Heroes and Villains: The Effects of Heroism on Autocratic Values and Nazi Collaboration in France*

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Abstract

We measure the effects of a network of heroes in legitimizing and diffusing extreme political behaviors. Exploiting newly-declassified intelligence files, novel voting data and regimental histories, we show the home municipalities of French line regiments arbitrarily rotated through Philippe Pétain's command during the heroic WWI battle of Verdun, though similar before WWI, increasingly espouse Pétain's authoritarian political views thereafter, raising 7% more active Nazi collaborators per capita during the Pétain-led Vichy regime (1940-44). The effects are similar across joining Fascist parties, German forces, paramilitaries hunting Jews and the Resistance, and collaborating economically.

Keywords: Heroes, Networks, Leaders, Democratic Values, Autocracy, Identity, Votes, Legitimacy

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> Frenchmen!... I today assume the leadership of the government of France. Certain of the affection of our admirable army that has fought with a heroism worthy of its long military traditions..., certain of the support of veterans that I am proud to have commanded, I give to France the gift of my person in order to alleviate her suffering.– Maréchal Philippe Pétain, June 17, 1940.

> *On parle avec tendresse du Héros de Verdun: en nous donnant ta vie, ton génie et ta foi, tu sauves la Patrie une seconde fois...* [We speak with tenderness of the Hero of Verdun: when giving us your life, your genius and your faith, you save the Fatherland a second time.] – André Dassary, in *Maréchal, nous voilà*, the unofficial anthem of *Vichy* France, 1941.

1 Introduction

In July 1940, one of the most durable democracies in the world, one that had endured for seventy years, weathering both a pandemic and a world war, committed suicide. The French Parliament voluntarily ended its own sovereignty, and with it the Third Republic, by voting full powers to "*Le Maréchal*", Philippe Pétain, an 84-year old military officer credited with saving France during the Battle of Verdun in the First World War. Pétain established the right-wing authoritarian *Vichy* regime that would collaborate with Nazi Germany until France's liberation by the Allies in 1944. At that time, 96,012 French individuals would be listed by French military intelligence as having actively collaborated with the Nazis, while countless more would collaborate more tacitly. France's crushing military defeat in 1940, however, was only part of the story. Instead, it was arguably in part a symptom of an underlying process that had led to an undermining of democratic values. Unlike other democratic states that had fallen that year to the Nazis, France's elected representatives in 1940 chose not to set up a legitimate government in exile. Instead, many appeared convinced that dictatorship by a historic war hero was necessary for the "national renewal" of France.

Under what conditions do democratic values erode and previously durable democratic institutions falter? To what extent can heroes legitimize otherwise repugnant and extreme political preferences? What role do hierarchical networks forged by shared heroism play in propagating the values of their leaders? In this paper, we measure the effects of *heroic* human capital– the credential that heroic acts provide in acting as a costly signal of type– in shaping political identity and legitimizing political action. Our setting, 1940s France, provides a compelling laboratory for understanding the political economics of heroism. Almost by definition, heroes engage in pro-social acts, making it hard to distinguish heroic legitimization and endorsement of political activities with their inherent social desirability. Yet in the 1940s, the French people were asked by the Victor of Verdun, whose credentials as a patriot were hard to question, to confront an abrupt revocation of the nation's long-standing democratic principles and to instead collaborate with an oppressive foreign regime.[1] Our setting allows us to examine which individuals choose to actively support the undermining of democracy by a hero, and the extent

[1]Even the rallying cry of the 1789 Revolution and motto of Republican France: *Liberté, Egalité, Fraternité* [Liberty, Equality, Fraternity], was banned in 1940 in favor of *Travail, Famille, Patrie* [Work, Family, Fatherland].

to which this influence is disproportionately transmitted through others with heroic credentials and their networks to local communities.

In particular, we exploit a natural experiment – the arbitrary rotation of front-line French regiments through the pivotal Battle of Verdun when Pétain was assigned command there between February and April 1916 – on subsequent active Nazi collaboration by individuals from the home municipalities of those regiments during 1940-1944. We combine this identification strategy with a novel dataset we gathered from a range of original sources at a very fine level of granularity, exploiting data at the individual level, regimental level and among the 34,945 municipalities of 1914 France. This dataset includes unique individual data on more than 85,389 active collaborators in those municipalities that we hand-coded from a secret 1945 French intelligence report that has been only recently declassified.[2]

We first document how the French army expanded a rotation system, the *Noria* [millwheel], with 88% of French line regiments processing through the battlefield at Verdun, 53% directly under Pétain. By design, the French army sought to maintain interchangeability of its line regiments, and the timing of rotation of regiments to battles was unrelated to the characteristics of the home municipalities from which they were raised. Indeed, consistent with the arbitrary nature of the rotation system, municipalities that raised regiments that served under Pétain at Verdun are very similar along a broad range of pre-war characteristics to other municipalities, both within the same department and more generally. Importantly, we hand-collected novel data to show that this includes similar vote shares for each political party in the last pre-war election in 1914.

Despite these initial similarities, individuals in municipalities that served under Pétain at Verdun were 7 to 10% more likely to actively participate in collaborationist organizations that emerged once Pétain assumed dictatorial powers in 1940, compared to individuals in otherwise similar municipalities within the same department. The effects appear across all forms of collaboration in our data, including Fascist political parties, deep economic collaboration with the Nazis, joining paramilitary groups that conducted the internal repression of the regime against Jews and the Resistance, or directly enlisting in German combat or auxiliary units. The effects are robust to using alternative functional forms, including Poisson regressions of the number of local collaborators, and a Spatial Regression Discontinuity setting around regiment catchment boundaries. They are also not driven by spatial correlation.

To the best of our knowledge, we exploit the most exhaustive list that exists of active collaborators in occupied Europe. Yet, we find consistent results when analyzing two alternative data sources: data on collaborators with top leadership positions across the Vichy regime compiled by US intelligence in 1944, and on volunteers in a French paramilitary group that fought alongside the Wehrmacht on the Eastern Front.[3]

[2]This number corresponds to those out of the total 96,012 who had identifiable address information within the borders of metropolitan France in 1914, which at the time excluded the parts of the Alsace-Moselle region ceded to Germany in 1871.

[3]These data include those who volunteered in the Legion of French Volunteers against Bolshevism (henceforth 'LVF'). Among them are also those deemed physically incapable to serve and those that died at the Front. In

Our estimates suggest that municipalities whose regiments happened to be rotated under Pétain at Verdun raised 10,644 additional active collaborators relative to municipalities rotated through Verdun under another general. This figure is comparable to the 15,401 members of the Resistance-hunting militia, the *Milice*, listed in our data, and more than twice the 5,271 French individuals who joined the notorious German secret police, the *Gestapo*. Further, as we discuss below, it is likely that our results are *underestimates* of the true effect of heroic networks.

We interpret our results as consistent with the legitimization of values diffusing through a complementary hierarchical network of heroes. In particular, we argue that those regiments that were rotated through the Battle of Verdun under Pétain's command forged a network that was tied specifically to Pétain and was exogenously imbued with a shared credential of heroism. We show this network complemented the heroism of their commanding general in subsequently legitimizing, justifying, and diffusing extreme political behaviors that would have otherwise been considered repugnant.[4]

To establish the complementarity between Pétain's leadership and the heroic network forged at Verdun in increasing local support for Nazi collaboration, we exploit biographical data on all of Pétain's peace-time and war-time assignments, including field and staff commands before and after Verdun. Collaboration is higher among the home municipalities of regiments exposed to Pétain at Verdun but not at other points in his military career. We further exploit detailed regimental histories to show that the effects on collaboration also do not reflect exposure to other battles, including the also-heroic First Battle of the Marne that saved Paris, or other major battles in 1916 such as the Somme Offensive. Nor does it reflect exposure to the command of the other heroic marshal of the Great War, Ferdinand Foch, who died in 1929.

To further single out the role of shared heroism, we use data on regiments' journals of operation and on individual medal citations between January 1915 and June 1917. We empirically validate that rotation through Verdun under Pétain not only forged a closer connection to Pétain but was also viewed by contemporaries as more heroic: these treated regiments were awarded more citations for valor, even compared to rotation through Verdun under another general, and Pétain himself intervened more often in the award ceremonies. Further, we confirm that there is a positive relationship between heroic citations and later collaboration, but it is chiefly driven by those rotated through *Verdun under Pétain*.

We also evaluate other mechanisms through which the complementary heroic network may have influenced collaboration. We first assess the main alternative: whether the effects instead reflect differences in the nature of the combat– or the resulting trauma– that just happened to have coincided with Pétain's generalship. However, using individual data on close to 1.3 million French military fatalities, we show that the lethality of combat under Pétain at Verdun was actually not substantively different, both when compared to fatalities at Verdun following Pétain's reassignment or at other battles on the Western Front throughout the war. Further,

contrast, our main dataset chiefly consists of those still alive in 1944.

[4]Repugnance and cultural taboos have been shown to be an important check on the existence of markets (Roth, 2007), but limit many other policies as well.

rather than the violence 'begetting more violence' among the survivors, we do not find that those exposed are more or less likely to join violent collaborationist organizations relative to other groups. We consider alternative channels, including pecuniary incentives or coordination and bandwagon effects. We provide evidence that each of these channels provides an incomplete explanation on its own.

We next seek to understand the dynamics. To measure the effects on these values directly and evaluate the extent to which voters in the home municipalities of Pétain's Verdun regiments select right-wing and far-right parties that mimicked Pétain's own values, we hand-collected data on French legislative elections at the local level. Even though Pétain assumed a limited political role through much of the inter-war period, he was widely recognized as a right-wing conservative strongly opposed to communism, and at least as early as 1918, seen as displaying an increasing propensity to espouse authoritarian values. We show that municipalities whose regiments served under him at Verdun, although very politically similar to other municipalities in the 1914 elections, increasingly vote for the right (and later the extreme right) in the interwar period. These patterns accentuate the severe inter-war polarization that afflicted France, strengthening a trajectory towards violent internal conflict later considered akin to a civil war (Jackson, 2001). Further, there are suggestive differences in political preferences even after the Liberation of France in 1944, when the collaborationist regime fell, far-right parties were banned, and Pétain himself would be convicted of high treason.[5]

Overall, we interpret these results as reflecting the role of a network of individuals with complementary *heroic* credentials in legitimizing and propagating political values. At the individual level, heroic credentials provide a strong, often tragically costly, signal of an individual's type, particularly in demonstrating their relative willingness to forego private interests in the interests of the nation. In environments of hidden action or information, possessing a heroic credential can engender greater trust in heroes' endorsements of policies as reflecting the public good rather than their personal interests.[6] This can make heroes not only more desirable as agents in trust-based economic relationships in general, but can be perceived to be a particularly relevant signal when it comes to the delegation of political authority and decision making. It also enables heroes to be more credible when publicly supporting extreme and even hitherto repugnant policies relative to other public figures, whose type and thus motives are less clear.

Further, while heroes often distinguish themselves by showing individual initiative, their credentials as heroes do not operate in a vacuum. We cannot measure the effects of Pétain's legitimization of anti-democratic values on France as a whole, because all of France was exposed to Pétain's heroic credentials. In that sense our measures are underestimates. However, we can compare which municipalities were more responsive to his message by changing their voting behavior and actively participating in collaborationist organizations. Our results suggest that

[5]Pétain's deputy, Pierre Laval, was executed, along with a number of other high-ranking Vichy ministers. De Gaulle, who had served under Pétain in World War I, commuted Pétain's sentence to life imprisonment in recognition of Pétain's military contributions in World War I.

[6]On costly investments and hierarchies inducing trust, see Athey et al. (2016).

Pétain's legitimization of authoritarian values was complemented by the persuasive presence of the regular citizen-soldiers, the *poilus* [hairy ones], who shared a common, and complementary, heroic credential with Pétain.

The presence of such complementarities in a hierarchical network can, we argue, also explain some of the more puzzling aspects of Nazi collaboration that we uncover and document. For example, why was it that the home communities of the heroes of Verdun, symbols of French fortitude and the will of the French Republic to resist, were more likely to join collaborationist organizations, and do so even as late as 1943-44, when it was clear that Germany was losing the war? The logic of robust comparative statics, implied by the presence of complementarity (Milgrom and Roberts, 1990, Milgrom et al., 1991), provides likely answers. If others that share a heroic credential are now considered traitors, this will reduce the value to each hero of their own. This is particularly the case for the most public face of the network— in our case, Pétain. As a result, the heroes of Verdun have more incentives to support their leader: it is costlier to turn against him than for others because of the complementarity of their heroic credentials. Further, there are incentives to invest in participation in organizations and other reinforcing devices that strengthen the value of their heroic credentials and the network as a whole. Yet, the more individuals invest, the costlier it is to abandon the network. These reinforcing incentives over time may explain why the home communities of the heroic network forged under his command at Verdun still supported Pétain even when it was clear that the Nazis were losing, and after the war as well.[7]

To the best of our knowledge, our paper is the first to measure the effects of heroes and heroic networks in legitimizing and propagating policy preferences. We are able to exploit an arbitrary process that formed a network of heroes, those who *did Verdun*, who were themselves connected to a heroic leader – Pétain – who would assume national political leadership in World War II.[8] In doing so, we build upon and contribute to an important literature on the relevance of endorsements by central figures and celebrities in diffusing messages through networks.[9] Our setting overcomes two major hurdles in the empirical literature on leadership in particular.[10] It solves the reflection problem – the fact that leaders emerge endogenously from their communities

[7]Pétain's natural death in prison in 1951 sparked demonstrations in most French cities, orchestrated by veterans of Verdun (Williams, 2005, p. 271). See also Jha (2018) for a parallel formalization and other historical examples where reinforcing complementary investments can induce institutional persistence even after the central complementary relationship ceases to exist.

[8]Our identification strategy builds on Jha and Wilkinson (2012, 2019), who use the arbitrary assignment of army units overseas to measure the effects of different combat exposures. Whereas those works focus mainly on grass-roots political organizations among veterans and on the spread of democratic ideas among them, our paper focuses on a distinct channel: that of heroic human capital operating through a complementary hierarchical network, both in legitimizing racist authoritarianism and undermining democratic values. Other important works examine the social effects among units of soldiers that served together (eg Costa and Kahn, 2008). On violent mobilization, see Rogall (2021) and Bai et al. (2021).

[9]See e.g. Jackson and Yariv (2011), Banerjee et al. (2019) and Alatas et al. (2021).

[10]The ways through which leaders can influence individuals actions are explored in a growing, though mainly theoretical literature. Leaders can persuade and organize followers (Hermalin, 1998, Caillaud and Tirole, 2007). They can coordinate group action by defining a reference behavior (Akerlof and Holden, 2016), affecting expectations and social norms (Bursztyn et al., 2017, Acemoglu and Jackson, 2015), or directly shaping group identity (Akerlof, 2016). See also Lenz (2012).

– by analyzing a setting where the leaders had already emerged elsewhere.[11] In that regard, our paper complements work by Dippel and Heblich (2021), who compare American towns where exiled German leaders of the 1848 revolutions chose to settle to otherwise similar towns and find that towns with more leaders were more likely to develop local athletic societies, open German newspapers and mobilize volunteers in the American Civil War. We are further able to overcome the challenge of the endogenous choice of the communities in which leaders choose to operate by examining the effects on political action in the communities – determined at birth – of the network of those that acquired heroic credentials complementary to the leader's own.

Our results highlight the importance of heroism in providing a form of capital that can broaden the spectrum of policy preferences that individuals can publicly adopt (i.e. *the Overton Window*). By imbuing heroes with a credential of proven willingness to sacrifice for the nation, heroes can also challenge other sources of political legitimacy, including traditional sources such as stemming from religion or descent (Greif and Rubin, 2020) or the legitimacy of democratic elections themselves (Levi et al., 2009). As we discuss below, heroes can become potent champions of democracy and freedoms but also potentially their greatest challengers. Thus our paper links to a literature on the determinants of declines in democratic values and political extremism more generally.[12]

Finally, to the best of our knowledge, ours is the first paper to measure the causal determinants of collaboration in Nazi-occupied Europe. This question has been relatively ignored by the literature in economics and political science, which mostly focuses on the determinants of insurgency and resistance.[13] This is in part because collaboration, by its nature, tends to be more covert than overt acts of resistance and insurgency, and thus harder to measure. Collaboration in France, in particular, has been the object of a recent fascinating, yet still mostly qualitative historical literature (e.g. Burrin, 1996, Jackson, 2001, Paxton, 2001, Ott, 2017).[14] We exploit

[11] People choose to follow or reject leaders based on their own preferences, making it difficult to disentangle the causal influence of leaders from the preferences and actions of their followers. Other solutions to this reflection problem include the use of experimental methods that randomly assign leaders temporarily in lab-like settings (see e.g d'Adda et al., 2017), and the measuring of changes in outcomes when managers or leaders turn over or die (e.g. Bertrand and Schoar, 2003, Jones and Olken, 2005, Bandiera et al., 2020).

[12] An important body of work shows how Nazis were able to assert their authority within the nascent Weimar Republic namely through propaganda (Adena et al., 2015) and leveraging existing organizations (Satyanath et al., 2017). Yet, democracies do appear to become more resilient as they survive (Besley and Persson, 2019, Acemoglu et al., 2021). Less, however, is known about whether and how long-lived democracies can also fail. Our results also contribute to the literature on the effect of conflict on political and economic development. Several studies have highlighted the influence of combat experience or victimization on subsequent voting and political behavior. Conflict experience is associated with heightened collective action (Blattman, 2009, Jha and Wilkinson, 2012, Campante and Yanagizawa-Drott, 2016). Koenig (2015) finds that places with more veterans in World War I were more likely to vote for Fascist parties in Germany, a result that does not hold in Italy where instead places that suffered higher military fatalities in WWI voted more for the Fascists during the interwar period (Acemoglu et al., 2020). Fontana et al. (2017) show that internal fighting under prolonged German occupation led to more Communist support in post-World War II Italy. They suggest that victims of the conflict identify with the side that won and against those perceived as responsible for the defeat. In our setting, in contrast, we find that a network of victorious heroes of France in the First World War were *more* likely to support the invaders in the Second through a novel mechanism.

[13] See for example Gagliarducci et al. (2018), Kocher and Monteiro (2016), Ferwerda and Miller (2014) on Europe, and Dell and Querubin (2017), Trebbi and Weese (2019) on US interventions overseas.

[14] We contribute to this historiography in a number of substantive ways as well. While many historians agree

a range of unique and hitherto largely untapped sources, including contemporary intelligence reports, to create, to the best of our knowledge, the most exhaustive list of collaborators in occupied Europe to date.[15]

We first provide the relevant background on the French Army in the Great War (Section 2) and present our empirical strategy based upon regimental rotation (Section 3). We then briefly discuss the role of Pétain and veterans organizations in the run-up to the Vichy regime, and introduce our new dataset on collaborators (Section 4). We next present the main results (Section 5), and the mechanisms (Section 6), before discussing the broader implications and concluding (Section 7).

2 Verdun: Forging an Exogenous Heroic Network

2.1 The Battle of Verdun, 1916

On February 21st 1916, the Germans launched Operation *Gericht*. The German commander, Erich von Falkenhayn, aimed to exploit the great symbolic importance of Verdun to either lure the French into contesting a concentrated static position where they could be "bled to death" by artillery or crush French morale by capturing the fortress-city (Horne, 1962, p. 36).[16] Yet, up until that time, Verdun had remained a quiet sector of the front. The Germans were able to maintain great secrecy despite their massive buildup to the attack, and consequently found the French grossly unprepared. The rapid German advance led to disastrous French losses and the successive removal of four ineffective French generals in the first five days of battle. A "*snap decision*" was made that Pétain should be placed in command at Verdun on February 26th (Horne, 1962, p.129).

Pétain immediately implemented a number of major innovations that made apparent his concern for the infantry under his command. First, he reorganized the slender supply line, commemorated to this day as the *Voie Sacrée*, bringing to bear artillery so as to spare the troops. Second, he expanded a system of troop replacements, known as the *Noria* [millwheel]. Like the simple wheel of buckets on a stream for which it was named, under the Noria system, line regiments were rotated after a few days, before their numbers were decimated and morale impaired, and sent to rest away from the front. They were then returned to the line, then rested again. By May 1st, 53% of the entire French line infantry had been rotated through Verdun.

These innovations stopped the German advances and arguably saved the French army from collapse. However Pétain, already lionized by the Paris press as the *Héros de Verdun*, rankled both the High Command and politicians with his increased visibility and disdain for their

that Pétain's prestige was forged at Verdun and may have helped to legitimize collaboration, there has been no attempt, to the best of our knowledge, to measure this causally. Further, there has been no attempt to measure the extent to which this depended on the presence of a network of heroes who also served at Verdun.

[15] Some key aspects of the data are summarized in Lormier (2017).

[16] Verdun's symbolic importance goes back at least to a treaty in 843 that ended the civil war between Charlemagne's grandsons, largely delineating the borders of what would become France, Germany and (disputed) Lotharingia.

directives.[17] As a result, Pétain was promoted away from direct command at Verdun on May 1st. Under his successors, Robert Nivelle and Charles Mangin, the furious contest at Verdun continued, even as the major Allied offensive on the Somme on July 1st diverted German resources. At great cost, the French gradually clawed back German gains until the 17th of December, 1916, when the battle was declared over.

By then, the Battle of Verdun had become the longest in history. French casualties reached around 378,777 while Germany lost around 330,000 men. 305,440 soldiers were killed, almost a death a minute (Ousby, 2007).[18] The battle was also a watershed of World War I. As Horne (1962)[pp. 1-2] notes: *"Before it, Germany still had a reasonable chance of winning the war; in the course of those ten months this chance dwindled away.... In the aftermath, too, Verdun was to become a sacred national legend, and universally a household word for fortitude, heroism, and suffering ... Long after the actual war was over, the effects of this one battle lingered on in France."* Because of the rotation system, more men of that generation would have the Battle of Verdun engraved on their memory than any other. The profound significance of the simple phrase *"J'ai fait Verdun"* [I did Verdun], adopted broadly among its veterans, was understood throughout the country (Ousby, 2007).

As we shall show, Verdun not only created heroes, it created a network with ties specific to Pétain himself. Indeed, nearly a half-century later, Henry Giniger, long-time Paris bureau reporter for the *New York Times*, noted: "*The man who organized the defenses, strengthened the strongpoints, mobilized almost every cannon in the French Army and stood beside the single supply road, "the sacred way," watching with compassion in his icy blue eyes as men strode up to the front and stumbled back a few days later– this man became the greatest of heroes, "the champion of France", as Paul Válery, the poet, was later to hail him. Between Philippe Pétain and the men who fought with him– indeed between Pétain and the whole nation– was forged a bond that the living feel to this day.* (*New York Times*, Nov. 15, 1964.)"

2.2 Pétain: the unexpected Hero of Verdun

Pétain had not been born to greatness, but was assigned to Verdun because he happened to be available at the time. Of peasant background, he graduated 229 out of 386 from the Saint-Cyr military academy, and advanced only slowly up the ranks.[19] In 1914, he was a 58-year old colonel on the verge of retirement (Williams, 2005, p.41).

His slow progress may be explained in part by his modest origins, but also by his disdain for publicity, political networking and his military philosophy, which was at times at odds with High Command's. Pétain was also known for his clipped tones and delivery.[20] His lack of

[17]The Paris press struggled to find a 'suitable photograph' of Pétain when he assumed command at Verdun, but none existed. Prior to the battle, "*he was simply not a public figure*" (Williams, 2005, p.71). But with his increased visibility, Joffre sought his replacement.

[18]These figures can be compared to the 405,399 military deaths the United States suffered during the entire Second World War, and the 22,654 soldiers killed on both sides in its bloodiest battle in history, Antietam.

[19]He spent five years as sous-lieutenant, seven years as lieutenant, and ten as captain (Horne, 1962).

[20]His nickname while a professor at the *École de Guerre* was *Précis-le-Sec* [Precise-the-Dry] (Williams, 2005,

willingness to 'manage up' may have also played a role. His superior officers found him sarcastic and cautious, while politicians and many peers found him irreverent and cold.[21]

Yet, even though he appears to have lacked the skills or the inclination to be a charismatic populist demagogue in the vein of Hitler and Mussolini, or an effective manipulator of internal party politics, like Stalin, Pétain was a soldier's general, beloved by the soldiers under his command for the genuine concern he showed for their well-being.[22] In this management style, he would differ markedly from his successors at Verdun, Nivelle and Mangin.[23]

Yet, as Horne (1962) writes: *"The choice of Pétain to command at Verdun was made less because of his qualities than because he happened to be available at the moment"* [p.141]. At the start of the Battle of Verdun, he happened to be in command of the Second Army, which had been relieved by the British army in the Champagne sector and moved off the frontline six weeks earlier to form a general reserve. These routine Allied military decisions, done without foresight of the coming battle, meant that Pétain happened to be free to take direct command of the regiments at the front a few days after the start of the battle.[24]

It is important to stress that although Pétain was in direct charge of military and logistic decisions at Verdun, he had no say on the timing of the rotation of specific regiments to Verdun. This was exclusively the responsibility of Joffre, and subject to broader strategic considerations. Joffre's decisions about troop rotations were dictated by the possibility of other attacks and subordinate to the main strategic objective of 1916, the Somme Offensive scheduled for that summer.[25]

2.3 The *Noria* Rotation and Heroic Networks

Our empirical identification of heroic networks exploits the fact that the line infantry regiments of the French army, in common with that of many militaries, were designed to be interchangeable in strength and equipment, and thus easily deployable in response to the needs of the moment.[26] Yet despite this inter-changeability in deployment, 144 of the 173 regiments of the French army in August 1914 were recruited from specific subregions, each with their

p.35).

[21] A common refrain of his military evaluations note his 'cold' character (Williams, 2005, p.26). His fellow-officers too noted his "icy formality" (Horne, 1962, p.139).

[22] According to Alastair Horne (1962, p.139), Pétain "was the paternal figure, the leader who was devoted to his men, who suffered what they suffered".

[23] The anti-thesis of Pétain, the 'silver-tongued' Nivelle, though much-admired by politicians was never popular with the soldiers. He was known for not even consulting the casualty lists after a battle (Williams, 2005, p.71). His subordinate, Mangin, was nicknamed the "Butcher". Both Nivelle and Mangin were later discredited by the catastrophic Chemin des Dames offensive of 1917 and subsequent mutinies in the French army, a situation that Pétain would again be called upon to rescue. See also Bandiera et al. (2020) on how the fit between leadership styles and firms' needs can shape managerial performance.

[24] The order was unanticipated by Pétain himself, who was away from his Noailles headquarters in a Gare du Nord hotel with his mistress at the time of his summons (Williams, 2005, p.67).

[25] As Joffre's letter to Pétain on 5 March 1916 states: "The headquarters of army corps, after their replacement by those who will be *sent to you*, will also be under *my* disposal" (emphasis added, Army Ministry, 1926, p.334). See also Williams (2005, p.70).

[26] See e.g. Jha and Wilkinson (2012) on the British army and other forces as well.

own recruitment bureau and military depot.[27] We digitized the 9th edition of the *Dictionnaire des Communes* (Baron and Lassalle, 1915) which enables us to assign each of the 34,947 municipalities to their original bureau of recruitment within France's 1914 borders.[28]

On August 2nd, 1914, France mobilized every man between 20 and 48 years of age. 92.76% of 1914 France's municipalities sent troops that served in one of the 153 line regiments that were rotated through the Battle of Verdun. 56.86% of all French municipalities did so in one of the 92 regiments rotated through under Pétain's direct command. The remaining 19 line regiments were those kept in reserve for the major—and ultimately more bloody— Allied offensive at the Somme in July 2016, or those already assigned to the fronts in the Dardanelles, Greece, or Serbia.[29] We consider a regiment to form part of the exogenous heroic network linked to Pétain if it happened to rotate through Verdun under his direct command (between February 26th and May 1st), as opposed to those that were rotated between May and December, under other generals.[30] Both in its conception and, as we show, in its implementation, the rotation to Verdun was based upon the needs of the moment and unrelated to the home characteristics of the regiments involved.

Figure 1 shows the rotation of home municipalities of the regiments assigned to Verdun for each of the ten months of the battle. Figure A1 summarizes these monthly figures, showing which municipalities ultimately raised regiments that served under Pétain at Verdun, which served there under other commanders, and which were deployed elsewhere. As the figures reveal, consistent with the arbitrary nature of the rotation system, almost every area of France sent troops to Verdun, with regiments recruited from different sub-regions arriving at the same time without any systematic distinction as to who was assigned when.

2.4 Pétain's imprint on the regiments he commanded at Verdun

That Pétain became a national hero after Verdun is undisputed.[31] But did Pétain leave a particular imprint on the regiments that he commanded during these first few months of the battle, more than on other regiments rotated at Verdun later in the battle? Appendix Table A1

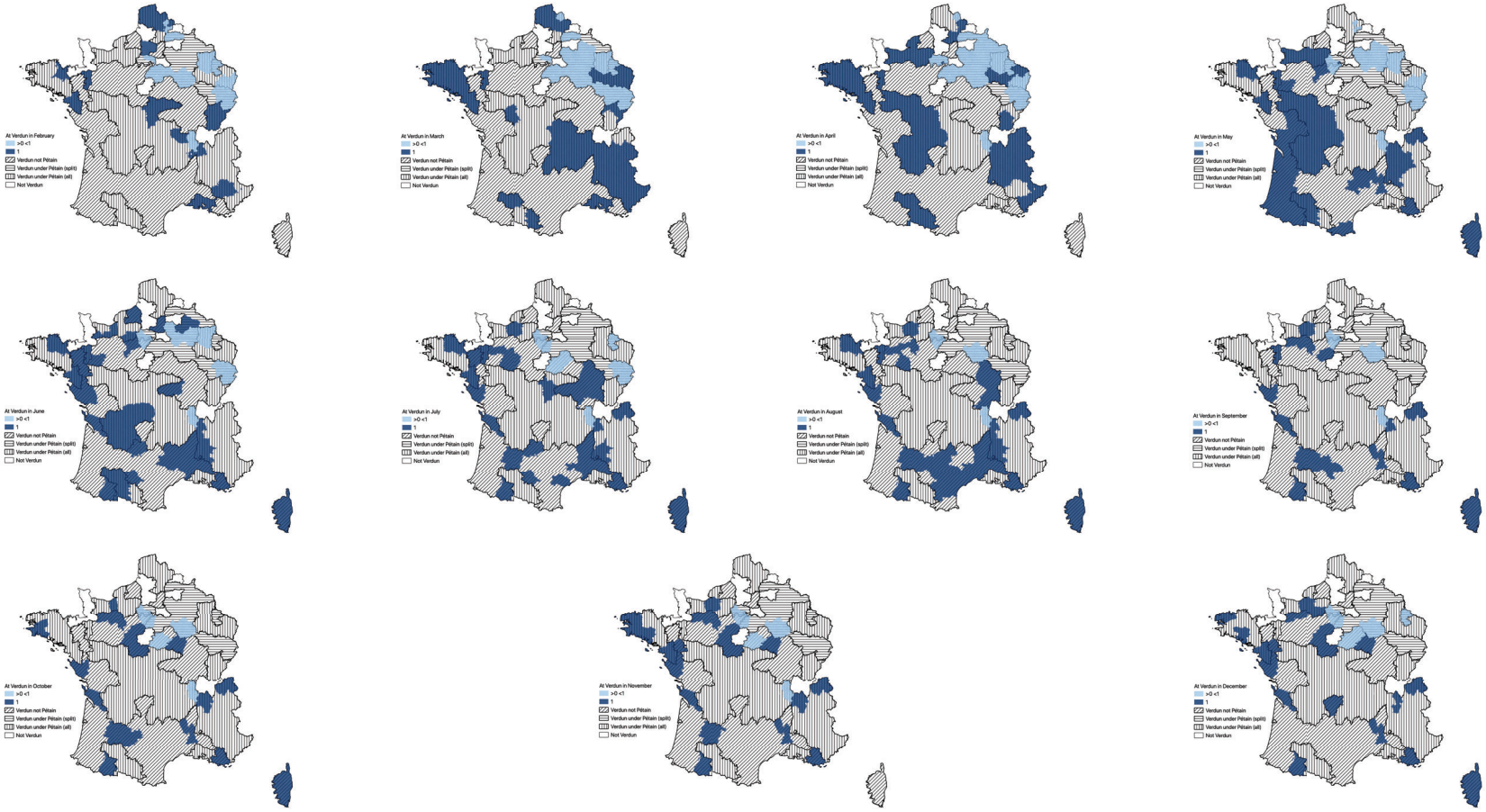
[27] The remaining 'Fortress' regiments, numbered from 145 to 173, were recruited from specific border areas and were complemented with excess troops from Paris and other population centers in order to allow an increased peacetime concentration at the frontiers (see Imperial General Staff (1914)). We assign these fortress regiments to each of their recruitment sub-region in population-weighted shares. Our results are robust to excluding fortress regiments (see Section 6.1). Other army corps, such as the artillery, were organised at the broader region level and are therefore less suitable for our analysis.

[28] To replace war-time losses, there was more mixing of recruits from outside the original sub-regions as the war continued (Bracken, 2018). This should *attenuate* the effects on the original municipalities, making our effects a likely *underestimate*.

[29] One further line regiment – the 145th – had been captured in 1914 and served 4 years of the war in German POW camps. Thus, it too was not part of the rotation.

[30] No regiment was withdrawn between the start of the battle and the arrival of Pétain, so that all regiments that served in those 5 days are also treated.

[31] Williams (2005, p.63) describes: *"Those dreadful months, however also saw the birth of a legend. Individual memories of the hideous slaughter faded as the collective heroism was honored. In time, too, legend developed into myth. [...] As it happened, no one was a greater beneficiary of that particular myth than Philippe Pétain."*



Notes: From the top left (February) to the bottom right (December), different regiments were dispatched to the Battle of Verdun. Pétain commanded between February and May 1st. The figure displays where all (dark blue), some (light blue) or none of the regiments from each municipality were rotated through Verdun each month.

Figure 1: Rotation of regiments through Verdun, by month, February-December, 1916

shows that he did. We use each regiment's official histories and Operation Journals[32] to code the number and context of specific references to Pétain and to Nivelle and Mangin, who succeeded him in direct command of Verdun after May 1st 1916. As Table A1 shows, all regiments rotated at Verdun mention Pétain more often, but those that were rotated under his command in those first months do so even more (Column 1). Regiments rotated at Verdun under Pétain mention him 29.2% more often than regiments rotated at Verdun at another point of the battle. This is true even when we restrict the sample to regiments that were rotated at Verdun (Column 2). The vast majority of these references are in the context of Pétain personally reviewing or decorating the regiment (67.8% of mentions, with other mentions referring to his strategic command or direct involvement in command). No other major battle, be it other heroic battles as the Marne or disasters as the Chemin des Dames (where Pétain was called again to crush mutinies), demonstrate as extensive a connection to Pétain (Column 3).[33]

3 Empirical Strategy

In what follows, we estimate the following model at the municipality level:

$$Y_{i,1919-1945} = \alpha + \beta VerdunPetain_{i,1916} + \gamma Verdun_{i,1916} + \mathbf{X}_{i,<1916}\phi' + \eta_{Di} + \epsilon_i$$

where our unit of analysis i is a municipality within France's 1914 borders (i.e. excluding most municipalities in Alsace-Moselle). Municipalities are the smallest unit in the Census, with an average population of $1,146$ inhabitants in 1936. We project all geographies to their 2015 municipal borders.[34] This leaves us with $34,945$ municipalities of which $34,942$ are populated in 1936.[35]

$Y_{i,1919-1945}$ denotes a series of outcomes, including our main dependent variable of interest: the intensity of collaboration, measured as the logarithm of the share of collaborators listed in 1944/1945 as being from municipality i, normalized by the population.[36] As we show below,

[32]These documents, published after the war, were generally written by the commanding officers of the regiment themselves and were based on each regiments' operational documents (see Supplementary references in the Appendix).

[33]The generals that succeeded him at Verdun, Nivelle and Mangin (Columns 4 to 9) are also significantly more closely connected to the regiments that served under them, confirming that who was in direct command of the battle mattered for the regiments. For them however, the effect is circumscribed to those regiments under their direct command at Verdun and not those under Pétain's command (Columns 5 and 8). This is consistent with historical accounts that Pétain alone became to incarnate the "collective heroism" of the Verdun victory, and suggests that any effect identified of the specific rotation under his command is again a likely underestimate of the overall Pétain effect.

[34]See https://public.opendatasoft.com/explore/dataset/geoflar-communes-2015/information/?flg=fr

[35]The remaining five consists of three municipalities that were destroyed and permanently depopulated as a result of the Battle of Verdun itself, and two municipalities that were created after 1936.

[36]Given no Census was taken during the war and to avoid our estimates being contaminated by potentially endogenous population movements during and immediately after the war, we report the log ratio of the number of collaborators to the pre-war population of the municipality, measured in the last pre-war Census of 1936. More precisely, to deal with the zeros, we use the log of $\frac{\text{number of collaborators} + 1}{\text{pre-war population} + 1}$.

our results are robust to using alternative sources of data on collaboration, as well as alternative functional forms. This includes estimating Poisson regressions using the *count* of local collaborators as the dependent variable. To explore mechanisms, we also use as dependent variables the (log) vote shares for different parties in four interwar elections (1919, 1924, 1932, 1936) in Section 6.7.

The measure of combat exposure to Pétain, $VerdunPetain_{i,1916}$ is the share of regiment(s) raised in municipality i that served under Pétain at the Battle of Verdun.[37] We control for the Verdun overall rotation itself, $Verdun_{i,1916}$. Alternatively, we estimate our coefficient of interest, β, excluding the municipalities whose regiments were not rotated at Verdun in 1916. We control for η_{Di}, a set of 90 department-level fixed effects, as well as for X_i, a vector including municipality-level pre-treatment variables. Importantly, these include municipal vote shares for the left or the right in the last pre-war legislative elections in 1914 (the excluded category being the vote share for centrist or miscellaneous parties). We also control for the logarithm of the population measured in the last pre-war Census, in 1911.

Our preferred specification only includes department fixed effects and pre-WWI controls but in order to shed light on the mechanisms, in some specifications we also control for a municipality's military fatality rate in World War I and variables that capture France's early experience in World War II. We also control for exposure to the Verdun rotation in general as the very few municipalities (7.24% of municipalities) that raised regiments that were *not* rotated at Verdun may have idiosyncratically had a different experience during and after the war. As we show, our results are in fact more precisely estimated and larger in magnitude if we exclude those municipalities from the estimation sample. We cluster standard errors at the level of the treatment: the regiment (173 regiments).[38]

Figure A1 illustrates our identifying variation. We exploit within-department variation in rotation of regiments through Verdun at different times, which led certain regiments to happen to serve under Pétain's direct command. Our identification is based on the fact that the processes through which regiments were rotated through Verdun in 1916, and through which Pétain himself was assigned and redeployed, were due to coincidence, military exigency and German action that were independent of the home characteristics of specific regiments themselves.

Consistent with this, Table I shows that municipalities that raised regiments rotated at Verdun under direct command of Pétain are statistically similar to others, both across France

[37] We reconstruct the battle history of each regiment from each of the 173 *"Historique du Régiment"* books, which describe the day-to-day operations of each regiment. For each regiment, we manually code whether, and when, it was rotated at Verdun in 1916. We then define an indicator variable ($Verdun$) equal to one if the regiment fought at Verdun in 1916; and an indicator variable equal to one ($VerdunPetain$) if the regiment fought at Verdun under Pétain's command, i.e. between the 26th of February and the 1st of May 1916. We then construct a municipality exposure share by averaging the battle history over the regiments raised from the municipality.

[38] In specifications with vote shares as the dependent variable, we use two-way clustering, and cluster the standard errors at the regiment and at the electoral district level. We also implement standard checks to assess the plausibility of unobservable differences in the residual variation explaining the effect or the importance of spatial autocorrelation of the error terms.

and within the same department, along a wide range of the most relevant characteristics. Most importantly, whether it be comparing with no controls or comparing communes within the same department, Verdun-under-Pétain municipalities have similar vote shares to others for left-wing, centrist or right-wing parties.[39] In fact, comparing within the same department, we fail to reject that Verdun-under-Pétain municipalities exhibit the same pre-treatment vote shares for the left, center, or right. Similarly, we fail to reject differences in election turnout.

Table I: Summary Statistics and Balance on Pre-War Characteristics and Contemporaneous Covariates

	Observations (municipalities)	Mean (sd)	Coeff (se)	p-value	Coeff (se)	p-value
Controls			None		Dept FE	
Pre-Treatment Characteristics						
Left Vote Share 1914	33,641	10.735 (16.184)	-0.132 (1.809)	0.942	-1.484 (1.788)	0.408
Centre/Other Vote Share 1914	33,641	51.239 (31.894)	-3.348 (4.472)	0.455	-1.063 (4.119)	0.797
Right Vote Share 1914	33,641	42.998 (32.589)	3.789 (4.831)	0.434	2.985 (3.534)	0.400
Turnout 1914	33,641	79.518 (9.862)	1.264 (1.168)	0.281	0.168 (0.871)	0.847
Log Population 1911	34,922	6.237 (0.985)	0.032 (0.085)	0.702	-0.012 (0.052)	0.822
Inter-War and WWII Charact.						
Log Population 1936	34,942	6.072 (1.064)	0.030 (0.090)	0.737	-0.053 (0.060)	0.377
Combat Days 1940	34,942	4.469 (3.477)	1.212 (0.637)	0.059	-0.069 (0.207)	0.738
Log Distance Demarcation Line	34,942	4.659 (1.149)	0.153 (0.210)	0.467	0.004 (0.081)	0.963
Vichy France 1940-44	34,942	0.375 (0.484)	-0.015 (0.091)	0.870	0.009 (0.016)	0.574

Notes: This Table compares municipalities whose home regiments were sent to Verdun under Pétain to others on their pre-war characteristics. We show the coefficients (and p-values) of an OLS regression of each characteristic on a municipality's share of regiments sent to Verdun under Pétain, conditional on rotation to Verdun, both without and with 90 department fixed effects. Standard errors are clustered at the regiment level. *p<0.10, ** p<0.05, *** p<0.01.

Table II disaggregates the 1914 electoral results party by party. There are no significant differences in vote share for any of the parties in Verdun-under-Pétain municipalities. Notably, this includes not only parties on the right-wing but also the Socialist party (SFIO) of prominent

[39] We provide details on elections and political parties in 1914 in the online Appendix Section B.3.1.

anti-militarist Jean Jaurès, whose assassination crippled the final efforts to stave off war.

Table II: Exposure to Pétain and 1914 legislative vote

	Left	Center Left		Center Right	Right	
	(1) SFIO	(2) RAD-SOC	(3) RAD-INC	(4) PRDS	(5) Progressistes	(6) ALP
Verdun under Pétain	0.026	0.056	-0.067	0.003	-0.048	0.029
	(0.083)	(0.044)	(0.072)	(0.053)	(0.071)	(0.046)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept
Verdun	✓	✓	✓	✓	✓	✓
1911 pop	✓	✓	✓	✓	✓	✓
R-squared	0.72	0.90	0.88	0.91	0.90	0.90
Observations	33,640	33,640	33,640	33,640	33,640	33,640
Mean DepVar	1.27	2.20	0.89	1.47	0.64	1.00
Sd DepVar	1.58	2.03	1.86	2.09	1.77	1.89

Notes: This Table shows that in the 1914 elections, municipalities that raised regiments that served at Verdun under Pétain did not vote differently that other municipalities. The table provides OLS estimates of equation (3) including only log population in the 1911 Census in X_i. The dependent variables are the log vote share for each political party in the 1914 legislative elections, as indicated. Political parties are ordered in the table from most left-wing ("SFIO") to most right-wing ("ALP"). Political parties are described in details in the online Appendix Section B.3.1. An observation is a municipality. "1911 pop" stands for the logarithm of the 1911 population. Robust standard errors two-way clustered at the Regiment level and at the 1914 canton (electoral district) level are in parenthesis (*** p<0.01, ** p<0.05, * p<0.10).

Similarly, using the last pre-war Census in 1911, we observe that Verdun-under-Pétain municipalities had similar populations to other towns in the same department or more widely across France. Further, in the Appendix Tables A2 to A6, we compare 55 historical, socio-demographic, and geo-climatic characteristics at the municipality, grid-cell, historical district, town, or canton level. 4 out of these 55 (and none at the level of our treatment, the municipality) are statistically significantly different at the 10% level in our treated sample, no higher than what we would expect by pure chance.

As a final note, Table I also shows that the Germans do not appear to have perceived Verdun-under-Pétain municipalities to be particularly more or less desirable to directly control than other municipalities during the lead up to the Battle of France in 1940. These municipalities had similar populations in 1936. They were also neither more proximate to the demarcation line that separated German-occupied and Vichy France nor more likely to be assigned to either of these zones.[40] These similarities are true both comparing municipalities across France and locally within the same department.[41]

The lack of pre-existing differences is consistent with the historical record that suggests that the French Army engaged in interchangeable deployment of regiments that happened to expose soldiers from a specific set of otherwise similar Verdun-under-Pétain municipalities.

[40] On the strategic choices of positioning the demarcation line, see Kocher and Monteiro (2016).

[41] As the table suggests, Verdun-under-Pétain municipalities did experience about 1.2 extra days of combat in the Blitzkrieg on average (p-value 0.059) compared to others across France, but had very similar experiences when compared to other municipalities in the same department.

To supplement this evidence, we can also test alternative possibilities. For example, it could be the case that the regiments from Verdun-under-Pétain municipalities were either specially selected to be *cannon fodder* in the early months at Verdun or ended up being so. They might therefore have experienced greater fatalities in the Great War, and that may explain subsequent differences in willingness to collaborate in the Second World War. Another possibility is that Verdun-under-Pétain municipalities were the opposite: that despite having similar vote shares and other demographics, they were selected from favored municipalities by the French High Command, perhaps from more pacifist or politically influential areas, and thus their soldiers were shielded from war-time fatalities.

Table III: Regression: Combat Fatalities by Battle

	Deaths by regiment		Municipality WWI fatality rate	
	(1)	(2)	(3)	(4)
Marne	0.083*		-0.027	
	(0.043)		(0.021)	
Verdun under Pétain	-0.064	0.049	0.017	0.016
	(0.051)	(0.075)	(0.023)	(0.023)
Verdun	0.145*	0.373***	0.018	0.019
	(0.080)	(0.117)	(0.041)	(0.041)
Somme	0.196***	0.397***	0.006	0.006
	(0.049)	(0.071)	(0.020)	(0.020)
Chemin des Dames	0.122***		-0.007	
	(0.044)		(0.019)	
South Eastern Front	-0.297***	-0.555***	-0.069*	-0.071**
	(0.078)	(0.112)	(0.035)	(0.034)
Unit of obs.	Regiment	Regiment	Municipality	Municipality
Time-period	Whole war	1916	Whole war	Whole war
R-squared	0.25	0.35	0.01	0.00
Observations	173	173	34,942	34,942
Mean DepVar	8.01	6.15	1.55	1.55
Sd DepVar	0.31	0.49	0.36	0.36

Notes: An observation is: a regiment in Columns 1 and 2; a municipality in Columns 3 and 4. Robust standard errors clustered at Regiment level (*** p<0.01, ** p<0.05, * p<0.10). Column 1 shows the results of an OLS regression of the (log of) cumulative battle deaths by regiment over the whole war on whether the regiment participated in each battle, as indicated. Column 2 shows the results of a similar exercise but considers only regiments deaths in 1916 and battles in 1916 only. Columns 3 and 4 show the results of OLS regressions of the (log + 1 of) each municipality WWI fatality rates on the regimental shares assigned to each battle, as indicated. The WWI fatality rate at municipality is computed as the number of soldiers born in a municipality who died in combat divided by the municipality population in 1911. We match 99.72% of $1,266,060$ fatalities to $34,782$ municipalities of birth.

To examine this, we code whether each line regiment participated in specific battles from their regimental histories, and combine this with data on $1,266,060$ with birth information in metropolitan France from the *Mémoire des Hommes* online database (see also Gay, 2017). We are able to match 99.72% of them to their birth municipalities in order to construct fatality rates relative to each municipality's 1911 population. This new dataset constitutes in itself a

contribution to the cliometrics of the First World War.

As Table III shows, France suffered a tragedy in World War I, with the average municipality losing four percent of its population to military fatalities. First note that it was, of course, hard to know *ex ante* which battles would be successes or failures for France, and the major battles of the Great War – and even those solely of 1916 – do exhibit variation in the fatality rates for the regiments that were exposed. This is particularly true of the ultimately failed attempts to break through the German lines at the Somme in 1916 and the Chemin des Dames in 1917 (Column 1 and 2). However, despite the differences stemming from fatalities to regiments in specific battles, their home *municipalities* ultimately had similar overall military fatality rates (Column 3 and 4). Moreover, the regiments exposed to Verdun under Pétain were not exceptional in terms of their overall fatality rates. This is true whether comparing fatality rates to those in other regiments serving at Verdun *after* Pétain, other *heroic* battles – like the First Battle of the Marne that saved Paris – or other battles in 1916, such as the Somme Offensive. In other words, by the end of the war, the regiments that fought at Verdun under Pétain had experienced similar losses than other regiments, and municipalities home to those regiments suffered similar World War I losses than other municipalities.

These patterns run contrary to both the cannon fodder and positive selection hypotheses, and instead are consistent with one implication of quasi-random deployment: that over time there will tend to be regression to the mean in terms of fatality rates.[42]

4 Collaboration during World War II: Background and Data

Before presenting the main outcome variables, we briefly describe Pétain's role in the inter-war years and during the German occupation, in combination with veterans' networks, and describe the new dataset on collaborators we built for this study.

4.1 Heroes and the Death of the Third Republic

The Constitution of the Third Republic had been designed specifically to prevent a Napoleon-style 'heroic' takeover: a weak executive faced a strong assembly, with shifting coalitions (Reynolds, 2014). The Republic had, nevertheless, proved robust enough to deliver a unity government – the *Union Sacrée* – that won the Great War despite France's appalling losses. However, this coalition unraveled shortly thereafter. France's political polarization became further accentuated during the Great Depression, making it hard to sustain majorities. France went through 26 separate cabinets between 1930 and 1940 alone (Steiner, 2005).

The inter-war period also saw the creation and increasingly active engagement of large ex-combatant organizations in politics. Of 6.4 million French war veterans in 1920, about 3 million would join a veterans' association between the wars. Among these was the *Croix de Feu* [Cross

[42] In fact, we fail to reject a test that home regimental assignment to these different battles has *zero* joint effect on municipality-level fatality rates at the 88.50% level across battles within the Western Front, and 34.19% if we include the South-Eastern Front.

of Fire], a society initially limited only to decorated veterans, many of whom had served at Verdun, that later grew to about 600,000 members. Other right-wing veterans groups included the *Union nationale de combatants* (UNC), with 900,000 members (Millington, 2012) as well as more militant networks such as *La Cagoule* [the Hood], set up to violently break up Communist meetings, and the *Corvignolles*, another anti-communist organization set up by Pétain's former aide-de-camp, Captain Léon Bonhomme (Williams, 2005, p.140).[43]

In February 1934, the situation reached the point of crisis, when anti-parliamentarist demonstrations by right-wing *Ligues*, including the *Croix de Feu* and *UNC*, turned bloody, with 15 killed and 236 wounded. This was perceived by the Left as an attempted coup.[44] The subsequent victory of the Leftist Popular Front in 1936 led by the socialist (and Jewish) Premier Léon Blum with Communist support, raised the threat of social change. A common refrain that emerged among the Right in the late 1930s was "rather Hitler than Blum". The Republican system and its liberal values were seen by some as responsible for these signs of France's decay, and, in 1940, for its military defeat. Authoritarianism and even collaboration with Germany were viewed as potential solutions to restore order and prevent a social revolution.

Against this backdrop, Pétain himself was seen as a "*genuine national hero*" (Paxton, 2001, p.34). He was revered in conservative right-wing circles. *"Wherever he went, he was fêted. The weekly magazines were full of his exploits, of the speeches he made to veterans' associations, of the prize-givings, of the parades... "*(Williams, 2005, p.116). With French politics polarized into weakness in the face of a rising Germany, editorials began to appear in newspapers across the political spectrum, proposing Pétain as the strongman France needed.[45]

Pétain developed increasingly authoritarian tendencies.[46] However, after his retirement from France's highest military position in 1931, Pétain refrained from explicit political position-taking (Paxton, 2001, p.34).[47] On the occasions that he did voice his views, it was, however, to support anti-communist efforts, to express contempt for politicians and parliamentary institutions, and in support of the army's potential role to intervene in domestic politics.[48]

[43]It is important to note that not all the veterans organizations were right-wing however: there was also the center-left *Union féderale* with 900,000 veterans as members (Millington, 2012).

[44]As the historian Julian Jackson (2001) describes: *"The date 6 February 1934 marked the beginning of a French civil war lasting until 1944. The truth about that night was that a demonstration had turned ugly and the police had panicked. But since civil wars require the enemy to be demonized, the left interpreted the events of 6 February as an abortive fascist coup, the right as a massacre of fifteen innocent patriots by the Republic...: this was the bloodiest week in French politics since the Commune."* (p.65)

[45]When, in 1934, the right-wing newspaper *Le Petit Journal* organized a survey on who should lead France as its dictator, Pétain received the highest support (see Appendix Figure B8). *La Victoire* proclaimed [their capitalization] "*C'EST PÉTAIN QU'IL NOUS FAUT!*"[It is Pétain whom we need!], a cry taken up by *Le Jour*, and the far right *L'Action Française*. Perhaps more surprising was a 1935 endorsement by the left-wing *Vu* (Williams, 2005, p.135).

[46]This was accentuated while serving with the dictator of Spain, Primo de Riveira, in the Rif War in 1925. On September 9, 1925, *The New York Times* reported Pétain's toast to Riveira: *"...who through his intelligence and patriotism was able to re-establish discipline and order in Spain. Perhaps circumstances may make it necessary to do in France as was done in Spain"*.

[47]After the events of 6 February 1934, Pétain agreed to become Minister of War, a position he only held until the new government fell once more. He was later made France's ambassador to Fascist Spain in 1939.

[48]Pétain's best man, Marshal Emile Fayolle (1964, p.197), noted as early as January 1917 that *"Pétain believes he is a great man; he says seriously that the Republic is afraid of him."* He was not alone. In April 1918, Williams

This changed in the run-up to the elections of 1936, when it became clear the Left was leading the Right by a million votes. Pétain gave a widely-reported interview to *Le Journal*, just before the final vote, attacking communism and its enablers in France. He claimed that the people of Fascist Italy and Nazi Germany were happier, and endorsed the veterans of the increasingly right-wing *Croix de Feu*, noting how they *"occupy themselves with the moral and spiritual improvement of youth."* He claimed *"We are like sailors without a steersman, without a rudder"* (Williams, 2005). In fact, as we document below, municipalities exposed to Pétain at Verdun also began to diverge in their vote choices in the 1920s, with lowered support for the Communists, and higher support for right-wing and far-right parties that becomes particularly accentuated in 1936.

As the Victor of Verdun, Pétain was highly focal among the other heroes of that battle in particular. Along with numerous local reunions, he gave prominent speeches at Verdun, including at the dedication of the immense ossuary on the battlefield in 1927 and, adopting a more explicit right-wing tone, for the twentieth anniversary of the battle in 1936.[49] Four years later, when called upon finally to rescue France once more as he had done at Verdun, Pétain would once again invoke the "*support of the veterans [he had] commanded*".

It is worth noting that "Marshal Pétain did not seize power in the summer of 1940. It descended upon him like a mantle" (Paxton, 2001, p.185). On 18 May 1940, after Germany invaded France, Pétain joined the government, in the hope that his presence would revive the spirit of resistance. With the military situation nevertheless deteriorating rapidly, France's parliament argued about whether to move France's seat of government overseas to its empire, to remain in France, or even to join a Franco-British political union. Pétain advocated for the government to remain in France. Favoring continued resistance, Prime Minister Paul Reynaud resigned, and Pétain took his place. On 22 June, France signed an armistice giving Germany control over the North and West, but leaving two-fifths of France's prewar territory unoccupied to be governed from Vichy. On July 10th 1940, the two legislative chambers ratified the Armistice and granted the Cabinet the authority to draw a new constitution (Lacroix et al., 2019). Soon Pétain assumed plenipotentiary powers as Head of State. Thus ended the Third Republic, which, to this day, remains the longest-enduring Republican regime in France.

Initially, Pétain's heroic status was such that most of France did appear to be behind him in the summer and autumn of 1940.[50] Upon gaining power, however, Pétain's regime quickly began dismantling liberal institutions and adopted an authoritarian course. In October 1940,

(2005, p. 81) writes: "*the politicians in Paris objected [to his assuming command] that Pétain was now so widely known for his dislike of politicians in general, and of President Poincaré in particular, that he would be a threat to the Constitution.*" See also Williams (2005, p. 142) and Appendix Figure B9.

[49] Pétain's draft speech at Verdun in 1936 claimed that 'having won the war, France was at the point of losing the peace', and called for dramatic political reforms along the right-wing lines of family, army and country (Williams, 2005). The government vetoed his request for a live radio broadcast, and sought to censor parts of his speech, but his words were widely reported. He would return to these themes four years later.

[50] Censors' estimates based on the sentiment expressed in about 300,000 letters each week – which may or may not have reflected preference falsification – suggest that between 20 and 30 percent of the general population were still supportive of state collaboration after the Allied landing in North Africa in 1942. Support for Pétain himself, however, was believed to be higher and even more enduring (Burrin, 1996, Paxton, 2001).

Pétain's collaboration took an overt turn, when a photograph of him shaking hands with Hitler at a summit at Montoire was widely publicised and distributed. He promised the French "a new peace of collaboration" and "golden prospects."[51] Yet the regime's actions rapidly took on an extreme right wing and racist agenda, including the deportation of Jews, that outstripped both German expectations and their requests.[52] The regime took an ever more repressive turn after the full occupation of France by Germany in November 1942. In early 1943, a *Milice* [militia] was formed from a grouping of existing veterans organizations to hunt down and kill the French Resistance. In the Appendix Section B.2, we illustrate our mechanism with the example of a soldier who happened to be assigned to Verdun under Pétain, received a medal for heroism by Pétain himself, developing a lasting loyalty to his former commander. Though swearing revenge against the Germans in 1940 and actively in discussions to join the Resistance as late as 1943, that man, Joseph Darnand, would be swayed by a personal appeal by Pétain to stay in the Milice. Once a hero of France, he would instead later swear loyalty to Hitler, joining the *Waffen SS*.

4.2 Collaboration and the Paillole Dataset

Our measure of collaboration comes from a remarkable 2,106-page list collected in 1944-45 under the supervision of Colonel Paul Paillole, the head of French army intelligence at the end of the war (Lormier, 2017).[53] Colonel Paillole was well-qualified to generate this list as he had not only served in the Free French forces, running intelligence networks in France from 1942 onward, but also in the *Deuxième Bureau* – the counter-intelligence services – of the Armistice Army of the Vichy government between 1940 and 1942.[54] Following the German occupation of the South of France, Paillole joined the Free French in Africa, while continuing to run his networks in France, infiltrating collaborator organizations and supporting resistance networks. For example, a successful raid in 1943 abducted six collaborators and captured a file containing the names of all the members of the *Parti Populaire Francais* (PPF), which is also part of our dataset.[55]

[51] Extract of Pétain's speech on 10 October 1940.

[52] Pressures on the French to apply the Final Solution to Jews did not start until 1942 according to Paxton (2001, p.143). In any case, Hitler did not care about the National Revolution, which was clearly "the expression of indigenous French urges for change, reform, and revenge... made urgent and possible by defeat" (Paxton, 2001, p.143).

[53] The list disappeared after the war, but resurfaced at Maurice Papon's trial in 1997, where it was slated to be introduced as evidence that Papon was a collaborator. It then disappeared again, perhaps because a number of those accusing Papon of collaboration were themselves on the list. Before his death in 2002, Paillole shared a copy of the then-classified report with Anne-Marie Pommiès, curator of the Centre National Jean Moulin. Finally, the list was declassified in 2015 and is kept at the Department Archives of Gironde (fonds 5362 W 613).

[54] The French Armistice Army was allowed to maintain its counter-intelligence services on the condition that they did not act against Germany or Italy. However, the former Allied commander turned Vichy Minister for National Defense, Weygand, encouraged the Deuxième Bureau to create underground organizations like the innocuous-sounding *Entreprise des Travaux Ruraux* [Business of Rural Work], headed by Paillole. These acted not only against Gaullist resistants and Communists but also German spies within the Unoccupied Zone.

[55] Similarly, on March 1st, 1944, the head of the department of the *Rassemblement National Populaire* (RNP) [National Popular Assembly] was abducted in broad daylight, along with all of his documents, which were eventually given to Paillole. See Appendix B.1.

The file records the name of each suspected collaborator, their address, the nature of collaboration, and, in some cases, additional information on place and date of birth (or age) and economic occupation. Appendix Figure B7 shows an anonymized example of these files. The list captures the full spectrum of collaboration, from economic collaboration to membership in collaborationist political parties or paramilitary groups, as well as German auxiliary or combat units.

We digitized the entire file, linking the same individuals if they appear separately as members of different organizations, and geo-referencing the municipality of birth or residence of each entry. Our final dataset includes 95,401 names of individuals and families, representing at least 96,012 individuals overall.[56] For almost eighty percent of entries, we have information on the nature of collaboration, recorded as membership in almost fifty different specific collaborationist groups.

Political parties represented in our dataset include the largest group, the extreme right RNP (17,970 individuals–see also Figure A2) and PPF (9,403 individuals) as well as other smaller collaborationist political parties that emanated from the 1930s Fascist Leagues, such as the Francist Movement or the Revolutionary Social Movement.

The paramilitary groups in our data also had their genesis in 1930s, and specifically from the war veterans groups from the inter-war period. These had been consolidated in August, 1940 into the *Legion française des combattants* (Legion of War Veterans). Its President was Pétain himself (see Appendix). Consistent with our interpretation, though Pétainist, the *Legion* was not, prior to the revelation of Pétain's own open collaboration at Montoire that October, supportive of the Germans. Instead it "*exhibited adoration of the Marshal and with its anti-German sentiments dreamed of revenge*" (Forbes, 2006, pg.35). With Pétain's open collaboration, however, and despite their own anti-German views, a group of veterans led by war hero Joseph Darnand (see Appendix) formed their own private sub-organization, the *Service d'Ordre Légionnaire* (SOL) in 1941 within the *Legion* to provide 'shock troops' for Pétain. The SOL would later provide the nucleus for the *Milice* (15,401 individuals), which was formed in January 1943 at Hitler's insistence to hunt the Resistance. Collaborationist volunteers could also join the *Légion des Volontaires Français contre le Bolchevisme* (LVF) in 1941 for service on the Eastern Front. Some would later swear direct allegiance to Hitler by joining the *'Charlemagne'* Division of the *Waffen SS* from 1943 onwards (Forbes, 2006)(see also Appendix).

Beyond the SS, other forms of direct Nazi collaboration include working for the *Gestapo* (5,271 individuals) or the *Service de Renseignement Allemand* (German Intelligence Service: 3,088 individuals). 1,550 people were considered economic collaborators, clearly a subset selecting those with deep economic relationships. We are able to geo-reference the birthplace of 86,947 collaborators, including 85,389 individuals within France's 1914 borders.[57]

[56] For example, when an entry refers to *M. et Mme [X] et leur famille*, we assign a lower bound of one additional family member for a total of three at a specific address.

[57] We confirm using the military records for a sample (from Oise and Gard departments) that for individuals where only an address is listed, this corresponds to their birthplace. 13,235 individuals on the list have separate information on birthplace and address. This suggests that 15.22% of the collaborators in our list are internal

5 Effects on Collaboration

In this section, we show that municipalities whose regiments were exposed to direct command of Pétain at Verdun during WWI raised 7-10% more collaborators per capita in WWII. We discuss the robustness of this empirical finding to alternative specifications in Section 5.2 as well as its robustness to using alternative sources of data on collaboration in Section 5.3.

5.1 Main Result

Figure 2 maps the quintiles of the distribution of collaborators per capita across municipalities in 1945, overlayed with the regimental combat experience in World War I. Notice that there is significant regional variation in the shares of collaborators. However, there are disproportionately higher shares of collaborators in Verdun-under-Pétain municipalities, even compared to others close by. The raw proportions in the data back these geographic patterns. There were 9.66 active collaborators per 10,000 people in municipalities home to a regiment that served under Pétain's command, against 7.81 in municipalities whose home regiment served at Verdun, but not under Pétain, a 23.67% difference (P-value of difference in means: 0.000).

Table IV shows that these raw differences are robust. Column 1 reports the uncontrolled results within 90 departments, showing that the share of collaborators is 7.4 percent higher in municipalities whose regiments had fought at Verdun under direct command of Pétain. In contrast, having fought at Verdun under another general has no statistically significant effect on collaboration.

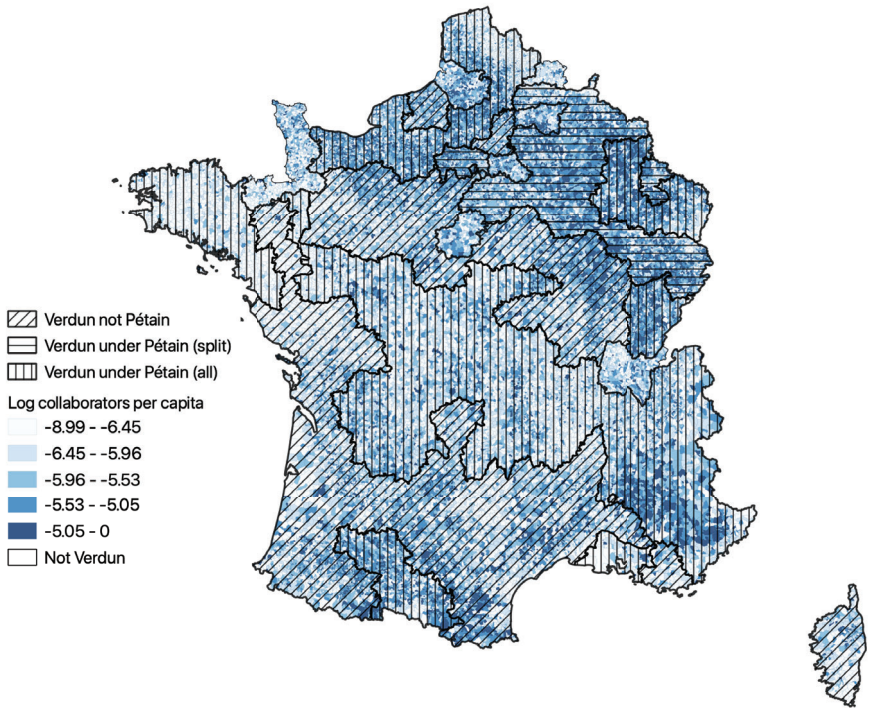
Column 2 adds controls for the vote shares for different political positions in the 1914 legislative elections, held at the eve of World War I[58] as well as for pre-World War I population. The Verdun-under-Pétain effect becomes more precisely estimated. The positive and significant coefficients associated with vote shares both for the right as well as for the left suggest that collaboration was more intense in municipalities within the same department that were also historically more polarized.

Columns 3 and 4 replicate the estimates from Columns 1 and 2 excluding municipalities that were *not* rotated at Verdun (therefore dropping the control for the Verdun rotation). The estimation sample drops to $32,412$. The coefficient associated with exposure to Pétain at Verdun becomes larger and more precisely estimated. Columns 5 to 8 show that these results are robust to Poisson estimation, using the count of collaborators in the municipality as the dependent variable and controlling for the 1936 municipal population.

The magnitude of our estimates suggests that exposure to Pétain at Verdun increased active collaboration rates by 6.7%, comparing otherwise similar municipalities within the same department, and by 9.1%, comparing otherwise similar municipalities within the same department that were also rotated at Verdun. Interpreting the Poisson estimates, exposure to Pétain

migrants, a figure that matches estimates of internal migration available from the 1936 Census (16.41%).

[58] Section B.3 in Appendix describes how we classify different political parties on the left-right political spectrum in each election. See also Table II for the breakdown of political categories party by party in the 1914 election.



Notes: The map shows quintiles of the distribution of the log of collaborators per capita across municipalities in 1944/1945, overlayed with municipal regimental combat experience in World War I. This map shows information for 85,389 collaborators in the 34,947 municipalities within France's 1914 borders

Figure 2: Collaborators in France, 1940-45 (quintiles).

at Verdun led to 10,644 additional active collaborators[59] in municipalities rotated at Verdun under Pétain compared to other municipalities from the same department rotated at Verdun under another general. This is more than the total number of individuals in our data who joined the Gestapo, the SS, the SA or the German intelligence service (9,735 altogether) or who volunteered to serve on the Eastern front with the Wehrmacht (Legion of French Volunteers against Bolshevism, 8,771 individuals).

5.2 Robustness

We provide additional robustness checks in the Appendix Section A. We check that our results are not driven by functional form assumptions. In addition to our results being robust to a

[59]The incidence ratio associated with the estimate in Column 8 of Table IV is $e^{0.224} = 1.251$ with respect to a mean number of 2.422 collaborators in a municipality. This implies that Verdun-under-Pétain have 0.608 ($1.251 * 2.422 - 2.422 = 0.608$) additional collaborators, on average, compared to Verdun-not-Pétain municipalities. The average number of Verdun-under-Pétain municipalities is 17,506 (weighted sum including partial assignments), implying overall 10,644 ($17,506 * 0.608$) additional collaborators.

Table IV: **Regression: Collaboration in World War II**

	Log collabo. per cap. (OLS)				Numb. of collabo. (Poisson)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1914 France		Verdun only		1914 France		Verdun only	
Verdun under Pétain	0.074*	0.067***	0.139***	0.091***	0.173*	0.192**	0.223**	0.224**
	(0.041)	(0.018)	(0.041)	(0.023)	(0.105)	(0.098)	(0.099)	(0.087)
Verdun	0.035	0.028			0.163	0.171		
	(0.081)	(0.041)			(0.133)	(0.121)		
Log Share Left, 1914		0.035***		0.033***		-0.092**		-0.107**
		(0.007)		(0.007)		(0.046)		(0.049)
Log Share Right, 1914		0.011**		0.011**		0.027		0.027
		(0.005)		(0.005)		(0.024)		(0.025)
Log pop 1911		-0.591***		-0.590***		0.599***		0.589***
		(0.012)		(0.013)		(0.203)		(0.216)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept
Moran P-Val	0.30	0.16	0.47	0.91	NA	NA	NA	NA
R-squared	0.23	0.60	0.24	0.61				
Observations	34,942	34,942	32,412	32,412	34,942	34,942	32,412	32,412
Mean DepVar	-5.75	-5.75	-5.75	-5.75	2.44	2.44	2.42	2.42
Sd DepVar	0.83	0.83	0.83	0.83	32.87	32.87	33.08	33.08

Notes: Columns 1 and 2 provide OLS estimates of equation (3). The dependent variable is the log collaborators in 1944-1945 per capita (1936). Columns 3 and 4 provide OLS estimates of equation (3) estimated only in the sample of municipalities that sent a regiment to Verdun (and therefore dropping $Verdun$ as a control). Columns 5 to 8 replicate these estimates using a Poisson specification with the number of collaborators in the municipalities as the dependent variable and controlling for the log. population in the municipality in 1936. All regressions control for the 90 department fixed effects. The excluded category for the results of the 1914 elections is the share of votes for candidates running for centrist or "miscellaneous" parties in 1914. For observations with missing historical information (see Table I for summary statistics), we impute zeros and we control for an indicator equal to one when the variable is missing. Robust standard errors clustered at Regiment level in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Poisson specification (Columns 5 to 8 of Table IV), Columns 1 to 4 of Table A7 shows that the results are robust to using the inverse hyperbolic sine of local collaborators as an alternative dependent variable, controlling for 1936 population. We also show in Columns 5 to 8 of Table A7 that our results are robust to excluding movers.

As discussed above, Verdun under Pétain's municipalities are very similar to others on a wide range of characteristics, including pre-WWI detailed vote outcomes, demographic, historic, and geographic characteristics. A comparison between our uncontrolled specification in Column 1 of Table IV and Column 2 in which we add controls for pre-WWI vote shares and population reveals that the coefficient is stable in magnitude and more precisely estimated with the addition of these controls, which alone raise the R^2 by 0.37. A bounds exercise (Oster, 2019) suggests that the influence of unobserved variables would need to be 10 to 20 times the influence of pre-treatment political preferences and population in order to explain away the treatment effect.[60]

[60] *delta* ratio: 10.08 based on a maximum R^2 of 1; *delta* ratio: 21.67 based on a maximum R^2 of 1.3 times the estimated R^2.

To assess the relevance of spatial correlation, we also calculate Moran statistics (a spatial version of the Durbin-Watson statistic) based on a distance matrix. The related p-values, displayed at the bottom of Columns 1 to 4 of Table IV, are between 0.16 and 0.91. These statistics suggest that correlation in spatial noise is unlikely to drive our results.

Next we implement a regression discontinuity design across military boundaries. We select the optimal bandwidth suggested by Calonico et al. (2014). The resulting estimation sample drops to 40.73% of the original estimation sample. We implement a fuzzy spatial regression discontinuity design across regiment catchment boundaries, in which we instrument our treatment by the distance to the boundary. We include the controls included in Column 2 of Table IV together with (or without, for robustness) a quadratic polynomial in latitude and longitude of the municipality centroid to capture unobservables that may vary around the regiment catchment borders. The First-Stage F-statistic is between 48.54 and 49.29 (Table A8). The second stage results are robust and larger in magnitude compared with our main results. Estimates displayed in Table A9 show that there are 9.3 to 10.3% more collaborators in municipalities that raised regiments that were rotated at Verdun under Pétain. By contrast, we observe no significant discontinuity in vote shares for the left or the right prior to WWI, military fatality rate in WWI, or local population in 1911 (see Columns 3 to 10). The fact that we observe a significant jump in the share of collaborators across the regiment catchment border, but not in other covariates, further rules out spatial correlation as a driver of our results (since there is no reason to expect a discontinuous jump in the presence of spatial autocorrelation) and reinforces the validity of our main results in this hyperlocal sample.

Further, the Appendix reports the results of a permutation inference exercise where we randomly reassign the treatment (1,000 times each) at two different levels: at regiment level, keeping the allocation of each municipality to 'its' regiment as the actual allocation; and at municipal level. These permutation inference tests account for potential issues related to imbalance across clusters and spatial correlation. Results of both exercise displayed in Figures A3 and A4 show that our effect size is well outside the range of estimated effects from these placebo treatments. The fact that we obtain similar results when we reassign treatment at regiment or municipal level additionally suggests that our effects are not driven by a specific allocation of municipalities to specific regiments.

5.3 Alternative data sources

Our data on collaboration was collected by a network of different agents under the supervision of Paillole, who himself had no direct ties to Pétain.[61] To address the possibility that some

[61] Paillole, born in 1905, was too young to have served in the first World War and had no visible ties during the interwar period to either veteran organizations or to Pétain himself. It would be far-fetched to suppose that the construction of the list could in any systematic way be associated with the treatment of interest in our paper. For this to be the case, it should be that Paillole, as well as those who helped him assemble the list locally, have not only exact knowledge of the order of rotation of line infantry regiments at Verdun but also of the assignment of each municipality to its infantry regiment, for each of the 34,947 municipalities. In some cases, such as in the previously cited examples of the RNP and PPF, we can entirely rule out any such possibility of selection, since

areas may be overrepresented and others underrepresented on the list, Figure A6 shows that the results are not sensitive to particular regions being dropped out of the estimation sample. Results are similarly insensitive to individual departments being dropped out of the sample one by one, with the main coefficient of interest having a mean of 0.067, standard deviation of 0.0027, min of 0.056 (p-value=0.000) when excluding Orne and a max of 0.077 (p-value=0.000) when excluding Vienne.

Our data represents the largest and most comprehensive dataset available on collaboration. Nevertheless, we verify the validity of our results using two additional sources. First, we use data collected just after the D-Day landings by US intelligence, the Office of Strategic Services (1944), on high level political collaboration.[62] This dataset lists 1,327 people, who were top personnel of the Vichy government (cabinet members and top Ministry personnel), and members of the diplomatic service, press, radio and executive committees of political parties. Second, we use newly and independently collected data on 9,239 volunteers seeking to join a violent paramilitary organization that served on the Eastern front in the Wehrmacht uniform: the Legion of French Volunteers against Bolshevism (LVF).[63]

The local shares of collaborators in our data and in these other data are strongly correlated.[64] Column 1 and 2 of Table A10 replicates Columns 2 and 4 of Table IV using local collaborators from these two additional data sources together as the dependent variables. In Columns 3 and 4, we consider collaborators from all three sources combined (removing roughly 50% of individuals in the LVF list who already appear in our data). Despite the fact that these alternative sources are less comprehensive and reflect two very different types of collaboration – high end administrative Vichy leadership versus direct Nazi footsoldier volunteers – our results remain robust and comparable in magnitude. Section 6 further confirms that our results are stable across different kinds of collaboration in our main dataset.

6 Mechanisms

So far, we have established a robust link between communities whose soldiers were rotated through service under Pétain at Verdun and subsequent willingness to actively collaborate with the Nazis twenty-three years later. We now investigate why.

the list was based on complete listings confiscated from captured collaborators.

[62]This dataset was declassified in 1949.

[63]This dataset was collected from various archival sources, including the national Archives, the *Service Historique de la Défense de Caen*, and the financial institution that was responsible for the payment of LVF members *(Comptoir National d'Escompte)*. Complementing our list, it also contains data on those who volunteered but were deemed unfit to serve, and those who were killed before the end of the war. We thank Philippe Douroux for sharing this data with us.

[64]Raw correlation between the (log) share of collaborators in our data and the (log) share of the OSS and LVF data combined: 0.80.

6.1 The violence of battle or a network of heroes?

Municipalities that sent troops to fight at Verdun under Pétain not only could claim to have raised a set of heroes on their return, but also faced the tragedy that many did not come back. Perhaps, instead of a heroic network, it was the violence and the losses faced by these municipalities that shaped subsequent propensities to actively collaborate with Germany. Indeed, a growing post-conflict literature points to the importance of exposure to violence, death and memories in changing subsequent outcomes.[65]

As noted above, however, neither Verdun-under-Pétain regiments nor their home municipalities were significantly different in their overall military death rates. We add controls for (the log of) World War I military fatality rate in Column 1 of Table A11 as well as its interaction with Verdun-under-Pétain in Column 2. The fatality rate itself is negatively correlated with the propensity to actively collaborate with the Nazis.[66] However, including it as a control, or as an interaction with our treatment interest, does not change the effect of Verdun-under-Pétain exposure on active collaboration.[67]

Perhaps, rather than losses in the First War, the effect was due to differential exposure to the German invasion and occupation in the Second World War. Column 5 of Table A11 adds controls for key factors related to the invasion and occupation in World War II. The duration of a municipality's exposure to combat in 1940 does not seem to have an effect, nor the position of a municipality relative to the demarcation line. However, the share of collaborators in our data is 6.6 per cent lower in Vichy France compared to German-occupied France, potentially reflecting the greater opportunity for working with the Germans in the latter. The effect of exposure to Pétain, however, remains stable with the addition of war-related controls.

Could the effects on collaboration be driven by combat experience at Verdun more generally rather than exposure specifically to Pétain? We have already established that those municipalities that sent troops to fight at Verdun at other times do not show these patterns. The coefficient associated with Verdun in Table IV is never statistically significant. However, it may be that two or three months of exposure to Verdun at different times led to similar heroic networks and *esprit de corps*. Figure A5 shows the coefficient on an indicator variable for regiments exposed to any set of two (left panel) or three (right panel) consecutive months of rotation through Verdun.[68] No other consecutive months of fighting, apart from those during which regiments were exposed to Pétain's leadership, are significantly positively associated with collaboration.[69]

[65] See e.g. Blattman (2009), Jha and Wilkinson (2012), Bauer et al. (2016) and more recently Ochsner and Roesel (2019), Tur-Prats and Valencia (2020).

[66] Similarly, as we discuss in our companion paper (Cagé et al., 2020), the fatality rate in World War I is *positively* correlated with the propensity to join the Resistance.

[67] The results are similarly unchanged when considering specifically line infantry fatalities in 1916. In that case, the coefficient associated with Verdun-under-Pétain remains stable at 0.067 (se: 0.018) whether the interaction is also included or not, and neither fatalities nor the interaction are statistically significant.

[68] We focus on two and three months to best compare with the effect of the two months and a few days of exposure to Pétain (Feb 26 - May 1).

[69] Another source of heterogeneity in combat experience that may impact our results is that, by being rotated

6.2 Complementarities: a network of heroes or a network of Pétain?

So far, we have shown that being exposed to war, or even to Verdun itself but under a different general, does not have the same effect as rotation through Verdun under Pétain's command. But to establish that complementarities exist, we need to also show that the effect is stronger among those exposed to the network of heroes that served with Pétain at Verdun than among those exposed to Pétain's own personal network.

Several recent papers have highlighted how charismatic leaders can shape norms and identity by simple contact, either through public rallies or personal communications with selected audiences (Masera et al., 2020, Becker and Rubin, 2019). As described above, qualitative accounts suggest that Pétain was not known for his charisma *per se*, but he did emerge as a soldier's general who inspired strong loyalties among some. We gathered information on whether a municipality's home regiments were exposed to Pétain at any of his field and staff postings both in peace-time and before (and after) Verdun during the war (Etat-Major de l'Armée, 1922, Williams, 2005). If our results were driven by Pétain's own network rather than operating through the complementary network of heroes under his command at Verdun, we should expect that controlling for Pétain's personal network should attenuate our coefficient.[70] In contrast, if it was the exogenous complementary network of heroes forged at Verdun that legitimized collaboration, then the effect should be robust.

Column 3 of Table V adds a variable that captures the exposure of a municipality's regiments to Pétain's command in his preceding career. Before the war, Pétain was an infantry colonel who had held staff or field command positions in eight different regiments (or 3% of the line infantry). At the start of the war, he commanded the 33rd infantry regiment in the field, but quickly rose through the ranks to command the II Army from 22 June 1915 (through which 31 infantry divisions – or 36% of the line infantry – were to be rotated) until Verdun. We group these together and construct a variable that captures exposure to Pétain's command before Verdun ("Pétain before Verdun": mean: 0.38, s.d.: 0.46). After Verdun, he oversaw the command of the Center Army Group (to which 176 infantry divisions – or 84% of the infantry– were attached at various points). He later became Commander-in-Chief of all French armies in the West, exposing close to 95% of municipalities to his command.

Naturally, personal exposure to Pétain is likely to be more intensive within commands where Pétain was a more proximate commander – in peacetime and earlier in the war – than when

through Verdun, a regiment was potentially less likely to be deployed at the Somme offensive of the same year. Table A11 in the Appendix shows that our results are robust to adding a control for those regiments that were also rotated through either the Somme (Column 6) or other major battles or theatres of war (Column 7). Rotation through the other heroic battle before Verdun, the first Battle of the Marne (that saved Paris), similarly has no effect (Column 8). Finally, fortress regiments had different recruiting protocols, and were more likely to face the frontier. This led them to experience more deaths in battle – $3,527$ deaths for fortress regiments against $3,115$ for others (P-value=0.000). However, our results are unchanged when excluding fortress regiments (Column 9).

[70] Unlike the timing of Pétain's assignment to Verdun, he had more influence on other postings over his career, and thus could have chosen posts, like the 33rd regiment based at Arras, that were closer to home and where people might also be more responsive to his message. Thus we interpret the coefficient on Pétain before Verdun itself as correlational rather than causal.

he was commanding a large and rotating cast of regiments. However, as the table suggests, the coefficients associated with exposure to Pétain either before Verdun (Column 1), specifically in the II Army (Column 2), or after Verdun (Column 3) are insignificant in explaining subsequent collaboration. Distance to Pétain's municipality of birth (Cauchy-à-la-Tour) is also statistically insignificant (Column 4). Thus, it does not appear that exposure to Pétain's own network raises collaboration relatively more than elsewhere. Further, note that the coefficient associated with exposure to Pétain at Verdun remains statistically significant and is broadly unchanged in magnitude with the addition of these additional exposure variables. This suggests that those at Verdun exposed to Pétain for longer at other times do not seem different than those first (and exogenously) exposed to Pétain at Verdun.

Another question is whether all hierarchical heroic networks inherently lead to support for authoritarianism, and further whether the effects would have been the same if Pétain had not survived to personally legitimize the Vichy regime. While the latter counterfactual is hard to measure, we can examine whether other heroic networks show similar patterns after the war after the demise of their leader. The main rival to Pétain in terms of personal heroic leadership status coming out of the war was the other Maréchal awarded his baton in 1918, Ferdinand Foch. However, he died in 1929 with his reputation as a soldier of the Republic intact. As the point estimates in Table V suggest, exposure to Foch's personal command is not significantly associated with collaboration (Column 5), even when considered together with Pétain's own network. Taken together, our results suggest that complementarity did indeed exist between Pétain's presence and legitimization of collaboration and the network of heroes forged at Verdun under his command.

6.3 Singling out heroism: Medal citations

To single out the specific role of heroism gleaned at Verdun under Pétain's command, we use data from a contemporaneous newspaper source (*L'Illustration*) on 16,489 individual medal citations during '*La Grande Guerre*'. Among those, 8,545 soldiers received a citation for service in the infantry. We sum the numbers of medals by line infantry regiment and municipality (yielding a mean of 36, s.d. 11). Columns 1 and 2 of Table VI show that, consistent with the historical background and our suggested mechanism, exposure to Pétain at Verdun is associated with more heroism, translating into a 23.4% increase in individual citations for valor.[71] This is true even within the subset of those who served at Verdun (Column 2), with those serving under Pétain obtaining 15% more medals compared to those serving at Verdun under another general.

Furthermore, the relationship between military citations and later propensity to collaborate is largely channeled by Pétain exposure at Verdun (Columns 3 to 6 of Table VI). Among those who served at Verdun, military citations are associated with more collaboration in WWI

[71] We use the log. number of citations, but the results are unchanged if we use the number of citations instead, with coefficients of 7.87 (P-value: 0.001) and 5.57 (P-value: 0.031) corresponding to Columns 1 and 2, and all other results carrying through.

Table V: **Regression: Personal Exposure to Heroic Leaders: Pétain & Foch**

	Log Collaborators pc				
	(1)	(2)	(3)	(4)	(5)
Verdun under Pétain	0.068***	0.069***	0.051**	0.065***	0.070***
	(0.018)	(0.018)	(0.020)	(0.019)	(0.017)
Verdun	0.028	0.029	0.039	0.015	0.026
	(0.040)	(0.040)	(0.042)	(0.036)	(0.042)
Pétain before Verdun	-0.002				
	(0.027)				
II Army		-0.009			
		(0.028)			
Pétain after Verdun			-0.039		
			(0.027)		
Log dist Cauchy				0.033	
				(0.036)	
Foch					-0.053
					(0.057)
Fixed effects	Dept	Dept	Dept	Dept	Dept
1911 pop	✓	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓	✓
R-squared	0.60	0.60	0.60	0.61	0.60
Observations	34,942	34,942	34,942	34,940	34,942
Mean DepVar	-5.75	-5.75	-5.75	-5.75	-5.75
Sd DepVar	0.83	0.83	0.83	0.83	0.83

Notes: This table provides OLS estimates. The dependent variable is the log collaborators (1944-45) per capita (1936). All specifications control for department fixed effects (90 departments) and the usual set of pre-WWI controls at the municipality level (as in Column 2 of Table IV). In Column 4, we also control for municipality centroid's latitude and longitude in order to not confound distance to Cauchy-à-la-Tour (which is situated in the Pas-de-Calais department in the North of France) with broad geographical differences. Robust standard errors clustered at the regiment level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

(Column 5), although the relationship is not statistically significant in the broader population (Column 3). Further, the correlation between military citations and collaboration is chiefly driven by municipalities exposed to Pétain at Verdun (Column 6).

Overall, these results highlight that exogenous exposure to Pétain at Verdun forged, not *merely perceived*, but *documented contemporary credentials* of *heroism*. Nevertheless, as we show, this would later predict a higher propensity to collaborate with actions many might consider the epitome of villainy.

6.4 Why collaborate? Incentives, trauma or values

We can exploit the fact that we have detailed data on individual memberships in different collaborationist organizations to shed further light on the mechanisms at play. We consider three alternatives in particular. The first, and most obvious, is pecuniary – perhaps being connected with Pétain meant a greater possibility for economic and financial opportunities

Table VI: **Direct Evidence on Heroism: Medal Citations**

	Log. Citations		Log collabos pc			
	(1)	(2)	(3)	(4)	(5)	(6)
	1914 France	Verdun only	1914 France		Verdun only	
Verdun under Pétain	0.234***	0.148*		0.069***		0.086***
	(0.077)	(0.076)		(0.019)		(0.024)
Log. Medal Citations			0.010	-0.003	0.047*	0.033
			(0.027)	(0.028)	(0.024)	(0.026)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept
Verdun	✓		✓	✓		
1911 pop	✓	✓	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓	✓	✓
R-squared	0.68	0.69	0.60	0.60	0.60	0.60
Observations	34,835	32,305	34,830	34,830	32,300	32,300
Mean DepVar	3.52	3.53	-5.74	-5.74	-5.74	-5.74
Sd DepVar	0.35	0.32	0.83	0.83	0.84	0.84

Notes: The dependent variable in Columns 1 and 2 is the log. number of individual medal citations in the regiment (mean number of individual medal citations: 35.57; st. dev.: 10.82; Min: 6.5; Max: 69). The dependent variable in Columns 3 to 6 is the log. collaborators per capita. All specifications control for department fixed effects (90 departments) and the usual set of pre-WWI controls at the municipality level (as in Column 2 of Table IV). Robust standard errors clustered at the regiment level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

when he assumed power, irrespective of a change in one's democratic values (as in Fisman, 2001). This would suggest that Verdun-under-Pétain municipalities should be more likely to engage in economic collaboration than other types.

A second possibility is that the first two months at Verdun that coincided with Pétain's generalship were exceptionally more brutal than Verdun at other times in a way that is not fully captured by military fatalities (which, as we have seen were similar). Perhaps this affected individuals' propensities for risk or psychological costs of violence? This would suggest the effect should be focused upon more violent paramilitary organizations in particular.

A third possibility is our favored explanation. Like Joseph Darnand (see Appendix Section B.2), the heroism of those that served under Pétain at Verdun provided a common heroic credential that not only made it particularly costly to turn against him but to have complementary incentives to invest more over time. This included joining political parties (see below) and veterans organizations, but then going further, joining violent paramilitary organizations like the Milice in 1943, and even units heading to the Eastern Front like the *LVF* and the *Waffen SS* when it was already clear that Germany was losing the war.

Table VII shows the estimation results of equation (3) for each main kind of collaboration separately. Combat exposure to Pétain at Verdun raises the propensity to collaborate across the whole spectrum of collaboration, from participation in political parties, paramilitary groups, Nazi organizations, as well as economic collaboration.[72] While the effects are somewhat stronger

[72]There are 1,550 individuals recorded as economic collaborators. Out of them, 1,476 are purely recorded as

Table VII: **Effects on different types of collaboration**

	Political	Paramilitary	Nazi	Economic
	(1)	(2)	(3)	(4)
Verdun under Pétain	0.078***	0.047***	0.064***	0.056***
	(0.017)	(0.014)	(0.015)	(0.016)
Fixed effects	Dept	Dept	Dept	Dept
Verdun	✓	✓	✓	✓
1911 pop	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓
R-squared	0.78	0.81	0.90	0.95
Observations	34,942	34,942	34,942	34,942
Mean DepVar	-5.91	-5.93	-6.02	-6.06
Sd DepVar	0.90	0.91	0.97	1.03

Notes: This table provides OLS estimates. The dependent variables are the log numbers of collaborators (1944-45) per capita (1936) across each type. All specifications control for department fixed effects (90 departments) and the usual set of pre-WWI controls at the municipality level (as in Column 2 of Table IV). Robust standard errors clustered at the regiment level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10). The *Political* category encompasses membership in: RNP, PPF, Groupe Collaboration, MSR (Mouvement social révolutionnaire), Francisme, Jeunesses Patriotes, CSAR (Comité secret d'action révolutionnaire), Amis du Maréchal, PFNC (Parti français national collectiviste), PNC (Parti national collectiviste), JNRP (Jeunesse du Rassemblement National Populaire), MRF (Mouvement Révolutionnaire Francais). *Paramilitary* includes: Milice, Service d'Ordre Légionnaire, Légion des Volontaires Français contre le Bolchevisme, Légion Tricolore, Légion Francaise des Combattants, Phalange Africaine, Corps des volontaires Français, Police de Sécurité, Groupes Mobiles de Réserve. *Nazi* includes: Gestapo, SS, SA, SD (Sicherheitsdienst), Sicherheitspolizei, German intelligence service, Reichsarbeitdienst, German Navy, NSDAP, Affaires Juives (Association des Administrations Provisoires), and Organization Todt. *Economic* collaboration is a distinct category in our data.

for membership in the main collaborationist political organizations, we cannot reject that the coefficients are the same as for participating in para-military groups, working directly for the Nazis, or engaging in economic collaboration (see also the detailed description of collaboration in Appendix Section B.1 and regression results by organization in Figure A7 and Table A12.)

As another test of whether the effects reflect private pecuniary gains or psychological effects exclusive to the treated set of individuals, or a broader effect on values due to their ability to legitimize behavior, we can exploit the fact that, for a subset of 30.18% of the individuals on the list, the file records their age or date of birth (collaborators are 37.25 years old on average), and for 76% of the sample, we can assign a gender as well.[73]. If the effect is due to private pecuniary gains exclusive to those in veteran networks or psychological effects, including those due to the effects of specific battle experience, we should expect those collaborators from municipalities exposed to Verdun under Pétain who were most likely to be assigned to serve there at that time – males of World War I military age – to show a significantly heightened effect. If instead, they help legitimize and spread a broader change in values, we should expect the increase to spread

economic collaborators and the remaining 74 are also recorded as members of a collaborationist political party, paramilitary organization, Nazi collaborator, or another type of collaboration (including 22 in the RNP, 14 in the Milice and 10 in the Gestapo).

[73] 19% are women, and women are on average 2.34 years younger than men, which corresponds to the average age difference between wives and husbands (Lery, 1976).

to family members and beyond, with more muted differences between age groups and gender.

As Figure A8 shows, the increase in the share of collaborators due to exposure to Verdun under Pétain is statistically significant for each demographic. Notice that the size of the effects are indeed somewhat higher for men than for women, and somewhat higher for those of military age or just short of military age in World War I than for some other groups. However, women and those born after the First World War in Verdun-under-Pétain municipalities receive the lion's share of the treatment as well, and we fail to reject that the effects are the same. This again suggests a diffusion of values rather than purely private gains or exposure effects accruing solely to the network of individuals personally connected with Pétain.

6.5 Coordination and bandwagon effects vs inherited values

We have shown so far how the effect diffused through Pétain's network of heroes, who followed their leader and swayed others around them. However, how did such diffusion operate? Was it due purely to coordination and bandwagon effects (see e.g. Kuran, 1997) or to the imitation of others, particularly of heroic Verdun veterans? Or was it really a deeply transformative process, which reshaped values? We now present direct evidence on the relative roles of coordination versus internalized values in explaining our results.

To do so, we exploit information on the municipality of birth of movers in our collaboration dataset. We compare, within the same destination locality, the behaviors of movers born either in a Verdun-under-Pétain municipality or not. If the results were simply due to coordination, only characteristics of residence municipalities should matter. If, by contrast, they also reflected the role of internalized values which individuals carry with them when they move, birth municipalities should influence the behavior of movers, even within the same destination location.

Our analysis is now at the level of the municipality of residence of collaborators. We focus on the sub-sample of movers (i.e. those whose birth municipality is different from their residence in 1944-45, N=13,235) and we retain information on the Verdun-under-Pétain exposure of both their birth and residence municipalities.[74] We then compute, within residence municipalities, the overall per capita share of collaborators who were not born locally but who were born in a Verdun-under-Pétain municipality ("*Collabo V-u-P*") as well as their relative share among all local collaborators who are internal migrants ("*Share V-u-P*"). We proceed in the same way for collaborators who were born in a non Verdun-under-Pétain municipality ("*Collabo Not from V-u-P*" and "*Share Not V-under-P*"). We then estimate equation (3) using these shares as dependent variables.

Table A13 presents the results. They show that the treatment status of both birth and residence municipalities influence whether people collaborate. The coefficient associated with the

[74] About half of collaborators who migrated originate from a Verdun-under-Pétain municipality (54.97%), which is consistent with the share of municipalities rotated at Verdun under Pétain, and suggests no selective outmigration from Verdun-under-Pétain municipalities. We consider a municipality of birth as a "Verdun under Pétain" municipality if more than a third of home regiments has been rotated at Verdun under Pétain.

Verdun-under-Pétain status of residence municipalities is positive and significant in explaining both the numbers of collaborators from "V-u-P" municipalities (Column 1) and from other municipalities (Column 2). In other words, both people from Verdun-under-Pétain municipalities and non Verdun-under-Pétain municipalities are more likely to collaborate when they reside in a Verdun-under-Pétain location.[75] However, migrants born in "V-u-P" municipalities are over represented compared to those born in other municipalities, both in absolute and relative shares. The coefficient associated with Verdun-under-Pétain is larger in Column 1 than in Column 3, and this difference is statistically significant at the 4.53% level. Collaborators from "V-u-P" municipalities are also overrepresented among local collaborators who are also migrants (Column 2), as opposed to those from non "V-u-P" municipalities (Column 4).[76] Overall these results reinforce our interpretation that the effect of exposure to Pétain operates at least partly through internalized values and preferences that individuals carry with them, even when they move, rather than through pure bandwagon effects.[77]

6.6 Collaboration versus Resistance

So far we have focused upon the incidence of active collaboration. But the people of France had other choices in World War II: to passively collaborate, to wait and see (*attentisme*), or to actively resist. In our companion paper (Cagé et al., 2020), we exploit data we collected on more than 425,966 recognized participants from Metropolitan France in another important set of local political organizations, those of the French Resistance. Consistent with a change in values diffusing to the population and a pattern of escalating commitment, we also find that those municipalities exposed to Pétain at Verdun raise 8.45% *fewer* civilian members of the French resistance (the *maquisards*) late in the war in 1943-44 (s.e.: 0.04).

6.7 The Timeline of Commitment: Votes in Interwar France

To what extent is the shift in active collaboration with an extreme authoritarian regime during the war reflected in political behavior in the inter-war period? As mentioned above, this was

[75] Since we now focus on movers within residence municipalities, this effect could be driven both by selection – people inclined to collaborate are more likely to move to a Verdun-under-Pétain municipality where they find like-minded people, or by a treatment effect of destination location – people absorb local values and are more likely to follow others around them into collaboration in Verdun-under-Pétain municipalities. In either case, this suggests that local coordination is important: either in driving location choices or, conditional on location choices, in driving collaboration behavior.

[76] The difference between the coefficients in Columns 2 and 4 is itself statistically different from 0 at the 5.60% level.

[77] Similarly, we can check whether the effect is different among municipalities that raised several regiments, with some exposed to Verdun-under-Pétain exposure while others were not. We present in Appendix Figure A9 the results of specifications in which we either exclude those split municipalities, or redefine their treatment status as different indicator variables depending on the share that was rotated at Verdun under Pétain. The magnitude of the results increases when we exclude split municipalities and peaks at a 9.96% increase in collaboration in Verdun-under-Pétain municipalities when we define an indicator variable equal to one for our treatment when more than half of the regiments was rotated at Verdun under Pétain and exclude those where exactly one half was rotated. Thus having a coherent network of heroes increases the effect somewhat relative to one with differential exposures and identities.

also a time of rising political polarization.[78]

To investigate whether local exposure to Pétain had already began to shape political preferences in a way that prefigured collaborationist political inclinations during the Second World War, we gather novel municipal-level data from paper-format archives on the electoral results in four interwar legislative elections – 1919, 1924, 1932 and 1936. For each election, we classify each party along an extreme left-extreme right axis, following a process described in more detail in the Appendix Section B.3.

As Table VIII shows. Verdun-under-Pétain municipalities swung to the right during the interwar period. They were 18.2% more likely to vote for the right (Column 7) and 1.5% more likely to vote for the extreme right, when the extreme right presented candidates in the 1919 and 1936 elections (Column 9). Compared to other municipalities in the same department that were also sent to Verdun (even Columns), the magnitudes are larger and the coefficients more precisely estimated. These results cannot be explained by a change in turnout (Columns 11 and 12).

As we have discussed, one implication of complementarity is that the effect of the heroic network can escalate, as individuals face additional incentives to invest further time and resources in augmenting the value of their common heroic credential. Figure A10 displays the coefficients associated with Verdun-under-Pétain in separate regressions, in which the dependent variable is the log vote share for the right and extreme right combined in municipality i in each legislative election of 1914, 1919, 1932, and 1936 (estimation of equation (3)). From similar vote shares for the right in 1914, municipalities exposed to Verdun-under-Pétain show a rise in right-wing vote shares in the 1930s, becoming particularly stark in 1936. As mentioned above, these elections were held just after Pétain, already known to be anti-Communist, made his first explicit political speeches honoring the *Croix de Feu* and favoring the Right.

In Appendix Section A, we further analyze how exposure to Pétain at Verdun affects the vote share in each post-war election, party by party. The results are reported in Table A14. In the 1919 and 1924 legislative elections, Verdun-under-Pétain municipalities were significantly more likely to vote for the "Entente Républicaine Démocratique" (ERD), a conservative right-wing party, part of the "Fédération Républicaine" (FR-URD), which moved closer to the Fascist Leagues over the interwar period. In 1932, this trend is confirmed, with a large (significant) increase in the vote share for two right-wing parties: the "Alliance Démocratique" (AD-RG) and the "Union Républicaine Démocratique".[79] In 1932, the URD was close to the extreme right

[78]The first post-war election of 1919 saw a victory of the right-wing Bloc National headed by Clemenceau. The elections of 1924, 1932, and 1936 all saw the victory of a left-wing coalition, the first and second "Cartel des Gauches" in 1924 and 1932, and the "Front Populaire" in 1936, which for the first time also included the Communist party (see the Appendix Table B4 for summary statistics and Section B.3 for a detailed description of inter-war politics). Far-right leagues rejected participation in the formal Parliamentary process until the 1936 elections (when they gathered only 0.40% of the total vote).

[79]The URD was part of the "Fédération Républicaine" (FR-URD). Note also that the number of observations is lower for the 1932 elections than for the other two elections. It is due to the fact that for that year, the national archives have lost the electoral results in the departments whose first later is A and B (i.e. Ain , Aisne, Allier, Alpes Maritimes, Ardèche, Ardennes, Ariège, Aube, Aude, Aveyron, and Basses Alpes.).

Table VIII: **Increasing Vote Shares for the Right in Verdun under Pétain Municipalities in the Interwar Period**

	Ext. Left		Left		Centre		Right		Ext Right		Turnout	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All	Verdun	All	Verdun	All	Verdun	All	Verdun	All	Verdun	All	Verdun
Verdun under Pétain	-0.021	-0.018	0.005	-0.001	-0.050***	-0.076***	0.182**	0.207***	0.015**	0.016**	-0.007	-0.003
	(0.039)	(0.040)	(0.069)	(0.060)	(0.019)	(0.018)	(0.077)	(0.074)	(0.007)	(0.007)	(0.010)	(0.010)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept
Year Fixed Effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Verdun	✓		✓		✓		✓		✓		✓	
1911 pop	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.46	0.45	0.37	0.37	0.43	0.43	0.54	0.53	0.73	0.73	0.36	0.37
Observations	129,033	119,936	129,033	119,936	129,033	119,936	129,033	119,936	137,267	127,402	129,019	119,921
Mean DepVar	1.46	1.46	2.43	2.44	3.47	3.48	2.43	2.41	0.39	0.39	4.39	4.39
Sd DepVar	0.86	0.86	1.17	1.17	1.22	1.22	1.55	1.55	0.52	0.52	0.16	0.16

Notes: This table provides OLS estimates of equation (3) with interwar (log) vote shares and turnout as the dependent variables. The estimation sample is the pooled cross section of vote shares and turnout over the four interwar legislative elections of 1919, 1924, 1932, and 1936. Odd columns presents results for all municipalities within France's 1914 borders; even columns restricts the estimation sample to municipalities that sent a regiment to Verdun. All regressions are at the municipality level with department fixed effects and the usual set of pre-WWI controls at the municipality level (as in Column 2 of Table IV). The electoral district is the arrondissement in 1914, 1932 and 1936 and the department in 1919 and 1924. A department nests several arrondissements, so we choose the department as the level at which we cluster standard errors, in addition to the regiment level. Robust standard errors two-way clustered at the Regiment and department levels are displayed in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Fascist league of the *Jeunesses Patriotes*, founded by the future collaborator Pierre Taittinger.

Following the 1932 elections, a defeat for the right, France polarize further. Groups emerged even further to the right of the FR-URD. In particular, Marcel Bucard, a war veteran "*whose conduct at the front had earned him Pétain's praise and the rank of captain*" (Sirinelli, n.d., p.140) created the *Francisme* movement in 1933. This Fascist, anti-Semitic movement, partly financed by Mussolini, fielded candidates in the 1936 elections, and individual members of this organization would later also be recorded by French army intelligence in our 1944 dataset. As Table A14 suggests, this is not without antecedent: Verdun-under-Pétain municipalities are associated with a 3.0% increase in the vote share for the Francist candidates in 1936. To the detriment of others representing the left and the center, we also observe a 8.0% increase in the votes for more mainstream conservative right-wing candidates, the "agrarians" (AGR).[80]

Overall, the party-level analysis of the inter-war electoral results brings to light the role played by exposure to Pétain at Verdun on changing ideologies in the inter-war period. First through an opposition to the communist party consistent with Pétain's well-known anti-communism, second through an increase in the vote for Taittinger's URD and then for the fascist Francist movement, electoral choices that both mimicked Pétain's own views and escalated over time, increasing political polarization and paving the way for collaboration.[81]

Finally, to explore the long-term effect of exposure to Pétain on political behavior, we use data on 18 legislative elections in post-war France (Bekkouche and Cagé, 2018, Cagé, 2020). We again classified each party consistently along an extreme-left to extreme-right axis (see Appendix). Results for each election are displayed in Figure 3. Panel A shows the estimated coefficient associated with Verdun-under-Pétain for the log vote share for the left (combined with extreme left) in each separate election. We do the same for the log vote share for the right (combined with extreme right) in Panel B. The analysis of individual elections reveals a striking picture of a persistent and relatively stable lower vote share for the left that lasts almost to the end of the Cold War. The support for the right tends to spike particularly in times of real or perceived crisis for France.[82]

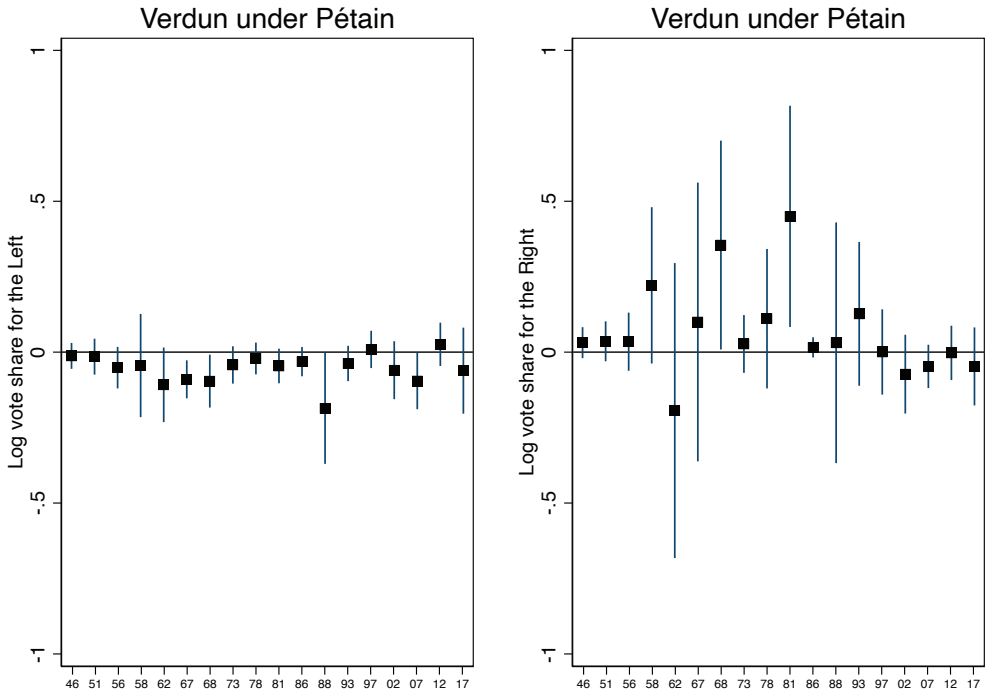
7 Discussion

On October 27, 1951, a mass being held in Notre Dame Cathedral in Paris sparked a violent riot. About five thousand mass-goers, including many clearly-identified as heroes of Verdun, had

[80] This group had emerged to the right of the FR-URD, which by 1936 had split.

[81] As the table suggests, these differences in electoral outcomes are also not explained by a suppression of turnout.

[82] The elections for which the Pétain effect is most significant and largest in magnitude in driving vote for the right are in 1958, 1967-1968, as well as 1981. The 1958 elections were held in the midst of the Algerian war and under a new constitution, with de Gaulle returning to executive power. The end of the 1960s were times of profound social unrest, and a general strike in 1968, which led to the collapse of the government. 1981 was also a crucial year in France with the election of the first Socialist president of the Fifth Republic, Francois Mitterand, whose radical program, joint with the Communists, was seen by many as a threat to economic and social order. A few days before the election, the Minister of the Interior declared that if Mitterand was elected, Russian tanks would take over Paris. Mitterand ran for reelection in 1988, but on a more moderate platform.



Notes: The figure plots coefficients and 95% confidence intervals obtained from estimating specification 3 using the log vote shares for the left or extreme left (left panel) or for the right or extreme right (right panel) in each post-WWII election as the dependent variable, with the full set of usual pre-WWII controls and department fixed effects. Each coefficient and confidence interval is from a different regression. An observation is a municipality. Post-war election results are available at the canton level (with varying number of cantons over the years as a function of redistricting, from 2,896 cantons in 1951 to 2,054 after 2015). Standard errors are two-way clustered at the Regiment and at the canton level (corresponding to the cantons delimitation in each election year).

Figure 3: Pétain and the Difference in Vote Share for the Left (and Extreme Left) and the Right (and Extreme Right) in Post-war France

gathered in memory of Philippe Pétain, who had died that July. According to the Associated Press: "*Old heroes of Verdun carried their flags, carefully rolled, into the church to honor the man who once commanded them. Outside, thousands of resistance fighters and deportees of World War II screamed "Pétain, Murderer!" as they swayed against a solid barrier of steel-helmeted police ... Anti-Pétain crowds sang the "Marseillaise" .... Some raised clenched fists in the Communist salute. Yells were heard of "Jail for collaborators" and the "The Fascists shall not pass" ... Several demonstrators were injured.*"[83]

Why did some of France's greatest heroes end up remembered among their gravest villains? In this paper, we present evidence for two complementary channels. First, we argue, our results reflect the legitimizing effect of heroism. Having undergone great sacrifice for the nation, heroes gain a credential that is a strong signal of their pro-social, or in this case, pro-'national' type. This allows them to adopt positions that might otherwise be controversial, broadening the

[83]See e.g."French Veterans of 2 Wars Clash at Petain Mass", *Daily Boston Globe*, Oct. 28, 1951.

"Overton Window" without others imputing self-interested motives or lack of alignment with national goals. In this way, Philippe Pétain was able to draw upon his credential as a hero of the First World War to later legitimize collaboration with one of the most repugnant occupying forces in world history, and to legitimize actions taken by the Vichy regime itself that ran strongly counter to the values of what remains France's most long-lived democratic system of government.

Second, we provide evidence that these legitimizing effects of heroism are complementary to the presence of networks of those sharing the same heroic credential. We show that the home municipalities of those who won heroic credentials but did not serve under Pétain do not collaborate more, nor do those that served under Pétain before he became a hero or after he was promoted away from direct command at Verdun. The effect on legitimizing collaboration rather comes among those that exogenously acquired a credential of heroism that was linked to Pétain's own.

The presence of complementary heroic networks further provides incentives to engage in a range of decisions, including joining political and social organizations, and propagating a common message that themselves strengthen the value of this shared heroic credential. This can induce momentum—as individuals become more embedded in the network, they can find it increasingly costly to renounce it—and persistence over time.

Indeed we find that being exposed to this network increases the chances of joining extreme rightwing groups even when it was clear that the Nazis would lose the war and the risk of dying was high. And the ties born at Verdun have lingering effects on politics even years after Pétain's trial and death.[84]

Thus, our paper suggests both that heroes matter in legitimizing otherwise unpopular political views, and that heroes matter even more when they emerge within a hierarchical network of those with a shared credential. These unusual views do not have to be authoritarian: heroic networks can be potent supporters of novel democratic principles as well.[85]

Our paper points to the aftermath of war as being particularly potent moments for political change, as these are moments where complementary networks of heroes are most likely to exist. This resonates with the pattern that democratization does appear to follow war (Przeworski, 2007). Yet heroes, while often emerging out of the crisis of war, may also emerge from a courageous commitment to *nonviolent* resistance to injustice as well (Bhavnani and Jha, 2012). Beyond the effects on domestic politics, it is a common observation in international relations that politicians from relatively hawkish parties are, ironically, often better positioned to make politically risky overtures for peace with long-standing adversaries than their dovish counterparts.[86] However, our interpretation points to the greater set of options available to heroes in

[84]See also Henry Giniger, "Petain– of Verdun, of Vichy, of History", *New York Times*, Nov 15 1964.

[85]The Society of the Cincinnati of Revolutionary War veterans, among whom George Washington, Alexander Hamilton and the Marquis de Lafayette were prominent members, provides a prominent example. For comparisons with the role played by US Civil War hero, Joshua Chamberlain, in Maine in 1880 and the events at the US Capitol on January 6th, 2021, see also our companion piece in *VoxEU*, Jan 17 2021.

[86]One example is Nixon's famous reapprochement with China.

particular to shape politics.[87]

More generally, our paper reinforces the point that depolarization efforts that seek to treat individuals, whether it be with unbiased information, incentives or other methods to persuade, are likely to be less successful than they might otherwise be when these individuals are embedded in networks. Though heroic networks helped legitimize extreme and deeply repugnant activities in France in World War II, leveraging such networks may provide a potent means to support profound and beneficial social and political change as well.

References

Acemoglu, Daron and Matthew O. Jackson, "History, expectations and leadership in the evolution of social norms," *Review of Economic Studies*, 2015, *82* (2), 423–456.

_ , Giuseppe De Feo, Giacomo De Luca, and Gianluca Russo, "War, Socialism, and the Rise of Fascism," Mimeo, MIT 2020.

_ , Nicolás Ajzenman, Cevat Giray Aksoy, Martin Fiszbein, and Carlos A Molina, "(Successful) Democracies Breed Their Own Support," Technical Report, NBER 2021.

Adena, Maja, Ruben Enikolopov, Maria Petrova, Veronica Santarosa, and Ekaterina Zhuravskaya, "Radio and the Rise of Nazis in Prewar Germany," *Quarterly Journal of Economics*, July 2015, *130* (4), 1885–1939.

Akerlof, Robert, ""We Thinking" and Its Consequences," *American Economic Review*, May 2016, *106* (5), 415–19.

_ and Richard Holden, "Movers and Shakers," *Quarterly Journal of Economics*, 06 2016, *131* (4), 1849–1874.

Alatas, Vivi, Arun Chandrasekhar, Markus Mobius, Benjamin Olken, and Cindy Paladines, "Designing Effective Celebrity Messaging: Results from a Nationwide Twitter Experiment promoting Vaccination in Indonesia," working paper, Stanford May 2021.

Athey, Susan, Emilio Calvano, and Saumitra Jha, "A theory of community formation and social hierarchy," working paper 3467, Stanford GSB August 2016.

Bai, Ying, Ruixue Jia, and Jiaojiao Yang, "The Nexus of Elites and War Mobilization," Working Paper 28667, National Bureau of Economic Research April 2021.

Bandiera, Oriana, Andrea Prat, Stephen Hansen, and Raffaella Sadun, "CEO Behavior and Firm Performance," *Journal of Political Economy*, 2020, *128* (4), 1325–1369.

Banerjee, Abhijit, Arun Chandrasekhar, Esther Duflo, and Matthew Jackson, "Using Gossips to Spread Information," *Review of Economic Studies*, May 2019, *86* (6).

Baron, Ch. and Ch. Lassalle, "Dictionnaires des Communes Administratif and Militaire," Dictionnaire 1915.

Bauer, Michal, Christopher Blattman et al., "Can War Foster Cooperation?," *Journal of Economic Perspectives*, 2016, *30* (3), 249–274.

Becker, Sascha and Jared Rubin, "Ideological Entrepreneurs and the Diffusion of Radical Innovation: Martin Luther's Personal Ties and the Spread of the Early Reformation," August 2019. mimeo, Chapman.

Bekkouche, Yasmine and Julia Cagé, "The Price of a Vote: Evidence from France, 1993-2014," CEPR Discussion Papers 12614, C.E.P.R. Discussion Papers 2018.

Bertrand, Marianne and Antoinette Schoar, "Managing with Style: The Effects of Managers on Firm Policies," *Quarterly Journal of Economics*, 2003, *118*, 1169–1208.

Besley, Tim and Torsten Persson, "Democratic Values and Institutions," *American Economic Review: Insights*, 2019, *1* (1), 59–76.

[87]For example, Yitzhak Rabin, a commando in Israel's war of independence who rose to be the Army chief during Israel's victory in the Six Day War, was also able to pursue the Oslo Peace Accords, as head of the center-left Israeli Labour party.

Bhavnani, Rikhil and Saumitra Jha, "Gandhi's Gift: On the Promise and Limitations of Non-Violent Civil Disobedience," *Economics of Peace and Security Journal*, 2012.

Blattman, Christopher, "From Violence to Voting: War and Political Participation in Uganda," *American Political Science Review*, 2009, *103* (2), 231–247.

Bracken, Johnathan, *The Verdun Regiment*, Pen and Sword, 2018.

Burrin, Philippe, *Living with Defeat: France under German Occupation, 1940-1944*, London: Arnold, 1996.

Bursztyn, Leonardo, Georgy Egorov, and Stefano Fiorin, "From Extreme to Mainstream: How Social Norms Unravel," Working Paper 23415, NBER 2017.

Cagé, Julia, "Media Competition, Information Provision and Political Participation: Evidence from French Local Newspapers and Elections, 1944-2014," *Journal of Public Economics*, 2020.

_ , Pauline Grosjean, and Saumitra Jha, "Army of Shadows: Organising Resistance in WWII France," Working Paper 2020.

Caillaud, Bernard and Jean Tirole, "Consensus Building: How to Persuade a Group," *The American Economic Review*, 2007, *97* (5), 1877–1900.

Calonico, Sebastian, Matias D. Cattaneo, and Rocio Titiunik, "Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs," *Econometrica*, 2014, *82* (6), 2295–2326.

Campante, Filipe and David Yanagizawa-Drott, "The Intergenerational Transmission of War," April 2016.

Costa, Dora and Matthew Kahn, *Heroes and Cowards: The Social Face of War*, Princeton U. Press, 2008.

d'Adda, Giovanna, Donja Darai, Nicola Pavanini, and Roberto A Weber, "Do Leaders Affect Ethical Conduct?," *Journal of the European Economic Association*, 02 2017, *15* (6), 1177–1213.

Dell, Melissa and Pablo Querubin, "Nation Building Through Foreign Intervention: Evidence from Discontinuities in Military Strategies," *The Quarterly Journal of Economics*, 2017, *133* (2), 701–764.

Dippel, Christian and Stephan Heblich, "Leadership in Social Networks: Evidence from the Forty-Eighters in the Civil War," *American Economic Review*, February 2021, *111* (2).

Émile Fayolle, Marie, *Cahiers Secret de la Grande Guerre*, Plon, 1964.

Etat-Major de l'Armée, "Les Armées Francaises dans la Grande Guerre," 1922.

Ferwerda, Jeremy and Nicholas Miller, "Political Devolution and Resistance to Foreign Rule: A Natural Experiment," *American Political Science Review*, 2014, *108* (3), 642–660.

Fisman, Raymond, "Estimating the Value of Political Connections," *The American Economic Review*, 2001, *91* (4), 1095–1102.

Fontana, Nicola, Tommaso Nannicini, and Guido Tabellini, "Historical Roots of Political Extremism: The Effects of Nazi Occupation of Italy," Discussion Paper 11758, CEPR 2017.

Forbes, Robert, *For Europe: The French Volunteers of the Waffen-SS*, Helion, 2006.

Gagliarducci, Stefano, Massimiliano Onorato, Francesco Sobbrio, and Guido Tabellini, "War of the Waves: Radio and Resistance During World War II," CEPR Discussion Papers 12746, C.E.P.R. Discussion Papers 2018.

Gay, Victor, "The Legacy of the Missing Men: The Long-Run Impact of World War I on Female Labor Force Participation," 2017 Papers pga905, Job Market Papers 2017.

Greif, Avner and Jared Rubin, "Political Legitimacy and the Institutional Foundations of Constitutional Government," February 2020. mimeo, Chapman.

Hermalin, Benjamin E., "Toward an Economic Theory of Leadership: Leading by Example," *The American Economic Review*, 1998, *88* (5), 1188–1206.

Horne, Alistair, *The Price of Glory: Verdun 1916*, London: MacMillian & Company Limited, 1962.

Imperial General Staff, *Handbook of the French Army*, Great Britain War Office, 1914.

Jackson, Julian, *France: The Dark Years, 1940-1944*, Oxford U. Press, 2001.

Jackson, Matthew and Leeat Yariv, "Diffusion, strategic interaction and social structure," in "Handbook of Social Economics," North-Holland, 2011, chapter 1, pp. 648–678.

Jha, Saumitra, "Trading for Peace," *Economic Policy*, July 2018, pp. 485–526.

_ and Steven Wilkinson, "Does Combat Experience Foster Organizational Skill? Evidence from Ethnic Cleansing during the Partition of South Asia," *American Political Science Review*, 2012, *106* (4), 883–907.

_ **and** _ , "Marching towards the Bastille: Veterans as Vanguards in the French Revolution," 2019. mimeo, Stanford.

Jones, Benjamin and Benjamin Olken, "Do Leaders Matter? National Leadership and Growth Since World War II," *Quarterly Journal of Economics*, 2005, *120* (3), 835–864.

Kocher, Matthew A and Nuno P Monteiro, "Lines of Demarcation: Causation, Design-Based Inference, and Historical Research," *Perspectives on Politics*, 2016, *14* (4), 952–975.

Koenig, Christoph, "Loose Cannons – War Veterans and the Erosion of Democracy in Weimar Germany," Technical Report 2015.

Kuran, Timur, *Private Truths, Public Lies*, Harvard U. Press, 1997.

Lacroix, Jean, Pierre-Guillaume Méon, and Kim Oosterlinck, "A Positive Effect of Political Dynasties: the Case of France's 1940 Enabling Act," CEPR Discussion Papers 13871 2019.

Lenz, Gabriel, *Follow the Leader? How Voters Respond to Politicians' Policies and Performance*, U. Chicago Press, 2012.

Lery, Alain, "La nuptialité en France de 1931 à 1974," *Économie et statistique*, 1976, *75* (1), 60–68.

Levi, Margaret, Audrey Sacks, and Tom Tyler, "Conceptualizing Legitimacy, Measuring Legitimating Beliefs," *American Behavioral Scientist*, November 2009, *53* (3), 354–375.

Lormier, Dominique, *Les 100 000 collabos: Le fichier interdit de la collaboration française* Documents, Cherche Midi, 2017.

Masera, Federico, Pauline Grosjean, and Hasin Yousaf, "Whistle the Racist Dogs: Political Campaigns and Police Stops," Technical Report, UNSW 2020.

Milgrom, Paul and John Roberts, "The Economics of Modern Manufacturing: Technology, Strategy and Organization," *American Economic Review*, 1990, *80* (3), 511–28.

_ **, Yingyi Qian, and John Roberts**, "Complementarities, momentum and the evolution of modern manufacturing," *American Economic Review: Papers and Proceedings*, May 1991, *81* (2), 84–88.

Millington, Chris, *From victory to Vichy: Veterans in inter-war France*, Manchester U. Press, 2012.

Ochsner, Christian and Felix Roesel, "Mobilizing History," working paper, CERGE-EI 2019.

Office of Strategic Services, *A Selected Who's Who in Vichy, France, June 1940-August 1944*, United States, 1944.

Oster, Emily, "Unobservable selection and coefficient stability: Theory and evidence," *Journal of Business & Economic Statistics*, 2019, *37* (2), 187–204.

Ott, Sandra, *Living with the Enemy: German Occupation, Collaboration and Justice in the Western Pyrenees, 1940-1948*, Cambridge U. Press, 2017.

Ousby, Ian, *The Road to Verdun*, London: Jonathan Cape, 2007.

Paxton, Robert, *Vichy France: Old Guard and New Order, 1940-1945*, Columbia U. Press, 2001.

Przeworski, Adam, "Conquered or Granted? A History of Suffrage Extensions," 2007. mimeo, NYU.

Reynolds, David, *The Long Shadow: The Legacies of the Great War in the Twentieth Century*, New York: W.W. Norton, 2014.

Rogall, Thorsten, "Mobilizing the Masses for Genocide," *American Economic Review*, January 2021, *111* (1), 41–72.

Roth, Alvin E., "Repugnance as a Constraint on Markets," *Journal of Economic Perspectives*, September 2007, *21* (3), 37–58.

Satyanath, Shanker, Nico Voigtländer, and Hans-Joachim Voth, "Bowling for Fascism: Social Capital and the Rise of the Nazi Party in Weimar Germany, 1919- 33," *Journal of Political Economy*, 2017, *125* (2).

Sirinelli, Jean-François, *Histoire des droites en France: Politique.*

Steiner, Zara, *The Lights that Failed: European International History, 1919-1933*, Cambridge, 2005.

Trebbi, Francesco and Eric Weese, "Insurgency and Small Wars: Estimation of Unobserved Coalition Structures," *Econometrica*, 2019, *87* (2), 463–496.

Tur-Prats, Ana and Felipe Valencia, "The Long Shadow of the Spanish Civil War," working paper, UC Merced 2020.

Williams, Charles, *Pétain*, Palgrave Macmillan, 2005.

Appendix: *Heroes and Villains*

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October 12, 2021

Note: Appendices denoted A are intended for posting on the journal and on the authors' websites. Appendices denoted B appear only on the authors' websites.

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Table A1: **References to Generals in Regimental Histories**

	Pétain			Nivelle			Mangin		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	1914 France	Verdun only	1914 France	1914 France	Verdun only	1914 France	1914 France	Verdun only	1914 France
Verdun under Pétain	0.292***	0.292***	0.257**	-0.060	-0.060	-0.150**	-0.097	-0.097	-0.132
	(0.097)	(0.097)	(0.115)	(0.061)	(0.061)	(0.068)	(0.106)	(0.106)	(0.120)
Verdun	0.240**		0.286**	0.172***		0.295***	0.370***		0.411***
	(0.108)		(0.138)	(0.062)		(0.093)	(0.121)		(0.155)
Marne			0.052			0.110**			-0.008
			(0.091)			(0.046)			(0.097)
Somme			0.047			0.161**			0.046
			(0.110)			(0.063)			(0.113)
Chemin des Dames			0.080			0.068			0.093
			(0.095)			(0.051)			(0.098)
R-squared	0.10	0.05	0.11	0.02	0.01	0.11	0.03	0.01	0.04
Observations	172	152	172	172	152	172	172	152	172
Mean DepVar	0.60	0.64	0.60	0.15	0.17	0.15	0.48	0.52	0.48
Sd DepVar	0.61	0.62	0.61	0.33	0.35	0.33	0.62	0.63	0.62

Notes: OLS estimates. An observation is a regiment. General Pétain was the commanding officer at Verdun between 26 February and May 1st, when he was replaced by Generals Nivelle and Mangin. The dependent variables are the (log +1) number of references to each General in the regimental history document of each line infantry regiment, excepted for one, the 97th Infantry Regiment, for which the source document is hand-written and cannot be systematically searched through. See Supplementary references for a full list of references. "Verdun under Pétain" is a dummy variable taking value one if the regiment was rotated at Verdun between 26 February and May 1st (no regiment left or arrived on these specific dates). "Verdun " is a dummy variable taking value one if the regiment was rotated at Verdun at any point of the battle. Similarly, "Marne", "Somme", and "Chemin des Dames" are dummy variables that take value one if the regiment was rotated at those other major strategic battles. Robust standard errors are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Table A2: **Balance on 1872 Characteristics (Chef-lieux level)**

	Observations (chef-lieux)	Mean (sd)	Coeff (se)	p-value	Coeff (se)	p-value
Controls			None		Dept FE	
Demographics and Education (1872)						
Log population	400	9.151	-0.009	0.935	0.168	0.377
		(0.960)	(0.108)		(0.189)	
Share Men	400	48.476	0.186	0.640	-0.113	0.881
		(3.052)	(0.396)		(0.752)	
Share Women	400	51.524	-0.186	0.640	0.113	0.881
		(3.052)	(0.396)		(0.752)	
Share Foreigners	400	2.894	1.922	0.198	0.421	0.507
		(6.880)	(1.485)		(0.633)	
Share Illiterate	400	17.869	1.013	0.345	1.142	0.231
		(7.222)	(1.070)		(0.950)	
Religious Characteristics (1872)						
Catholic places of worship	400	97.343	0.829	0.352	-0.987	0.540
		(6.923)	(0.888)		(1.607)	
Protestant places of worship	400	1.692	-1.486	0.064	-0.553	0.511
		(5.462)	(0.795)		(0.838)	
Jewish places of worship	400	0.165	0.052	0.474	-0.006	0.887
		(0.607)	(0.072)		(0.041)	
Other places of worship	400	0.293	0.042	0.785	0.305	0.089
		(1.300)	(0.153)		(0.178)	
Occupation Shares (1872)						
Industrial workers	400	33.844	5.244	0.026	2.415	0.486
		(16.705)	(2.334)		(3.455)	
Farmers	400	18.421	-2.802	0.199	-4.734	0.101
		(15.261)	(2.169)		(2.871)	
Merchants	400	14.740	0.976	0.233	0.934	0.439
		(7.443)	(0.815)		(1.204)	
Liberal occupations	400	11.645	-0.620	0.424	-1.502	0.354
		(6.357)	(0.774)		(1.615)	
Unemployed	400	1.289	-0.072	0.812	1.904	0.035
		(2.565)	(0.304)		(0.896)	

Notes: This Table displays 1872 characteristics in chef-lieux (the main town in each of France's arrondissements). The second Column shows the number of observations. The third shows the mean and standard deviation for each variable. The fourth to seventh Columns show the coefficients, standard errors, and p-values of OLS regressions of each characteristic on the Verdun under Pétain variable (which includes partial assignments) conditional on rotation to Verdun with no controls (Columns 4 and 5) and with 90 Department Fixed Effects (Columns 6 and 7). Standard errors clustered at Regiment level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Table A3: **Balance on Historical Characteristics from Squicciarini [16] at Canton level**

	Observations (Cantons)	Mean (sd)	Coeff (se)	p-value	Coeff (se)	p-value
Controls			None		Dept FE	
1873						
Number of schools	2,765	2.384 (1.400)	0.153 (0.055)	0.005	0.067 (0.079)	0.394
Share Catholic schools	2,765	0.212 (0.189)	0.010 (0.007)	0.161	-0.006 (0.010)	0.555
Share schools in bad condition	2,765	0.052 (0.083)	0.009 (0.003)	0.007	0.011 (0.005)	0.036
1894						
Number of schools	2,765	2.384 (1.543)	0.100 (0.060)	0.096	-0.037 (0.096)	0.702
Share Catholic schools	2,765	0.166 (0.151)	-0.006 (0.006)	0.332	-0.004 (0.009)	0.641
Share Catholic students	2,765	0.200 (0.185)	-0.006 (0.007)	0.435	-0.007 (0.011)	0.542
Share Male Catholic students	2,765	0.090 (0.138)	0.004 (0.005)	0.407	-0.007 (0.009)	0.438
Share Female Catholic students	2,765	0.311 (0.268)	-0.012 (0.010)	0.237	-0.006 (0.016)	0.685
1901						
Average HH expenditure	1,374	66.924 (6.675)	0.125 (0.371)	0.738	-0.923 (0.728)	0.205

Notes: This Table displays historical characteristics from Squicciarini [16] at the canton level. The variables shown in the table are the following: log number of schools in 1873 and 1894, share of Catholic schools in 1873 and 1894, share of schools' buildings in bad conditions in 1873, share of students in Catholic schools in 1894, share of male/female students in Catholic schools in 1894, average household expenditure in 1901. The second Column shows the number of observations. The third shows the mean and standard deviation for each variable. The fourth to seventh Columns show the coefficients, standard errors, and p-values of OLS regressions of each characteristic on the Verdun under Pétain variable (which includes partial assignments) conditional on rotation to Verdun with no controls (Columns 4 and 5) and with 90 Department Fixed Effects (Columns 6 and 7). Standard errors clustered at Regiment level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10). Source: Squicciarini [16].

Table A4: **Balance on Historical Characteristics from Squicciarini [16] at Baillage level**

	Observations (Baillages)	Mean (sd)	Coeff (se)	p-value	Coeff (se)	p-value
Controls			None		Dept FE	
Wheat suitability	533	2.623	-0.094	0.585	-0.049	0.632
		(1.910)	(0.172)		(0.103)	
Total plague outbreaks (1517-1786)	533	0.680	-0.162	0.327	-0.371	0.142
		(1.817)	(0.165)		(0.252)	
Share of refractory clergy (1791/1792)	533	0.317	-0.038	0.156	-0.016	0.363
		(0.297)	(0.027)		(0.018)	
Log average HH expenditure 1901	533	3.099	0.002	0.992	0.001	0.933
		(1.853)	(0.168)		(0.008)	
Subscribers Encyclopédie (1777-1780)	533	0.546	-0.096	0.425	-0.207	0.257
		(1.325)	(0.121)		(0.183)	
Log number of firms in 1800	533	0.603	0.198	0.013	-0.072	0.483
		(0.874)	(0.079)		(0.102)	

Notes: This Table displays historical characteristics (at the dates indicated) from Squicciarini [16] at the baillage or sénéchaussée (historical district) level. The variables shown in the table are the following: soil suitability for wheat, total plague outbreaks (district-level averages) between 1517 and 1786, share of refractory clergy in 1791/1792, log average of canton household expenditure weighted by pop in 1901 at the district level, number of subscribers to the Encyclopédie between 1777 and 1780, log number of firms around 1800 in each district in cotton spinning, metallurgy and paper milling. The second Column shows the number of observations. The third shows the mean and standard deviation for each variable. The fourth to seventh Columns show the coefficients, standard errors, and p-values of OLS regressions of each characteristic on the Verdun under Pétain variable (which includes partial assignments) conditional on rotation to Verdun with no controls (Columns 4 and 5) and with 90 Department Fixed Effects (Columns 6 and 7). Standard errors clustered at Regiment level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10). Source: Squicciarini [16].

Table A5: **Balance on Weather, Elevation and Presence of Natural Resources at Municipal Level**

	Observations (Municipalities)	Mean (sd)	Coeff (se)	p-value	Coeff (se)	p-value
Controls			None		Dept FE	
Precipitation rate (mm/day)	34,942	2.601	0.149	0.153	0.078	0.258
		(0.643)	(0.103)		(0.068)	
Average temperature (C°)	34,942	11.805	-1.150	0.000	-0.065	0.692
		(1.539)	(0.226)		(0.162)	
Elevation(m)	34,942	276.909	75.643	0.094	17.021	0.581
		(294.309)	(44.918)		(30.790)	
Coal	34,942	0.030	0.007	0.520	-0.017	0.129
		(0.170)	(0.011)		(0.011)	
Silver	34,942	0.034	0.009	0.439	0.004	0.705
		(0.182)	(0.011)		(0.010)	
Copper	34,942	0.027	0.004	0.625	0.004	0.634
		(0.163)	(0.009)		(0.009)	
Lead	34,942	0.036	0.011	0.342	0.012	0.293
		(0.185)	(0.011)		(0.011)	
Zinc	34,942	0.029	0.012	0.272	0.008	0.478
		(0.168)	(0.011)		(0.011)	
Iron	34,942	0.025	-0.004	0.531	-0.014	0.131
		(0.157)	(0.007)		(0.009)	
Hydrocarbon	34,942	0.019	0.002	0.863	0.008	0.216
		(0.138)	(0.010)		(0.007)	

Notes: This Table displays municipal-level data on weather, elevation, and presence of natural resources. The second Column shows the number of observations. The third shows the mean and standard deviation for each variable. The fourth to seventh Columns show the coefficients, standard errors, and p-values of OLS regressions of each characteristic on the Verdun under Pétain variable (which includes partial assignments) conditional on rotation to Verdun with no controls (Columns 4 and 5) and with 90 Department Fixed Effects (Columns 6 and 7). Standard errors clustered at Regiment level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10). Source: Data on weather and elevation is from Centre National de Recherches Météorologiques and is based on 8,602 data points between 1976 and 2005. Data on presence of natural resources is from the Open Mineral Cadastre, French Ministry for Ecological Transition (downloaded May 10, 2021).

Table A6: **Balance on Soil Characteristics at Grid-Cell Level**

	Observations (Square Grid 16km*16km)	Mean (sd)	Coeff (se)	p-value	Coeff (se)	p-value
Controls			None		Dept FE	
Clay	1,750	248.014	14.056	0.034	1.225	0.940
		(132.319)	(6.615)		(16.247)	
Silt	1,750	410.682	4.350	0.614	-2.392	0.902
		(172.730)	(8.622)		(19.386)	
Sand	1,750	341.304	-18.407	0.106	1.167	0.964
		(227.641)	(11.391)		(25.973)	
Organic carbon	1,750	26.087	4.081	0.000	-1.970	0.448
		(20.658)	(1.029)		(2.598)	
Nitrogen	1,750	2.206	0.378	0.000	-0.174	0.371
		(1.579)	(0.079)		(0.195)	
Calcium carbonates	1,750	57.067	-16.524	0.016	-9.707	0.552
		(137.543)	(6.881)		(16.303)	
pH	1,750	6.422	0.029	0.661	0.310	0.047
		(1.312)	(0.066)		(0.156)	

Notes: This Table displays soil characteristics: average clay, silt, sand, organic carbon, nitrogen, and calcium carbonates soil content (g.kg-1) as well as the pH measured in water (1 to 5 soil to water ratio) at the 16 km x 16 km grid-cell level. The second Column shows the number of observations. The third shows the mean and standard deviation for each variable. The fourth to seventh Columns show the coefficients, standard errors, and p-values of OLS regressions of each characteristic on the Verdun under Pétain variable (which includes partial assignments) conditional on rotation to Verdun with no controls (Columns 4 and 5) and with 90 Department Fixed Effects (Columns 6 and 7). Standard errors clustered at Regiment level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10).
Source: Data is from INRAE French Soil Quality Monitoring Network (RMQS) (downloaded May 10, 2021) and Karimi et al. [13]. The RMQS is based on the monitoring of 2240 sites representative of French soils and their land use. These sites are spread over the French territory along a systematic square grid of 16 km x 16 km cells. The network covers a broad spectrum of climatic, soil and land-use conditions (croplands, permanent grasslands, woodlands, orchards and vineyards, natural or scarcely anthropogenic land and urban parkland). The physical, chemical and biological properties of the soil are measured on each site. These soil analyses were carried out by the Soil Analysis Laboratory of INRAE (Arras, France). Analyses used in this study only concern the surface layer (generally 0–30 cm layer) of samplings between 2000 and 2009.

Table A7: **Robustness to Alternative Functional Form and Excluding Movers**

	Collaborators - IHS				Log collabos pc - w/o movers			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1914 France		Verdun only		1914 France		Verdun only	
Verdun under Pétain	0.049*	0.049**	0.070**	0.070***	0.064	0.057***	0.138***	0.084***
	(0.028)	(0.024)	(0.031)	(0.027)	(0.043)	(0.015)	(0.044)	(0.024)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept
Verdun	✓	✓			✓	✓		
1911 pop		✓		✓		✓		✓
Pre-WWI vote shares		✓		✓		✓		✓
R-squared	0.47	0.48	0.47	0.47	0.24	0.67	0.24	0.67
Observations	34,942	34,942	32,412	32,412	34,942	34,942	32,412	32,412
Mean DepVar	0.41	0.41	0.41	0.41	-5.82	-5.82	-5.82	-5.82
Sd DepVar	0.87	0.87	0.87	0.87	0.86	0.86	0.86	0.86

Notes: Columns 1 to 4 replicate Columns 1 to 4 of Table IV using instead the inverse hyperbolic sine of the number of collaborators in each municipality as the dependent variable and controlling for 1936 municipal population. Columns 5 to 8 reproduces replicate Columns 1 to 4 of Table IV restricting the estimation sample to the subsample of collaborators whose residence in 1945 is not different from their municipality of birth (i.e. excluding movers from the estimation sample). All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls. Robust standard errors clustered at Regiment level in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Table A8: **Regression Discontinuity across Regiment Catchment Borders: First Stage Estimates**

	Verdun under Pétain	
	(1)	(2)
Distance from military boundary	0.017***	0.016***
	(0.002)	(0.002)
Fixed effects	Dept	Dept
Verdun	✓	✓
Pop 1911	✓	✓
Pre-WWI vote shares	✓	✓
RD polynomial		✓
F-stat	48.54	49.29
R-squared	0.86	0.86
Observations	14,202	14,202
Mean DepVar	0.51	0.51
Sd DepVar	0.48	0.48

Notes: This table shows the results of the first stage of a fuzzy spatial regression discontinuity design across regiment catchment borders. The specifications only use observations that fall within the optimal Calonico et al. [5] bandwidth (17.5 km, or 10.87 miles, on the untreated side of the border and 22km, or 13.67 miles on the treated side). Columns 1 and 2 display the first stage estimates associated with Columns 1 and 2 of Table A9 (respectively). All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls (as in Column 2 of Table IV) as well as a quadratic polynomial in latitude and longitude of the municipality centroid, when indicated. Robust standard errors clustered at Regiment level in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Table A9: **Regression Discontinuity across Regiment Catchment Borders: Second Stage Estimates**

	Log collabos pc		Log sh Left 1914		Log sh Right 1914		WWI death rate		Pop 1911	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Verdun under Pétain	0.103**	0.093*	0.163	0.292	-0.135	-0.131	-0.124	-0.013	-0.059	0.025
	(0.045)	(0.049)	(0.217)	(0.239)	(0.272)	(0.289)	(0.221)	(0.231)	(0.099)	(0.105)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept
Verdun	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pop 1911	✓	✓	✓	✓	✓	✓	✓	✓		
Pre-WWI vote shares	✓	✓								
RD polynomial		✓		✓		✓		✓		✓
R-squared	0.60	0.60	0.48	0.49	0.51	0.51	0.10	0.11	0.30	0.30
Observations	14,201	14,201	13,693	13,693	13,693	13,693	14,038	14,038	14,177	14,177
Mean DepVar	-5.78	-5.78	1.72	1.72	3.13	3.13	3.80	3.80	6.27	6.27
Sd DepVar	0.82	0.82	1.19	1.19	1.46	1.46	2.14	2.14	0.99	0.99

Notes: This table shows the results of the second stage of a fuzzy spatial regression discontinuity design across regiment catchment borders. The specifications only use observations that fall within the optimal Calonico et al. [5] bandwidth (17.5 km, or 10.87 miles, on the untreated side of the border and 22km, or 13.67 miles on the treated side). All regressions are at the municipality level with department fixed effects and control for the Verdun rotation. Additional controls include pre-WWI population and pre-WWI vote shares (as in Column 2 of Table IV) as well as a quadratic polynomial in latitude and longitude of the municipality centroid, when indicated. First stage results for Columns 1 and 2 are displayed in Table A8. Robust standard errors clustered at Regiment level in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Table A10: **Collaboration in WWII: Evidence from Alternative Data Sources**

	OSS + LVF		Paillole + OSS + LVF	
	(1)	(2)	(3)	(4)
	1914 France	Verdun only	1914 France	Verdun only
Verdun under Pétain	0.053***	0.065***	0.059***	0.081***
	(0.014)	(0.018)	(0.017)	(0.023)
Fixed effects	Dept	Dept	Dept	Dept
Verdun	✓		✓	
1911 pop	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓
R-squared	0.89	0.89	0.58	0.58
Observations	34,947	32,417	34,947	32,417
Mean DepVar	-6.00	-5.99	-5.72	-5.71
Sd DepVar	0.95	0.95	0.83	0.83

Notes: The Table reproduces Columns 2 and 4 of Table IV. The dependent variables in Columns 1 and 2 are the log of collaborators per (1936) capita computed from alternative data sources on collaboration: the OSS and independently collected data on volunteers to the LVF.The dependent variables in Columns 3 and 4 are the log of collaborators per (1936) capita computed from all three data sources on collaboration: Paillole, the OSS, and volunteers to the LVF who are not already on the Paillole list. Robust standard errors clustered at Regiment level in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Table A11: **Accounting for Differences in Battle Experiences in 1916 and Excluding Fortress Regiments**

	Log collabos pc						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Verdun under Pétain (VuP)	0.067***	0.067***	0.067***	0.068***	0.070***	0.070***	0.061***
	(0.018)	(0.017)	(0.017)	(0.017)	(0.018)	(0.018)	(0.016)
Verdun	0.034	0.034	0.034	0.028	0.000	0.000	0.009
	(0.041)	(0.041)	(0.039)	(0.041)	(0.040)	(0.039)	(0.035)
WWI fatal. rate	-0.017***	-0.015*	-0.017***				
	(0.005)	(0.008)	(0.005)				
VuP*WWI fatal. rate		-0.006					
		(0.012)					
Combat days in 1940			0.000				
			(0.005)				
Log dist demarcation line			0.012				
			(0.008)				
Vichy France			-0.062**				
			(0.028)				
Somme				-0.017	-0.025	-0.025	
				(0.022)	(0.022)	(0.022)	
South Eastern Front					-0.060	-0.060	
					(0.041)	(0.043)	
Marne						0.000	
						(0.029)	
Sample	All	All	All	All	All	All	No Fortress
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept
1911 pop	✓	✓	✓	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓	✓	✓	✓
R-squared	0.61	0.61	0.61	0.60	0.60	0.60	0.60
Observations	34,942	34,942	34,942	34,942	34,942	34,942	33,332
Mean DepVar	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75	-5.76
Sd DepVar	0.83	0.83	0.83	0.83	0.83	0.83	0.83

Notes: This table shows that the effect associated with Pétain's leadership at Verdun on collaboration in WWII is robust to accounting for other potential differences in WWI military fatality rate, war experience in WWII, battle experience in 1916, or before. In Column 1, we add a control for the log (+1) military fatality rate in WWI in the municipality of birth of soldiers based on individual data on $1,266,060$ military fatalities, 99.72% of which we are able to match to $34,782$ municipalities of birth. The mean rate is 4.03 ; and the mean log rate is 1.55. We standardize the log rate to have mean 0 and standard deviation of 1. In Column 2, we also include an interaction between Verdun-under-Pétain and the (standardized) log military fatality rate in WWI. In Column 3, we add controls for war experience in WWII (See Section B.4 of this Appendix for more detail). Columns 4 and 5 consider the influence of the other major theaters of operation for the French Army in 1916: the Battle of the Somme and the European South-Eastern front. Column 6 considers the potential influence of another major battle prior to 1916: the Battle of the Marne in 1914. Column 7 excludes fortress regiments (the regiments numbered 145 and above, which manned the eastern fortifications, including Verdun, before the start of the Battle) from the estimation sample. All regressions are at the municipality level with department fixed effects and control for the Verdun rotation as well as the usual set of pre-WWI controls (as in Column 2 of Table IV). Robust standard errors clustered at Regiment level in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Table A12: **Effects by Collaborationist Organization**

	RNP	PPF	MSR	Franc	GC	SOL	Milice	LVF	Germ Int	Gestapo	Eco coll	AM
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Verdun under Pétain	0.075***	0.061***	0.052***	0.055***	0.056***	0.052***	0.043***	0.057***	0.058***	0.051***	0.056***	0.049***
	(0.015)	(0.015)	(0.016)	(0.017)	(0.016)	(0.016)	(0.015)	(0.015)	(0.016)	(0.016)	(0.016)	(0.016)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept
Verdun	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1911 pop	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.86	0.88	0.93	0.94	0.94	0.94	0.86	0.89	0.94	0.92	0.95	0.95
Observations	34,942	34,942	34,942	34,942	34,942	34,942	34,942	34,942	34,942	34,942	34,942	34,942
Mean DepVar	-5.98	-6.01	-6.05	-6.05	-6.06	-6.06	-5.98	-6.01	-6.05	-6.04	-6.06	-6.07
Sd DepVar	0.96	0.96	1.02	1.02	1.03	1.04	0.95	0.96	1.02	1.00	1.03	1.05

Notes: This table shows that exposure to Pétain at Verdun influences collaboration across all different types of collaboration. All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls (as in Column 2 of Table IV). Robust standard errors clustered at Regiment level in parentheses (*** p<0.01, ** p<0.05, * p<0.10).
The organizations are ranked by decreasing absolute membership numbers. The dependent variables are the log number of members in each organization per capita. RNP: National Popular Rally; PPF: French Popular Party. The PPF and RNP are the two major collaborationist political parties. Secondary parties, inherited from the 1930s Fascist Leagues are: MSR: Revolutionary Social Movement; and Franc: Francism. GC: Groupe Collaboration is a collaborationist think- tank gathering many prominent intellectuals and members of the elite. SOL: Legionary Order Service is a para-military group grounded in WWI Veterans organizations. Milice is the primary para-military group after 1943. LVF: Legion of French Volunteers against Bolshevism: para-military group of volunteers to fight alongside the Wehrmacht on the Eastern Front. Germ Int: German Intelligence Service. Eco coll: Economic Collaboration. AM: "Amis du Maréchal": Friends of the Marshal [Pétain].

Table A13: **Collaboration among Movers in the Same Destination, as a Function of Treatment Status of the Municipality of Birth**

	Collabo V-u-P	Share V-u-P	Collabos Not V-u-P	Share Not V-u-P
	(1)	(2)	(3)	(4)
Verdun under Pétain	0.072***	0.010***	0.058***	0.000
	(0.016)	(0.003)	(0.016)	(0.004)
Fixed effects	Dept	Dept	Dept	Dept
Verdun	✓	✓	✓	✓
1911 pop	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓
R-squared	0.91	0.14	0.91	0.14
Observations	34,947	34,947	34,947	34,947
Mean DepVar	-6.03	0.02	-6.03	0.02
Sd DepVar	0.98	0.12	0.99	0.11

Notes: The unit of observation is a municipality of residence. "V-u-P" stands for "Verdun-under-Pétain". This table provides an OLS regression of the log number of collaborators per capita who were born elsewhere and migrated either from a "Verdun-under-Pétain" municipality (Col 1) or from another municipality (Col 3). In Col 2 (resp. 4), the dependent variable is the share of collaborators who migrated from a Verdun-under-Pétain (resp. not Verdun-under-Pétain) municipality among local collaborators who are internal migrants. All regressions are at the municipality level with department fixed effects and the usual set of pre-WWI controls at the municipality level (as in Column 2 of Table IV). Robust standard errors clustered at Regiment level in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

Table A14: **Exposure to Pétain and Vote in the Inter-war Period**

(a) 1919 elections

	Ext. Left	Left	Center Left	Right			Ext. Right
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Communistes	SFIO	PRRS	FR-URD	UNR	ERD	Action Francaise
Verdun under Pétain	0.022	-0.098	-0.082**	0.014	0.031	0.140**	0.028
	(0.032)	(0.062)	(0.038)	(0.028)	(0.035)	(0.058)	(0.032)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept
Verdun	✓	✓	✓	✓	✓	✓	✓
1911 pop	✓	✓	✓	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓	✓	✓	✓
R-squared	0.85	0.65	0.92	0.92	0.93	0.91	0.86
Observations	33,541	33,541	33,541	33,541	33,541	33,541	33,541
Mean DepVar	0.02	2.08	1.29	1.12	1.11	0.99	0.04
Sd DepVar	0.96	1.16	1.87	1.85	1.93	1.81	0.97

(b) 1924 elections

	Ext. Left	Left		Center Left		Center Right	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	BOP	SFIO	RAD-SOC	REP-RAD	RG	ERD	Conservateur
Verdun under Pétain	-0.095**	0.031	0.037	0.004	-0.055	0.088**	0.005
	(0.048)	(0.075)	(0.037)	(0.030)	(0.052)	(0.043)	(0.033)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept
Verdun	✓	✓	✓	✓	✓	✓	✓
1911 pop	✓	✓	✓	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓	✓	✓	✓
R-squared	0.58	0.85	0.90	0.90	0.89	0.90	0.87
Observations	32,624	32,624	32,624	32,624	32,624	32,624	32,624
Mean DepVar	1.29	2.41	1.15	0.13	1.47	2.85	0.11
Sd DepVar	1.05	1.66	1.88	1.27	1.81	1.69	1.21

Exposure to Pétain and Vote in the Inter-war Period (cont'd)

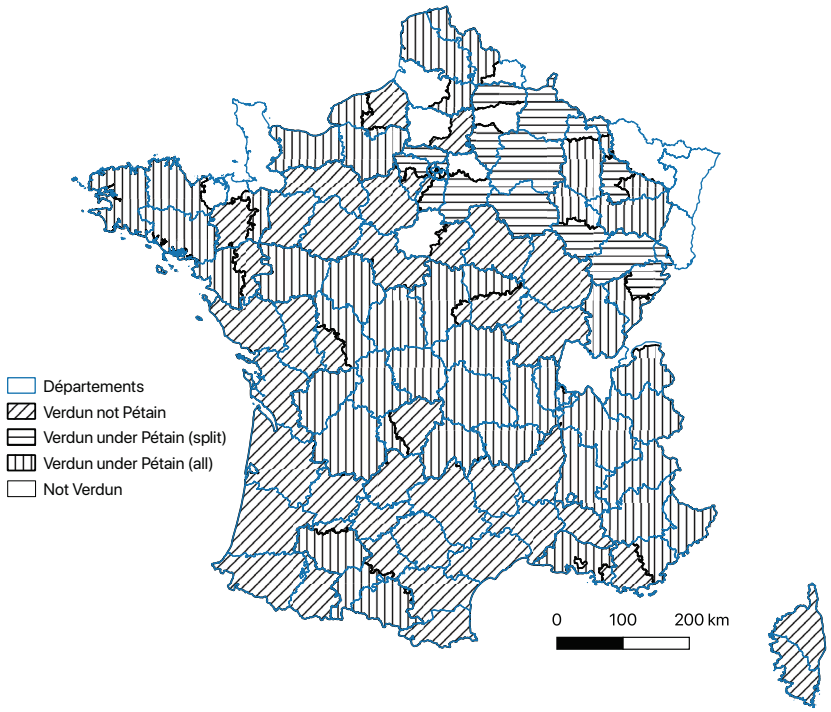
(c) 1932 elections

	Ext. Left	Left	Center Left		Center Right		Right	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PCF	SFIO	REP-SOC	RAD-SOC	AD-RG	AD-IND	AD-PDP	FR-URD
Verdun under Pétain	-0.004	-0.070	0.003	0.058	0.156**	-0.038	-0.012	0.187***
	(0.063)	(0.095)	(0.031)	(0.099)	(0.070)	(0.101)	(0.059)	(0.047)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept
Verdun	✓	✓	✓	✓	✓	✓	✓	✓
1911 pop	✓	✓	✓	✓	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.56	0.68	0.85	0.86	0.90	0.82	0.87	0.88
Observations	29,036	29,036	29,036	29,036	29,036	29,036	29,036	29,036
Mean DepVar	1.07	2.04	0.37	2.18	1.45	1.36	0.18	0.93
Sd DepVar	1.02	1.51	1.46	1.91	2.05	1.91	1.37	1.90

(d) 1936 elections

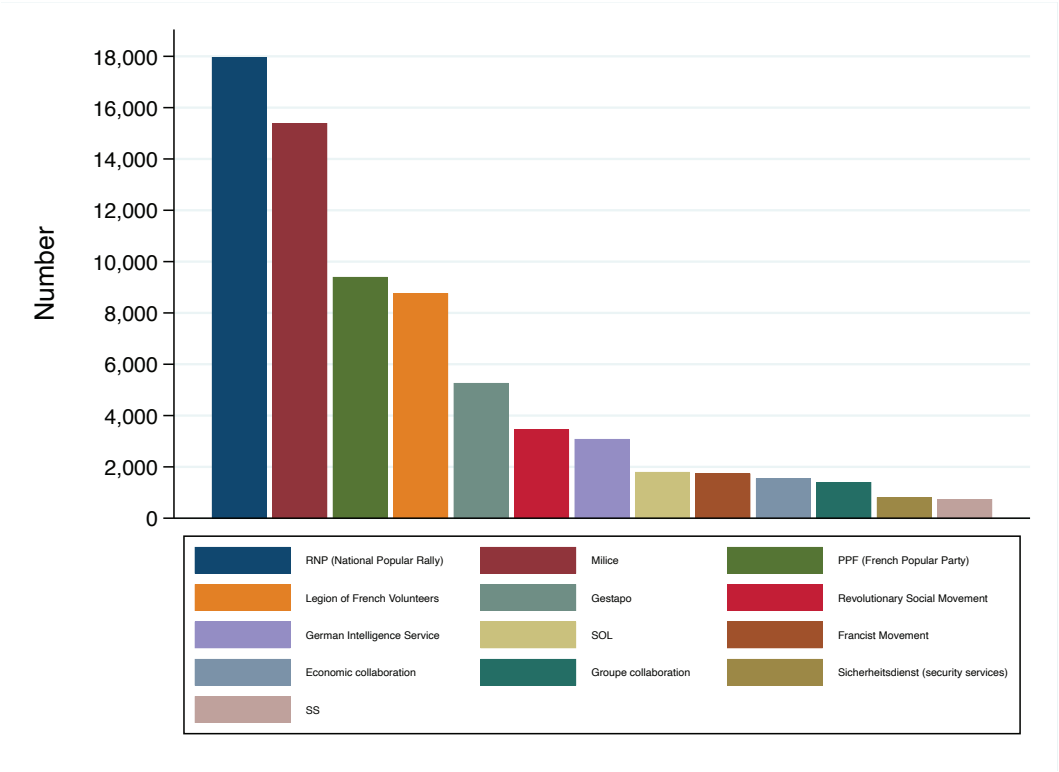
	Ext. Left	Left	Center Left		Center Right		Right	Ext. Right
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PCF	SFIO	USR	RAD-SOC	AD	PRN	AGR	Franciste
Verdun under Pétain	-0.031	-0.026	-0.035	-0.015	-0.097	-0.076	0.080**	0.030***
	(0.056)	(0.086)	(0.063)	(0.075)	(0.114)	(0.072)	(0.036)	(0.009)
Fixed effects	Dept	Dept	Dept	Dept	Dept	Dept	Dept	Dept
Verdun	✓	✓	✓	✓	✓	✓	✓	✓
1911 pop	✓	✓	✓	✓	✓	✓	✓	✓
Pre-WWI vote shares	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.56	0.65	0.80	0.84	0.85	0.88	0.82	0.78
Observations	33,832	33,832	33,832	33,832	33,832	33,832	33,832	33,832
Mean DepVar	1.96	2.42	1.37	2.37	2.61	1.84	0.93	0.76
Sd DepVar	0.89	1.15	1.15	1.38	1.46	1.48	0.77	0.45

Notes: This table provides the results of an OLS estimation of equation (3). The dependent variable is the log of the vote share for different political parties in each legislative election of 1919, 1924, 1932, and 1936, as indicated. All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls (as in Column 2 of Table IV).
For 1919, due to the multitude of political parties running in this election (see more detail in Section B.3.2), we only display the results for parties that obtained at least 10% of the vote, except, for illustration purposes, the Communists (Extreme Left), which obtained 1.65% of the vote, and Action Française (Extreme Right), which obtained 1.71% of the vote. For the other elections, we display the results for parties that obtained at least 3% of the vote, except for the Francist party (Extreme Right), which obtained 1.4% of the vote in 1936.
Robust standard errors two-way clustered at Regiment level and at electoral district level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10).



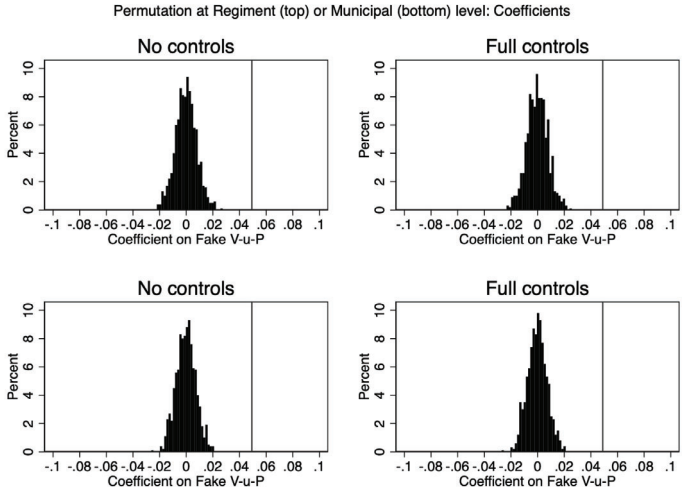
Notes: The figure displays whether all (vertical lines), some (horizontal lines) or none of the regiments from each municipality were rotated through Verdun. Thin blue lines indicate department boundaries and illustrate our within-department identifying variation. 92.76% of 1914 France's municipalities sent troops that served at Verdun. 56.86% sent troops that served at Verdun under Pétain.

Figure A1: Municipalities raising regiments under Pétain at Verdun



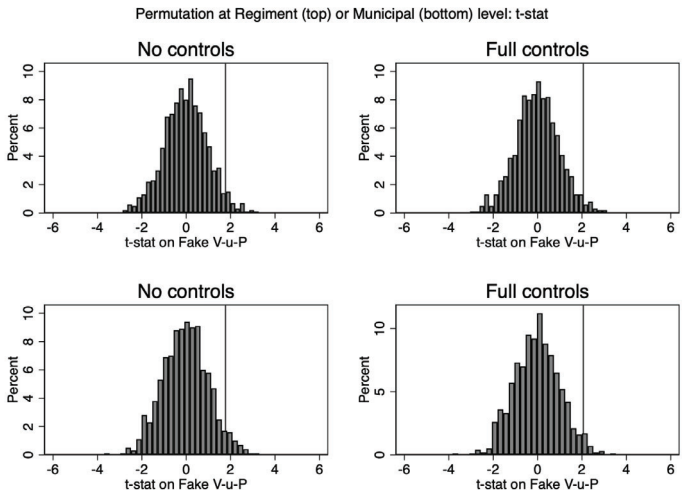
Notes: The figure plots the number of collaborators in the main groups, ordered by membership size. The main group by membership is the RNP (National Popular Rally, or *Rassemblement National Populaire*, a Fascist collaborationist political party created in 1941 by Marcel Déat, former number 2 of the socialist party SFIO together with former leaders of veteran organizations in the occupied zone). The other major Fascist collaborationist party, the PPF (French Popular Party, or *Parti Populaire Français*, created by the former number 2 of the communist party Jacques Doriot) comes third in total membership in our collaborators list. Secondary collaborationist parties are the MSR (the Revolutionary Social Movement) and the Francist Movement, two parties that were the direct continuation of Fascist right-wing leagues from the 1930s. Groupe Collaboration (11th on our list in terms of total membership) were a more elite and less violent political organization that supported collaboration with Nazi Germany for a new European order. The second major group in total membership in our list consists of the Milice, a para-military organization that succeeded to the SOL (the 8th group in total membership) in January 1943. While the SOL was firmly grounded in WWI Veterans organizations and wore its allegiance to Pétain, the Milice was younger and more disparate in membership. The second major paramilitary organization is the Legion of French Volunteers against Bolshevism (or LVF), created in July 1941 whose volunteers fought in the Wehrmacht uniform on the Eastern front. Other collaborators directly supported the Nazi occupation by joining the Gestapo (the 5th most predominant form of collaboration in our list), working for the German Intelligence Service (7th), the German security services (12th) or the SS (13th). Economic collaboration is also recorded in our list. $1,550$ (1.62% of the total) collaborators are listed as economic collaborators, and the vast majority of them are listed only for this reason (only 30 of them are also listed as members of a collaborationist political party, 18 as Nazi collaborators (Gestapo, SS, Intelligence or Security services), and 14 as Milice members). This suggests that these economic collaborators are distinct from the others, ideological collaborators, but that only serious cases of profiteering, as opposed to day-to-day exchange, are included.

Figure A2: Number of Collaborators by Category, Main Categories



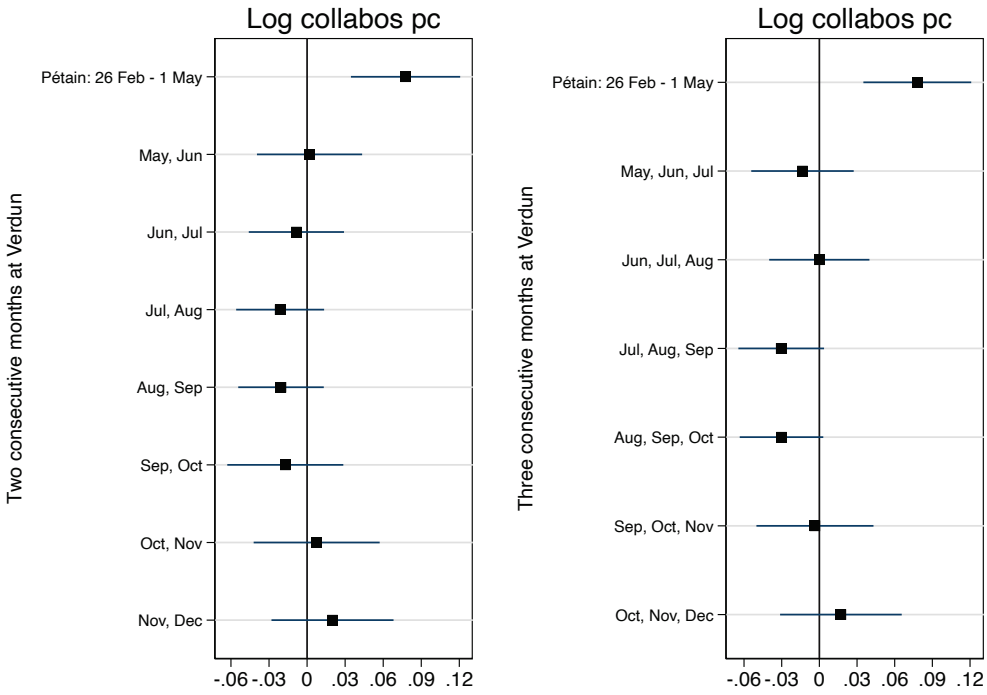
Notes: The histogram shows the distribution of coefficients obtained from permutation inference based on 1,000 replications. The distribution of t-statistics is shown in Figure A4. We perform permutation inference by reassigning treatment status, alternatively, at two different levels: 1) at the regiment level, keeping the allocation of each municipality to its regiment as the real allocation, 2) at the municipal level. The top panel displays results for the permutation inference at the regiment level conditional on the Verdun rotation and department fixed effect (left) (as in Column 1 of Table IV) and controlling additionally the usual set of pre-WWI controls (right) (as in Column 2 of Table IV). The bottom panel displays similar results for the permutation inference at the municipal level. The vertical bars indicate the coefficients obtained from the real assignment (see Columns 1 and 2 of Table IV).

Figure A3: Permutation Inference: Distribution of Coefficients



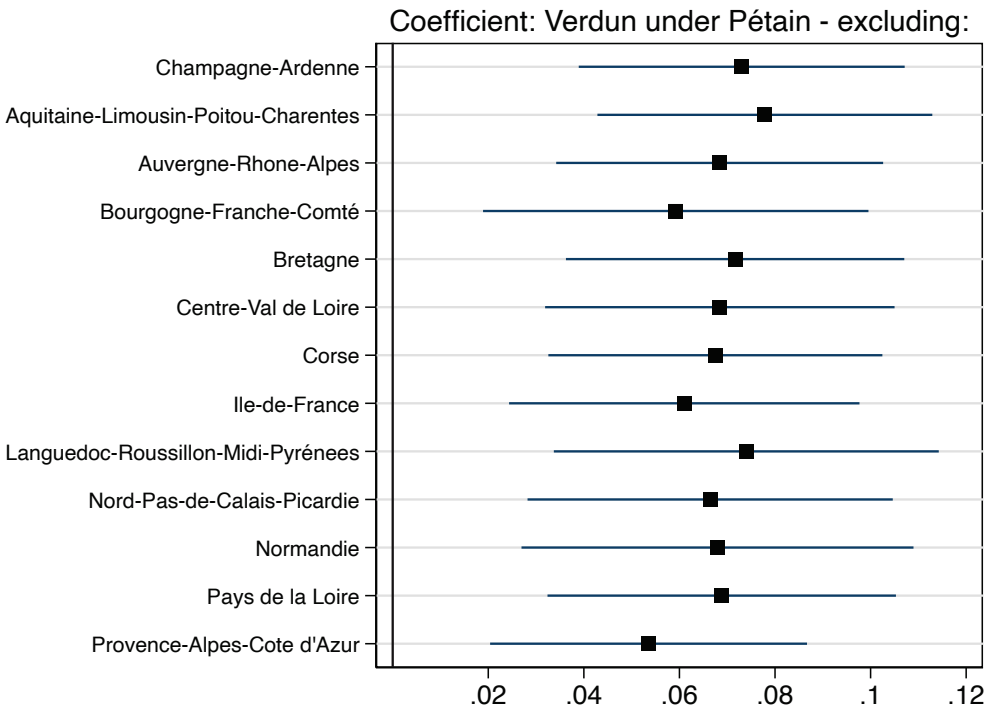
Notes: See notes to Table A3. The vertical bars indicate the t-statistics obtained from the real assignment (see Columns 1 and 2 of Table IV).

Figure A4: Permutation Inference: Distribution of t-statistics



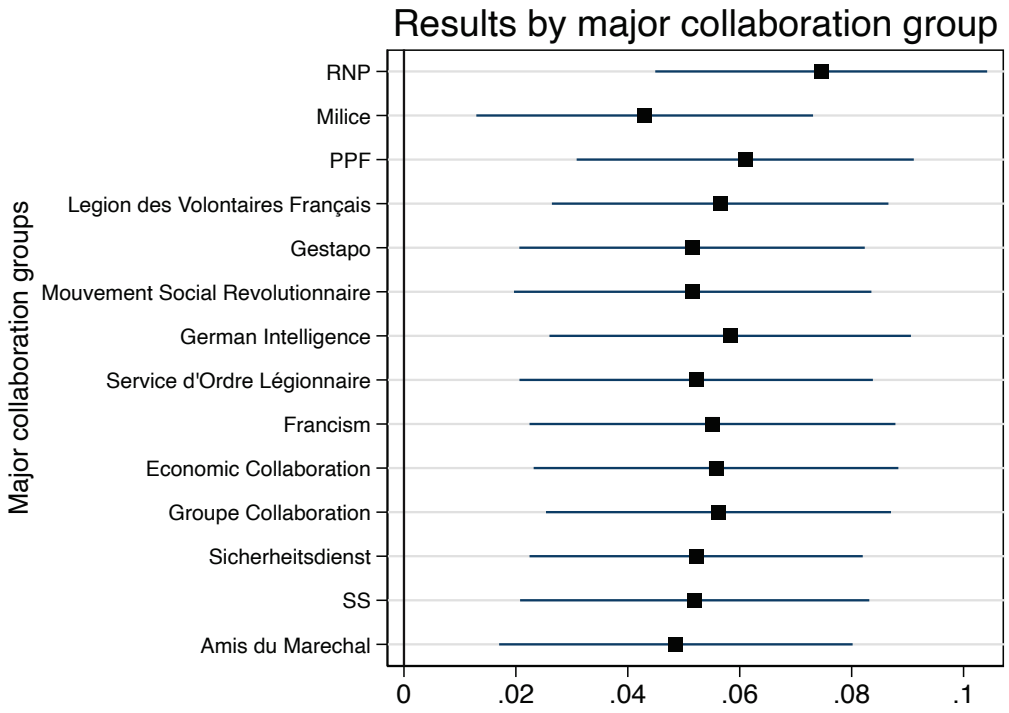
Notes: The figure shows coefficients and 95% confidence intervals obtained from separate regressions of the log share of collaborators in the municipality on consecutive months of fighting at Verdun, as indicated. All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls (as in Column 2 of Table IV). Standard errors are clustered at the regiment level. The figure shows that the positive and significant effect of fighting at Verdun on collaboration is only observed for the months during which Pétain was in command (i.e. February, March, April).

Figure A5: Estimated Effect of Fighting at Verdun in Different Months on the Share of Collaborators



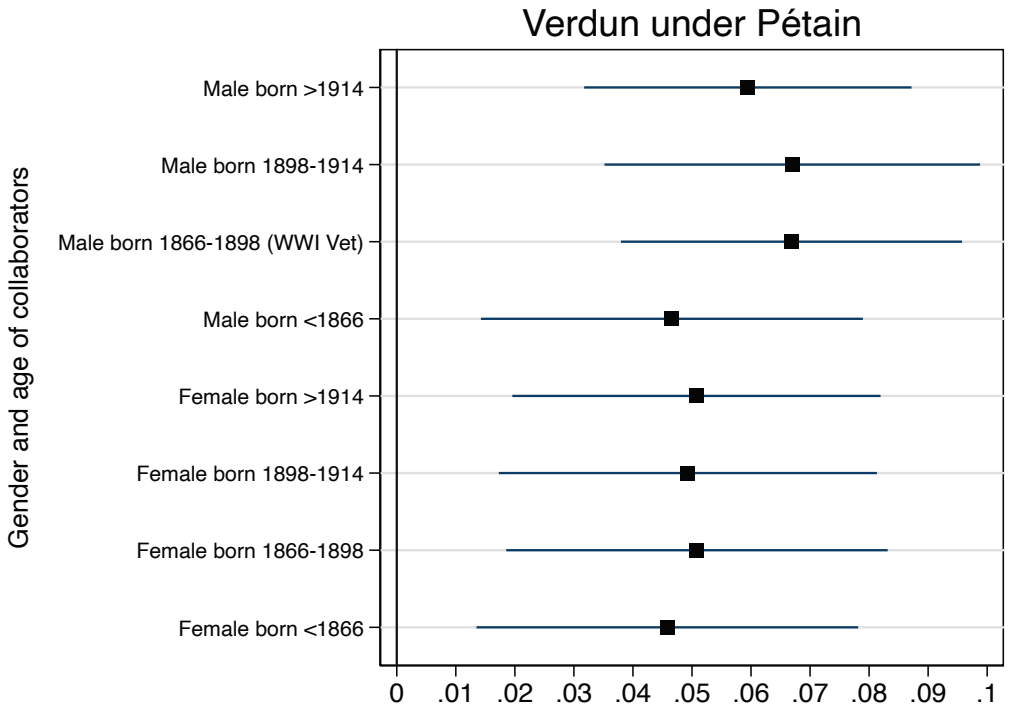
Notes: The figure shows coefficients and 95% confidence intervals in separate regressions in which we drop each region one by one, as indicated. All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls (as in Column 2 of Table IV). Standard errors are clustered at the regiment level.

Figure A6: Robustness to Dropping each Region One by One



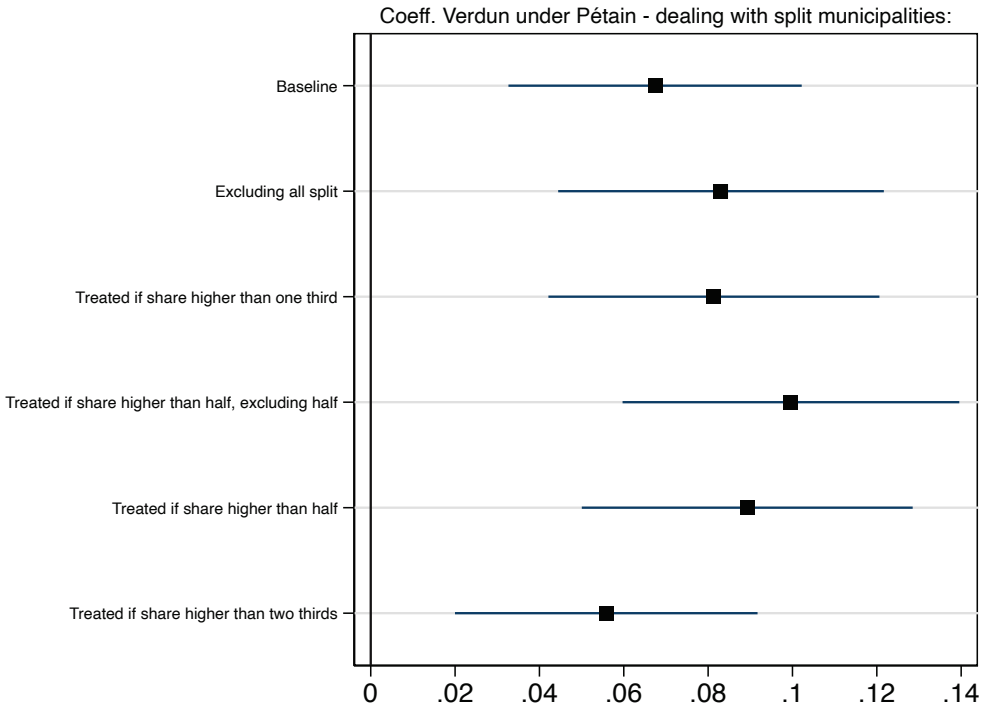
Notes: The figure shows coefficients and 95% confidence intervals obtained from a specification using the log of collaborators per capita, for each collaborationist group, as indicated, as the dependent variable. Groups are ordered by membership size. We present results for each major group by membership size (see Figure A2 in Appendix), as well as the "Amis du Maréchal" ("Friends of the Marshal"): a more marginal group with explicit allegiance to Marshal Pétain as its sole purpose. Each line is a separate regression. All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls (as in Column 2 of Table IV). Standard errors are clustered at the regiment level. Regression results are displayed in Table A12. The figure shows that the effect of combat exposure to Pétain at Verdun drives collaboration across the board, from membership to various collaborationist political parties, paramilitary groups, Nazi organizations, and economic collaboration. More detail on the different forms of collaboration can be found in Appendix B.1.

Figure A7: Effects on Membership in Each of the Main Collaborationist Organizations.



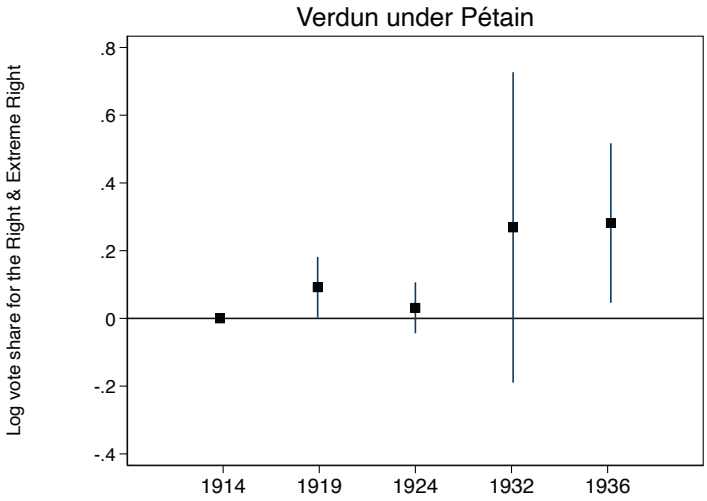
Notes: The figure plots coefficients and 95% confidence intervals obtained from estimating specification (3) using the log share of collaborators of each demographic as the dependent variable. "WWI Vet": those eligible to serve in the line regiments, reserves or territorial infantry (i.e. men aged 47-73 in 1945). Males born prior to 1866 were not eligible to serve in WWI. Note those men born in 1914 and after would have been eligible for drafting in the French army or forced labor in Germany. Each line is a separate regression. All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls (as in Column 2 of Table IV).

Figure A8: Differential Effects by Gender and Age among Collaborators.



Notes: The figure shows coefficients and 95% confidence intervals in separate regressions in which we redefine the treatment status of municipalities that raised more than one regiment, when the rotation history of these regiments at Verdun-under-Pétain is different from one another (henceforth "split municipalities"). Our baseline estimate (top estimate reproduced here for comparison purposes) relies on the share of regiments that was treated. The second estimate from the top is the estimate we obtain when we simply exclude from the estimation sample all split municipalities (reducing the estimation sample to 30,344 observations as a result, with mean value of Verdun-under-Pétain: 0.50). The third estimate from the top defines a treatment dummy for Verdun-under-Pétain that takes value one if the share rotated at Verdun under Pétain is higher than or equal to one third, and zero otherwise (mean value of Verdun-under-Pétain: 0.55). The fourth and fifth estimate from the top define instead such a treatment dummy to take value one if the share rotated at Verdun under Pétain is higher than one half, and zero otherwise, excluding those exactly at one half (fourth estimate) or considering them as treated (fifth) (mean values of Verdun-under-Pétain: 0.49 and 0.53 respectively). The last estimate defines the treatment dummy to take value one if the share rotated at Verdun under Pétain is higher than (or equal) to two-thirds (mean value of Verdun-under-Pétain: 0.44). All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls (as in Column 2 of Table IV). Standard errors are clustered at the regiment level. Horizontal bars indicate 95% CI.

Figure A9: Robustness to Redefining the Treatment Status of Municipalities That Raised More than One Regiment



Notes: The figure shows coefficients and 95% confidence intervals of regressing log. vote share for the Right and Extreme Right combined (with the Extreme Right only running in 1919 and 1936) in the elections of 1914, 1919, 1932 and 1936 on exposure to Verdun-under-Petain. All regressions are at the municipality level with department fixed effects and control for the Verdun rotation and the usual set of pre-WWI controls (as in Column 2 of Table IV). Standard errors are two-way clustered at the regiment and at the electoral district level.

Figure A10: Effects on Vote Shares for the Right and Extreme Right in the Interwar Period

B Supplementary Appendix: Not Intended for Publication

B.1 Forms of Collaboration in our Data

> *Les dates d'engagement des Francais qui ont choisi de servir dans la SS mèritent réflexion: très tard, en 1944, alors que l'Allemagne a déjà perdu évidemment la guerre.*[The dates of engagement of the French who chose to serve in the SS merits reflection: very late, in 1944, when it was clear that Germany had lost the war"- Jean François Deniau, "Memoire de trois vies", Plon, 1954, cited in Forbes [pg.viii 9].

Collaborationist political parties. A range of political parties and organizations in France provided opportunities for different forms and intensities of collaboration. This diversity was in sharp contrast with other European fascist regimes, which tended to impose a unique party; and with other occupied countries, where political parties were not tolerated by the German occupant. Collaborationist parties distributed newspapers, held meetings, and organized demonstrations. But they also engaged in spying, informing, denunciation, and violence against Jews and opponents, including the Resistance.

The two main collaborationist parties were the French Popular Party (PPF) and the National Popular Rally (RNP).[1] Both parties were created by two former prominent left-wing politicians (respectively former number two of the Communist and Socialist parties), both heroic veterans of the first World War: Jacques Doriot and Marcel Déat.[2] Alongside them were parties that were direct emanations of the right-wing fascist leagues of the 1930's, chief among which the Francist movement and the Revolutionary Social Movement.[3] More mainstream intellectuals joined the Groupe Collaboration, whose members promoted cultural exchanges with Germany and the advent of a New European order.

Such a wide political spectrum of collaborationist parties shows how people from all sides of the polarized and radicalized 1930s rallied behind collaboration. A common perspective was to be against the Republic, against Bolshevism, and against liberalism. Although critical of Vichy for what they judged a too tepid stance on collaboration, all the parties' leaders claimed Pétain's support [3, p.382], and some, such as the leader of the RNP, accepted positions at Vichy.[4]

Paramilitary Groups. Immediately after the signature of the Armistice, Xavier Vallat, the state secretary in charge of veteran affairs grouped all Great War veteran organizations under the single umbrella of the *Legion Française des Combattants* (The Legion). Its statutes

[1] Respectively in French: "Parti Populaire Français" and "Rassemblement National Populaire". In the absence of our data, many estimates have tended to use very round numbers, placing total membership at between 40,000 and 50,000 for the PPF [3, p. 417, 469], and between 20,000 [3, p. 393] and 30,000 [14, p. 253] for the RNP.

[2] An active combatant for the whole duration of the war, Déat had been awarded the highest French order of merit (the Legion d'Honneur) and received five bravery citations. Doriot, 4 years his junior, joined active combat in 1917 and was made prisoner. He was awarded the War Cross ["Croix de Guerre"] for valorous service. Doriot eventually joined the Eastern Front in the "Legion des Volontaires Français contre le Bolchevisme". He was killed by an Allied plane in Germany in 1945. After a short appointment in the Vichy government, Déat joined the SS, and fled to Germany and then Italy at the end of the War.

[3] Both movements had also been formed by WWI veterans, Marcel Bucard and Eugène Deloncle.

[4] As Burrin describes: "The Paris leaders were rivals, not opponents, extremists of Pétainism, not anti-Pétainists" [3, p.383].

plainly stipulated the Legion was to substitute for all existing associations of veterans (Journal Officiel, Art. 5, 30 August 1940, p.4845).The Legion swore its allegiance to Marshal Pétain and was officially charged with the implementation of Pétain's "National Revolution". The role of the Legion and the central influence of Pétain's prestige is clear: veterans "must form groups down up the uttermost village in order to have the wise counsels of their leader of Verdun heeded and carried out."[5] However, the Legion never engaged in violent actions. This became the prerogative of two other groups, the *Service d'Ordre de la Legion* (SOL) and, later on, of the *Milice*.

To provide shock troops for Pétain within the Legion, which was seen as too ideologically disparate and, given its anti-German sentiments, hard to mobilise, the SOL was constituted in January 1942. Elements of the SOL further formed into the Milice at Hitler's insistence by January 1943. The SOL and the Milice were paramilitary organizations as well as political movements.[6]

The "Legion des Volontaires Français contre le Bolchevisme" was created in 1941 by the collaborationist parties to raise volunteers to fight alongside the Wehrmacht on the Eastern front. Members could later directly also the German forces as part of the so-called "*Charlemagne*" division of the *Waffen-SS*.

Nazi collaboration An estimated total of $22,000$ French people directly served Germany in combat or auxiliary units [3, p.433]. They joined the Gestapo or the Waffen-SS or joined the Wehrmacht on the Eastern front under the "Legion des Volontaires Français contre le Bolchevisme" or the SS Charlemagne. Twice as many had volunteered but were not deemed fit for service, many of them veterans of the First World War who were too old. Pétain had actively encouraged them, by declaring in November 1941: "You are responsible for part of our military honour" [in 3, p.433].

Although this classification between political, paramilitary and Nazi collaboration was made by historians, in practice, the delimitations between these groups were porous and unclear. Political parties engaged in violent demonstrations and violent action, often alongside the SOL, the Milice, or French and German Gestapo members. The SOL and the Milice were originally intended as a unique political party, which would eventually absorb the collaborationist parties. They were armed by the SS. The "Legion des Volontaires Français contre le Bolchevisme" was created and controlled by collaborationist parties but fought under the Wehrmacht uniform.

B.2 An example: Joseph Darnand

Joseph Darnand provides a useful illustration. Born in 1897, in February 1916, he was assigned to the 35th regiment, which happened to be dispatched to Verdun shortly thereafter to serve under Pétain's command. Darnand received the *Médaille Militaire* from Pétain himself in 1918 and was further inducted into the *Légion d'Honneur* in 1925, with President Poincaré citing him as one of the "artisans of victory". Darnand actively invested his time and energies

[5] Xavier Vallat, quoted in *D'Ordre du maréchal Pétain. Documents officiels réunis et commentés par Jean Thouvenin* (Paris, n.d.1940 in Paxton [14], p.190).

[6] The political objectives of the SOL are set against: "bourgeois selfishness", "egalitarianism", "individualism", "global capitalism", "gaullist dissidence", "Bolshevism", "the Jewish plague", "free-masonry" and in favor of: "discipline", "authority", "truth", "nationalism", and "Christian civilization" (21 points of the SOL, in Germain [10]. The SOL and the Milice informed on, executed and helped deport Jews, free masons, anybody suspected of Resistance as well as those seeking to escape the order to work in Germany under the Compulsory Labour Service. Some historians believe $45,000$ people volunteered for the Milice and the SOL [14, p.298].

in various veterans organizations, including the *Croix de Feu* and particularly *La Cagoule*, between the wars. Darnand would reenlist and garner further combat decorations fighting the Germans in 1940. Escaping from a POW camp in August 1940, like other members of the *Legion française des combatants*, he swore revenge against the Nazis. Following Pétain's overt collaboration, Darnand instead forged a sub-group- the *SOL* loyal to Pétain and willing to follow him into cooperation with the Nazis. However, as late as 1943, Darnand was still in negotiations with the Resistance to fight the Germans. And yet, he became the leader of the main paramilitary organization, the Milice, and despite some misgivings, agreed to continue at Pétain's personal request. Despite the shifting natures of the war, he would later join the Waffen SS in 1943, swearing fealty to Adolf Hitler himself. He fled to Germany and Italy at the end of the war, soon to be captured, repatriated back to France and executed for his crimes [9, pg.32-42]. Darnand's remarkable reversal of loyalties was shared in varying degrees by many, in a manner consistent with the legitimization of previously-repugnant values by Pétain and the escalating commitment of the heroes who shared his heroic credentials at Verdun. As Darnand wrote to De Gaulle, just two days before his execution: "these men [*Miliciens*] are authentic Frenchmen ... Their only mistake is to have been faithful to a great soldier [Pétain]" [7, pg.257-258].

B.3 Electoral data

To study the effect of combat exposure to Pétain on political preferences and to control for pre-WWI political preferences, we collected, digitized, and consistently coded the results of 23 legislative elections in France since 1914. In this Section, we provide institutional details on elections and political parties over that period. The French political system is characterized by a lot of entries and exits of parties, and parties regularly change their name. One of the main empirical challenge is therefore to classify the different political parties from the Extreme Left to the Extreme Right over such a long period of time. To do so, we rely mainly on Agrikoliansky [1], Poirmeur [15], and Haegel [12] for the pre-WWII period; post-WWII data mainly come from Cagé [4] and Bekkouche and Cagé [2]. Here, we briefly describe the data for three crucial time periods in our analysis: 1914, in order to control for pre-WWI vote; the interwar, when an alignment in political preferences along Pétain's conservative right-wing agenda emerged; and the post World War II period, after the fall of the Vichy regime and the restoration of the French Republic.

Please note: the fact that there are more observations, for each of the elections, in the tables below than in the tables in the body of the paper, is due to the fact that for some large cities (such as Paris, but also Marseille, Lyon, Bordeaux, Toulouse, Nice, etc.), we collect the electoral data at the finest possible level we have and report the electoral results at a geographical level smaller than the municipality. However, to perform the regression analyses in the paper, we collapse the electoral data at the municipality level so as to match it with our other observables.

B.3.1 The 1914 Elections

Elections took place in April 1914, three months before the outbreak of WW1.[7] The voting system was the *"scrutin uninominal à deux tours par arrondissements"*, a two-round system. There were 586 electoral districts in Metropolitan France. 2,904 candidates ran in the first round of the elections.

[7] More precisely, the first round took place on April 26 1914 and the second round on May 10 1914.

We collect and digitize the 1914 electoral results at the municipality level (more than 34,000 municipalities) from the paper archives of the Interior Ministry.[8] Figure B1 shows an example of the data. As it appears on the picture, the Interior Ministry data only reports the name of the candidates but not their political party. To obtain information on the political party of all the candidates, we digitize the official results at the district level (see Figure B2 for an illustration) and manually match the candidates using the district where they run and their name.

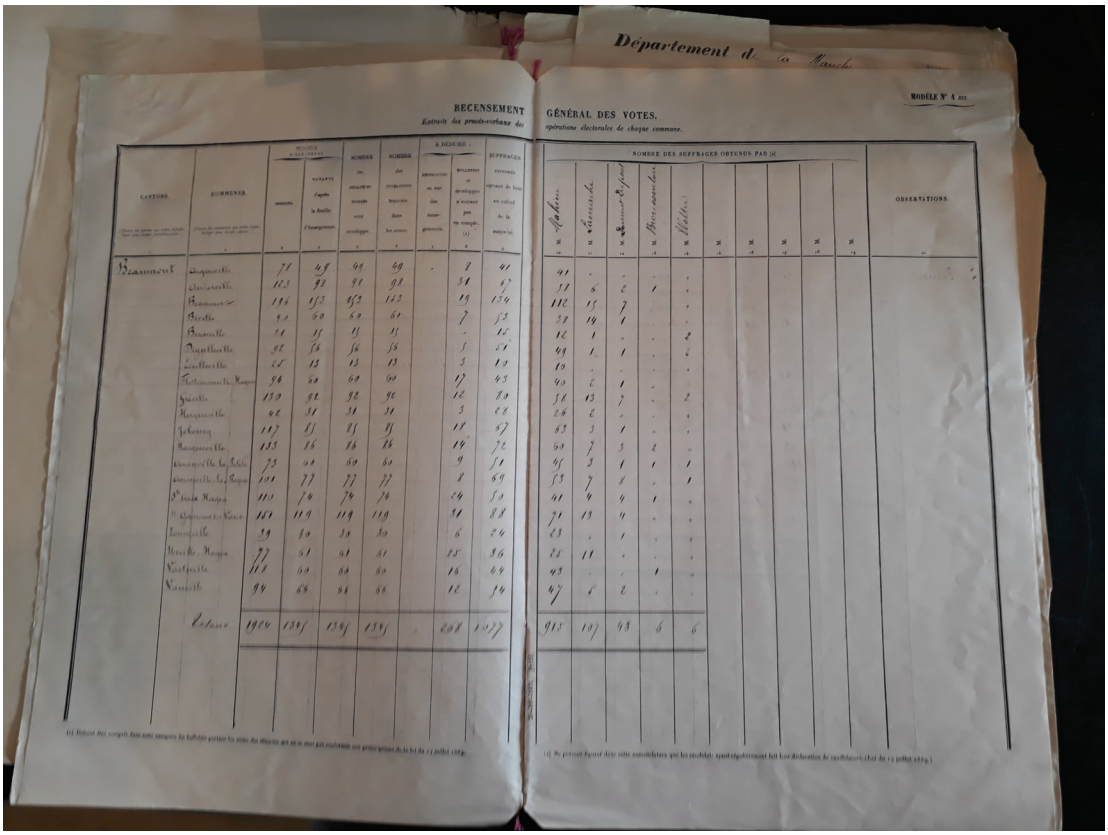


Figure B1: Example of the 1914 Municipal-level Election Data

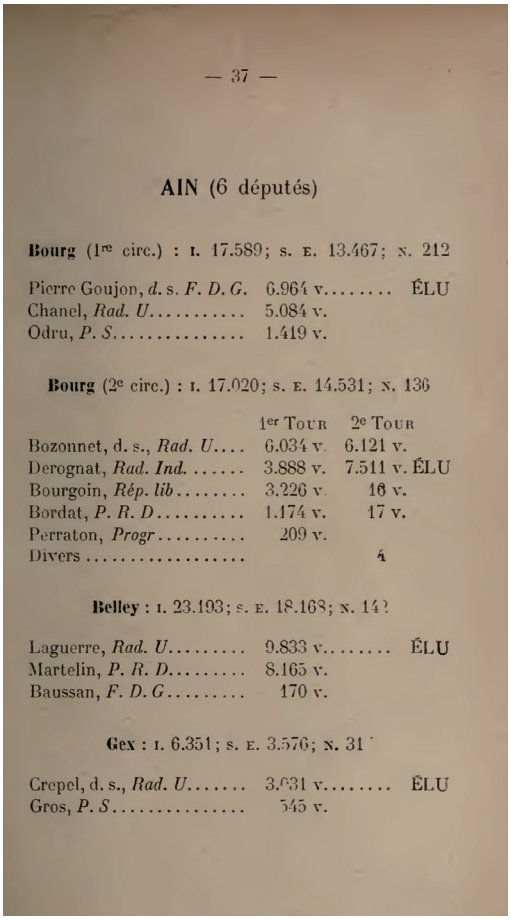
To classify the candidates, we mostly rely on Georges Lachapelle ("Les élections législatives des 26 avril et 10 mai 1914. Résultats officiels"), and rank the main parties on the Left-Right political spectrum as follows (from Left to Right) in 7 different categories:

1. Parti Socialiste Unifié (**SFIO**). It includes the Socialiste Unifiés and the Parti Ouvrier Révolutionnaire.

2. Républicain Socialiste (**REP-SOC**). It includes the Républicain Socialiste and the Socialistes indépendants.

3. Radical Unifié (**RAD-SOC**);

[8]These results are available in the boxes C//7241 to C//7254 at the National Archives. To the extent of our knowledge, we are the very first to digitize these data.



— 37 —

AIN (6 députés)

Bourg (1re circ.) : I. 17.589; S. E. 13.467; N. 212

Pierre Goujon, *d. s. F. D. G.*	6.964 v.....	ÉLU
Chanel, *Rad. U.*.....	5.084 v.	
Odru, *P. S.*.....	1.419 v.	

Bourg (2e circ.) : I. 17.020; S. E. 14.531; N. 136

	1er Tour	2e Tour	
Bozonnet, d. s., *Rad. U.*...	6.034 v.	6.121 v.	
Derognat, *Rad. Ind.*.....	3.888 v.	7.511 v.	ÉLU
Bourgoin, *Rép. lib*.....	3.226 v.	16 v.	
Bordat, *P. R. D*.....	1.174 v.	17 v.	
Perraton, *Progr*.....	209 v.		
Divers.....		4	

Belley : I. 23.193; S. E. 18.168; N. 142

Laguerre, *Rad. U.*.....	9.833 v.....	ÉLU
Martelin, *P. R. D*.....	8.165 v.	
Baussan, *F. D. G*.....	170 v.	

Gex : I. 6.351; S. E. 3.576; N. 31

Crepel, d. s., *Rad. U.*.....	3.031 v.....	ÉLU
Gros, *P. S*.....	545 v.	

Figure B2: Example of the 1914 District-level Electoral Results We Use to Recover the Political Parties of the Candidates

4. Radical Indépendant (**RAD-IND**). It includes the Radical Indépendant (ou Gauche Radicale)[9], the Républicains indépendants and Républicain de gauche.

5. Parti Républicain Démocratique et Social (**PRDS**).[10] It also includes the Alliance Républicaine and the Fédération des gauches.[11]

6. **Progressistes**. It includes the Progressites and the Fédération républicaine.

7. Action Libérale Populaire (**ALP**). It includes the Droite, the Action Libérale Populaire, and the Républicain Libéral.

The remaining candidates are classified in a "**Divers**" (Miscellaneous) category.

We classify the candidates into five different positions: Left, Center Left, Center Right, Right and Divers. The Right includes the PRDS, the ALP and the Progressistes. The Center

[9]The Radical Indépendant splintered from other "Radicals" over the alliance with the Socialists.

[10]The name is "Parti Républicain Démocratique" from 1911 to 1917 – i.e. in 1914 – and then "Parti Républicain Démocratique et Social" (PRDS) from 1920 to 1926. Hence here, for the sake of clarity, we will use the same name in 1914 and 1924: PRDS.

[11]The "Fédération des gauches", despite its name, was on the Right and later formally joins the PRDS.

Right consists of the RAD-IND . The Center Left includes the RAD-SOC and the REP-SOC. The SFIO is the Left. The remaining parties are classified in the "Divers" (Miscellaneous).

The *"Radical Unifié"* (RAD-SOC) came first in the 1914 elections. In Table B1 we report the vote share (popular vote) obtained by each party in the first round of the election, as well as summary statistics for the turnout rate.

Table B1: 1914 Legislative Elections: Summary Statistics

	Mean	St.Dev	Median	P75	Max
Vote share - Left					
SFIO	9.5	16.4	0.4	11.8	100
Vote share - Center left					
REP-SOC	3.6	13.3	0.0	0.0	100
RAD-SOC	28.6	29.7	24.0	51.6	100
Vote share - Center right					
RAD-IND	11.8	23.6	0.0	8.5	100
Vote share - Right					
PRDS	20.5	29.5	0.0	39.1	100
Progressistes	9.3	21.1	0.0	0.0	100
ALP	12.8	23.4	0.0	18.4	100
Vote share - Miscellaneous	3.8	14.3	0.0	0.0	100
Turnout	79.6	9.9	81.4	86.2	100
Observations	35285				

Notes: This table provides summary statistics on the 1914 legislative elections results. An observation is a municipality. The different political parties are described in the text.

B.3.2 The Interwar Period: the 1919, 1924, 1932, and 1936 Elections

The 1919 elections, which were the first post-war elections, resulted in a decisive victory for the right-wing *"Bloc National"*. On the contrary, the 1924, 1932 and 1936 elections also saw the victory of a left-wing coalition. The first *"Cartel des Gauches"*, an alliance between the Radical-Socialist Party and the SFIO (the French Socialist Party), as well as the independent radicals and the Socialist Republicans won the 1924 elections. The second *Cartel des gauches* won the 1932 elections.[12] The 1936 elections were won by a more radical left-wing alliance. For the first time, the communist party was included in the winning coalition. The victorious *"Front Populaire"* (Popular Front) consisted of the SFIO (Socialist Party), the Radical-Socialists, the Communist Party, as well as a number of other smaller parties on the Left.

The Right included a number of parties over that period. Although fascist and Extreme Right leagues were active during the interwar period, they rejected participation in elections,

[12]The main parties constituting this Cartel are, as in 1924, the *"Radicaux Indépendants"* (Independent Radicals), the *"Parti Républicain Socialiste"* (Republican-Socialist Party), the SFIO (the French Socialist Party), and the Radical Party.

until the 1936 elections. The Parti Franciste and the Jeunesses Patriotes ran in the 1936 elections, but obtained a very low electoral score.

Uniquely, as for the 1914 elections, we are the very first to have collected the electoral results for the 1919, 1924, 1932, and 1936 elections at the municipality level, directly from paper-format archival data.[13]

The 1919 elections Figure B3 shows an example of the data for the 1919 elections. The elections took place in November. The voting system was the *"scrutin mixte à un tour"*. [14] The *"scrutin mixte à un tour"* is a mixed-member voting system, combining multi-member majority and multi-member proportional ballot in only one election round, in the departmental framework. The department is the electoral district, with the election of one deputy for every 75,000 inhabitants; however, if there are more than 6 deputies to be elected, the department is divided into constituencies which must elect at least 3 deputies each. A minimum floor is also established: each department must have at least 3 deputies.

Candidates must organize themselves into lists. The number of candidates per list cannot exceed the number of deputies to be elected in the constituency. Isolated candidates are also allowed, if they have the support of 100 voters in the constituency. It is forbidden to stand for election in more than one constituency. In practice, majority voting takes precedence over proportional representation as any candidate who obtains an absolute majority is declared elected within the limit of the seats to be filled. The seats are, in each list, allocated to the candidates who have won the most votes. If seats remain to be filled, only then the ballot becomes proportional. The electoral quotient is determined by dividing the number of voters by that of the deputies to be elected; and the average of each list by dividing the total number of votes obtained by the number of candidates. Each list is allocated as many seats as its average contains the electoral quotient. For candidates to be elected, they must have won a number of votes greater than half the average number of votes on the list of which they are part. In the event of an equal number of votes, the oldest candidate wins.

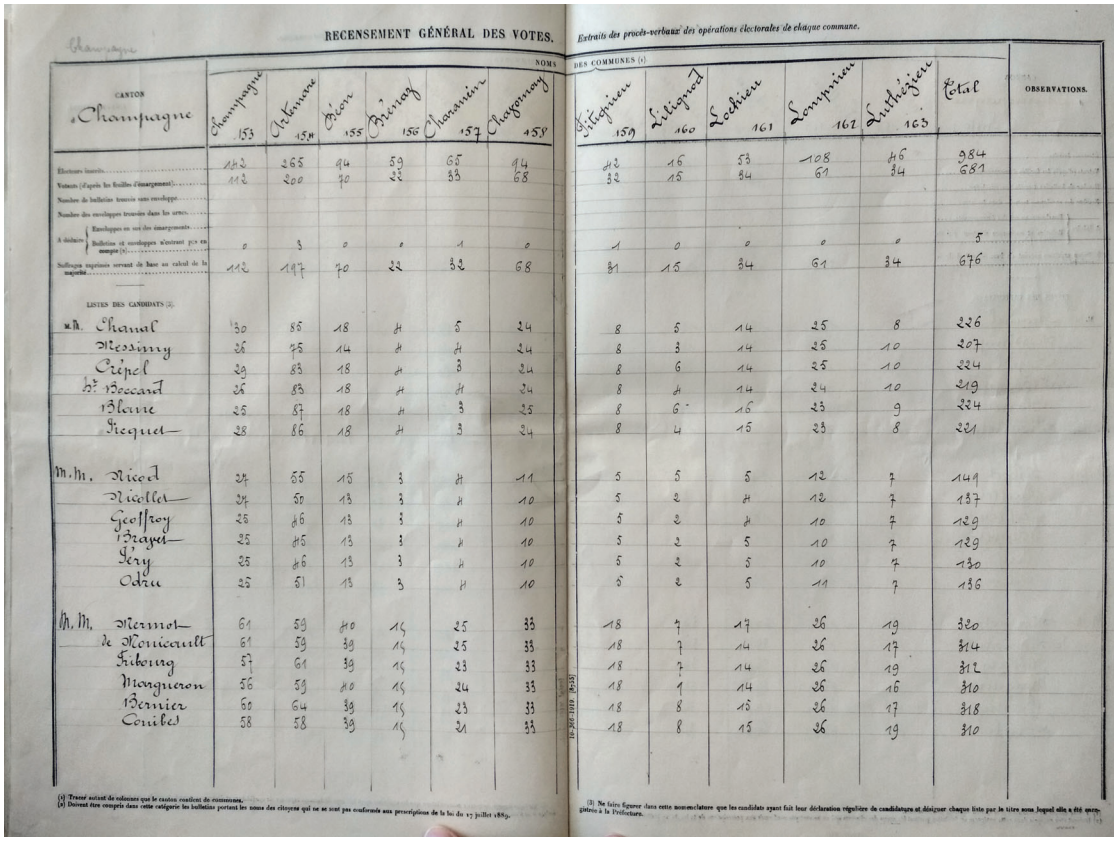
A number of different lists run during the 1919 elections. The archival data, as illustrated in Figure B3, only provides information on the name of the candidates running for each list. We collect the information on the name of each list as well as of the associated political party from Georges Lachapelle (*"Elections législatives du 16 Novembre 1919*, and complete when necessary this information with the *"Tableau des élections à la chambre des députés"* (the so-called *"Tableau Electoral"*.)

The main political forces running are (from Left to Right of the political spectrum):

- The **Communistes**.
- The Parti Socialiste (**SFIO**). It includes the Socialiste Unifiés.
- The Parti républicain radical et radical socialiste (**PRRS**).
- The Républicain Socialiste (**REP-SOC**).
- The Radical Indépendant (**RAD-IND**).
- The "**Gauche Radicale**", which is very close from the Radical Indépendant – they often sit together.

[13] These results are available in the boxes C//10001 to C//10009 at the National Archives for 1919; C//10010 to C//10019 for 1924; and in the boxes C//10030 to C//10041 for 1932.

[14] This voting system has been used only twice under the Third Republic (in 1919 and 1924) following the enactment of the law of July 12, 1919. To describe this system, we rely here on Chevallier and Mayeur [6].



RECENSEMENT GÉNÉRAL DES VOTES.

Extraits des procès-verbaux des opérations électorales de chaque commune.

Champagne

CANTON de Champagne	Champagne 153	Artenac 154	Brion 155	Brinay 156	Charanin 157	Chagenay 158	Fléginieux 159	Lédignac 160	Lochieu 161	Lemprieu 162	Luthézieu 163	Total	OBSERVATIONS
Électeurs inscrits	182	265	94	59	65	94	82	16	53	108	46	984	
Votants (d'après les feuilles d'émargement)	112	200	70	22	33	68	32	15	34	61	34	681	
Nombre de bulletins trouvés sans enveloppe													
Nombre des enveloppes trouvées dans les urnes													
A déduire : Enveloppes en sus des émargements													
A déduire : Bulletins et enveloppes n'entrant pas en compte (1)	0	3	0	0	1	0	1	0	0	0	0	5	
Suffrages exprimés servant de base au calcul de la majorité	112	197	70	22	32	68	31	15	34	61	34	676	
LISTES DES CANDIDATS (2).													
M.M. Chanal	30	55	18	4	5	24	8	5	14	25	8	226	
Nessigny	26	45	14	4	4	24	8	3	14	25	10	207	
Crépel	29	53	18	4	3	24	8	6	14	25	10	224	
Bx Boccard	26	53	18	4	4	24	8	4	14	24	10	219	
Blanc	25	57	18	4	3	25	8	6	16	23	9	224	
Picquet	28	56	18	4	3	24	8	4	15	23	8	221	
M.M. Nicod	24	55	15	3	4	11	5	5	5	12	7	141	
Nicollet	24	50	13	3	4	10	5	2	4	12	7	137	
Geoffroy	25	46	13	3	4	10	5	2	4	10	7	129	
Braget	25	45	13	3	4	10	5	2	5	10	7	129	
Léry	25	46	13	3	4	10	5	2	5	10	7	130	
Odru	25	51	13	3	4	10	5	2	5	11	7	136	
M.M. Mermet	61	59	40	15	25	33	18	7	17	26	19	320	
de Monicault	61	59	39	15	25	33	18	7	14	26	17	314	
Friboug	57	61	39	15	23	33	18	7	14	26	19	312	
Mauguéron	56	59	40	15	24	33	18	7	14	26	16	310	
Bernier	60	64	39	15	23	33	18	8	13	26	17	318	
Conibes	58	58	39	15	21	33	18	8	15	26	19	310	

(1) Tracer autant de colonnes que le canton contient de communes.
(2) Doivent être compris dans cette catégorie les bulletins portant les noms des citoyens qui ne se sont pas conformés aux prescriptions de la loi du 17 juillet 1889.

(3) Ne faire figurer dans cette nomenclature que les candidats ayant fait leur déclaration régulière de candidature et désigner chaque liste par le titre sous lequel elle a été enregistrée à la Préfecture.

Figure B3: Example of the 1919 Municipal-level Election Data

- The "Alliance Républicaine Démocratique" (**ARD**).
- The "Gauche republicaine democratique" (**GRD**), whose members sit together with the ARD.
- The "Républicains de gauche" (**RG**).
- The "Fédération Républicaine - Union Républicaine et Démocratique" (**FR-URD**).
- The "Union Nationale Républicaine" (**UNR**), which is part of the "Bloc National".
- The "Action républicaine et sociale" (**ARS**), also part of the "Bloc National".
- The ""Entente Républicaine Démocratique" (ERD), also part of the "Bloc National".
- The "**Bloc National**", which is made on different parties, but for which some candidates ran directly.
- A number of lists led by "**Anciens Combattants**" (veterans), which were part of the "Bloc National".
- The "**Action Française**", on the Extreme Right.

Table B2: 1919 Legislative Elections: Summary Statistics

	Mean	St.Dev	Median	P75	Max
Vote share - Extreme Left					
PCF	0.044	0.7	0.000	0.00	45
Vote share - Left					
SFIO	12.53	14.6	7.39	17.75	100
Miscellaneous left	0.72	5.2	0.00	0.00	94
Vote share - Center left					
PRRS	13.19	20.8	0.00	24.56	100
REP-SOC	3.39	11.6	0.00	0.00	100
Vote share - Center right					
RAD-IND (Bloc National)	1.00	6.8	0.00	0.00	98
Gauche Radicale	1.38	8.4	0.00	0.00	100
ARD (Bloc National)	3.95	16.2	0.00	0.00	100
GRD (Bloc National)	3.53	12.9	0.00	0.00	100
RG	2.03	10.2	0.00	0.00	100
Vote share - Right					
FR-URD (Bloc National)	12.32	22.2	0.00	19.42	100
UNR (Bloc National)	14.82	26.0	0.00	25.08	100
ARS (Bloc National)	4.13	15.1	0.00	0.00	100
ERD (Bloc National)	12.29	23.8	0.00	8.76	100
Bloc National (other)	1.03	8.4	0.00	0.00	100
Anciens Combattants (Veterans)	2.66	8.3	0.00	0.00	97
Miscellaneous right	1.70	8.9	0.00	0.00	92
Vote share - Extreme Right					
Action Francaise	0.11	1.1	0.00	0.00	47
Vote share - Miscellaneous	7.92	17.0	0.00	2.95	100
Turnout	72.57	11.3	73.91	79.67	100
Observations	35907				

Notes: This table provides summary statistics on the 1919 legislative elections results. An observation is a municipality. The different political parties are described in the text.

The 1924 elections The 1924 elections were held in May. Like for the 1919 elections, the voting system was the *"scrutin mixte à un tour"*. A number of different lists ran during the 1924 elections. The archival data, as illustrated in Figure B4, only provides information on the name of the list; given candidates from the same party gather together on different lists depending on the districts, to classify the lists, we complete the Interior Ministry information with information collected from Georges Lachapelle (*"Elections législatives du 11 Mai 1924*, illustrated in Figure B5).

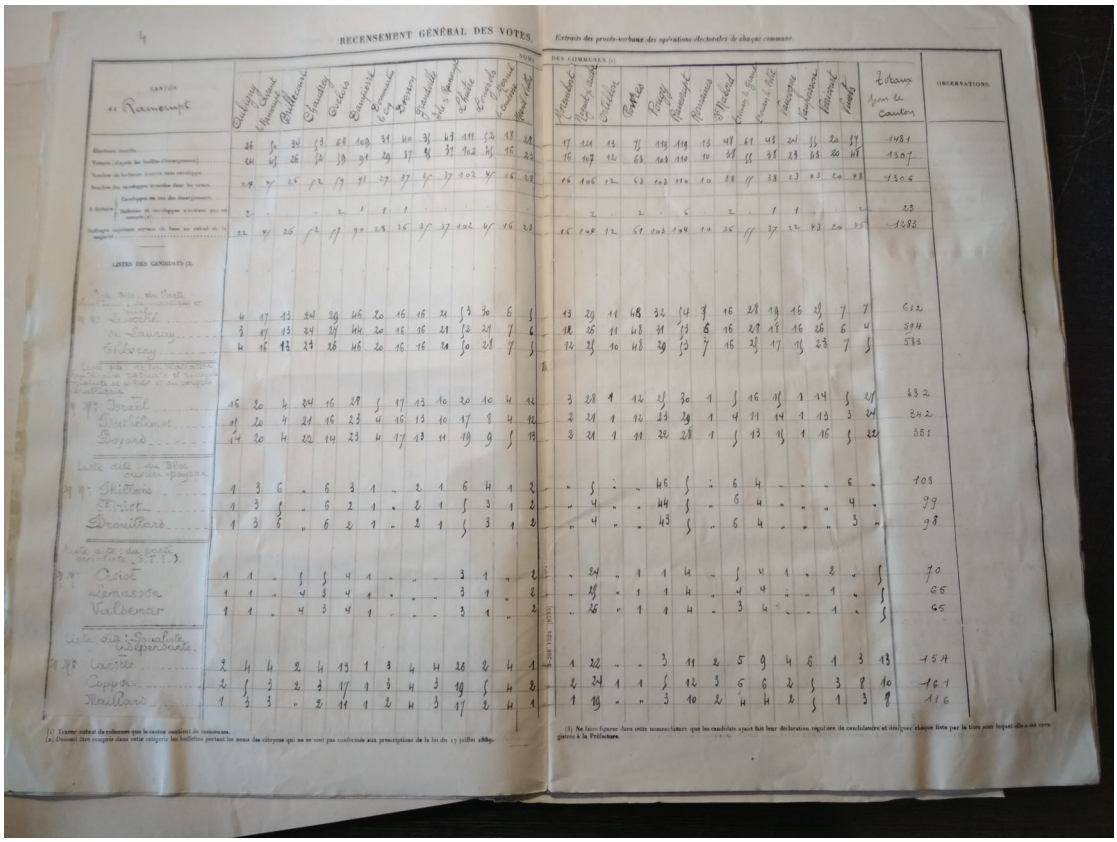


Figure B4: Example of the 1924 Municipal-level Election Data

The main political forces running are (from the Left to the Right):

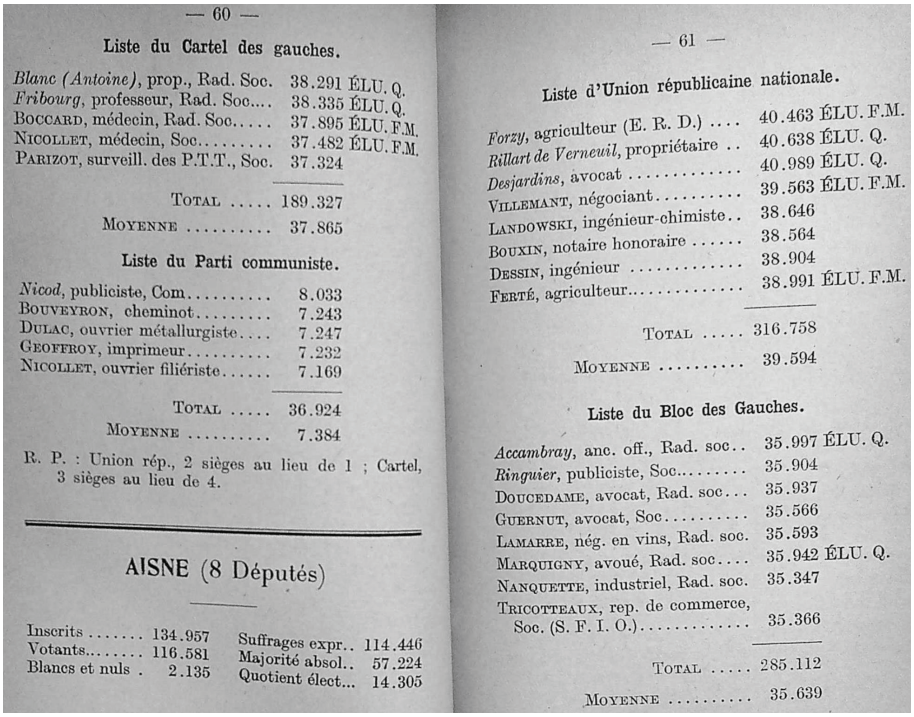
1. The "Liste du Bloc Ouvrier Paysan-Parti communiste" (**BOP**). This list is formed of the Communist Party and of some members of the Socialist Party.
2. The *"Liste du parti socialiste"* (**SFIO**) .
3. The *"Liste Républicaine Socialiste"* (**REP-SOC**).
4. The *"Liste radicale-socialiste"* (**RAD-SOC**).
5. The *"Républicains radicaux nationaux"* or dissidents (**REP-RAD**).
6. The *"Liste des républicains de gauche"* (**RG**).[15]

[15]This list is on the Right despite the name.

7. The *"Entente Républicaine Démocratique"* (**ERD**).

8. The **"Conservateurs"**.

Candidates from smaller parties on the Left are classified as "Miscellaneous Left". The remaining candidates are classified in a "**Divers**" category. Table B3 provides summary statistics at the municipal level on these elections.[16]



— 60 —

Liste du Cartel des gauches.

Blanc (Antoine), prop., Rad. Soc.	38.291 ÉLU. Q.
Fribourg, professeur, Rad. Soc....	38.335 ÉLU. Q.
Boccard, médecin, Rad. Soc.....	37.895 ÉLU. F.M.
Nicollet, médecin, Soc.....	37.482 ÉLU. F.M.
Parizot, surveill. des P.T.T., Soc.	37.324
Total	189.327
Moyenne	37.865

Liste du Parti communiste.

Nicod, publiciste, Com.....	8.033
Bouveyron, cheminot.....	7.243
Dulac, ouvrier métallurgiste....	7.247
Geoffroy, imprimeur.....	7.232
Nicollet, ouvrier filiériste.....	7.169
Total	36.924
Moyenne	7.384

R. P. : Union rép., 2 sièges au lieu de 1 ; Cartel, 3 sièges au lieu de 4.

AISNE (8 Députés)

Inscrits	134.957	Suffrages expr..	114.446
Votants.....	116.581	Majorité absol..	57.224
Blancs et nuls .	2.135	Quotient élect...	14.305

— 61 —

Liste d'Union républicaine nationale.

Forzy, agriculteur (E. R. D.)	40.463 ÉLU. F.M.
Rillart de Verneuil, propriétaire ..	40.638 ÉLU. Q.
Desjardins, avocat	40.989 ÉLU. Q.
Villemant, négociant.....	39.563 ÉLU. F.M.
Landowski, ingénieur-chimiste..	38.646
Bouxin, notaire honoraire	38.564
Dessin, ingénieur	38.904
Ferté, agriculteur.....	38.991 ÉLU. F.M.
Total	316.758
Moyenne	39.594

Liste du Bloc des Gauches.

Accambray, anc. off., Rad. soc..	35.997 ÉLU. Q.
Ringuier, publiciste, Soc.....	35.904
Doucedame, avocat, Rad. soc...	35.937
Guernut, avocat, Soc.....	35.566
Lamarre, nég. en vins, Rad. soc.	35.593
Marquigny, avoué, Rad. soc....	35.942 ÉLU. Q.
Nanquette, industriel, Rad. soc.	35.347
Tricotteaux, rep. de commerce, Soc. (S. F. I. O.).....	35.366
Total	285.112
Moyenne	35.639

Figure B5: Example of the 1924 District-level Electoral Results We Use to Recover the Political Parties of the Candidates

Just as for 1914, we also group the candidates into political positions, including for 1924 the Extreme Left category [we rely on 11, 8]. We include in the Right the ERD and the Conservateur. The REP-RAD and the RG are classified as Center Right. The Center Left includes the RAD-SOC and the REP-SOC; the Left the SFIO; and the Extreme Left the BOP.

The 1932 elections The 1932 (as well as the 1936 elections) took place with the *"scrutin uninominal majoritaire à deux tours"* (two-round system). The constituencies are single-member constituencies. If a candidate obtains the absolute majority in the first round, as well as a minimum of 25% of all the registered voters, then she is elected. If no candidate obtains the absolute majority in the first round, then there is a second round where the two

[16]Note that, given the electoral system used – the *"scrutin mixte à un tour"* where, as described above, citizens were given as many votes as there were MPs to elect, and where they could distribute those votes as they wished among the various candidates on all lists –, one cannot compute as usual the vote share obtained by each list using the number of votes cast.

Table B3: 1924 Legislative Elections: Summary Statistics

	Mean	St.Dev	Median	P75	Max
Vote share - Extreme left					
BOP	5.3	8.5	2.1	6.1	98
Vote share - Left					
SFIO	24.5	24.6	16.4	44.4	100
Miscellaneous left	0.2	1.7	0.0	0.0	89
Vote share - Center left					
RAD-SOC	12.2	20.5	0.0	18.7	100
REP-SOC	1.5	8.2	0.0	0.0	100
Vote share - Center right					
REP-RAD	2.0	8.6	0.0	0.0	100
RG	13.9	20.3	0.0	24.9	100
Vote share - Right					
ERD	35.9	26.9	35.0	54.9	100
Conservateur	1.8	8.9	0.0	0.0	100
Vote share - Miscellaneous	0.7	5.4	0.0	0.0	94
Turnout	84.4	8.0	85.5	89.5	100
Observations	35560				

Notes: This table provides summary statistics on the 1924 legislative elections results. An observation is a municipality. The different political parties are described in the text.

most-voted candidates and the candidates who obtained more than 12.5% of the registered voters can take part. The candidate who obtains most votes win.

Candidates in the legislative elections of 1932 are often difficult to classify, especially candidates from the Right half of the political spectrum, who are often characterized more by their opposition to the three major parties and the Left and Centre Left (PCF, SFIO, Radicals) than by their membership of a particular party, especially since the boundaries between the many right-wing parliamentary organizations and groups are often quite fluid and frequently change during the course of a legislature. Based on Lachapelle's classifications, the main parties are, from the Extreme Left to the Right:

- The Communist party (**PCF**);
- The Socialist party (**SFIO**);
- The Républicains Socialistes (**REP-SOC**);
- The Radicaux Socialistes (**RAD-SOC**);
- The Républicains de gauche (**AD-RG**) (that are part of the "Alliance Démocratique");
- The Radicaux Indépendants (**AD-IND**) (which also include candidates from the "gauche radicale", the "gauche sociale et radicale", and the "indépendants de gauche"), that are part of the "Alliance Démocratique";

- The Parti Démocrate Populaire (**AD-PDP**) (Christian-democrats), that is also part of the "Alliance Démocratique";
- The Union Républicaine Démocratique (**FR-URD**), that also includes candidates presented by the Fédération Républicaine.

Besides, there were also a number of "Miscellaneous Right" candidates, mostly under the label "Conservative", and as well as"Miscellaneous Left" candidates. Table B4 provides summary statistics at the municipal level on the 1932 elections.

Table B4: 1932 Legislative Elections: Summary Statistics

	Mean	St.Dev	Median	P75	Max
Vote share - Extreme left					
PCF	4.2	7.7	1.4	4.4	93
Vote share - Left					
SFIO	16.1	19.8	7.1	26.4	100
Miscellaneous left	0.2	2.4	0.0	0.0	68
Vote share - Center left					
REP-SOC	4.0	12.6	0.0	0.0	97
RAD-SOC	23.2	24.7	16.0	42.1	100
Vote share - Center right					
AD-RG	17.9	25.4	0.0	35.5	100
AD-IND	15.6	24.7	0.0	26.3	100
Vote share - Right					
AD-PDP	3.6	12.7	0.0	0.0	100
FR-URD	12.7	23.6	0.0	16.4	100
AGR	1.3	5.8	0.0	0.0	84
Miscellaneous right	0.8	6.2	0.0	0.0	99
Vote share - Miscellaneous	0.5	6.7	0.0	0.0	100
Turnout	85.0	8.1	86.3	90.1	100
Observations	31828				

Notes: This table provides summary statistics on the 1932 legislative elections results. An observation is a municipality. The different political parties are described in the text. The number of observations is lower for the 1932 elections than for the other legislatives elections. It is due to the fact that for that year, the national archives have lost the electoral results in the departments whose first letter is A and B (i.e. Ain , Aisne, Allier, Alpes Maritimes, Ardèche, Ardennes, Ariège, Aube, Aude, Aveyron, and Basses Alpes.

1936 Elections The 1936 legislative elections took place on 26 April and 3 May, to fill 618 seats in the Chamber of Deputies. There were won by the *"Front Populaire"* (Popular Front) composed of the SFIO, the RAD-SOC, the Communist Party (PCF), as well as a number of other smaller parties on the left. The voting system was similar to the one used in 1932 (single-member, two-round ballot). The *"Front Populaire"* fell in 1938, when the RAD-SOC forced the SFIO out of cabinet and the Communists broke with the coalition over the vote for the Munich agreement (which the Communists voted against). A general strike ensued

in 1938, which the RAD-SOC crushed, before joining a political alliance with conservative Right-wing parties, the AD and the URD.

In the continuation of 1932, candidates in the 1936 elections, particularly in the opposition, on the Right, are often difficult to classify. We adopt the following classification, from the Extreme Left to the Right:

- The Communist party (**PCF**);
- The Socialist party (**SFIO**);
- The Union Socialiste Républicaine (**USR**);
- The **RAD-SOC**;
- The Alliance Démocrate (**AD**);
- The Fédération Républicaine - Union Républicaine et Démocratique (**FR-URD**);
- The Parti épublicain National (**PRN**);
- The Parti **Franciste**.

Table B5 provides summary statistics at the municipal level on the 1936 elections.

B.3.3 The Post-World War 2 Legislative Elections

To investigate the long-run consequences of the exposure to Pétain, we gather the results of the post-WW2 legislative elections. Under the Fourth and the Fifth Republic, legislative elections in France were supposed to take place every five years. However, given the executive power to dissolve the National Assembly – which happened a number of times under the Fourth and the Fifth Republic – the time interval between two legislative elections in our sample can be shorter. Between 1945 and 2017, 18 legislative elections took place.[17] Data for these elections are from Cagé [4] and Bekkouche and Cagé [2].

The wartime period marks an almost wholly clean break with the prewar party system: in the aftermath of WW2, the political landscape is upside down and the ratio of power is completely modified, in particular regarding political parties on the Right. In striking contrast with the interwar period, the Right held a large electoral advantage until the 1980s. As for the Extreme Right, the history of the French Extreme Right is the one of splinter groupuscules that are marginal in the political life [1][18] until the first electoral success of the National Front in 1983.

B.4 World War 2 Combat Exposure and Resistance Data

We use several other datasets that capture the other dimensions of French history during WWII beyond collaboration, and in particular data on combat intensity in 1940 and 1944 and on the Resistance.

[17] In 1945, 1951, 1956, 1958, 1962, 1967, 1968, 1973, 1978, 1981, 1986, 1988, 1993, 1997, 2002, 2007, 2012, and 2017.

[18] The only success – the one of the "Poujadisme" in 1956 – is short-lived.

Table B5: 1936 Legislative Elections: Summary Statistics

	Mean	St.Dev	Median	P75	Max
Vote share - Extreme left					
PCF	8.56	11.4	4.23	11.36	90
Vote share - Left					
SFIO	16.66	18.6	9.14	28.11	100
Miscellaneous left	0.21	2.7	0.00	0.00	73
Vote share - Center left					
USR	6.62	15.1	0.00	1.57	100
RAD-SOC	19.14	21.2	12.37	34.63	100
Vote share - Center right					
AD	26.83	27.4	21.43	46.34	100
FR-URD	0.28	2.6	0.00	0.00	93
PRN	15.91	25.2	0.00	28.44	100
Vote share - Right					
AGR	1.95	8.4	0.00	0.00	100
Miscellaneous right	2.18	10.1	0.00	0.00	100
Vote share - Extreme right					
Franciste	0.04	0.8	0.00	0.00	53
Vote share - Miscellaneous	1.62	9.8	0.00	0.00	100
Turnout	84.85	7.3	85.83	89.47	100
Observations	36903				

Notes: This table provides summary statistics on the 1936 legislative elections results. An observation is a municipality. The different political parties are described in the text.

B.4.1 Combat in 1940

We digitized and geocoded data on the battles that took place in France from the maps of the *The West Point Atlas of American wars*. The so-called "Battle of France" only lasted six weeks (from May 1940 to June 1940). We construct measures of the days of combat at a given point, and we aggregate at the municipality level. Figure B6 below shows the resulting heat map of combat intensity across France. The mean number of days of combat in a given municipality in 1940 was 4.47 days, and the maximum 23 days. The delimitation of the demarcation line was, to some extent, determined by the advance of German troops, as well as by economic consideration, with major economic resources and railway lines in the occupied zone. Accordingly, the mean combat intensity is much higher in the occupied zone (6.39 days) compared to the Vichy-controlled area (1.27 days).

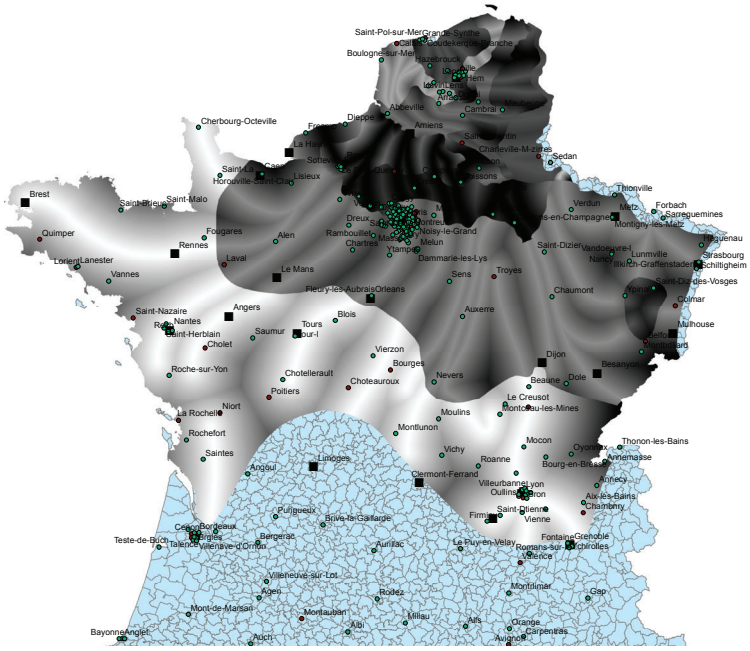


Figure B6: Heat Map of Combat Intensity in 1940. Own calculations based upon weekly German individual unit movements derived from the *The West Point atlas of American wars*.

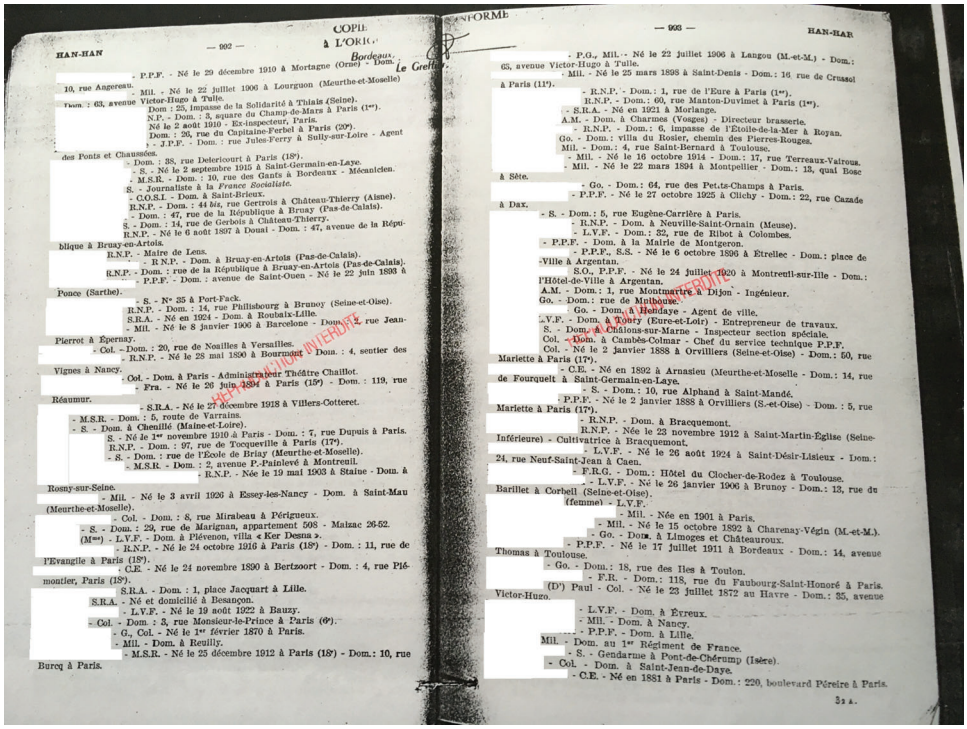
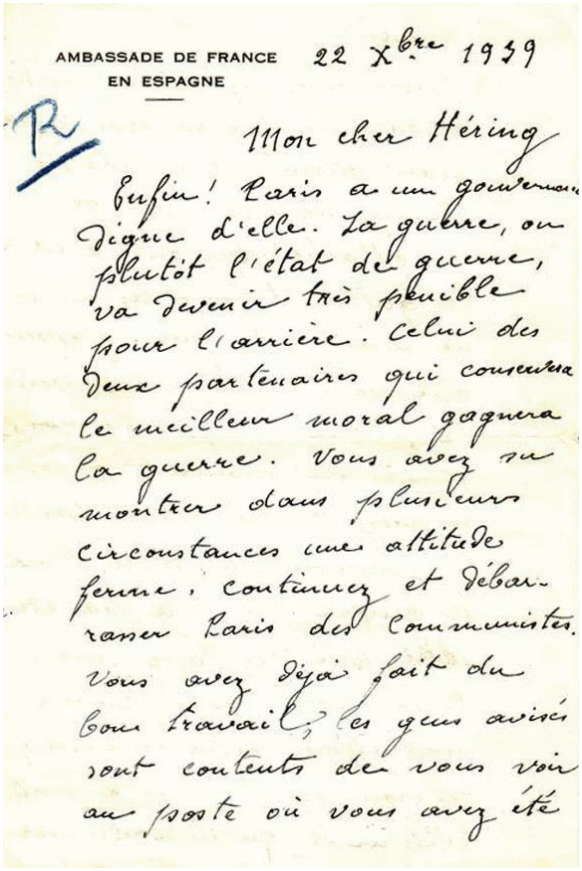


Figure B7: Example Page from the Secret List of Collaborators Collected in 1944 and 1945 under the Supervision of Colonel Paul Paillole, the Head of French Army Intelligence at the End of the War.

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Figure B8: Referendum on "If France had to choose a dictator, who would you pick?" in the "Petit Journal" Newspaper, on 5 December 1934



AMBASSADE DE FRANCE
EN ESPAGNE

22 X^bre 1939

Mon cher Héring

Enfin! Paris a un gouverneur digne d'elle. La guerre, ou plutôt l'état de guerre, va devenir très pénible pour l'arrière. Celui des deux partenaires qui conservera le meilleur moral gagnera la guerre. Vous avez su montrer dans plusieurs circonstances une attitude ferme, continuez et débarrassez Paris des communistes. Vous avez déjà fait du bon travail, les gens avisés sont contents de vous voir au poste où vous avez été

Notes: Pétain writes: "My dear Héring, Finally! Paris has a governor who is worth her. The war, or rather the state of war, is about to become very uncomfortable for the back. The one of the two partners who keeps better morale will win the war. You have shown in several circumstances a firm attitude, go on and keep ridding Paris of the Communists. You already have done a good job, the people in the know are glad to see you in this position" (translation from the Authors).

Figure B9: Letter from Pétain, then Ambassador to Spain, to General Héring, upon Héring's Nomination as Military Commander of Paris, 22 December 1939.

.

References

[1] **Agrikoliansky, Éric**, *Les partis politiques en France - 3e édition* Science politique, Armand Colin, 2016.

[2] **Bekkouche, Yasmine and Julia Cagé**, "The Price of a Vote: Evidence from France, 1993-2014," CEPR Discussion Papers 12614, C.E.P.R. Discussion Papers 2018.

[3] **Burrin, Philippe**, *Living with Defeat: France under German Occupation, 1940-1944*, Arnold: London, Sydney, Auckland, 1996.

[4] **Cagé, Julia**, "Media Competition, Information Provision and Political Participation: Evidence from French Local Newspapers and Elections, 1944-2014," *Journal of Public Economics*, 2020.

[5] **Calonico, Sebastian, Matias D. Cattaneo, and Rocio Titiunik**, "Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs," *Econometrica*, 2014, *82* (6), 2295–2326.

[6] **Chevallier, Jean-Jacques and Jean-Marie Mayeur**, *Histoire des institutions et des régimes politiques de la France de 1789 à 1958* Campfire graphic novels: Classic, Dalloz, 2009.

[7] **Cointet, Jean-Paul**, *Les Hommes de Vichy – L'illusion du pouvoir*, Perrin, 2017.

[8] **Dubasque, François and Eric Kocher-Marboeuf**, *Terres d'élections : Les dynamiques de l'ancrage politique (1750-2009)*, Rennes: Presse Universitaires de Rennes, 2014.

[9] **Forbes, Robert**, *For Europe: the French volunteers of the Waffen-SS*, Stackpole Books, 2010.

[10] **Germain, Michel**, *Histoire de la milice et les forces du maintien de l'ordre: guerre civile en Haute-Savoie*, La Fontaine de Siloé, 1997.

[11] **Guillaume, Sylvie**, *Dictionnaire des parlementaires d'Aquitaine sous la Troisième République*, Presses universitaires de Bordeaux, 1998.

[12] **Haegel, Florence**, *Partis politiques et système partisan en France* Fait politique, Sciences Po, 2007.

[13] **Karimi, Battle, Sébastien Terrat, Samuel Dequiedt, Nicolas PA Saby, Walid Horrigue, Mélanie Lelièvre, Virginie Nowak, Claudy Jolivet, Dominique Arrouays, Patrick Wincker et al.**, "Biogeography of soil bacteria and archaea across France," *Science advances*, 2018, *4* (7), eaat1808.

[14] **Paxton, Robert**, *Vichy France: Old Guard and New Order, 1940-1945*, Columbia University Press: New York, 2001.

[15] **Poirmeur, Yves**, *Les partis politiques: Du XIXe au XXIe siècle en France*, LGDJ, 2014.

[16] **Squicciarini, Mara**, "Devotion and development: Religiosity, education, and economic progress in 19th-century france," *Education, and Economic Progress in 19th-Century France (July 2019). CEPR Discussion Paper No. DP13877*, 2019.

Supplementary references

[17] *Campagne 1914 – 1918 - Historique du 57e Régiment d'Infanterie. Bulletin de la Société de Géographie de Rochefort*. 1920.

[18] Albert Bailly. *Le 15-2 pendant la Grande guerre : de l'Alsace aux Flandres, 1914-1918*. Imprimerie Berger-Levrault (Nancy), 1919.

[19] Gabriel Boissy. *Le 81e régiment d'infanterie : quatre citations Gerbéviller. Ypres Beauséjour. Verdun. Mort-homme Locre La Serre*. Impr. Royer (Nancy), 1920.

[20] Bibliothèque de documentation internationale contemporaine. *113e régiment d'infanterie. Historique sommaire de la campagne 1914-1918*.

[21] Bibliothèque de documentation internationale contemporaine. *Historique des 151e et 351e régiments d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[22] Bibliothèque de documentation internationale contemporaine. *Historique des 66e régiment d'infanterie, 266e régiment d'infaterie et 70e régiment d'infanterie territoriale. France. 1914-1918*. Maison Alfred Mame et fils (Tours).

[23] Bibliothèque de documentation internationale contemporaine. *Historique du 102e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[24] Bibliothèque de documentation internationale contemporaine. *Historique du 103e régiment d'infanterie. France. 1914-1918*. Imprimerie du Progrès, A. Felix (Sartrouville).

[25] Bibliothèque de documentation internationale contemporaine. *Historique du 109e régiment d'infanterie. France. 1914-1918*.

[26] Bibliothèque de documentation internationale contemporaine. *Historique du 10e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[27] Bibliothèque de documentation internationale contemporaine. *Historique du 110e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[28] Bibliothèque de documentation internationale contemporaine. *Historique du 112e régiment d'infanterie. France. 1914-1918*.

[29] Bibliothèque de documentation internationale contemporaine. *Historique du 116e régiment d'infanterie. France. 1914-1918*. Imprimerie Commelin (Vannes-Pontivy).

[30] Bibliothèque de documentation internationale contemporaine. *Historique du 117e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[31] Bibliothèque de documentation internationale contemporaine. *Historique du 121e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[32] Bibliothèque de documentation internationale contemporaine. *Historique du 122e régiment d'infanterie. France. 1914-1918*. imp. Carrère (Rodez).

[33] Bibliothèque de documentation internationale contemporaine. *Historique du 123e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[34] Bibliothèque de documentation internationale contemporaine. *Historique du 124e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[35] Bibliothèque de documentation internationale contemporaine. *Historique du 125e régiment d'infanterie. France. 1914-1918*. Imprimerie Marc Texier (Poitiers).

[36] Bibliothèque de documentation internationale contemporaine. *Historique du 130e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[37] Bibliothèque de documentation internationale contemporaine. *Historique du 131e régiment d'infanterie. France. 1914-1918*. Imprimerie du Loiret (Oreleans).

[38] Bibliothèque de documentation internationale contemporaine. *Historique du 135e régiment d'infanterie. France. 1914-1918*. Lithographue militaire Demange (Angers).

[39] Bibliothèque de documentation internationale contemporaine. *Historique du 13e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[40] Bibliothèque de documentation internationale contemporaine. *Historique du 141e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[41] Bibliothèque de documentation internationale contemporaine. *Historique du 142e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[42] Bibliothèque de documentation internationale contemporaine. *Historique du 146e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[43] Bibliothèque de documentation internationale contemporaine. *Historique du 149e régiment d'infanterie. France. 1914-1918*. Imprimerie Klein (Epinal).

[44] Bibliothèque de documentation internationale contemporaine. *Historique du 150e régiment d'infanterie. France. 1914-1918*.

[45] Bibliothèque de documentation internationale contemporaine. *Historique du 154e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[46] Bibliothèque de documentation internationale contemporaine. *Historique du 155e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[47] Bibliothèque de documentation internationale contemporaine. *Historique du 159e régiment d'infanterie. France. 1914-1918*. Librairie militaire Chapelot.

[48] Bibliothèque de documentation internationale contemporaine. *Historique du 161e régiment d'infanterie. France. 1914-1918*. Imprimerie de Berger-Levrault.

[49] Bibliothèque de documentation internationale contemporaine. *Historique du 162e régiment d'infanterie. France. 1914-1918*. Imprimerie de Berger-Levrault.

[50] Bibliothèque de documentation internationale contemporaine. *Historique du 164e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot.

[51] Bibliothèque de documentation internationale contemporaine. *Historique du 166e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[52] Bibliothèque de documentation internationale contemporaine. *Historique du 167e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[53] Bibliothèque de documentation internationale contemporaine. *Historique du 168e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[54] Bibliothèque de documentation internationale contemporaine. *Historique du 169e régiment d'infanterie. France. 1914-1918*.

[55] Bibliothèque de documentation internationale contemporaine. *Historique du 173e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[56] Bibliothèque de documentation internationale contemporaine. *Historique du 17e régiment d'infanterie. France. 1914-1918*.

[57] Bibliothèque de documentation internationale contemporaine. *Historique du 18e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[58] Bibliothèque de documentation internationale contemporaine. *Historique du 1er régiment d'infanterie. France. 1914-1918*.

[59] Bibliothèque de documentation internationale contemporaine. *Historique du 20e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[60] Bibliothèque de documentation internationale contemporaine. *Historique du 25e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[61] Bibliothèque de documentation internationale contemporaine. *Historique du 27e R. I. pendant la guerre 1914-1918*. R. Thorey.

[62] Bibliothèque de documentation internationale contemporaine. *Historique du 29e régiment d'infanterie. France. 1914-1918*.

[63] Bibliothèque de documentation internationale contemporaine. *Historique du 34e régiment d'infanterie. France. 1914-1918*.

[64] Bibliothèque de documentation internationale contemporaine. *Historique du 37e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[65] Bibliothèque de documentation internationale contemporaine. *Historique du 40e régiment d'infanterie. France. 1914-1918*.

[66] Bibliothèque de documentation internationale contemporaine. *Historique du 42e régiment d'infanterie. France. 1914-1918*. Imprimerie Schmitt frères (Belfort).

[67] Bibliothèque de documentation internationale contemporaine. *Historique du 43e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[68] Bibliothèque de documentation internationale contemporaine. *Historique du 44e régiment d'infanterie. France. 1914-1918*. Charles-Lavauzelle.

[69] Bibliothèque de documentation internationale contemporaine. *Historique du 45e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[70] Bibliothèque de documentation internationale contemporaine. *Historique du 47e régiment d'infanterie. France. 1914-1918*. Imprimerie J. Haize (Saint-Servan).

[71] Bibliothèque de documentation internationale contemporaine. *Historique du 49e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[72] Bibliothèque de documentation internationale contemporaine. *Historique du 51e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[73] Bibliothèque de documentation internationale contemporaine. *Historique du 53e régiment d'infanterie. France. 1914-1918*. Imprimerie ouvrière (Toulouse).

[74] Bibliothèque de documentation internationale contemporaine. *Historique du 56e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[75] Bibliothèque de documentation internationale contemporaine. *Historique du 59e régiment d'infanterie. France. 1914-1918*. Imprimerie J. Delaye et fils (Pamiers).

[76] Bibliothèque de documentation internationale contemporaine. *Historique du 60e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[77] Bibliothèque de documentation internationale contemporaine. *Historique du 64e régiment d'infanterie. France. 1914-1918*. Imprimerie militaire Charles-Lavauzelle.

[78] Bibliothèque de documentation internationale contemporaine. *Historique du 69e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[79] Bibliothèque de documentation internationale contemporaine. *Historique du 73e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[80] Bibliothèque de documentation internationale contemporaine. *Historique du 74e régiment d'infanterie. France. 1914-1918*. Imp. L. Wolf (Rouen).

[81] Bibliothèque de documentation internationale contemporaine. *Historique du 77e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[82] Bibliothèque de documentation internationale contemporaine. *Historique du 80e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[83] Bibliothèque de documentation internationale contemporaine. *Historique du 82e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot.

[84] Bibliothèque de documentation internationale contemporaine. *Historique du 84e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[85] Bibliothèque de documentation internationale contemporaine. *Historique du 85e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[86] Bibliothèque de documentation internationale contemporaine. *Historique du 86e régiment d'infanterie. France. 1914-1918*. Imp. Peyriller, Rouchon et Gamon.

[87] Bibliothèque de documentation internationale contemporaine. *Historique du 8e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[88] Bibliothèque de documentation internationale contemporaine. *Historique du 90e régiment d'infanterie. France. 1914-1918*. Imp. G. Dupin.

[89] Bibliothèque de documentation internationale contemporaine. *Historique du 92e régiment d'infanterie. France. 1914-1918*. Maison Alfred Mame et fils (Tours).

[90] Bibliothèque de documentation internationale contemporaine. *Historique du 94e régiment d'infanterie. France. 1914-1918*. Imprimerie Oberthür (Rennes).

[91] Bibliothèque de documentation internationale contemporaine. *Historique du 95e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[92] Bibliothèque de documentation internationale contemporaine. *Historique du 96e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault.

[93] Bibliothèque de documentation internationale contemporaine. *Historique du 9e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris).

[94] Bibliothèque de documentation internationale contemporaine. *Le Quinze-Six pendant la Grande Guerre*. Imprimerie Berger-Levrault.

[95] Bibliothèque de documentation internationale contemporaine. *Historique du 107e régiment d'infanterie. France. 1914-1918*. Imprimerie Claude Helluy et cie (Angoulême), 1919.

[96] Bibliothèque de documentation internationale contemporaine. *Historique du 132e régiment d'infanterie. France. 1914-1918*. Imprimerie Louis Schnelder (Bishwiler), 1919.

[97] Bibliothèque de documentation internationale contemporaine. *Historique du 16e régiment d'infanterie. France. 1914-1918*. Imprimerie militaire J.-L. Serre (Montbrisson), 1919.

[98] Bibliothèque de documentation internationale contemporaine. *Historique du 170e régiment d'infanterie. France. 1914-1918*. Imp. A-F. Faivre d'Arcia, 1919.

[99] Bibliothèque de documentation internationale contemporaine. *Historique du 26e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault, 1919.

[100] Bibliothèque de documentation internationale contemporaine. *Historique du 38e régiment d'infanterie. France. 1914-1918*. Librairie du Lycée (Saint-Etienne), 1919.

[101] Bibliothèque de documentation internationale contemporaine. *Historique du 68e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault, 1919.

[102] Bibliothèque de documentation internationale contemporaine. *Historique du 89e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot, 1919.

[103] Bibliothèque de documentation internationale contemporaine. *119e régiment d'infanterie. Cinaquante et un mois de guerre d'après l'historique du Corps*. Henri Charles-Lavauzelle (Paris), 1920.

[104] Bibliothèque de documentation internationale contemporaine. *Historique des 137e et 337e régiments d'infanterie et des 84e et 284e régiments d'infanterie territoriale. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[105] Bibliothèque de documentation internationale contemporaine. *Historique du 100e régiment d'infanterie. France. 1914-1918*. Imprimerie Viers (Tulle), 1920.

[106] Bibliothèque de documentation internationale contemporaine. *Historique du 101e régiment d'infanterie. France. 1914-1918*. Imprimerie du Progrès, A. Felix (Sartrouville), 1920.

[107] Bibliothèque de documentation internationale contemporaine. *Historique du 104e régiment d'infanterie. France. 1914-1918*. Imprimerie du Progrès, A. Felix (Sartrouville), 1920.

[108] Bibliothèque de documentation internationale contemporaine. *Historique du 115e régiment d'infanterie. France. 1914-1918*. Imprimerie Gabriel Enault (Mamers), 1920.

[109] Bibliothèque de documentation internationale contemporaine. *Historique du 11e régiment d'infanterie. France. 1914-1918*. Edouard Julien (Albi), 1920.

[110] Bibliothèque de documentation internationale contemporaine. *Historique du 126e régiment d'infanterie. France. 1914-1918*. Imprimerie de la République (Brive), 1920.

[111] Bibliothèque de documentation internationale contemporaine. *Historique du 127e régiment d'infanterie. France. 1914-1918*. Imprimerie P. Fassiaux-Dufrenne (Saint-Amand-les-Eaux), 1920.

[112] Bibliothèque de documentation internationale contemporaine. *Historique du 129e régiment d'infanterie. France. 1914-1918*. Imprimerie du Journal LE HAVRE (Le Havre), 1920.

[113] Bibliothèque de documentation internationale contemporaine. *Historique du 12e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[114] Bibliothèque de documentation internationale contemporaine. *Historique du 134e régiment d'infanterie. France. 1914-1918*. Protat Frères (Macon), 1920.

[115] Bibliothèque de documentation internationale contemporaine. *Historique du 136e régiment d'infanterie. France. 1914-1918*. Imprimeries Oberthur (Rennes), 1920.

[116] Bibliothèque de documentation internationale contemporaine. *Historique du 138e régiment d'infanterie. France. 1914-1918*. Imprimerie Ussel Freres, A. Bontemps Succeseur (Limoges), 1920.

[117] Bibliothèque de documentation internationale contemporaine. *Historique du 143e régiment d'infanterie. France. 1914-1918*. Soc. anon. des étab d'imp. A Herbelin, 1920.

[118] Bibliothèque de documentation internationale contemporaine. *Historique du 144e régiment d'infanterie. France. 1914-1918*. Imprimerie G. Delmas (Bordeaux), 1920.

[119] Bibliothèque de documentation internationale contemporaine. *Historique du 153e régiment d'infanterie. France. 1914-1918*. Imprimerie Paul Kahn (Epinal), 1920.

[120] Bibliothèque de documentation internationale contemporaine. *Historique du 15e régiment d'infanterie. France. 1914-1918*. Imprimerie F. Cocharaux (Auch), 1920.

[121] Bibliothèque de documentation internationale contemporaine. *Historique du 160e régiment d'infanterie. France. 1914-1918*. Librairie Chapelot (Paris), 1920.

[122] Bibliothèque de documentation internationale contemporaine. *Historique du 165e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[123] Bibliothèque de documentation internationale contemporaine. *Historique du 21e régiment d'infanterie. France. 1914-1918*. Imprimerie Moderne (Langres), 1920.

[124] Bibliothèque de documentation internationale contemporaine. *Historique du 22e régiment d'infanterie. France. 1914-1918*. Imprimeries Réunies (Lyon), 1920.

[125] Bibliothèque de documentation internationale contemporaine. *Historique du 23e régiment d'infanterie. France. 1914-1918*. Imprimerie-librairie militaire universelle L. Fournier (Paris), 1920.

[126] Bibliothèque de documentation internationale contemporaine. *Historique du 24e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[127] Bibliothèque de documentation internationale contemporaine. *Historique du 2nd régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[128] Bibliothèque de documentation internationale contemporaine. *Historique du 31e régiment d'infanterie. France. 1914-1918*. Charles Lavauzelle, 1920.

[129] Bibliothèque de documentation internationale contemporaine. *Historique du 33e régiment d'infanterie. France. 1914-1918*. Imprimerie de J. Dumoulin (Paris), 1920.

[130] Bibliothèque de documentation internationale contemporaine. *Historique du 36e régiment d'infanterie. France. 1914-1918*. A. Olivier (Caen), 1920.

[131] Bibliothèque de documentation internationale contemporaine. *Historique du 3e régiment d'infanterie*. Librairie militaire Chapelot (Paris), 1920.

[132] Bibliothèque de documentation internationale contemporaine. *Historique du 40e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[133] Bibliothèque de documentation internationale contemporaine. *Historique du 46e régiment d'infanterie. France. 1914-1918*. Imprimerie librairie militaire universelle L. Fournier (Paris), 1920.

[134] Bibliothèque de documentation internationale contemporaine. *Historique du 48e régiment d'infanterie. France. 1914-1918*. Imprimerie Oberthür (Rennes, 1920.

[135] Bibliothèque de documentation internationale contemporaine. *Historique du 4e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault, 1920.

[136] Bibliothèque de documentation internationale contemporaine. *Historique du 50e régiment d'infanterie. France. 1914-1918*. Imprimerie Cassard frères (Périgueux), 1920.

[137] Bibliothèque de documentation internationale contemporaine. *Historique du 55e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[138] Bibliothèque de documentation internationale contemporaine. *Historique du 58e régiment d'infanterie. France. 1914-1918*. Imprimerie Rullière frères (Avignon), 1920.

[139] Bibliothèque de documentation internationale contemporaine. *Historique du 5e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[140] Bibliothèque de documentation internationale contemporaine. *Historique du 63e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[141] Bibliothèque de documentation internationale contemporaine. *Historique du 67e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[142] Bibliothèque de documentation internationale contemporaine. *Historique du 6e régiment d'infanterie. France. 1914-1918*. Imprimerie J. Thaumiaux (Saintes), 1920.

[143] Bibliothèque de documentation internationale contemporaine. *Historique du 70e régiment d'infanterie. France. 1914-1918*. Imprimerie Oberthür (Rennes), 1920.

[144] Bibliothèque de documentation internationale contemporaine. *Historique du 71e régiment d'infanterie. France. 1914-1918*. Francisque Guyon (Saint-Brieuc), 1920.

[145] Bibliothèque de documentation internationale contemporaine. *Historique du 75e régiment d'infanterie. France. 1914-1918*. Imprimerie Berger-Levrault, 1920.

[146] Bibliothèque de documentation internationale contemporaine. *Historique du 76e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[147] Bibliothèque de documentation internationale contemporaine. *Historique du 78e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1920.

[148] Bibliothèque de documentation internationale contemporaine. *Historique du 7e régiment d'infanterie. France. 1914-1918*. (Cahors), 1920.

[149] Bibliothèque de documentation internationale contemporaine. *Historique du 88e régiment d'infanterie. France. 1914-1918*. Imprimerie F. Cocharaux (Auch), 1920.

[150] Bibliothèque de documentation internationale contemporaine. *Historique du 91e régiment d'infanterie. France. 1914-1918*. A. Anciaux (Charleville), 1920.

[151] Bibliothèque de documentation internationale contemporaine. *Historique du 93e régiment d'infanterie. France. 1914-1918*. Imprimerie Moderne (La Roche-Sur-Yon), 1920.

[152] Bibliothèque de documentation internationale contemporaine. *Le Régiment des lions : histoire du 133e régiment d'infanterie pendant la Grande guerre*. Librairie F. Montbarbon (Belley), 1920.

[153] Bibliothèque de documentation internationale contemporaine. *Historique du 148e régiment d'infanterie. France. 1914-1918*. Imprimerie J. Brinkmann (Mulhouse), 1921.

[154] Bibliothèque de documentation internationale contemporaine. *Historique du 157e régiment d'infanterie. France. 1914-1918*. Imprimerie Brun et Piallat, 1922.

[155] Bibliothèque de documentation internationale contemporaine. *Historique du 62e régiment d'infanterie. France. 1914-1918*. Henri Charles-Lavauzelle (Paris), 1922.

[156] Bibliothèque de documentation internationale contemporaine. *Historique du 118e régiment d'infanterie. France. 1914-1918*. Imprimerie-Librairie militaire universelle L. Fournier (Paris), 1923.

[157] Bibliothèque de documentation internationale contemporaine. *Historique du 39e régiment d'infanterie. France. 1914-1918*. Imprimerie commerciale du journal de Rouen (Rouen), 1934.

[158] Ministère des armées. *97e régiment d'infanterie : J.M.O.*

[159] André Gadioux and Maurice Pouron. *Ce que nous avons fait, historique du 32e régiment d'infanterie pendant la campagne 1914-1919*. (Tours), 1919.

[160] Charles Jules Gaston (1865-19..) Gaube. *Journal des marches et opérations du 98e régiment d'infanterie, du 2 août 1914 au 6 septembre 1919*. Imprimerie Maurice Souchier (Roanne), 1924.

[161] Service historique de la défense. *79e régiment d'infanterie. 1914-1918*. Impr. Royer (Nancy).

[162] Service historique de la défense. *Historique du 140e régiment d'infanterie pendant la guerre 1914-1918*. Berger-Levrault (Paris).

[163] Service historique de la défense. *Historique du 145e régiment d'infanterie*. Berger-Levrault (Paris).

[164] Service historique de la défense. *Historique du 147e régiment d'infanterie pendant la guerre 1914-1918 : 2e corps d'armée, 4e division d'infanterie, 7e brigade d'infanterie*. Berger-Levrault (Nancy).

[165] Service historique de la défense. *Historique du 158e régiment d'infanterie. Campagne 1914-1919*. Impr. de Berger-Levrault (Nancy).

[166] Service historique de la défense. *Historique du 19e régiment d'infanterie pendant la guerre 1914-1918*. Impr. Berger-Levrault (Nancy).

[167] Service historique de la défense. *Historique du 27e R. I. pendant la guerre 1914-1918*. R. Thorey (Dijon).

[168] Service historique de la défense. *Historique du 30e R.I. : 4 citations fourragère aux couleurs de la médaille militaire*. Hérisson (Annecy).

[169] Service historique de la défense. *Historique du 52e régiment d'infanterie pendant la guerre 1914-1918*. Berger-Levrault (Paris).

[170] Service historique de la défense. *Historique du 87e régiment d'infanterie : campagne 1914-1918*. Calmette et Petit (Paris).

[171] Service historique de la défense. *Historique du 108e régiment d'infanterie. 1914-1918 : la grande guerre*. Impr. générale du sud-ouest (Bergerac), 1919.

[172] Service historique de la défense. *128e régiment d'infanterie. Historique sommaire du régiment de la mobilisation au 11 novembre 1918*. H. Charles-Lavauzelle (Paris), 1920.

[173] Service historique de la défense. *Historique du 105e régiment d'infanterie : guerre de 1914-1918*. impr. du "Courrier du Puy-de-Dôme" (Riom), 1920.

[174] Service historique de la défense. *Historique du 111e régiment d'infanterie depuis le 2 août 1914 jusqu'au 1 juillet 1916*. Impr. de Fugairon (Antibes), 1920.

[175] Service historique de la défense. *Historique du 14e régiment d'infanterie*. (Toulouse), 1920.

[176] Service historique de la défense. *Historique du 163e régim. d'infanterie Guerre de 1914-1918 : guerre de 1914-1918*. (Sarrebruck), 1920.

[177] Service historique de la défense. *Historique du 171e régiment d'infanterie, Campagne 1914-1919*. Soc. anonyme d'imprimerie A. Herbelin (Belfort), 1920.

[178] Service historique de la défense. *Historique du 35e régiment d'infanterie : Campagne 1914-1919*. Soc. anon. des étab. d'imp. A. Herbelin (Belfort), 1920.

[179] Service historique de la défense. *Historique du 65e régiment d'infanterie : Stralsund (1807), Ratisbonne (1809), Anvers (1832), Magenta (1859), la Grande Guerre (1914-1918)*. H. Charles-Lavauzelle (Paris), 1920.

[180] Service historique de la défense. *Historique du 72e régiment d'infanterie pendant la campagne 1914-1918*. H. Charles-Lavauzelle (Paris), 1920.

[181] Service historique de la défense. *Historique du 83me régiment d'infanterie : Grande Guerre 1914-1918*. P. Pont (Saint-Girons), 1920.

[182] Service historique de la défense. *Historique du 99e régiment d'infanterie : 1914-1918*. Impr. générale du sud-ouest (Bergerac), 1920.

[183] Service historique de la défense. *Historique sommaire du 54e régiment d'infanterie : 54e régiment d'infanterie*. Fouriner (Paris), 1920.

[184] Service historique de la défense. *Historique sommaire du 61e regt d'infanterie (août 1914-décembre 1918)*. H. Charles-Lavauzelle (Paris), 1920.

[185] Service historique de la défense. *Résumé historique du 139me régiment d'infanterie : campagne 1914-1918*. Imprimerie du cantal républicain (Aurillac), 1920.

[186] Service historique de la défense. *Le 106e régiment d'infanterie pendant la guerre : 1914-1919*. Imprimerie typographique A. Robat (Châlons-sur-Marne), 1921.

[187] Service historique de la défense. *Historique du 172e régiment d'infanterie*. Paris, 1931.

[188] Service historique de la défense. *Historique du 120e régiment d'infanterie pendant la guerre 1914-1918*. Watelet (Paris), 1932.

[189] Pierre Paul. *Le 114e au feu. Historique de la guerre 1914-1918*. Impr. E. Payet (Saint-Maixent), 1923.