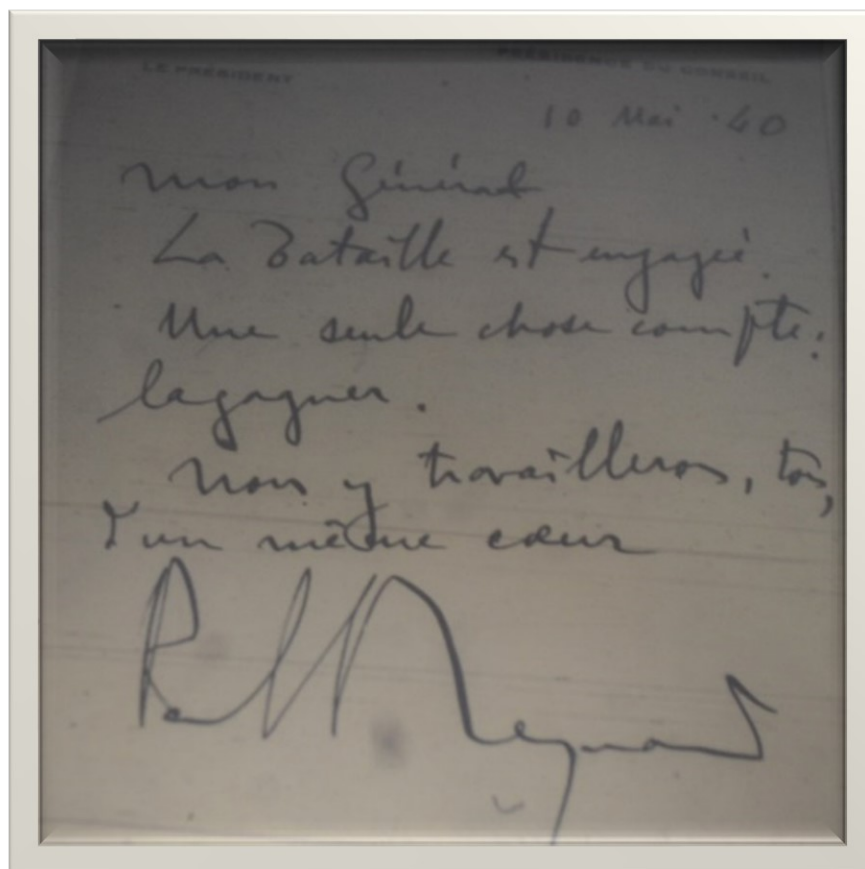
³⁵ Anatole de Monzie. *Ci-Devant*. (Paris: Flammarion, 1941), 219.

³⁶ Baudoin, *Neuf Mois*...33.

³⁷ Though still publicly supportive of one another, the relationship between Daladier and Gamelin had grown increasingly tense over the course of 1939. Gamelin had begun referring to his erstwhile defender as “une firouette, un homme d’une légèreté incommensurable”. Villelume, *Journal*, 43.

³⁸ Six weeks earlier, during a meal held at Gamelin’s HQ in Vincennes, the General warned Daladier of a mounting political conspiracy aimed against them both. “si on veut nous opposer l’un à l’autre, c’est pour mieux nous détruire l’un après l’autre.” SHAT 1K 224/10 d.4, Gamelin, *Journal de Marche*, March 16th, 1940.

begun. Only one thing matters: victory. We must all strive toward this with one heart.”³⁹



Letter from Reynaud to Gamelin, May 10th, 1940.

Their truce was to last for only nine days, after which time the disastrous state of affairs on the Northeast front led to the quick and uncontested replacement of Gamelin with Maxime Weygand, recently recalled from Syria. Upon arrival of the latter at the Supreme Military Headquarters at Vincennes, a hurried transition of power took place during which Weygand

³⁹ SHAT GR 1K 224, Lettres Personnelles du Général Gamelin.

informed the outgoing Commander-in-Chief, “You should be aware that Paul Reynaud does not think highly of you.”⁴⁰

Surprisingly, the longstanding acrimony between Paul Reynaud and Gamelin would dissipate entirely during their period of shared incarceration in Itter Castle, Austria from 1943-45.⁴¹ While recollecting his dismissal on May 19th, 1940, Gamelin reflected, “I do not wish to contest or criticise Mr. Paul Reynaud’s decisions. Circumstances born from our common captivity served to bring us together. I grew to appreciate not only his keen intellect but also the firmness of his nationalist convictions.”⁴² Following the war, Reynaud was ready to exchange compliments, writing of the former Army Chief’s remarkable intellectual gifts: “General Gamelin was always far more intelligent than Marshal Pétain.”⁴³ Reynaud later conceded that he delighted in Gamelin’s remarkable talents as a *raconteur* during their imprisonment. He fondly remembered listening to the General’s entertaining stories including a particularly stirring account of the Battle of Jena.⁴⁴ Gamelin’s gift for enthralling guests with wit and eloquence was perhaps never so convincingly displayed as in this reconciliation with his staunchest political enemy. Even following defeat, shame and incarceration, the General’s famous silver tongue could yet charm as effectively as ever.

⁴⁰ This comment is recorded in the memoirs of both interlocutors. See Gamelin, *Servir* t.3, 432-433 and Weygand, *Rappelé au Service*, 82-83.

⁴¹ Before the war, contempt was indeed mutual between the two. Gamelin once responded to Reynaud’s mounting criticism of his performance in the following terms: “J’estime, en outre, M. Reynaud dangereux; avec lui nous irons pendant et après la guerre à des aventures; il est l’homme des Banques, des hommes d’affaires, des hommes d’argent!” SHAT 1K 224, Journal de Marche, March 21, 1940. Later in his journal, Gamelin added, “Ce M. Reynaud est fou. S’il continue il mènera la France à sa ruine...il ne faut pas le laisser là.” *Ibid*, April 16th.

⁴² Gamelin, *Servir t.1*, 8.

⁴³ Reynaud, *La France à sauvé...499*.

⁴⁴ *Ibid*, 591.



*Paul Reynaud and a visibly aged Gamelin on the day of their liberation from Itter Castle, spring 1945.
Courtesy: SHAT GR 1K 224 15*

Part 2

Modernising the military

A number of historians have identified Gamelin as one of the few military leaders in France who recognised the importance of concentrated armour in the leadup to war. Martin

Alexander claims that “Gamelin was undoubtedly one of the French generals most favourably disposed to the offensive organisation of the army through the use of mechanical power.”⁴⁵

Alexander commends Gamelin for the manner by which he insisted upon the modernisation of the French armed forces in the late 1930s. A few years earlier, however, J.L. Crémieux-Brilhac argued that the exact opposite was true: “Over the course of ten years [Weygand] solicited constantly to modernise and equip the armed forces: but Gamelin never followed up on the path to motorisation and armour which had been started by his predecessor.”⁴⁶ Whereas Alexander noted Gamelin’s drive and vision required to establish France’s first armoured divisions, Crémieux-Brilhac’s assertion was that these measures were undertaken reluctantly, for political reasons, “only to avoid the reproach of being hostile to innovation.”⁴⁷

In truth the Daladier/Gamelin team were in lockstep concerning the development of mechanised forces for the army from 1936 until the disaster of May 1940. The program, inaugurated on September 7th, 1936 to nearly triple the number of tanks from twelve hundred to three thousand two hundred, was strongly supported by both men. Furthermore, both favoured the development of a heavy armoured division. These were responsible, if not visionary decisions. By late 1936, it would have amounted to a gross mismanagement of the entire military structure to resolve upon anything other than large-scale construction of armoured tanks, alongside every other European power. Both Gamelin and Daladier imagined a distinctly defensive role for these new vehicles. The majority of French tanks were to be assembled in small battalions and assigned to army divisions along the entire front. They were intended as

⁴⁵ Martin Alexander, *Republic in Danger*, 123.

⁴⁶ Crémieux-Brilhac, t.II, 112.

⁴⁷ *Ibid*, 389.

ripostes to German aggression, rather than offensive weapons in their own right. “The experience of war in Spain,” announced Daladier in mid-1937, “has shown that to employ even a limited number of armoured engines upon a fortified zone is to invite catastrophe.” He went on to outline the view of armour which, at the time, remained dominant within the French military establishment. “The French army considers [the tank] as an engine to accompany the infantry. In Germany, they have developed the idea of using divisions of tanks to force a breakthrough and subsequent invasion of a neighbouring territory. I don’t believe in it at all”.⁴⁸

Gamelin’s own opinion hardly wavered from the Prime Minister’s. In his opinion, wargames and operations in Spain had shown that the most effective countermeasure to an enemy’s armour were one’s own tanks. For this reason, it was imperative to equip the French army with sufficient mechanised units to challenge any German incursion. At the C.S.G. meeting of October 1936, he outlined his view on this matter. The Germans had conceived of the *Panzer* division as a tool of sudden attack followed by deep exploitation. France had no need for such an offensive weapon but did require the means to repel such an assault. He envisioned heavy armoured units to be used in reaction to enemy pressure anywhere along the *front continu*. In his view, these were most effective as counter-attacking forces to help in the defense of France. They were not to be utilized in offensive roles even when massed into powerful divisions. As Germany developed its tandem of tank and aircraft after 1936, Gamelin remained skeptical of its ability to challenge a defensive front’s concentrated firepower. The French ambassador to Berlin, André François-Poncet, was considerably impressed with the developing German offensive doctrine, however. He advised Gamelin that in his opinion, Germany would

⁴⁸ Quoted in Frank, *Prix du réarmement...* 76.

not hesitate to launch an attack on the Maginot Line using massed armour and ground support aircraft. François-Poncet worried that the Germans might be able to achieve far greater results with these new weapons than the French High Command was willing to anticipate since, according to the ambassador, “Gamelin did not, after all, believe in these weapons.”⁴⁹ François-Poncet warned that the Germans were planning to send waves of tanks through Belgium and into France from north to south. “Our armies, trained and organized for an entirely different form of warfare, would be thrown into complete disorder, provoking panic, and terrifying the population. Paralysing the government as the rest of the German forces would proceed to occupy the country.”⁵⁰

Gamelin did not oppose armoured divisions, but he thought they were limited in potential. They intrigued him, but he could not imagine them as capable of deciding the outcome of large battles. That distinction, he believed, remained with the slower moving infantry. That is why he remained so ambivalent, neither agreeing or disagreeing with their construction at the C.S.G. meetings of October 14, 1936, December 15, 1937, and December 2, 1938. As early as the spring of 1936, he was on record showing his scepticism on the matter, expressing his doubt at the Council meeting of April 29th.

I believe that the German armoured divisions are not intended for frontal breakthroughs of organized defensive positions, but rather for rapid action against relatively weak adversaries in open terrain. This would be the case in Czechoslovakia, Poland and Belgium whose armies are too small to saturate the territories they are defending.⁵¹

⁴⁹ Villelume, *Journal d'une défaite*. 31.

⁵⁰ Paul Stehlin, *Témoignage Pour l'Histoire*. Paris : Robert Laffont, 1964, 85.

⁵¹ Serre Commission Report, II, p.183..

For Gamelin, the armoured division was indeed “a rare and precious instrument” but one whose value was primarily as a defensive, reactionary force. “The armoured division,” he presented to the C.S.G. on December 2, 1938, “is not made to operate in unfamiliar terrain, but within the framework of traditional large units, which provide a necessary security.”⁵² Gamelin could not envision how armoured divisions, which stretched several miles in length while advancing along roadways, could ever find the room to maneuver effectively. This is why he determined in December 1937 to limit the number of brigades that made up a French heavy armoured division to four, down from the originally proposed number of six.⁵³ In his opinion, armoured divisions of six battalions would “lead to an unacceptable overcrowding of the existing roadways.”⁵⁴ Following this logic, Gamelin ordered the weakening of each heavy armoured unit by a third, certain that units larger than this would be rendered immobile by their sheer size and mass. If this had not proven true for the *Panzers* in Poland, it would certainly be the case in the

⁵² Ibid., 188-189. At the same C.S.G. meeting of December 2, 1938 General Pierre Héring, soon to be military governor of Paris, showed the sort of forward military thinking that was sorely lacking among the French High Command stating: “Si l’on veut faire quelque chose de neuf, il ne faut pas mettre la division cuirassée dans le système d’artillerie normal...ce sont les chars eux-mêmes qui constitueront l’artillerie et pourront d’ailleurs être appuyés par l’aviation de bataille.” (190). Along with Charles de Gaulle, Héring regularly demonstrated that he understood better than most, certainly more than either generals Gamelin or Georges, the role which concentrated armour was to play in the coming conflict. See also Général P.E. Tournoux *Défense des Frontières : Haut Commandement - Gouvernement 1919-1939*, (Paris: Nouvelles Editions Latines, 1960), 261.

⁵³ Each battalion of heavy tanks (B1 bis or SOMUA) comprised 34 machines. Thus, Gamelin’s D.C.R. of four battalions would contain 132 heavy tanks. The six-battalion D.C.R. would have contained 200. Considering the vast technical superiority of these tanks over the majority of German *Panzers*, such an increase would have given the DCRs a far greater chance to challenge the German breakthrough on the Meuse. Instead, the six battalions of B1bis heavy tanks, deemed superfluous by Gamelin, were allotted piecemeal along the length of the continuous front, ensuring that their effect on the course of battle would be negligible.

⁵⁴ SHAT DE 2016 SA 65, *C.S.G. meeting of December 15, 1937*. General Héring, present at the CSG meeting of December 15, argued to the contrary. He argued that roadways would be sufficient if only Gamelin would consider more flexible timetables. He argued that a full, six battalion DCR could be efficiently transported by separating it into three groups of two battalions, each traveling separately to their goal. Always the forward thinker, Héring added that the tanks would need to be freed from the slow travel speed of accompanying artillery.

West where all routes of invasion were lined with fortifications, obstructions and above all, with a greater number of soldiers. “Sir, I tell you, the conditions of war on the Western Front are so different from those in the east,” he once claimed, “that a *Panzerdivision* could not make its way from Berlin to Paris *in peacetime* if the bridges were obstructed.”⁵⁵ Speaking to the French ambassador to Germany, André François-Poncet, he added:

As a weapon, the tank division is too heavy and lacks manoeuvrability. It might succeed in breaking through our lines, but the flanks would quickly close around them. We have a sounder conception of the proper use of armour. We use them as auxiliaries to the infantry’s advance; the Germans use them as the spearhead which drags the infantry along.⁵⁶

Gamelin remained daunted by the immense size and length of armoured divisions advancing in columns and doubted that they could ever be effectively funnelled along existing road systems. In the framework of a static battle, he was correct. In such a case, only limited elements of the enormous *Panzer* divisions could engage the front at any given time. However, he failed to appreciate the extent to which modern armour increased the possibility of large-scale breakthrough. Piercing the front line and driving deep into the rear would quickly open enormous new swaths of terrain in which to operate. This was the tactic outlined by Guderian in *Achtung Panzer!* and had been put on display in Poland. Gamelin felt that he could prevent the breakthrough and, therefore, ensure that the ten German armoured divisions would never have the room in which to manoeuvre successfully in concert. Only an immediate breakthrough, effected without delay upon first contact with the enemy, followed by audacious, even foolhardy

⁵⁵ Jean Daridan, *Le Chemin de la Défaite, 1938-1940* (Paris: Plon, 1980), 151.

⁵⁶ Testimony of M. André François-Poncet, March 2, 1948. *Serre Commission, Vol.3*, 763.

forward movements into the French interior could seriously challenge Gamelin's plan. Unfortunately for him and for France, that is precisely what happened between May 12-14th. The collapse on the Meuse was so quick and so total that the Panzer's forward momentum never relented, and by fanning out behind the French front, never lacked the room to manoeuvre until the end of the campaign.

Before the battle, Gamelin was fully aware of the German offensive tactics and the equipment they had assembled to carry them out. He felt that so long as he chose the terrain carefully, he would be able to saturate the field of encounter, strip the Panzers of their mobility and neutralise the German threat. "A nation must have the tools for its policy," he told the C.S.G. in October, 1936. "The Germans have conceived of the *Panzerdivisionen* because it corresponds to their plans for delivering sudden strikes, followed up by deep exploitation." Even at this early date, the French High Command had been able to properly identify German tactics and consider the most appropriate response. "For us, it is not about grand jousts, but above all, to win the first battle, without taking undue risks and taking care to fight in good order, with all our forces combined."⁵⁷

Part 3

The Evolution of Gamelin's Theory on Airpower

Documents dated prior to the war indicate that General Gamelin never wavered in his impression that air power's primary usefulness remained in its reconnaissance and intelligence

⁵⁷ SHAT DE 2016 SA 65, C.S.G. meeting, October 14, 1936.

gathering roles. His experiences from 1914-1918 and more recently in Syria had convinced him that military operations in the third dimension did not have the power to radically alter the state of a land battle and were still only complimentary actions in support of the land forces below. The evolution of aircraft had not yet impressed upon Gamelin an appreciation for air power as a decisive weapon, and he categorically rejected General Douhet's vision of the bomber as the apex of modern military equipment. The *instruction sur l'emploi tactique des grandes unités*, the manual of French military doctrine, was developed in 1936 under Gamelin's oversight and distributed throughout the armed forces. In it, there is no mention of how to conduct air operations; the topic is simply overlooked. This omission, given the importance of airpower to previous French operations in Syria and the Rif, or the lessons gleaned from large-scale air operations in Spain, is bewildering. It remains difficult to explain in terms other than those reflecting Gamelin's personal lack of enthusiasm for the role of air power over the modern battlefield. Former Chief of Air Operations for the Northeast Front, François d'Astier de la Vigérie remembered several occasions when Gamelin expressed his insouciance regarding France's aerial inferiority. "What I saw was a willful, deliberate and constant effort to insist that aviation was a negligible factor." He recalled witnessing meetings of the C.S.G., during which Gamelin was presented with the double concern of French aerial weakness on the one hand, and the tremendous rate of German aircraft production on the other. Before these concerns Gamelin remained nonplussed, stating "We will simply fight without aviation."⁵⁸ Most tellingly, as late as December 1938, he addressed the Conseil with the following decision: "the high command

⁵⁸ François d'Astier de la Vigérie. *Le ciel n'était pas vide*. (Paris: René Julliard, 1952), 21, 56.

has determined that the support of armoured units by artillery is preferable to support by aviation.”⁵⁹

These views were to change dramatically as the *Luftwaffe* put its capabilities on display over Poland. For many observers, the Spanish Civil War had served to assuage fears of mass bombardment as a means of determining the outcome of war. As mentioned,⁶⁰ that conflict had clearly demonstrated the vulnerability of unescorted bombers to fighters and anti-aircraft fire. It had also shown that material damage inflicted during bombing attacks was often surprisingly small and quickly repaired.⁶¹ Events in Poland had swung the pendulum back toward increased fear of the potential for massed bombers to decide the outcome of a battle. The takeaway lessons from the Eastern campaign were that the long-feared *knock-out blow* was delivered to Poland, not by long distance strategic bombers, as prophesied by Douhet, but by low level tactical support bombers. Aircraft acting in a ground support role had proven so decisive that skeptics like General Gamelin were forced to revise their beliefs in light of the latest military developments. Once again, the bomber's frightful potential loomed over the thoughts of military strategists, not as it once had, as an unseen wave of machines delivering death from far above the clouds, but in the form of the dive bomber, immediate and close at hand, able to strike precisely where it was needed most.

⁵⁹ Général Conquet, *L'énigme des blindés 1932-1940* (Paris: Nouvelles Éditions Latines, 1956), 113.

⁶⁰ Chapter 1 of the present work, 35, 36.

⁶¹ The bombing of Guernica (April 26, 1937) is a famous exception to this rule. However, Richthofen's aerial attack on that city proved so devastating because the town was entirely shorn of defence against aircraft. The Spanish Republicans had no aircraft in the area to lend assistance either. By 1939, very few cities which could be considered as targets for aerial strikes were so completely deprived of the means to offer some measure of self-defence.

Not only had air power neutralised the ability for the Polish army to reinforce threatened sectors of their front, but in fact, the *Luftwaffe* had been successful in performing many of the very functions expected of land reserves. Air strikes, often called in by German field leaders when the results of land engagements still hung in the balance, were able to regularly tip the scales in favour of the invader. The extent of Gamelin's conversion toward greater appreciation of aerial intervention was suddenly obvious. "Aviation is now the ultimate weapon for mobile warfare," Gamelin conceded after September 1939. "It far exceeds the limitations of land forces. It is thus an obvious necessity to preserve a strong aerial reserve force (*masse de manoeuvre*) dedicated to immediate response according to need."⁶² In Gamelin's view, modern air power as practiced by the *Luftwaffe*, not only restricted the usefulness of land-based reserves but, in fact, could supplant a reserve army's role in battle. With the notable exception of occupying conquered territory, a task that would necessarily remain assignable only to soldiers on the ground, air power had been used in Poland as a far quicker, more maneuverable form of battlefield reinforcement. This provides further insight into the reasoning which induced Gamelin to blend his reserves, most importantly the Seventh army, into the front line. It also explains why he focused almost exclusively on managing the Allied air forces between May 10th and 19th.

Part 4:

Gamelin's Health

⁶² Gamelin *Servir t.1*, 280.

Was France's top soldier in proper physical condition to meet his responsibilities in the leadup to war? Could the glaring conceptual and strategic errors inherent in his planning have stemmed from declining cognitive abilities? Was he, in fact, gravely ill during this period? The details provided in Gamelin's military records remain murky on the state of his physical health in the late 1930s. Official army reports are straightforward in their description of a few chronic health complaints dating back to the earliest stages of his career. In July 1911 he was kicked by his horse, breaking several bones in his right hand and wrist. Acute abdominal pain stemming from an infection of the gall bladder later plagued his years in Brazil as Chief of the French military mission to Rio de Janeiro from 1919 to 1925.⁶³ While there, he also contracted dysentery on two separate occasions.⁶⁴ However, his most significant injuries were suffered during the First World War. A medical report prepared on October 15, 1934 mentions that Gamelin lived with three pieces of metal lodged within his body. These were embedded between his ribs, with the largest fragment located just outside of his left lung. As a result, he was regularly treated for accumulation of blood between his chest wall and lungs (hemothorax), a very painful condition which required constant monitoring.⁶⁵

Though significant, the ailments outlined within army medical reports fail to note any of the very serious health issues mentioned by certain observers close to Gamelin. For example, Armaments Ministry Raoul Dautry, certainly a reliable witness in the wake of a long and

⁶³ SHAT GR 13 YD 1279, Rapport de la Service de Santé de la Mission Militaire Française au Brésil, June 6, 1924.

⁶⁴ SHAT GR 13 YD 1279-2, Rapport médical préparé par le *Dr. Général Duguet*, September 1925.

⁶⁵ SHAT GR 13 YD 837, Rapport médical préparé par le *Dr. Roques*, October 15, 1934.

accomplished technocratic career characterised by straightforwardness and reliability, signaled a significant decline in the general's health throughout the late 1930s. During his time as Minister of Armaments, Dautry regularly questioned the soundness of Gamelin's judgement, believing that diabetes led him to vacillate between euphoria and extreme listlessness.⁶⁶

Furthermore, starting in the early 1970s, a number of historians and journalists advanced the notion that Gamelin suffered from an infection which grew progressively worse and may have significantly hampered his cognitive abilities by 1939-1940. Historian Dominique Lormier has recently determined that Gamelin had been treated for syphilis at Val-de-Grace hospital in 1930.⁶⁷ In his biography of Maxime Weygand, Barnett Singer supports this claim, stating: "Gamelin's wan hesitations, which made him despised by so many in the army, were obviously compounded by his knowledge of having syphilis in an advanced stage."⁶⁸ Gérard Chauvy has argued that the infection may have originated during Gamelin's five years in Brazil, acting as head of the local French military mission. Chauvy supports this idea by citing a series of letters written by Gamelin to War Minister Maginot in 1924. These letters requested in the strongest of terms, the General's desire to be recalled to France at the earliest possible opportunity due to pressing medical reasons. While refused at first by the Ministry, these requests were at last granted, indicating that the decline in Gamelin's health was serious enough to have changed the Minister's mind.⁶⁹ In 1976, Pierre Accoce claimed to have conducted an interview with

⁶⁶ Badouï, Rémi. *Raoul Dautry 1880-1951: Le technocrate de la République* (Paris: Balland, 1992), 206.

⁶⁷ Dominique Lormier *Les vérités cachées de la défaite de 1940* (Paris: Éditions du Rocher, 2020), 20.

⁶⁸ Barnett Singer, *Maxime Weygand: A Biography*. (North Carolina: McFarland, 2005), 215.

⁶⁹ Gérard Chauvy. *Le Drame de l'armée française ; du front Populaire à Vichy*. (Paris: Pygmalion, 2010).

physicians at Val-de-Grace hospital who admitted to treating Gamelin for syphilis. They claimed to have used *malariatherapy*, a method for which Austrian doctor Julius Wagner-Jauregg had only recently won the Nobel Prize for Medicine in 1927. The process induced high fever through the injection of *plasmodium vivax*, the causative agent for malaria.⁷⁰ This method was used to control the development of *dementia paralytica*, the devastating infection of the nervous system consistent with late-stage syphilis. Medical staff at the hospital informed Accoce that this treatment had been used on General Gamelin throughout the 1930s and up until the popularization of penicillin.⁷¹

Gamelin's repeated attempts to resign his command, particularly after the 1938 Munich Crisis, may have been motivated in large part by a declining state of health. From the time he had taken over the army in 1935 to his dismissal on May 19, 1940, Gamelin submitted no less than ten separate resignation letters. Daladier remembered that he began receiving such letters as early as 1937.⁷² By late 1938, however, Gamelin's offers of resignation followed one after another, as the balance of geo-political power shifted in Germany's favour. On February 9th, 1938, feeling that he "no longer enjoyed the confidence of the government,"⁷³ Gamelin again

⁷⁰ While criticized by some modern sources today as medical quackery, akin to medically useless and discredited treatments such as bleeding and leeches, it was, in its day, seen to achieve tangible results in over fifty percent of patients suffering from advanced syphilis. Prior to the introduction of penicillin in the early 1940s, *malariatherapy* was considered the most effective treatment for the illness. Patients would recover mental clarity and physiological coordination, both of which were increasingly compromised by the progression of syphilitic infection. This was not a long-term solution, however, and only produced results for a period of one to three months, after which time symptoms of mental deterioration would return, and a new round of treatment could be sought. See Jeffrey S. Sartin MD, "Malariatherapy for Syphilis" *BMJ Medical Journal* (March 13, 2005), 330.

⁷¹ Pierre Accoce and Dr. Pierre Rentchnick. *Ces Malades qui nous Gouvernent* (Paris: Stock, 1976), 135.

⁷² Minart, *Le Drame du Désarmement*...206.

⁷³ Gamelin *Servir, t.1*, 64.

asked to be relieved of his duties. Daladier refused to entertain the notion. In January 1939, he tried again, this time citing his advanced age, claiming it had always been his intention to retire in January of his sixty-seventh year. The timing of this resignation attempt is significant. Only two weeks earlier he wrote, “it is evident to me that the storm will break sometime in the following spring.”⁷⁴ An attempt to resign issued directly on the heels of this observation can only be regarded as an abdication. In any case, Daladier once more refused to accept his resignation, claiming that Gamelin’s disappearance from the military hierarchy would cause confusion and demoralization just when unity and cohesion were needed most. Thus, Gamelin attempted, once more, to resign while increasingly convinced that the German invasion was only weeks away. This behaviour speaks loudly to the *Generalissime*’s lack of confidence in his ability to lead the army through the trials of active war.

Four months later, on April 13th, less than four weeks prior to the German invasion, Gamelin yet again wrote a brief letter of resignation citing fundamental disagreements on the conduct of the war. Citing a difference in priorities concerning operations in Norway, he summarized his thoughts as follows: “Finding myself in disagreement with the Prime Minister on the principles which should guide our conduct of this war, I ask to be relieved of my responsibilities.” Three days later, he tried again, this time adding, “I do not wish to become a hindrance.”⁷⁵ In both cases his resignation was refused.⁷⁶ Interestingly, this period of active

⁷⁴ Ibid.

⁷⁵ Ibid, t.3, 352.

⁷⁶ In a journal kept during his time as a German prisoner, Daladier remembered that it was Prime Minister Paul Reynaud’s stark condemnation of the Commander in Chief’s handling of the Norwegian expedition that led to Gamelin’s attempts to resign his position. “Avant même que l’échec total de l’expédition de Norvège ne soit connu, Reynaud en rendait Gamelin responsable, dressait un réquisitoire en Conseil de guerre et de cabinet. Il le discréditait

attempts to relinquish command of the army coincided with the moment he revealed the details of his daring plan to intervene in southwestern Holland: the Breda Variant. During the same period that the Commander in Chief composed his many resignation letters, General Georges, his second in command, was energetically signaling his opposition to the Breda plan. The twin preoccupations of initiating a tremendously risky manoeuvre while simultaneously attempting to retire, betrays a sense that the task of defending France had become overwhelming to Gamelin, and that his proposed military solutions failed to reinvigorate his flagging optimism.⁷⁷ In the aftermath of the battle, Gamelin bitterly regretted his decision to stave off his retirement. “I believed I could help the army by staying close to the government. On many occasions I should have departed, I wanted to depart; others convinced me that it was my duty to remain. I was wrong. It was my weakness. I should have broken off and explained myself to the nation.”⁷⁸

Gamelin’s post-war writings are often fatalistic, almost superstitious in their tone toward the causes for French defeat. Repeatedly, he assigned cause for the utter failure of his strategy to the vicissitudes of life, as though fortune simply shines unpredictably upon ourselves one day, and upon our adversary the next.

War is the distillation of life. The strokes of fate, often undeserved, often rain down upon us; it is pointless to ruminate over one’s past decisions. One must take calculated risks. We have just lost the first match. Let us marshal our

dans l’opinion. Gamelin offrit par deux fois sa démission. Lebrun le refusa.” Edouard Daladier, “Journal de Captivité”, in *Riom 1942: Le Procès*, Julia Bracher, ed. (Paris: Omnibus, 2012), 168.

⁷⁷ The newspaper *Le Dépêche du Midi* ran an article in 1948 sympathising with Gamelin’s attempts to resign throughout 1939-1940. “On pourra toujours évidemment reprocher au général Gamelin de n’être point parti quand on ne lui a pas accordé toutes les ressources en hommes et matériels qu’il a demandés ...Mais chaque fois qu’il a voulu se retirer, les plus hautes autorités, comme tous ses collaborateurs, lui a présenté que son devoir était de rester.” SHAT DE 2016 SA 63 d9. *Dépêche du Midi* article (day/month unspecified, 1948).

⁷⁸ SHAT GR 1K 224 15, Gamelin’s apologia, p.5.

intelligence and our energy to win the next one. Let us not be discouraged by unkind fortune, let us not be thrown off balance by bad luck.⁷⁹

Elsewhere, he cites a variety of earthly and cosmic forces as decisive contributors to the military disaster. “One cannot deliver battle while the government prepares to stab you in the back...I don’t know if I missed my destiny or if destiny simply slipped past me...I had confidence in my intelligence and in the luck which had never yet failed me.”⁸⁰ Long convinced that he was destined for greatness, Gamelin now struggled to reconcile his long-standing *amour-propre* with the reality of a shattered reputation.

How many times over the course of my existence, aware of the difficulties I had surmounted, of my steady promotion, I asked myself: Toward what final destiny is God leading me? And I told myself, if He supports me thus, it is because He is relying on me. Alas, there are times when God abandons his own.⁸¹

Paul Reynaud once described Gamelin as “a prefect, a bishop, but not a leader of men.”⁸² Some historians have seconded the opinion that the General was far more proficient at subtlety and political artistry than as a military leader.⁸³ It is interesting to note, however, that Gamelin himself believed that the opposite was true. “In the end,” he wrote: “it would have been better

⁷⁹ SHAT GR 1K 224 15, *La Formation du Chef*, essay written by Gamelin while incarcerated at Itter Castle, 1943-44, p.11.

⁸⁰ SHAT GR 1K 224 15, *Notes Personnelles*, Gamelin’s apologia for the military defeat (undated), p.1.

⁸¹ Ibid.

⁸² Quoted in A. Horne, *To Lose a Battle*, p.45.

⁸³ See Nicole Jordan, “Strategy and Scapegoatism: Reflections on the French National Catastrophe, 1940” in *The French Defeat of 1940: Reassessments* ed. Joel Blatt. (New York: Berghahn Books, 2001), 22; Le Goyet, p.70; Julian Jackson, *The Fall of France*, p.12.

for France, I am sure, if it were me who had acted as Commander of the North-East Front, and either Georges or Weygand could have served as Chief of General Staff of National Defense.” In a striking reversal of the generally accepted historical narrative, he added, “My tastes, my aptitudes, indeed my whole life directed me far more toward direct command of the troops than towards dealing with organizational problems.”⁸⁴

Nazi propaganda films produced in the wake of the battle depicted waves upon waves of Nazi armour and aircraft bursting unopposed through the French countryside. These images quickly circulated across the globe and had considerable influence in shaping the narrative of why and how France fell so quickly. Ever since, the erroneous conviction that France had been overwhelmed by an industrial tidal wave has proven remarkably persistent. In fact, by the spring of 1940, France was materially prepared to defend its territory. It possessed a large army, a growing air force and the world’s fourth greatest navy. The French economy had been in full expansion since late 1938, following several years of depression. French industry was at last beginning to show its full potential under the wardship of Armaments Minister Raoul Dautry. While there were not enough French soldiers to match the total numbers fielded by the *Wehrmacht*, this disadvantage was offset somewhat by the defensive value of the Maginot Line. A far more significant shortfall was the insufficient number of trained pilots. This deficiency drastically reduced the number of available aircraft throughout the conflict, even though a great number of newly constructed machines spent the battle unused, awaiting crews on rural airstrips.

⁸⁴ SHAT GR 1K 224 15, *Gamelin’s apologia*, 15. Many historians have argued to the contrary. Among these, Cohen and Gooch have astutely observed that “Gamelin’s inertia deprived his subordinates of the guidance they needed – a guidance that...the interwar regulations led them to expect.” See Eliot A. Cohen and John Gooch. *Military Misfortunes: The Anatomy of Failure in War*. (London: Macmillan, 1990), 221.

These untapped resources would have sufficed to achieve numerical parity with the *Luftwaffe* if only enough trained pilots had been ready to utilise them.

If the material needs to engage the enemy with a reasonable chance of success were satisfied, the same was not true regarding the High Command's moral and conceptual preparation for war. Historical research has approached the causes for French defeat from a variety of interpretive angles. The undeniably poor performance of the infantry divisions (51st and 72nd D.I.) which broke and ran upon contact with the *Panzers* on the Meuse on May 12th-13th has received its share of justified attention.⁸⁵ So too has the slow reaction time of French counterattacks throughout the battle.⁸⁶ However, no investigation of the events of May-June 1940 is complete without reference to the fact that the French High Command fought this battle without strategic reserves to compensate for early setbacks. The pivot upon which the battle swung took place incontestably on the Meuse between May 12th and 14th. Near-immediate breakthrough into the French roadway system allowed German forces to maintain the speed of their advance, outpacing all attempts to organize new lines of defense in the rear. The absence of strong reserves immediately available to engage the *Panzers* explains the ease with which the German army was able to capitalise on local successes at Sedan and Dinant and trap fully half the Allied armies in a giant encirclement within a span of two weeks. This deficiency in the French order of battle, even more than the *Wehrmacht's* remarkable performance, was the single

⁸⁵ Detailed investigations into the disastrously ineffective defense provided by these units are found in Jeffery Gunsburg, *Divided and Conquered: The French High Command and the Defeat of the West, 1940*. (Westport, CT.: Greenwood Press, 1979) and Robert A. Doughty, *The Breaking Point: Sedan and the Fall of France, 1940*. (Mechanicsburg, P.A.:Stackpole, 1990), 103-130.

⁸⁶ See Karl Heinz Frieser, *The Blitzkrieg Legend*, 145-153.

most important contributor to these events, allowing the *Panzers* to maintain their all-important momentum to the Channel.

We have seen how twenty years of growing fears concerning the apocalyptic potential of modern air power had culminated in Giulio Douhet's vision of an all-encompassing *knock-out blow* from the skies during the opening round of future conflicts. These warnings, long dismissed by many, including Maurice Gamelin, as wild exaggerations, found support in aerial actions over Guernica, Poland and Norway. The true *knock-out blow* it appeared was not to be delivered by waves of strategic bombers leveling the enemy's infrastructure in a few concentrated bursts, nor was it the unleashing of poison gas over the helpless populations of major cities. The aerial revolution was characterised by low-level tactical support for the ground army, a tactic which, by 1939, could paralyse the movement of enemy units, especially reserves approaching the battle from a distance.

Gamelin's squandering of the nation's powerful strategic reserve was a tragic overcompensation for the nation's insufficient number of pilots, a default which ensured that German aircraft would dominate the skies during battle. Gamelin's gamble was an attempt to neutralise the *Luftwaffe's* most obvious advantage, displayed so convincingly in Poland and Norway. That is, if German aircraft had the ability to restrict enemy ground movement, Gamelin determined to minimize his army's ground movement as much as possible once its defensive positions in Belgium had been reached. The forward moving First Army group was thus fully reinforced with the maximum number of troops and reserves *before* its initial advance. This unparalleled re-imagining of a continuous front, based on the *methodical battle* and fought without reserves, is best interpreted as a collapse in morale within the French High Command. It indicated a loss of the very *sang-froid* upon which Gamelin had long prided himself. It was

conducted in haste, during wartime, without the approbation of any significant voices among senior military officers. The Commander-in-Chief's personal doubts on the matter were all too evident. This fatal reassignment of the French strategic reserve took place synchronously with a reordering of the chain of command designed to distance Gamelin from responsibility for the conduct of the battle. It also took place contemporaneously with a steady stream of resignation attempts which betrayed the General's growing defeatism. "After all, it is my duty", he told his Chief of Staff, General Doumenc, during one attempt to resign. "My resignation will be a relief to France."⁸⁷

The absence of a strong and mobile reserve army provides the principal material explanation for France's inability to effectively contest German progress once the breakthrough on the Meuse had been conducted. Its removal reflected a conceptual error based on Gamelin's over-reaction to German air power. After several years spent minimising the role of an air force over the modern battlefield, Gamelin's about-face in late 1939 was unequivocal. His rapid and disastrous re-ordering of the French army and its High Command was conducted unilaterally, heedless to universal opprobrium on the part of his senior officers. The latter were bewildered by the obvious inefficiencies presented by the new hierarchy and could only speculate on the motivations behind the Commander-in-Chief's organizational *diktat*. Gamelin's simultaneous efforts to submit his resignation "as a service that I will provide for the country"⁸⁸, indicate his wavering resolve as well as a lack of confidence in his ability to stem the German tide once unleashed. Once completed, his strategic reply to the methods of *Blitzkrieg* proved hopelessly

⁸⁷ Delpla, *Doumenc*, 151.

⁸⁸ *Ibid.*

ineffective. Rather than strengthening the anticipated points of contact with the enemy, incorporation of the strategic reserve into the forward armies was a decision which served only to weaken the French continuous front immeasurably. The absence of such a reactionary force allowed the *Blitzkrieg* to achieve spectacular success, even surpassing that of the Polish campaign seven months earlier. This was the true cause for the *Strange Defeat* and its foundations were moral rather than material. Faced with a new paradigm for warfare, the German use of combined arms massed on a narrow front, Gamelin embarked on a tremendous gamble. Taking the unprecedented decision to fight a war without reserves, Gamelin was stepping onto untrod territory, without any clear idea of the consequences, since such an order of battle had never been conceived in the modern era by a French commander. He accepted this risk alone, despite widespread hostility to the plan within the French military, while repeatedly submitting his resignation to both the President and Prime Minister of the Republic. Such is not the behaviour of a confident strategist but rather points to a desperate search for solutions to what seemed an increasingly irresolvable military problem. A decline in morale was indeed contributive to the Fall of France in May-June 1940, but this was not found on a generalized, societal level. It was not the result of schoolteachers steeped in the values of pacifism and republicanism failing, since 1918, to inculcate a fighting spirit in the nation's young men. It was not a product of socialism, communism or syndicalism sapping the industrial vigor of the French workforce. Nor was it to be found in a spirit of materialism which, since the roaring twenties, had spread a taste for ease and an abdication of self-sacrifice from the younger generation of Frenchmen and Frenchwomen. In this case, the collapse of morale took place at the top echelons of Republican military power. It stemmed from the growing spectre of modern air power, a steadily growing anxiety, fed by decades of apocalyptic military studies, film and literature. It at

last received confirmation and burst to the forefront of French military preparations as the German air force began to flex its muscle across Europe as of September 1939. Gamelin's decline, whether founded upon his advanced age or upon medical conditions affecting his ability to command, led him to seek out radical solutions to an increasingly worrisome military situation. To counter the *Luftwaffe*, he decided upon the strongest forward defense possible to the French army and chose to establish it where he anticipated the fight to be the fiercest, in Belgium. Had the main Nazi strike taken place there, Gamelin's plan could have proven very successful, at the very least, in prolonging the French defence. As it happened, when German forces traversed the Meuse, the battle was, to all intents and purposes, already decided. Deprived of a properly situated and fully supplied reserve, the French army remained incapable of repairing the damage caused by the enemy's breakthrough at Sedan until at last laying down its arms six weeks later.

Conclusion

This study began with the question: “why did France’s military leadership fail to provide a strong and mobile reserve force in the spring of 1940?” In truth, we have seen that this question is only valid in reference to the last six months prior to the German invasion of May 10th. Before November 1939, a strong, cohesive, and highly mobile strategic reserve did indeed exist in support of the French continuous front. This was Henri Giraud’s Seventh Army, well situated just east of Reims, near the eventual German invasion route through the Ardennes.

The process of removing and relocating the reserve army was therefore a strategic revision conducted entirely after the start of hostilities. It was, at its core, predicated upon a failure of morale within the high command. Fearing the capabilities of German air power, Gamelin denuded the Ardennes region of its strategic reserve and much of its dedicated air support, sending it all to the projected central battlefield in Belgium. This reorganization, largely unilateral, was Gamelin’s reaction to the recent terrifying display of air power over Poland. In theory, he hoped to strengthen the French advance into Belgium. In practice, however, the chief result of reconstituting of the front line was to ensure that the German breakthrough along the Meuse, once achieved, could not be effectively contained. Local defeat spiraled into national disaster due to a lack of men and machines geographically situated to contest the Nazi incursion in a timely manner. Thus, changes made in an atmosphere of flagging confidence and rising fears for the French army’s ability to resist the new aerial *Blitz* led directly to material shortcomings at the precise location where men and machines would be required in their greatest possible numbers. In short, flagging morale in the high command resulted in material insufficiency where

it was needed most. Seen in this light, we can appreciate the fundamental merits of both the *moralist* and the *materialist* schools of thought.

Looking at things through a wider lens, we have seen how French industry had ultimately been successful in its rearmament process by the Spring of 1940. The term *successful* need not refer to the outcome of the battle to preserve its validity. For in truth, the enormous effort to increase production after 1936 was never expected to equip France with the means to single-handedly defeat the Nazi war machine. It aimed, rather, to establish a position from which defense of the northeastern border could be attempted with a reasonable chance for success. The immediate goal was to blunt the first German offensive and create a stalemate which might eventually be broken with the ever-growing assistance of France's real and projected allies. By May 1940, a greater number of modern tanks, rough parity in aircraft with the *Luftwaffe*, and an enormous advantage in artillery provided France with the possibility for a defensive victory in the first round of the coming contest.

The French economy was in a particularly strong position to face the coming of war. Its enormous reserves in gold, coupled with rapidly increasing production of essential materials, and a sharp decline in unemployment, ensured that this war would not be lost in the short term due to fiscal exhaustion. France did not lose the economic and/or industrial test of war, as suggested by some recent historians. Its failure was one of strategy.

The German *Blitz* was, of course, based on speed. German success was possible only in the event that the *Wehrmacht's* forward movement was sustained. This enormous military caravan slowly picked up speed as it neared the Meuse on May 10-12. Following its

quick crossing, the juggernaut met with no significant resistance for the next five days, increasing its speed and momentum to the point where only a massive, coordinated counterattack could derail its progress. De Gaulle's limited action at Montcornet on May 17, like the British action at Arras four days later, were nowhere near sufficient to stem the tide. The lopsided German victory occurred primarily because the local success at Sedan could not be immediately challenged. The reserve force needed for such an action, once ideally situated near Reims, had been moved to the extreme left of the Allied formations. Had it been present near the center of the front, in accordance with longstanding French military tradition, it would have been able to engage the oncoming *Panzers* with seven divisions already trained to work in unison. Five of these were considered crack formations, possessing the most modern weaponry, and some of the most highly trained soldiery of the French army. In such circumstances, it becomes impossible to envision the kind of sweeping, largely uninterrupted, German advance from Sedan to the northern coastline which characterised the actual course of events. It is certainly not a *revisionist bridge too far*¹ to claim that at the very least, Giraud's Seventh army would have acted as a weighty impediment to the progress of Von Rundstedt's *Army Group A* in the days following the fall of Sedan.

As *Panzer* general extraordinaire, Heinz Guderian knew very well, any small delay allowed the French army precious time to recall forces toward the center of the line, stiffening its level of defense. This is not the place for extended hypothetical conjectures, only to make the reasonable claim that the absence of a strategic reserve gave the German tank divisions all the

¹ Julian Jackson has used this phrase in reference to Ernest R. May's revisionist history, *Strange Victory*. The specific "bridge" referred to is May's observation, supported by computer designed wargames, that the Allies were in a material position to soundly defeat Germany in May-June, 1940. See Jackson, *Fall of France*, 196.

time and space required to execute their plan with a level of success no one, on either side of the fighting, had anticipated. According to Guderian, events unfolded “almost as a miracle”². Hitler certainly agreed, shouting “This is a miracle! An absolute miracle!”³ Their bewilderment echoed Gamelin’s own esoteric musings on the subject, attributing defeat to the capriciousness of fate or divine retribution⁴. A miracle had indeed been delivered to the German army, not by Dame Fortuna but from the French High Command, whose adventurous gamble in Belgium, cleared a path from the Meuse to the Channel to be exploited by daring *Panzer* generals.

Decades of literary and cinematic speculation on the destructive potential of modern air power combined with memories of lived experiences from 1914-1918 haunted the edges of public consciousness by the late 1930s. The sense of living under the shadow of the bomber dictated the course of Continental politics after the Nazi announcement of a new German air force in 1935. Convinced at first of the army’s continued primacy in any future conflict, Maurice Gamelin constructed French strategy according to a conservative, but proven, set of rules. His continuous front would rely on overwhelming firepower to resist an invasion. In the event of breakthrough, he would avail himself of a powerful central reserve to redress any unforeseen setbacks. The decision to alter this sound strategy (which his successor, Weygand, would scramble to reinstate at the end of May) in favour of a front line manned and equipped to the greatest extent possible, tragically opened the hinge of Sedan wide open to the invader. In his own words, we have seen how Gamelin considered his revision necessary in order to wage war

² General Heinz Guderian. *Panzer Leader*. (New York: Ballantine Books, 1957), 84.

³ Frieser, *Blitzkrieg Legend*, 2.

⁴ See above, 324.

under a German dominated sky. Gamelin was correct in stating that airpower was “the decisive factor in determining the outcome”⁵ but the most useful attribute of this weapon, even more effective than its performance over the battlefield, proved to be its psychological impact. After years of threatening, cajoling and ultimately, dictating the course of European politics, the *Luftwaffe*'s greatest victory occurred in 1939/40 by sufficiently demoralizing the French high command, to the point that it chose to disavow itself of one of the army's most powerful assets: a large and cohesive strategic reserve. Without this valuable and irreplaceable asset, Hitler's initial tactical victory near the Meuse was rapidly exploited to undermine the French defensive network, and quickly seal the fate of the Third Republic.

⁵ Gamelin, *Servir* t.3, 365.

Bibliography

Archival Sources

Archives Nationales (AN)

Fonds Edouard Daladier. Vol. 1 (1919-1975)

496 AP 8-15 Vers la guerre. Avril 1938-septembre 1939.

496 AP 28-30 La préparation de la France à la guerre et les responsabilités de la défaite, 1919-1943.

Assemblée Nationale, *Les Événements survenus en France de 1933 à 1945; Témoignages et documents recueillis par la Commission d'Enquête Parlementaire*, 9 vols. (Paris: Presses Universitaires, 1947.

Front Populaire. *Le programme du Front Populaire*. Political Pamphlet, 1936.

Journal officiel de la République française. Débats Parlementaires, Chambre des Députés. 1936-1940.

Services Historiques de l'Armée de l'Air (SHAA)

A1 11P 12558 (Joseph Vuillemin)

A1 11Z 12934 (Armée de l'Air, 1936-1940)

A1 11Z 12935 (Pierre Cot)

A1 11Z 12938 (Guy la Chambre)

Services Historiques de l'Armée de Terre (SHAT)

DE 2016 SA (Journal de Marche du Général Gamelin)

GR 1K 224 (Fonds Maurice Gamelin), d.1-23.

GR 2N 26 (Réunions du Comité de Guerre), d1-d11

GR 13YD 837, 1279 (Général d'Armée: Gamelin, Maurice Gustave)

GR 1K 95 4 (Journal de Marche du Général Georges)

GR 5N (Conseil Supérieur de la Défense Nationale) 579 d2-d5, 580 d1-2,

GR 7N 2294, 2731 (Pologne 1939) d.4, 2914, 3006, 3456 d.3, 4025 d.12

1K 108 d.1

1N 67

2N 25 (Comité Permanent de la Défense Nationale)

2N 208 d.1

6N 325 d2, d3

7N 3697, 2293 d.3,

27 N10

3D 494

Primary Documents:

Allix, Edgar. "La Semaine de quarante heures et le chômage." *Revue Politique et Parlementaire* 153 (December 1932): 453-455.

Assemblée Nationale. *Rapport fait au nom de la commission chargée d'enquêter sur les événements survenus en France de 1933 à 1945 : Deuxième Partie*. Paris : Imprimerie de l'Assemblée Nationale, 1947.

Assemblée Nationale. *Rapport fait au nom de la commission chargée d'enquêter sur les événements survenus en France de 1933 à 1945: Troisième Partie*. Paris : Imprimerie de l'Assemblée Nationale, 1947.

Chauvineau, Louis. *Une invasion est-elle encore possible?* Paris: Berger-Levrault, 1940.

De Gaulle, Charles. *Vers L'Armée de Métier*. Paris: Bureau d'information de la France combattante, 1936.

Douhet, Giulio. *The Command of the Air*. New York: Howard McCann, 1942.

Douhet, Giulio, "La Guerre de l'Air: Préface du général Tulasne." *Journal 'les ailes'* (1932) : 11-12.

Doukas, Kimon A. "Armaments and the French Experiment." *The American Political Science Review* 33:2 (April 1939): 279-291.

du Merle, Guy. *Constructions des Avions*. Paris: Dunod, 1942.

Duval, Général. *Leçons de la guerre d'Espagne*. Paris: Plon, 1938.

Eliot, George Fielding. *Bombs Bursting in Air: The Influence of Air Power on International Relations*. New York : Reynal and Hitchcock, 1939.

France, Ministère de la Guerre. *Instructions Provisoires sur l'Emploi Tactique des Grandes Unités*. Paris: Imprimerie Nationale, 1937.

Gill Lieut.-Colonel N.J., *The Aerial Arm: Its Functions and Development*. London: The "Aeroplane" and General Publishing Co., Ltd, 1919.

Grahame-White, Claude and Harry Harper. *Aircraft in the Great War: A Record and Study*. Chicago: A.C. McClurg and Co., 1915.

- Hearne, R.P. *Aerial Warfare*. London: Bodley Head, 1909.
- Journal Officiel de la République Française, Débats: Sénat*. Paris: Direction de l'information légale et administrative, 1939-1940.
- Journal Officiel de la République Française, Débats: Chambre de Députés*. Paris: Direction de l'information légale et administrative, 1939-1940.
- Landry, Adolphe. "Réflexions sur les théories du salaire et le chômage." *Revue Économique Internationale* 49:6 (1935) : 1652-90.
- League of Nations. *International Trade Statistics 1930*. Geneva: League of Nations, 1932.
- League of Nations. *International Trade Statistics 1935*. Geneva: League of Nations, 1936.
- Liddell Hart, B.H. *Paris or The Future of War*. New York: E.P. Dutton, 1925.
- Mahoney, Thomas. "Doctrine of Ruthlessness." *Popular Aviation* (April 1940): 36-37.
- Middleton, Edgar C., *Airfare of To-day and of the Future*. London: Constable and Co., 1917.
- Ministère de l'Air, *Instruction sur l'emploi tactique des grandes unités aériennes* (31 march), 1937.
- Mitchell, William. *Skyways, A book on modern aeronautics*. Philadelphia and London: J.B. Lippincott, 1930.
- Neon. *The Great Delusion: A Study of Aircraft in Peace and War*. New York: Dial Press, 1927.
- No author. "L'avenir de l'aviation française: Interview de M. Pierre Cot." *Europe Nouvelle* 18: (January 5, 1935) : 13-14.
- Phillips, Thomas. "Preview of Armageddon." *Saturday Evening Post* (March 12, 1938): 12-13, 95-100.
- Pétain, Philippe. *Paroles aux Français, Messages et Ecrits '34-'41*. Lyons: Lardenchet, 1941.
- Roland, Philippe. *La crise de matériel de l'aviation militaire française*. Paris: Société d'études et d'informations économiques, 1938.
- Royse, M.W. *Aerial Bombardment*. New York: Harold Vinal, 1928.
- Sigaud, Louis. *Douhet and Aerial Warfare*. New York: Putnam and Sons, 1941.
- Slessor, Jack. *Air Power and Armies*. Oxford, Oxford University Press, 1936.
- Spaight, James. *Air Power and War Rights*. London: Longmans, 1933.
- Vauthier, Colonel Paul. *La Doctrine de Guerre du Général Douhet*. Paris: Éditions Berger-Levrault, 1935.

Memoirs, Journals and Personal Accounts

- Armengaud, Paul. *Batailles Politiques et Militaires sur L'Europe: Témoignages*. Paris, Éditions du Myrte, 1948.
- Baudoin, Paul. *Neuf Mois au Gouvernement (Avril-Décembre 1940)*. Paris: Éditions de la Table Ronde, 1948.
- Belin, René. *La semaine de 40 heures et la réduction du temps de travail*. Paris: CGT, 1937.
- Bloch, Marc. *Strange Defeat: A Statement of Evidence Written in 1940*. New York: Norton, 1999.
- Bonnet, Georges. *Défense de la Paix : De Washington au Quai d'Orsay*. Genève: Constant Bourquin, 1946.
- Cot, Pierre. *L'Armée de l'Air, 1936-1938*. Paris: Bernard Grasset, 1939.
- Cot, Pierre. *Triumph of Treason*. Chicago: Ziff Davis, 1944.
- de Monzie, Anatole. *Ci-Devant*. Paris: Flammarion, 1941.
- Daladier, Edouard. *Journal de Captivité: 1940-1945*. Paris: Calmann-Lévy, 1991.
- d'Astier de la Vigérie, François. *Le ciel n'était pas vide*. Paris: René Julliard, 1952.
- de Beauvoir, Simone. *The Prime of Life*. Harmondsworth: Penguin, 1965.
- de Villelume, Paul. *Journal d'une Défaite : Août 1939-Juin 1940* Paris : Fayard, 1976.
- Editorial, no author. "Notre Aviation: Les conditions de son redressement." *Revue des deux mondes* 45:2 (May 15, 1938): 270-283.
- Gamelin, Maurice. *Servir* (3 vols.). Paris: Plon, 1946.
- Gauché, Général. *Le Deuxième Bureau au Travail, 1935-1940*. Paris: Amiot-Dumont, 1953.
- Guderian, Heinz. *Panzer Leader*. Boston: De Capo Press, 2001.
- Jacomet, Robert. *L'Armement de la France, 1936-39*. Paris: Les Éditions Lajeunesse, 1945.
- Juneaud, J.H. Général, *De Verdun à Dien Bien Phu*, Paris: Éditions du Scorpion, 1960.
- Laffargue, André. *Fantassin de Gascogne: de mon jardin à la Marne et au Danube*. Paris: Flammarion, 1962.
- Lerecouvreur, M. *L'Armée Giraud en Hollande (1939-1940)*, Paris: Nouvelles Éditions Latines, 1951.
- Maurin, Général. *L'Armée moderne*. Paris: Flammarion, 1938.
- Minart, Jacques. *P.C. Vincennes, Secteur 4*. (2 vols.) Paris: Éditions Berger Levrault, 1945.
- Minnery, R.J. *The Private Papers of Hore-Belisha*. London: Doubleday, 1960.

- Montjean, Général. *L'Étrange Capture, Mai 1940*. Paris: Editions Pierre de Taillac, 2019.
- Noël, Léon. *L'Aggression Allemande contre la Pologne*. Paris: Flammarion, 1946.
- Prioux, René, Général. *Souvenirs de Guerre*. Paris: Flammarion, 1947.
- Reynaud, Paul. *La France a sauvé l'Europe* (2 vols.) Paris: Flammarion, 1947.
- Reynaud, Paul. *Au Coeur de la mêlée, 1930-1945*. Paris: Flammarion, 1952.
- Roton, Général G. *Années Cruciales: La Course aux Armements (1933-1939), La Campagne (1939-1940)*. Paris: Charles Lavauzelle, 1947.
- Spears, Sir Edward. *Assignment to Catastrophe, volume 1*. London: William Heinemann Ltd. 1955.
- Stehlin, Paul. *Témoignages Pour l'Histoire*. Paris: Robert Laffont, 1964.
- Von Manstein, Erich. *Lost Victories*. Novato, California: Presidio, 1955.
- Weygand, Maxime. *Rappelé au Service*. Paris: Flammarion, 1950.

Articles:

- Adamthwaite, Anthony. "Reactions to the Munich Crisis." In *Troubled Neighbours: Franco-British Relations in the Twentieth Century*, edited by Neville Waites, 170-200. London: Weidenfeld and Nicolson, 1971.
- Alexander, Martin. "In Defence of the Maginot Line", in *French Foreign and Defence Policy*, edited by Robert Boyce, 164-194. London: Routledge, 1988.
- Asselain, Jean-Charles. "Une erreur de politique économique: Les lois des quarantes heures de 1936." *Revue Économique* 25:4 (July 1974): 672-705.
- Bankwitz, Philip "Maxime Weygand and the Fall of France." *The Journal of Modern History* 31:3 (September 1959): 225-242.
- Buffotot, Patrice. "Le réarmement aérien allemand et l'approche de la guerre vus par le IIème bureau de l'Air Français." In *Deutschland und Frankreich 1936-1939*, edited by Klaus Hildebrand and Karl Ferdinand Werner, 250-290. Munich: Artemis Verlag, 1981.
- Cain, Anthony, Christopher. "L'Armée de l'Air, 1933-1940: Drifting Toward Defeat." In *Why Airforces Fail: The Anatomy of Defeat*, edited by Robin Higham and Stephen J. Harris, 41-70. Lexington: University of Kentucky Press, 2006.
- Cairns, John C., "Along the Road Back to France, 1940." *American Historical Review* 64:3 (April 1959): 583-603.
- Clark, Jeffrey J. "The Nationalisation of War Industries in France 1936-1937: A Case Study." *The Journal of Modern History* 49:3 (September 1977): 411-430.

- Cot, Pierre. "En '40 Où étaient nos avions?" *Icare* 57 (Spring-Summer 1971): 35-57.
- Dietrich, Lieutenant-Colonel Henri. "Point de Vue d'un réserviste" *Icare: Revue de l'aviation française (1939-40 – La Bataille de France, vol. 1: La Chasse)*, 54 (été 1970) : 118-124.
- d'Harcourt. Général Jean. "Les Chasseurs ont fait tout leur devoir" *Icare: Revue de l'aviation française (1939-40 – La Bataille de France, vol. 1: La Chasse)* 54 (été 1970) : 43-47.
- Dobbin, Frank. "The Social Construction of the Great Depression." *Theory and Society* 22:1 (February 1993): 1-56.
- Donnini, Frank. "Douhet, Caproni and Early Air Power." *Air Power History* 37:2 (Summer 1990): 45-52.
- Douglas M. Charles and John P. Rossi, "FBI Political Surveillance and the Charles Lindbergh Investigation." *The Historian* 59:4 (Summer 1997): 831-847.
- Dreifort, John. "The French Popular Front and the Franco-Soviet Pact, 1936-1937: A Dilemma in Foreign Policy." *Journal of Contemporary History* 11:2 (July 1976): 217-236.
- du Réau, Élisabeth. "Gouvernement et haut commandement Français devant la perspective de la guerre, (Septembre 1938-Septembre 1939)." *Guerres mondiales et Conflits Contemporains* 166 (April 1992): 149-165.
- Facon, Patrick. "Douhet et sa doctrine à travers la littérature militaire et aéronautique française de l'entre-deux-guerres: une étude de perception." *Revue historique des armées* 1 (1988): 95-96.
- Frank, Robert. "Intervention étatique et réarmement en France, 1935-1939." *Revue Économique* 31:4 (July 1980) : 743-781.
- Garraud, Philippe. "Les contraintes industrielles dans la préparation de la guerre de 1939-40: la modernisation inachevée de l'aviation française." *Guerres mondiales et contemporaines* 207 (Juillet-Septembre 2002) : 37-59.
- Garraud, Philippe. "Le rôle de la 'doctrine défensive' dans la défaite de 1940: Une explication trop simple et partielle", *Guerres mondiales et conflits contemporains*, 214 (Avril 2004) : 97-123.
- Harvey, A.D. "The French Armée de l'air in May-June 1940: A failure of conception." *Journal of Contemporary History* 25:4 (October 1990): 447-465.
- Hugo, Général Henri. "Une expérience inestimable" *Icare: Revue de l'aviation française (1939-40 – La Bataille de France, vol. 1: La Chasse)* 54 (été 1970) : 89-97.
- Imlay, Talbot. "Paul Reynaud and France's Response to Nazi Germany, 1938-1940." *French Historical Studies* 26:3 (Summer 2003) : 497-538.
- Ingram, Norman. "The Circulaire Chautemps, 1933: The Third Republic Discovers Conscientious Objection." in *French Historical Studies* 17:2 (Autumn 1991): 387-409.

- Ingram, Norman. Review of *A Vision of Europe: Franco-German Relations during the Great Depression, 1929–1932*, by Conan Fischer. *The American Historical Review*, Volume 124, Issue 4, (October 2019): 1528–1529.
- Jackson, Peter. “French Intelligence and Hitler’s Rise to Power” in *The Historical Journal* 41:3 (September 1998): 795-824.
- Jones, John F. “Giulio Douhet Vindicated: Desert Storm 1991.” *Naval War College Review* 45:4 (Autumn, 1992): 97-110.
- Jordan, Nicole. “Strategy and Scapegoatism: Reflections on the French National Catastrophe, 1940.” In *The French Defeat of 1940: Reassessments*, edited by Joel Blatt, 13-38. New York: Berghahn Books, 2001.
- Kirkland, Faris R. “The French Air Force in 1940: Was it defeated by the Luftwaffe or by politics?” *Air University Review* 36:6 (September-October 1983): 101-119.
- Kirkland, Faris R. “French Air Strength in May 1940.” *Air Power History* 40:1 (Spring 1993): 22-34.
- Lemaigen, Robert. “Le Vuillemin que j’ai connu.” *Icare* no. 59 (Automne-Hiver 1971): 54-71.
- Liautard, Lieutenant-Colonel Henri, “Combats dans le ciel, et retraits au sol,” *Icare: Revue de l’Aviation française (1939-40 La Bataille de France: Vol. II La Chasse, deuxième partie)*, no 55 (automne-hiver 1970), 94-95.
- Pesquies, Simone. “L’aéronautique militaire française dans la guerre du Rif.” *Revue du Nord* 285 (1990): 317-367.
- Porch, Douglas. “Spain’s African Nightmare.” *The Quarterly Journal of Military History* 18:2 (Winter 2006): 28-37.
- Pugh, Michael. “Policing the World: Lord Davies and the Quest for Order in the 1930s.” *International Relations* 16:1 (2002): 97-115.
- Rabbath, Edmond. “L’insurrection Syrienne de 1925-1927.” *Revue Historique* 2 :54 (April-June 1982): 405-447.
- Roos, Joseph. “La Bataille de la Production Aérienne.” *Icare* 59 (Automne-Hiver 1971) : 44-53.
- Sartin, Jeffrey S., M.D. “Malariatherapy for Syphilis” *BMJ Medical Journal* (March 13, 2005): 330.
- Sauvy, Alfred. “The Economic Crisis of the 1930s in France.” *The Journal of Contemporary History* 4:4 (October 1969): 21-35.
- Schreiber, Gerhard. “Les structures stratégiques de la conduite de la guerre de coalition Italo-Allemande au cours de la Deuxième Guerre Mondiale.”, *Revue d’histoire de la Deuxième Guerre mondiale*, 30e Année 120, (Octobre, 1980) : 1-32.
- Segré, Claudio. “Douhet in Italy: Prophet Without Honor?” *Aerospace Historian* 26:2 (June 1979): 69-80.

- Sganga, Rodolfo. "Douhet's Antagonist: Amedeo Mecozzi's Alternative Vision of Air Power." *Air Power History* 58:2 (Summer 2011): 4-16.
- Silverman, Dan. "Fantasy and Reality in Nazi Work Creation Programs, 1933-1936." *The Journal of Modern History* 65:1 (1993): 113-151.
- Singer, Barnett. "Patriots to Pacifists: The French Primary School Teachers, 1880-1940." *Journal of Contemporary History* 12:3 (July 1977): 413-434.
- Stehlin, Paul. "De la Diplomatie au Renseignement et à l'escadrille", *Icare: Revue de l'Aviation française (1939-40 La Bataille de France: Vol. II La Chasse, deuxième partie)*, no 55 (automne-hiver 1970): 42-49.
- Stephens, Alan. "The True Believers: Air Power Between the Wars." In *The War in the Air 1914-1994*, edited by Alan Stephens, 29-68. Fairbairn, Australia: Aerospace Center, 1994.
- Tallent, Colonel Maurice. "Garder le Moral," *Icare: Revue de l'Aviation française (1939-40 La Bataille de France: Vol. II La Chasse, deuxième partie)*, no 55 (automne-hiver 1970): 78-85.
- Thomas, Martin. "French Economic Affairs and Rearmament: The First Crucial Months, June-September 1936." *Journal of Contemporary History* 27:4 (October 1992): 659-670.
- Truelle, Jean. "La Production Aéronautique militaire française jusqu'en juin 1940." *Revue d'histoire de la deuxième guerre mondiale* 73 (Janvier 1969) : 75-100.
- Young, Robert J. "Preparations for Defeat: French War Doctrine in the Inter-War Period." *Journal of European Studies* 2:2 (1972): 155-172.
- Young, Robert. "The Strategic Dream: French Air Power in the Interwar Period, 1919-1939." *Journal of Contemporary History* 9:4 (October 1974): 57-76.
- Young, Robert. "La Guerre de Longue Durée: Some Reflections on the French Strategy and Diplomacy in the 1930s." In *General Staffs and Diplomacy before the Second World War*, edited by Adrian Preston, 41-65. London: Croom Helm, 1978.
- Zaidi Waqar, H. "Aviation Will Either Destroy or Save Our Civilization: Proposals for the International Control of Aviation, 1920-45." *Journal of Contemporary History* 46:1 (January 2011): 150-178.

Monographs:

- Accoce, Pierre and Dr. Pierre Rentchnick. *Ces Malades qui nous Gouvernent*. Paris: Stock, 1976.
- Adamthwaite, Anthony. *France and the Coming of the Second World War*. London: Frank Cass, 1977.

- Adamthwaite, Anthony. *Grandeur and Misery: France's Bid for Power in Europe, 1914-1940*. London: Arnold, 1995.
- Alexander, Martin. *The Republic in Danger: Maurice Gamelin and the Politics of French Defence, 1933-1940*. Cambridge: Cambridge University Press, 2003.
- Armengaud, Général Paul. *Batailles Politiques et Militaires sur l'Europe: Témoignages 1932-40*. Paris: Éditions du Myrte, 1948.
- Avril, Michel. *Raoul Dautry 1880-1951: La Passion de Servir*. Paris: France-Empire, 1993.
- Badouï, Rémi. *Raoul Dautry 1880-1951: Le technocrate de la République*. Paris: Balland, 1992.
- Bankwitz, Phillip Charles Farwell. *Maxime Weygand and Civil-Military Relations in Modern France*. Cambridge, Massachusetts: Harvard University Press, 1967.
- Baughen, Greg. *The Rise and Fall of the French Air Force: French Air Operations and Strategy, 1900-1940*. Croyden: Fonthill, 2018.
- Beaufre, André. *Le Drame de 1940*. Paris: Plon, 1967.
- Berg, Scott. *Lindbergh*. New York: Putnam, 1998.
- Boyce, Robert, ed. *French Foreign and Defense Policy, 1918-1940*. London: Routledge, 2005.
- Brodie, Bernard. *Strategy in the Missile Age*. Princeton N.J.: Princeton University Press, 1959.
- Brodie, Bernard. *The Heritage of Douhet*. Santa Monica: Rand Corp., 1952.
- Cain, Anthony Christopher. *The Forgotten Air Force: French Air Doctrine in the 1930s*. Washington and London: Smithsonian Institution Press, 2002.
- Caton, P.E. *1939-1940: Une Guerre Perdue en 4 Jours, II: Contre-Témoignages sur une catastrophe*. Paris: L'amitié par le livre, 1974.
- Chadeau, Emmanuel. *De Blériot à Dassault: L'Industrie aéronautique française, 1900-1950*. Paris: Fayard, 1987.
- Chapman, Herrick. *State Capitalism and Working-Class Radicalism in the French Aircraft Industry*. Berkely: University of California Press, 1990.
- Chase, Stewart. *Men and Machines*. New York: Macmillan, 1939.
- Chauvy, Gérard. *Le Drame de l'armée française; du front Populaire à Vichy*. Paris: Pygmalion, 2010.
- Christienne, Charles and Pierre Lissarrague, *A History of French Military Aviation*. Washington D.C.: Smithsonian Institution Press, 1986.
- Clark, Lloyd. *Blitzkrieg: Myth, Reality and Hitler's Lightning War*. London: Atlantic Books, 2016.
- Cohen, Eliot A. and John Gooch. *Military Misfortunes: The Anatomy of Failure in War*. London: Macmillan, 1990.

- Conquet, Général. *L'énigme des blindés 1932-1940*. Paris: Nouvelles Éditions Latines, 1956.
- Cornwell, Peter D., *The Battle of France Then and Now*. London: After the Battle Press, 2008.
- Crémieux-Brilhac, J.L. *Les Français de l'an 40 vol. I: La Guerre Oui ou Non?* Paris: Gallimard: 1990.
- Crémieux-Brilhac, J.L. *Les Français de l'an 40, vol. II: Ouvriers et Soldats*. Paris: Gallimard, 1990.
- Cuny, Jean and Raymond Danel, *L'aviation de Chasse Française, 1918-1940*. Paris: Société Nationale Industrielle Aérospatiale, 1973.
- D'Argenson, Marquis. *Pétain et le Pétainisme: Essai de psychologie*. Paris: Editions Tristan, 1996.
- Daridan, Jean. *Le Chemin de la Défaite, 1938-1940*. Paris: Plon, 1980.
- De Kerillis, Henri. *De Gaulle: Dictateur*. Montreal: Beauchemin, 1945.
- Deleuze, Gilles. *Bergsonism*. New York: Zone Books, 1991.
- Delpla, François. *Les Papiers secrets du général Doumenc (1939-1940)*, Paris: Olivier Orban, 1991.
- Doise, Jean and Maurice Vaïsse. *Politique étrangère de la France, Diplomatie et outil militaire, 1871-1991*. Paris: Imprimerie Nationale, 1987.
- Doughty, Robert. *The Seeds of Disaster: The Development of French Army Doctrine, 1919-1939*. Mechanicsburg, PA: Stackpole Books, 1985.
- Doughty, Robert. *The Breaking Point: Sedan and the Fall of France, 1940*. Mechanicsburg, Pennsylvania: Stackpole, 2004.
- Dunning, Chris. *Regia Aeronautica: The Italian Air Force 1923-1945 – An Operational History*. Surrey : Ian Allan Publishing, 2009.
- Duroselle, Jean-Baptiste. *Politique étrangère de la France, La décadence (1932-1939)*. Paris : Imprimerie Nationale, 1979.
- Duroselle, Jean-Baptiste. *Politique étrangère de la France: L'abîme, 1939-1944*. Paris: Imprimerie Nationale, 1986.
- Facon, Patrick. *Batailles dans le ciel de France Mai-Juin 1940*. Paris: Pascale Galodé, 2010.
- Fischer, Conan. *A Vision of Europe: Franco-German Relations during the Great Depression. 1929–1932*. New York: Oxford University Press, 2017.
- Fleming, Candace. *The Rise and Fall of Charles Lindbergh*. New York: Schwartz and Wade, 2020.
- Frank, Robert. *Le Prix du réarmement français (1935-1939)* Paris: Publications de la Sorbonne, 1982.

- Fridenson, Patrick and Jean Lecuir. *La France et Grande Bretagne face aux problèmes aériens*. Vincennes: Services Historique de l'Armée de l'Air, 1976.
- Frieser, Karl-Heinz. *The Blitzkrieg Legend: The 1940 Campaign in the West*. Annapolis: Naval Institute Press, 2005.
- Genebrier, Roger. *Septembre 1939 : La France Entre en Guerre*. Paris: Editions Philippe, 1982.
- Griffiths, Richard. *Marshall Pétain*. London: Faber and Faber, 2011.
- Gunsburg, Jeffery. *Divided and Conquered: The French High Command and the Defeat of the West, 1940*. Westport, CT.: Greenwood Press, 1979.
- Hillper, Thomas. *Bombing the People: Giulio Douhet and the Foundations of Air Power Strategy 1884-1939*. Cambridge: Cambridge University Press, 2013.
- Horne, Alistair. *To Lose a Battle: France 1940*. London: Macmillan, 1969.
- Imlay, Talbot. *Facing the Second World War: Strategy, Politics and Economics in Britain and France, 1938-1940*. Oxford: Oxford University Press, 2003.
- Ingram, Norman. *The Politics of Dissent: Pacifism in France 1919-1939*, Oxford: Clarendon Press, 1991.
- Ingram, Norman. *The War Guilt Problem and the Ligue des Droits de l'Homme, 1914-1944*. Oxford: Oxford University Press, 2019.
- Jackson, Julian. *The Politics of Depression in France, 1932-1936*. Cambridge: Cambridge University Press, 1985.
- Jackson, Julian. *The Fall of France: The Nazi Invasion of 1940*. Oxford : Oxford University Press, 2003.
- Jackson, Peter. *France and the Nazi Menace: Intelligence and Policy Making 1933-39*. Oxford: Oxford University Press, 2000.
- Juneaud, J.H. *De Verdun à Dien Bien Phu*. Paris : Éditions du Scorpion, 1960.
- Kennett, Leo. *The First Air War: 1914-1918*. Toronto: Macmillan, 1991.
- Kiesling, Eugenia C. *Arming Against Hitler: France and the Limits of Military Planning*. Lawrence, Kansas: University of Kansas Press, 1996.
- Khoury, Phillip Shukrey. *Syria and the French Mandate: The Politics of Arab Nationalism, 1920-1945*. Princeton, New Jersey: Princeton University Press, 1987.
- Lefebvre-Garros, Jean-Pierre. *Roland Garros*. Paris: Carrère, 1988.
- Le Goyet, Pierre. *Le Mystère Gamelin*. Paris: Presses de la Cité, 1975.
- Lormier, Dominique. *Les vérités cachées de la défaite de 1940*. Paris: Éditions du Rocher, 2020.

- Mackay, Robert. *Half the Battle: Civilian Morale in Britain during the Second World War*. Manchester: Manchester University Press, 2002.
- Maclaren, Roy. *Mackenzie King and the Age of Dictators: Canada's Imperial and Foreign Policies*. Kingston: Queen's University Press, 2019.
- Maier, Charles S. *In Search of Stability: Explorations in Historical Political Economy*. Cambridge, Cambridge University Press, 1987.
- May, Ernest R. *Strange Victory: Hitler's Conquest of France*. New York: Hill and Wang, 2000.
- McMillan, James Francis. *Twentieth-Century France: Politics and Society in France 1898–1991*. New York: Bloomsbury Academic, 2009.
- Meilinger, Philip, ed. *Paths of Heaven: The Evolution of Air Power Theory*. Alabama : Air University Press, 1997.
- Michel, Henri. *Le Procès de Riom*. Paris: Éditions Albin Michel, 1979.
- Minart, Jacques. *Le Drame du Désarmement Français: La Revanche Allemande (1918-1939)*. Paris: La Nef de Paris Éditions, 1959.
- Mitchell, B.R. *International Historical Statistics: Europe 1750-1993*. London: Palgrave Macmillan, 2000.
- Mordal, Jacques. *La Guerre a commencé en Pologne*. Paris: Presses de la Cité, 1968.
- Mouré, Kenneth. *Managing the Franc Poincaré: Economic Understanding and Political Constraint in French Monetary Policy, 1932-1938*, Cambridge: Cambridge University Press, 1998.
- Morrow, John H. *The Great War in the Air: Military aviation from 1909-1921*. Washington and London: Smithsonian Institute Press, 1993.
- Murray, Williamson. *Luftwaffe*. Baltimore: The Nautical and Aviation Publishing Company of America, 1985.
- Mysyrowicz, Ladislas. *Autopsie d'une défaite : Origines de l'effondrement militaire français de 1940*. Lausanne: L'Age d'Homme, 1973.
- Nord, Philip. *France, 1940: Defending the Republic*. New Haven, CT.: Yale University Press, 2015.
- Omissi, David. *Air Power and Colonial Control: The Royal Air Force, 1919-1939*. Manchester and New York: Manchester University Press, 1990.
- Overy, Richard. *The Origins of the Second World War*, 3rd Ed., London: Routledge, 2008.
- Paillat, Claude. *Le Désastre de 1940: La Guerre Immobile, Avril 1939 - 10 mai 1940*. Paris: Robert Laffont 1984.
- Porch, Douglas. *The French Secret Services*. Oxford, Oxford University Press, 1997.

- Questor, George H., *Deterrence Before Hiroshima: The Airpower Background of Modern Strategy*. New Brunswick and Oxford: Transaction Books, 1986.
- Ropp, Theodore. *War in the Modern World*. Westport: Connecticut: Praeger, 1962.
- Sauvy, Alfred. *Histoire Économique de la France entre les deux guerres (T.2 1931-1939): De Pierre Laval à Paul Reynaud*. Paris: Fayard, 1967.
- Schiavon, Max. *Le Général Alphonse Georges: Un Destin Inachevé*. Parçay-sur-Vienne: Éditions Anovi, 2009.
- Shirer, William. *The Collapse of the Third Republic: An Inquiry into the Fall of France in 1940*. New York: Simon and Schuster, 1969.
- Singer, Barnett. *Maxime Weygand: A Biography*. North Carolina: McFarland, 2005.
- Steiner, Zara. *The Triumph of the Dark: European International History, 1933-1939*. Oxford: Oxford University Press, 2013.
- Sullivan, B.R., "A Thirst for Glory: Mussolini, the Italian Military and the Fascist Regime, 1922-1936." PhD dissertation, New York: Columbia University, 1984.
- Tournoux, Général P.E. *Défense des Frontières: Haut Commandement – Gouvernement 1919-1939*. Paris: Nouvelles Éditions Latines, 1960.
- Vajda, Ferenc A. and Peter Dency. *German Aircraft Industry and Production*. Danvers, Maryland: SAE International, 1998.
- Villelume, Paul de. *Journal d'une Défaite: Août 1939-Juin 1940*. Paris: Fayard, 1976.
- Wallace, Max. *The American Axis: Henry Ford, Charles Lindbergh and the Rise of the Third Reich*. New York: St. Martin's Press, 2003.
- Watt, Donald Cameron. *Too Serious a Business: European Armed Forces and the Approach to the Second World War*. Berkeley and Los Angeles: University of California Press, 1975.
- Weygand, Maxime. *Mémoires: Rappelé au Service*. Paris: Flammarion, 1950.
- White, C.M. *The Gotha Summer*. London: Robert Hale, 1986.
- Young, Robert J. *France and the Origins of the Second World War*. London: Macmillan, 1996.

Edited Works

- Bracher, Julia, ed. *Riom 1942: Le Procès*, Paris: Omnibus 2012.
- Boyce, Robert, ed. *In Defence of the Maginot Line", French Foreign and Defence Policy 1918-1940: The Decline and Fall of a Great Power*. London: Routledge, 1988.

Bullitt, Orville H. ed. *For the President: Personal and Secret: correspondence between Franklin D. Roosevelt and William C. Bullitt*. Boston: Houghton Mifflin, 1972.

Davies, R.W. and Oleg V. Khlevniuk, eds. *The Stalin-Kagonovich Correspondence 1931-36*. New Haven: Yale University Press, 2003.

Max Schiavon, ed. *Les Carnets secrets du Général Huntziger, 1938-1941*. Paris: Éditions Pierre de Taillac, 2019, 105.

Unpublished Thesis

Stottor, Jillian Louise (1984). "The French Popular Front and the Franco-Soviet Pact 1935-1938"
[Unpublished M.Phil thesis] Bedford College, London.