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

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## Abstract

To what extent can heroes coordinate and legitimize otherwise strongly- proscribed and potentially repugnant political behavior? In this paper, we exploit the purposefully arbitrary *Noria* rotation of French regiments to measure the legitimizing effects of *heroic* human capital, gleaned through exposure to the pivotal Battle of Verdun under General Philippe Pétain in 1916. We wed this with a unique newly declassified dataset of 97,242 individual collaborators with the Nazis collected by French army intelligence in 1945 to show that, during the Pétain-led Vichy regime (1940-44), municipalities that raised troops that served under Pétain at Verdun later housed more collaborators with the Nazis than otherwise similar municipalities. Individuals from these municipalities were 5% more likely to join Fascist political parties or paramilitary groups that conducted the internal repression of the regime against Jews and resistants, or to directly join German military units. We interpret these results as reflecting the role that Verdun played in generating both credentials for leadership and organizational capacity that legitimized otherwise proscribed values, forging political identities that proved durable in explaining the Left-Right divide in France throughout much of the post-war period, and that were particularly salient in times of social and political crisis.

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*"J'ai fait Verdun."* [I did Verdun.]

"In our old age we'd be able to say to our families, and to young children being taught the Battle of Verdun, that we were there. And if we've seen such things, . . . people will look at us in amazement . . ."- Marcel Dupont, Lieutenant, 7th Chausseurs, *En Campagne: L'attente*, 1918, cited in Ousby (2007)[p.7]

"Frenchmen! Having been called upon by the President of the Republic, 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."- Philippe Pétain, June 17, 1940.

# 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 *Marechal* Phillippe Pétain, an 84-year old military officer credited with saving France during the Battle of Verdun in the First World War. Pétain established a right-wing authoritarian regime that would collaborate with Nazi Germany until France's liberation by the Allies in June 1944. Over that period, more than 97,242 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, indeed arguably was in part also a symptom, of an underlying process that had led to an undermining of democratic values. More than 1.3 million French soldiers died in World War I compared with $218,000$ in World War II. The former represented around 7% of the French male population. 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, from the extreme left to the extreme right, appeared convinced that a 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 heroic credentials play a role in legitimizing otherwise proscribed and repugnant, extreme, anti-democratic political preferences? How is personal attachment to a hero formed, and how durably can it shape political choices? In this paper, we measure the effects of *heroic* human capital– encompassing both the credential that heroic acts provide in acting as a costly signal of leadership type and the actual organizational skills acquired through learning by doing – in legitimizing and coordinating political action. Our setting, 1940s France, provides a very useful laboratory for understanding the political economics of heroism. Almost by definition, heroes engage in pro-social acts, often those deemed *patriotic* in most societies, making it hard to distinguish heroic legitimization and endorsement of political activities with their inherent social desirability. Yet in the 1940s, French men and women were asked by the great hero of Verdun, whose patriotic credentials were hard to question, to confront an abrupt revocation of the nation's long-standing democratic institutions,

to collaborate with an oppressive foreign regime and to forsake France's historic democratic values.[1] Our setting allows us to examine which individuals choose to follow a hero politically, and the extent 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 to service at the pivotal Battle of Verdun during the generalship of Pétain between February and April 1916– on subsequent active Nazi collaboration by individuals from the home municipalities of those regiments during 1940-1945. We combine this identification strategy with a novel dataset we gathered from a range of original archival and secondary sources at a very fine level of granularity, exploiting data at the individual level, regimental level and the level of France's 34,947 municipalities. This data set includes unique individual data on more than 97,242 collaborators that we hand-coded from a secret 1945 French intelligence report that had subsequently gone missing and has been only recently declassified.

We first document how the French army adopted a systematic rotation system, the *Noria*, that was based upon the military need to maintain inter-changeability of line regiments, and was aimed to rest troops from *L'enfer de Verdun*, rather than on specific characteristics of their home communities. Indeed, consistent with the arbitrary nature of the rotation system, municipalities that raised regiments that served under Pétain at Verdun are similar along a range of characteristics to other municipalities, both within the same department and more generally. These characteristics include not only their demographics and pre-1914 vote shares but also the regiment-level fatalities they endured in the First World War. We next show, however, that during the Second World War, individuals in municipalities that served under Pétain at Verdun were around 5% more likely to support Pétain's authoritarian regime and collaborate, by joining fascist political parties or paramilitary groups that conducted the internal repression of the regime against Jews and resistants, or by directly joining German combat or auxiliary units. These municipalities were also 13% less likely to raise members of the French resistance during the war. In contrast, we do not find these effects for regiments that served at Verdun outside of the period of Pétain's generalship, even in the immediate month following his replacement at Verdun, or in municipalities that happen to be geographically just across the border of the military catchment areas of regiments that served at Verdun under Pétain. We also observe no effect on collaboration of home regimental exposure to the other major battle of 1916, at the Somme.

By utilizing more precise information on the nature of collaboration of the individuals in our dataset, we are able to show that these effects are robust mainly for the political parties that were aligned with Pétain and for paramilitary groups that emanated directly from World War One veteran organizations and that swore their allegiance to Pétain. We further find that the effects of exposure to Pétain at Verdun is channelled through the collaborators who were themselves veterans of the First World War (about 40% of the French male population in 1940);

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[1]Even the rallying cry of the Great Revolution that had long been the motto of Republican France: *Liberte, Fraternite, Egalite* was banned in 1940 in favor of *Travail, Famille, Patrie* [Work, Family, Fatherland].

and are attenuated among municipalities that suffered more fatalities during World War One, suggesting that it was the surviving soldiers themselves who were responding to and bringing back the treatment. Further, there is a heightened effect among municipalities whose regiments had served the longest under Pétain, even before Verdun.

To unpack wider effects of Pétain exposure, we also document the effect of exposure to Pétain at Verdun on vote choices, which started materializing in the extreme political polarization that France underwent during the inter-war period. Even though Pétain assumed no major political role in the inter-war period, he was already a deeply popular heroic figure and widely recognized as a right-wing conservative. We show that municipalities whose regiments served under Pétain at Verdun increasingly vote for the right as polarization grew in France during the 1932 and 1936 elections. Even with the major political re-alignments after the war, these effects persist in terms of shaping support for right wing parties, and diminishing support for those on the left up until the 1980s. These effects are particularly accentuated during years of social and political crisis, increasing the share of the right wing during the threat of Algerian independence in 1958, massive social unrest in 1968, or the coming to power of the first Socialist president of the Fifth Republic in 1981.

We interpret these findings as reflecting the role played by exposure to Verdun in creating a network of individuals, tied to Pétain, who all shared heroic credentials. Heroic credentials can provide a strong, often tragically costly, signal of an individual's *patriotic* type, by which we mean an agent relatively more willing to forego private interests in the interests of the nation. This credential can enable war heroes that have provided such evidence of their patriotic type to subsequently adopt and support otherwise highly-proscribed and potentially repugnant policies relative to other public figures, whose type is less clear. While often such heroes can use this credential in a pro-social manner, including to pursue peace, in our example, the war hero, Pétain, also packaged peace with a range of extreme racist and dictatorial policies aimed at 'national renewal'. His decisions, which dramatically challenged France's institutions and its democratic traditions, along with our unique dataset of collaboration, help us to better isolate the role of heroism in legitimizing otherwise proscribed and repugnant political behaviour.

While heroes often distinguish themselves by showing individual initiative, their credentials as heroes do not operate in a vacuum. While we cannot measure the effects of Pétain's legitimization of anti-democratic values on France as a whole- and in that sense our estimates are likely to be a lower bound estimate of the true effect- we can compare which municipalities were more responsive to his message. Our results suggest that Pétain's legitimizing authority was relatively stronger among those communities home to the regular citizen-soldiers, the *poilus* [hairy ones], who were themselves heroes of Verdun and directly linked through shared experience with Pétain himself. This appears to reflect not only their relative willingness to *follow the leader* in his political views, but also in their ability to sway others around them.[2]

Further, as we show, the effects on political preferences appear durable, even after the

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[2]See e.g. Lenz (2012) on how party leaders can sometimes change the policy preferences of those who identify with that party in the US.

collaborationist regime would fall, extreme right wing parties were banned, and Pétain himself would be convicted of high treason.[3] The fact that support for those conservative right-wing parties that remained in municipalities exposed to Pétain at Verdun tended to be particularly pronounced in times of political crisis in the post-war period, hints at how views legitimized through exposure to heroes can be durable.

To the best of our knowledge, our paper is the first to measure the role of heroes in legitimizing previously proscribed and repugnant policy preferences. Heroes, and the narratives that emerge around them, have arguably been central to the mental models that humans use to comprehend their past and establish benchmarks for their future interactions with one another and with the state and society at large. From historic annals such as Homer's epics, the tale of David and Goliath, the Ramayana and the Romance of the Three Kingdoms to the *Band of Brothers* and modern Hollywood franchises, stories of heroism, particularly forged in war, are ubiquitous across cultures.[4]

Yet, measuring the effects of heroism and the mechanisms through which it operates has thusfar been very difficult. This is because the emergence of heroes, the networks that they develop and the heroic acts that they perform are often hard to empirically distinguish from the specific contexts that call for their heroism. Further, heroic narratives are also often shaped after the fact by those with specific objectives, making the propagation of heroism itself often endogenous. In our setting, we are able to exploit an arbitrary process that formed a network of heroes, those that *did Verdun*. We are able to exploit a setting where the heroes of the First World War were themselves connected to a heroic leader who would choose the wrong side of history, one later widely perceived as a *villain* of the Second World War.

Our results also highlight the importance of heroism in providing a form of capital that can broaden the spectrum of policy preferences that individuals can publicly adopt. By imbuing heroes with a credential of proven willingness to sacrifice for the nation, heroes can 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, Sacks and Tyler, 2009). Thus, as we discuss below, depending on the context, heroes can become potent champions of democracy and freedoms, but also, as in our case, potentially their greatest challengers.

Heroic acts can not only provide a credential for adopting more radical political positions, but also for directly assuming the role of leadership itself. Thus our paper links to emerging literatures measuring the effects of leadership, on the aftermath of conflict, and the determinants of declines in democratic values and political extremism more generally.[5]

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[3]Pétain would die in prison in 1951. De Gaulle, who had served under Pétain in World War I, commuted his sentence of execution to life imprisonment in recognition of Pétain's military contributions in World War I. However, Pétain's deputy, Pierre Laval, was executed, along with a number of other high ranking Vichy ministers.

[4]Our work resonates with recent theoretical contributions on the role of stories in shaping organizational culture and providing normative prescriptions that can motivate effort in organizations. See, e.g. Gibbons and Prusak (2020) and Akerlof, Matouschek and Rayo (2020).

[5]The many ways through which leaders can influence individuals actions have been explored in a growing, though mainly theoretical literature. Leaders can persuade and organize followers (Hermalin, 1998, Caillaud

Arguably the closest works to ours are by Dippel and Heblich (2018) and Jha and Wilkinson (2012),(2019). Dippel and Heblich (2018) compare American towns where exiled former leaders of the failed 1848 revolutions in Germany chose to settle relative to otherwise similar towns, and find that the towns with more leaders were more likely to develop local athletic societies, open German newspapers and to mobilize more volunteer troops in the American Civil War. A strength of their work is that it overcomes the reflection problem— that leaders emerge endogenously from their communities— by analyzing a setting where the leaders had already emerged elsewhere.[6] Our setting allows us to both exploit an arbitrary process which credentializes heroism and, with it, a specific type of leadership, but also to more directly 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 those that acquire this heroic credential. Our setting also allows us to distinguish between both ideological effects and effects through the network of individuals with heroic credentials.

We also build on Jha and Wilkinson (2012), who use a similar identification strategy to ours— the quasi-random assignment of Indian army battalions to different combat experiences in the Second World War— to measure the effects of combat exposure on public goods provision and ethnic cleansing in the battalions' home districts during the Partition of South Asia. Jha and Wilkinson (2019) further exploit the arbitrary assignment of French regiments to serve in the American revolution to examine how exposure to democratic ideas among military veterans helped precipitate more local support for democratic values and pro-revolutionary mobilization in the early, constitutional, phase of the French Revolution. They interpret their results as reflecting the key role that military experience overseas can play in providing new ideologies and organizational leadership skills to veterans, a group that can be particularly potent in propagating new political ideas when they return home. In contrast to this work, which emphasizes the propagation of the egalitarian democratic values of the American Revolution to France, we are able to examine a different channel: the role of heroic credentials operating through a network, this time to *undermine* democratic values.

In this way, our paper also ties to an emerging literature on democratic values and how even durable democracies can fail.[7] In a number of benchmark models of political economy, democracy is seen as an absorbing state (eg Acemoglu and Robinson, 2005). However, nascent democracies often revert to dictatorship. Indeed, an important body of work on the inter-war period shows how in the German context, Nazis were able to assert their authority within the nascent Weimar republic through propaganda (Adena, Enikolopov, Petrova, Santarosa and

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and Tirole, 2007). They can coordinate group action by defining a reference behavior (Akerlof and Holden, 2016), affecting expectations and social norms (Acemoglu and Jackson, 2015), or directly shaping group identity (Akerlof, 2016).

[6] People choose to follow or reject leaders based on their own preferences, making it very 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 in short-lived lab-experimental sessions (see .e.g dAdda, Darai, Pavanini and Weber (2017)), and the measuring of changes in outcomes when managers or leaders turn over or die (Bertrand and Schoar, 2003, Jones and Olken, 2005).

[7] Levitsky and Ziblatt (2018) provide an account of alternative channels through which this may occur.

Zhuravskaya, 2015) and the leveraging of existing organizations (Satyanath, Voigtlaender and Voth, 2017), to name a few. Yet, democracies do appear to become more resilient as they survive. Indeed, the extent to which communities transmit and propagate democratic values over time is seen as an important potential driver of such democratic resilience (Besley and Persson, 2016). Yet, even durable democracies may also revert to autocracy, though less is know about how. Our paper measures the extent to which democratic values are supplanted by autocratic preferences in the face of alternative sources of legitimacy, such as that derived from heroism.[8]

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 has mostly focused, instead, on the determinants of insurgency and resistance.[9] This is, in part, because collaboration, by its nature tend to be more covert than overt acts of resistance and insurgency and thus hard to measure. Collaboration in France in particular has been the object of a fascinating, yet still mostly qualitative historical literature (e.g. Jackson, 2001, Ott, 2017, Burrin, 1996, Paxton, 2001).[10] Instead we exploit a unique and largely untapped data source from a contemporary intelligence report, which we digitise, clean and geolocate to create, to the best of our knowledge, the most exhaustive list of collaborators in occupied Europe to date.[11]

In the next section, we provide the relevant historical background necessary to understand our identification strategy and our outcomes of interest. We then summarize key aspects of the novel dataset that we have created, before turning to the empirical analysis. We finally discuss the broader implications.

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[8]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, Bauer, Blattman, Chytilová, Henrich, Miguel and Mitts, 2016). In the specific context of the World Wars in Europe, recent papers by Koenig (2015) show that places with more veterans in the First World War were more likely to vote for fascist parties in Germany. Conversely, Fontana, Nannicini and Tabellini (2017) show that internal fighting under prolonged German occupation led to a higher vote share for the Communist party after the Second World War in Italy. The underlying hypothesized mechanism is that veterans and victims of the conflict identify with the side that won the conflict and against (actual or perceived) those responsible for the defeat. In our setting, in contrast, the heroes of the victorious French army the First World War were in fact more likely to support those the invading power that had lost that conflict.

[9]For example, in Europe (Gagliarducci, Onorato, Sobbrio and Tabellini, 2018, Monteiro and Assuncao, 2011, Ferwerda and Miller, 2014) or in foreign US interventions (Dell and Querubin, 2017, Trebbi, Weese, Wright and Shaver, 2017, Trebbi and Weese, 2019).

[10]We contribute this historiography in a number of substantive ways as well. While many historians agree 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. While we cannot evaluate whether Pétain's prestige encouraged collaboration on the whole, as has been claimed in the literature, we break new ground by showing that it was not the battle of Verdun that mattered, per se, but Pétain's support was disproportionately generated among the home communities of those who served under Pétain's *direct* command at Verdun.

[11]Some key aspects of the data were summarized in Lormier (2017). We are very grateful to Dominique Lormier for allowing us to consult and transcribe the original documents.

## 2 Historical Context

### 2.1 Rotating Heroes: Verdun, Pétain and the Noria Rotation

#### 2.1.1 Verdun: The worst and longest battle in history

The Battle of Verdun, sometimes called the *Stalingrad* of World War 1, assumed a great symbolic importance for France. "In the French collective imagination, the Great War *is* Verdun" (Jackson, 2001, p.28, emphasis added).

On the 21st of February 1916, the German Army launched Operation *Gericht*. The German Commander-in-Chief, Erich von Falkenhayn, planned to exploit the great symbolic importance of Verdun to lure the French infantry into contesting a concentrated and static position where they could be "bled to death" by artillery, knocking the French army out of the war.[12]

Yet, up until February 1916, Verdun had remained a quiet sector of the front. The Germans were able to maintain great secrecy in their massive buildup to the attack, and consequently found the French grossly unprepared.[13] After a few days of rapid German advance, a disastrous loss of French men, guns, and strongholds, led to the successive sacking of no less than five impuissant French Generals in the first five days of battle (Bapst, de Bonneval, Chrétien and Herr). The sixth general, Pétain, was put in command of the battle on February 25th.

Pétain immediately implemented two major innovations. First, he adopted a more defensive stance that relied more heavily on artillery and spared infantry troops. Second, he instituted a system of troop replacements, known as the *Noria*. 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.[14] To transport the large supplies of shells and fresh troops needed to relieve the frontline infantry (190,000 men were brought in in the first week), Pétain also re-organised the slender supply line to the front, a route commemorated in France to this day as the *Voie Sacrée* [Sacred Way].

These innovations succeeded in stopping German advances, and arguably saved the French army from collapse. With the situation stabilized, the French High Command, many of whose members were committed to the military doctrine of *attaque à outrance* [attack at all costs], sought to go on the offensive. Yet, Pétain, already lionized as the "hero of Verdun" resisted. The solution came on the first of May, when Pétain was instead promoted from direct command at

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[12]Verdun's symbolic importance goes back at least as far as Charlemagne. The Treaty of Verdun in 843 ended the civil war between his grandsons and largely determined the borders of the states that would one day become France and Germany, as well as the disputed lands of Lotharingia (including Lorraine) that lay in between. It was also the last French fortress to surrender to Prussia in 1870. Falkenhayn predicted:"Within our reach behind the French sector of the Western front there are objectives for the retention of which the French General Staff would be compelled to throw in every man they have. If they do so the forces of France will bleed to death  as there can be no question of a voluntary withdrawal  whether we reach our goal or not. If they do not do so, and we reach our objectives, the moral effect on France will be enormous" (Falkenhayn's memorandum, cited in (Horne, 1962, pg. 36, emph. added).

[13]The conclusions of French High Command, in early February 1916, were that "a [German] attack on the French front is improbable" ()

[14]By contrast, the Germans kept the same units on the line until whole regiments had been literally pulverized by artillery.

Verdun and replaced by the more aggressive generals Nivelle and Mangin. Though their attacks would fail, the long-awaited major Allied offensive on the Somme on 1 July diverted German resources. The furious contest at Verdun continued however, with French troops gradually re-taking the German gains following heavy bombardment, until the 17th of December, 1916, when the battle was declared over.

By then, what became called *L'enfer* (the Inferno) of Verdun had gained the status of the longest continuous battle in history. French casualties reached around 378,777 even while the German army lost around 330,000 men.[15] Out of the approximately 708,777 casualties on both sides, about 305,440 were killed, almost a death a minute for the entire 10 months of the battle (Ousby, 2007).[16] Between 40 and 60 million shells fell over the battlefield.

The battle was also a watershed of prime importance in the Great War. As noted by Horne (1962)[pg. 1-2]: "Before it, Germany still had a reasonable chance of winning the war; in the course of those ten months this chance dwindled away. Beyond it, neither the French nor the German army would be quite the same again . . . 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 length of the battle and of the rotation system implemented by Pétain, nearly three-quarters of the French Army and more than 88% of the line infantry were drawn through it. As a result, more men of that generation would have the memory of the Battle of Verdun engraved in their memory more than any other battle. 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).

### 2.1.2 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. Descended from a peasant family, Pétain had experienced very slow advancement following his graduation from the French Military Academy at Saint-Cyr. Too young to fight in 1870, he had spent five years as sous-lieutenant, seven years as lieutenant, and ten as captain (Horne, 1962). At the start of the War, at fifty-eight, he was a simple colonel.

His slow progress may be explained in part by his modest origins, but also by his disdain for publicity and political networking and his military philosophy, favouring artillery and defense, that was at odds with High Command's.[17] His lack of willingness to 'manage up' may have also played a role. Pétain was a man of few words. He was not liked by High Command, who found him too cautious, nor was he liked by politicians and many peers, who found him irreverent

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[15]The French dead represented one-tenth of their total killed in the entire war.

[16]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, Antietam.

[17]France's High Command had been obsessed with infantry-led offensive since France's humiliating defeat against Prussia in 1870. Pétain, in contrast, was a proponent of defensive attrition based on the artillery, and compulsively economical with human lives. An open critic of Joffre, one of his favourite maxims was that "one does not fight with men against materiel".

and cold.[18]

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. For his reliance on the artillery to spare the infantry and for the Noria rotation that rested the frontline infantry, as well as his genuine concern for his troops, Pétain was beloved by the soldiers under his command. Pétain was also closer to his men than any other commander: always ready to move up the frontline with the infantry, "he was the paternal figure, the leader who was devoted to his men, who suffered what they suffered" (Horne, 1962)[pg. 139]. In this management style, he would differ markedly from his successors at Verdun, Nivelle and Mangin.[19]

Yet, as Horne (1962)[pg. 141] 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". The dramatic failure of French military plans in the First Battle of the Marne and Commander in Chief Joffre's subsequent sacking of inept generals resulted in rapid promotion for those that remained, Pétain among them. 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. This sequence of routine French military decisions, done without foresight of the coming battle, meant that Pétain happened to be free to be deployed to the front to take command of the collapsing regiments on the line a few days after the start of the battle.[20]

It is important to stress that although Pétain was in charge of military and logistics decision at Verdun, he had no say in the rotation of specific regiments to Verdun. This was exclusively the responsibility of France's General-in-Chief Joffre, and subject to broader strategic considerations. Joffre's decisions about troops rotation was dictated by the possibility of other attacks and the front, which were feared in Lorraine, Champagne, the Oise valley (the way to Paris), Arras, or Calais[21], and Joffre's major strategic objective, which was to hold until the joint allied offensive on the Somme in the Summer. Joffre's complete control and oversight of troops movement is summarized in this communication to Pétain, on 5 March 1916: "The headquarters of army corps, after their replacement by those who will be *sent to you*, will also be under *my* disposal" (emp. added, Army Ministry, 1926, p.334).

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[18]Fellow-officers noted his 'icy formality' (Horne, 1962)[pg. 139]. To Poincaré, then President of the Republic, he once remarked that "nobody was better placed than the President himself to be aware that France was neither led nor governed" (Horne, 1962)[pg. 134].

[19]Nivelle and Mangin were never close nor popular with the soldiers, and were seen as disdainful of casualties. Mangin was nicknamed the "butcher of troops". 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. In the French collective imagination, and particularly among the *poilus*, Pétain alone embodied the "sacred national legend" of Verdun.

[20]The order was unanticipated by Pétain himself, who was away from his Noailles headquarters in a Gare du Nord hotel with a mistress in Paris at the time of his summons.

[21]See pp. 331-333 of Army Ministry (1926). "As a consequence [of these other possible attacks], General Joffre prescribes on the 5th of March [...] that it is necessary to study the possibility to withdraw from the front the units that are not indispensable" (Army Ministry, 1926, p.333).

### 2.1.3 A quasi-random network of heroes: military recruitment and the *Noria*

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.[22] Yet despite this *inter-changeability in deployment*, 144 of the 173 regiments of the French army in August, 1914 were *recruited locally*, from 144 specific subregions, each with their own recruitment bureau and military depot (please see Figure A1.).[23]

We digitized the 9th edition of the 1915 *Dictionnaire des Communes* (Baron and Lassalle, 1915) which enables us to assign each of the $34,947$ municipalities to their associated bureau of recruitment within France's 1915 borders[24] $27,930$ municipalities were associated with a single regiment, whereas $7,017$ municipalities, a number of them components of bigger cities, sent troops to a range of between 2 and 12 possible regiments.[25]

On August 2nd, 1914, France mobilized every man between 20 and 48 years of age. Among those, nearly one million (the military classes of 1911, 1912 and 1913, men born between 1891 and 1893) were already in the garrisons, completing their 3-year long military service.[26] They were the line infantry. In addition, 2.2 million men from the classes of 1900 to 1910 (24 to 34 years old in 1914) formed the reserve regiments, with each associated with a specific line regiment from its subregion. The older men formed the Territorial Infantry (those 35 to 41 years old in 1914) and its reserves (those 41 to 48 in 1914), which initially mostly had a support function, but were also drawn into combat as the war went on. Over the course of the war, 8.4 million men were mobilized.[27]

Because of the length of the battle, and of Pétain's Noria troop rotation system, more French infantry regiments served at Verdun than at any other battle. 88.66 percent of 1915 France's municipalities served in a regiment that was rotated at the Battle of Verdun (see Table A1). 49.71 percent of all French municipalities, and slightly more than half (55.31 percent) of those that served at Verdun, served directly under Pétain's command.

The regiments that were not rotated at Verdun were those kept in reserve for the major

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

[23]The remaining 'Fortress' line regiments, numbered from 145 to 173, were recruited from Paris and other population centers as well as from specific border areas to allow an increased peacetime concentration at the frontiers (see the Imperial General Staff's Handbook of the French Army 1914). We assign these Fortress regiments to each of their recruitment sub-region in population-weighted shares and show that our results are robust to both including and excluding Verdun exposure for a sub-region due to the fortress regiments. Other army corps, such as the artillery, were organised at the broader region level and are therefore less suitable for our analysis.

[24]1915 France did not include Alsace and Lorraine. We further check this assignment using additional sources, such as the British Imperial General Staff's *Handbook of the French Army (July 1914)*, and the *Carte de répartition des recrutements militaires du Département de la Seine* for Paris.

[25]For those, we average the battle history over possible regiments. The resulting estimates should therefore be interpreted as Intention-to-Treat estimates.

[26]The 1913 *Loi des trois ans* had already extended the length of military service from two to three years.

[27]These included 7% colonial troops. 21 additional infantry regiments had been formed from scattered units of decimated regiments, new recruits from annexed regions, or fresh troops of the classes of 1915, 1916, 1917 and 1918.
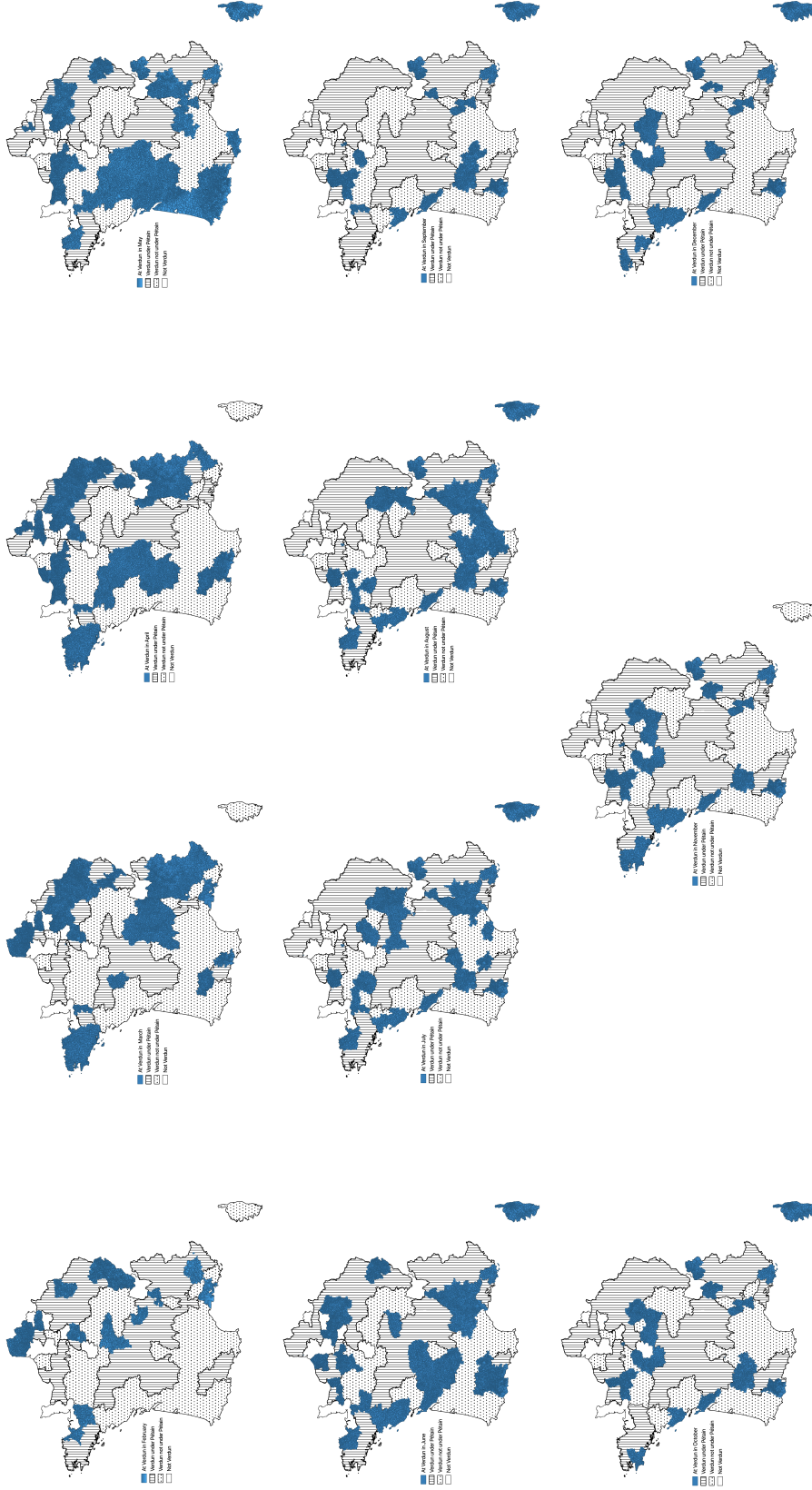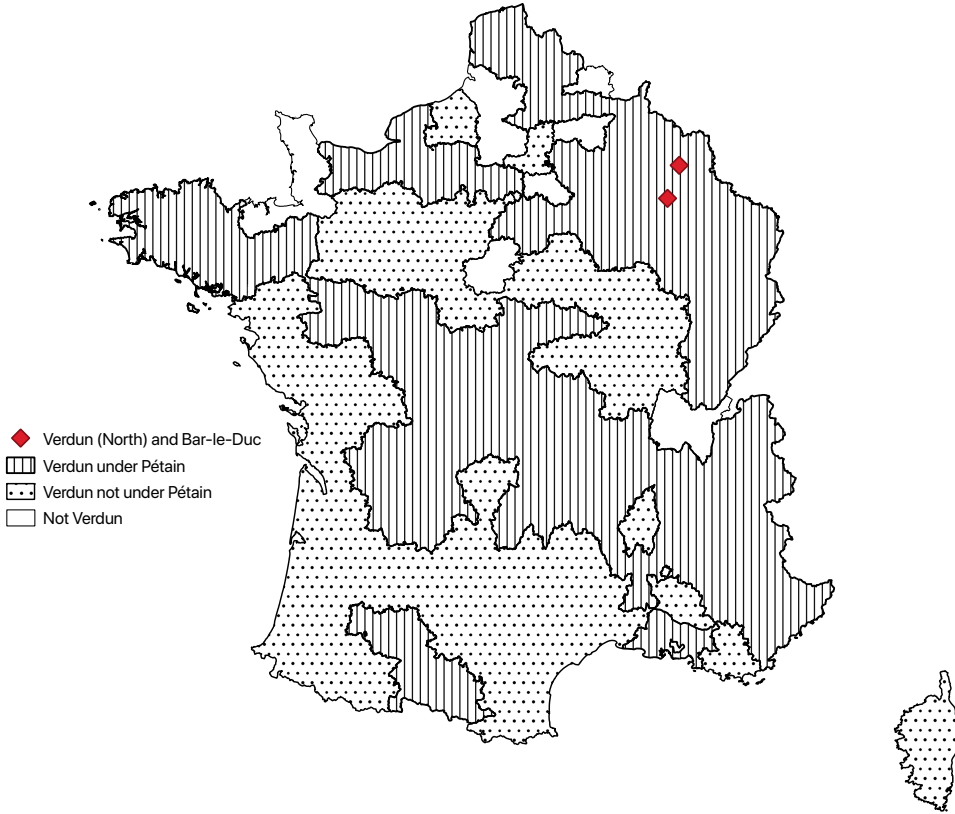
Figure 1: Rotation of regiments through Verdun, February–December, 1916: From the top left (February) to bottom right (December), different regiments were dispatched to the Battle of Verdun. Pétain commanded between February and the end of April.

**Notes:** The map shows which municipalities housed a regiment that was rotated at Verdun under Pétain, at Verdun not under Pétain and not at Verdun, as well as the location of Verdun and of Bar-le-Duc. These two towns were linked by the "Voie Sacrée". This map shows information for the $34{,}947$ municipalities within France's 1914 borders.

Figure 2: Municipalities raising regiments under Pétain at Verdun, those under other generals at Verdun, and those not at Verdun

(and ultimately more bloody) Allied offensive at the Somme in the Spring of 2016, or those already assigned to the fronts in the Dardanelles, Greece, or Serbia.[28] We use the resulting quasi-random variation in infantry regiments' exposure to direct command of Pétain at the Battle of Verdun. We consider a regiment to be *treated* by Pétain's leadership at Verdun if it served between the critical period of 25th of February and the 1st of May, as opposed to those that served from May to December, under Nivelle and Mangin's command.[29] 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.

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[28]The 145th regiment, that had been captured in 1914 and served 4 years of the war in German POW camps, was also not part of the rotation.

[29]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. In the empirical analysis, as a robustness check, we show that the results are similar when we only consider those regiments that served in April vs May, which removes potential unobserved heterogeneity between regiments that were stationed at Verdun before the battle and those that were brought in after its start.

Figure 1 shows the rotation of home municipalities of the regiments assigned to Verdun for each of the 10 months of the battle. Figure 2 summarizes these monthly figures, showing which municipalities ultimately had regiments serving under Pétain at Verdun, which served under other Generals, and which were held in reserve for the Somme offensive. 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.

## 3   Empirical Strategy and Identification

In what follows, we will estimate the following regressions at the municipality level $i$:

$$Y_{i,t} = \alpha + \beta Verdun_{i,1916} + \gamma VerdunPetain_{i,1916} + \mathbf{X}_{i,<1936}\phi' + \eta_{Di} + \epsilon_i$$

Our unit of analysis $i$ is a municipality (there are $36,571$ municipalities in present-day France, the equivalent of a Census block group, but were $34,947$ municipalities within France's 1914 borders[30]). $Y_i$ denotes a series of outcomes, including our main measure: the logarithm of the share of collaborators listed in 1945 as having been born in municipality $i$, normalized by their 1936 population.[31] The measures of combat exposure $Verdun_{i,1916}$ and $VerdunPetain_{i,1916}$ are created by combining the military histories of each line infantry regiment in World War I with the 1915 *Dictionnaire des Communes* which assigns each municipality to its infantry regiment.[32] In our preferred specification, we also include $\eta_{Di}$: 90 fixed effects, one for each department of Metropolitan France, and $X_i$, a matrix of pre-treatment and contemporaneous variables. In what follows, we will also use more stringent specifications, confining our comparison to municipalities whose soldiers were deployed to Verdun in the immediate months following Pétain's replacement by Nivelle, as well as comparing neighbouring municipalities on either side of the catchment area borders of treated regiments. We cluster our standard errors at the level of treatment: the regiment.

Our identification exploits the exogeneity of the timing of the rotation of each of the line infantry regiments at Verdun. Our main results compare municipalities which raised regiments that were rotated through Verdun in 1916, but at a different time: either under direct command

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[30]The regions of Alsace and Lorraine had been lost to Germany in the Franco-Prussian War of 1870 and were regained at the end of WWI.

[31]No Census was taken during the war. To avoid our estimates being contaminated by potentially endogenous population movements during and immediately after the war, we report the number of collaborators to the pre-war population of the municipality, measured in the last pre-war Census of 1936, and we control for the natural logarithm of the 1936 population in all specifications.

[32]We reconstruct the battle history of each regiment from each of the 173 *"Historique du Regiment"* books, which describe the day-to-day operations of each regiment during WWI. These documents are published by several sources (see the Appendix data description for the list of all sources). For each regiment, we manually code whether, and when, it was rotated at Verdun in 1916. We then define a dummy variable ("Verdun") equal to one if the regiment fought at Verdun in 1916; and a dummy variable equal to one ("Verdun under Pétain") if the regiment fought at Verdun under Pétain's command, i.e. between the 26th of February and the 1st of May 1916.

of Pétain before the first of May, or after. 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.

Indeed, consistent with this, Table I compares the pre-war political histories and early World War 2 experiences of different municipalities, both across France, and within the same department. It shows the coefficient on the indicator for municipalities that sent troops to Verdun under Pétain's generalship in Eqn 3. First, we observe that Pétain-at-Verdun (henceforth 'P-a-V' or 'treated') municipalities had similar populations to other towns both in 1911, and it turns out, in the last pre-WWII census (in 1936).

They also appear to have similar pre-war political preferences. The first gauges of this are the incidence of violent demonstrations by either the right-wing (Royalists or Bonapartists), left-wing (Socialists or Communists) or anarchist political factions between 1830 and 1914. The second set of pre-war characteristics represent the vote shares in the municipality for different parties during the 1914 legislative elections. The main parties include (ordered from right to left) the PRD (the Democratic Republican Party), the Independent Radicals, the Unified Radicals and the Unified Socialists.[33]

Comparing municipalities across departments, Pétain's regiments appear very similar in almost all dimensions in both electoral and civic engagement types of politics: in fact, there is only one significant difference: if anything, Pétain's municipalities appear somewhat *less* likely to have experienced violent right-wing demonstrations before 1914 for either the Royalist or Bonapartist factions.[34] Further, comparing municipalities *within the same department* reveal no significant differences. Further, in Table A10, we also compare populations by gender, literacy rates, share of foreigners, occupational shares of workers, and the number of Catholic, Protestant, Jewish and other places of worship for treatment and other towns among the 400 *chef-lieux* - the main towns of the arrondissements of France in the most detailed census- that of 1872. Once again, P-a-V municipalities appear very similar, comparing both within and across France's departments.[35]

These patterns appear consistent with the historical record that suggests that the French Army did indeed engage in interchangeable deployment of regiments that happened to expose soldiers from a specific set of otherwise similar municipalities to Pétain at Verdun. To supplement this evidence, we can also test alternative possibilities. For example, it could be the case that the regiments from P-a-V municipalities were specially selected to be *cannon fodder* in the crucial early months at Verdun. They might therefore have experienced greater fatalities in World War 1, and that may explain subsequent differences in politics. Another possibility is

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[33]Due to the need to hand-collect these data from archival sources, for this version of the paper, we only have the municipalities from Ain to Aveyron.

[34]This is particularly germane, since the claim of the Bonapartistes to legitimacy did itself rest chiefly upon Napoleon's military exploits.

[35]The one exception, comparing within the same department, is that 1872 unemployment rate happened to be 1.772 pp higher at the time (significant at 10%).

Table I: **Balance on Pre-War Characteristics and Contemporary Covariates**

| VARIABLES | Mean | SD | Coeff [Petain at Verdun] | SE | R2 | Coeff [Petain at Verdun] | SE | R2 | Obs |
|---|---|---|---|---|---|---|---|---|---|
| Fixed Effects | | | None | | | Department FE | | | |
| Log. Population 1911 | 6.237 | 0.985 | 0.045 | (0.085) | 0.002 | -0.038 | (0.051) | 0.244 | 34,922 |
| **Pre-Treatment Political Incidents** | | | | | | | | | |
| Royalist / Bonapartist Demonstration bef. 1914 | 0.115 | 3.283 | -0.146** | (0.063) | 0.000 | -0.080 | (0.054) | 0.009 | 34,669 |
| Anarchist Demonstration bef. 1914 | 0.0175 | 1.260 | -0.012 | (0.017) | 0.000 | 0.002 | (0.003) | 0.003 | 34,669 |
| Socialist/Communist Demonstration bef. 1914 | 0.0622 | 2.336 | 0.007 | (0.040) | 0.000 | 0.038 | (0.074) | 0.009 | 34,669 |
| **Pre-Treatment Vote Choice (from Right to Left)** | | | | | | | | | |
| Vote Share Democratic Republican Party (PRD) 191 | 15.21 | 23.90 | 4.012 | (8.233) | 0.082 | -2.082 | (5.623) | 0.294 | 3,818 |
| Vote Share Independent Radicals (Rad Ind) 1914 | 13.72 | 29.24 | 8.468 | (13.891) | 0.016 | -4.902 | (5.773) | 0.308 | 3,818 |
| Vote Share Unified Radicals (Rad Un) 1914 | 31.94 | 32.98 | -22.666 | (16.230) | 0.066 | -4.094 | (10.335) | 0.464 | 3,818 |
| Vote Share Unified Socialists (PS) 1914 | 16.10 | 23.40 | 12.609 | (8.932) | 0.041 | 16.822 | (10.728) | 0.376 | 3,818 |
| **Contemporaneous and WWII Characteristics** | | | | | | | | | |
| WWI Military Death Rate | 3.803 | 2.099 | 0.092 | (0.094) | 0.001 | 0.104 | (0.128) | 0.057 | 34,579 |
| Log. Population 1936 | 6.072 | 1.064 | 0.037 | (0.091) | 0.000 | -0.089 | (0.060) | 0.247 | 34,942 |
| Combat Days 1940 | 4.469 | 3.477 | 1.014 | (0.646) | 0.052 | -0.122 | (0.239) | 0.834 | 34,947 |
| Log. Dist Demarcation Line 1940-44 | 4.659 | 1.148 | 0.167 | (0.212) | 0.035 | 0.008 | (0.085) | 0.800 | 34,947 |
| Vichy France | 0.374 | 0.484 | 0.013 | (0.091) | 0.047 | 0.010 | (0.016) | 0.874 | 34,947 |

**Notes:** This Table shows that the municipalities that were rotated at Verdun under Pétain are not systematically different from other municipalities across a range of pre-Great War political characteristics. An observation is a municipality. Each row represents the coefficient of an OLS regression of the municipality characteristic on an indicator for whether that municipality raised troops for a regiment that served under Pétain at Verdun, controlling for deployment to Verdun. The first set of outcomes are indicators for violent demonstrations for different political factions between 1830-1914 from Tilly and Zambrano (2006-01-12). The second set represent the vote shares in the municipality for different parties during the 1914 legislative elections. Note that the 1914 election shares in this version of the paper only include municipalities with names between Ain and Aveyron (in progress). The third set of characteristics represent war-time factors that determined whether the municipality was governed by Pétain in 1940-44. Combat Days denote the number of days a municipality was at the front-lines of combat during the 1940 Battle of France. We present specifications with and without department fixed effects. Standard errors are clustered at the regiment level. * p<0.10, ** p<0.05, *** p<0.01.

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that P-a-V municipalities were the opposite: they were selected from favored municipalities by the French High Command, perhaps from relatively pacifist or politically influential areas, and thus their soldiers were shielded from war-time fatalities.

To examine this, we use information on the $1,237,149$ military fatalities in World War I of French soldiers born in metropolitan France (*Mémoire des Hommes*,Gay (2017)), their regiment and their municipality of birth[36]. As the table shows, France suffered a tragedy in World War 1, with the average municipality losing 3.8% of its population to military fatalities. However, contrary to both the cannon fodder and positive selection hypotheses, the overall military death rate in World War I was very similar in P-a-V municipalities to others.

In fact, by reconstructing the battle histories of all the line regiments of the French army from their regimental histories, we can show that one implication of quasi-random deployment, that over time there will be regression to the mean in terms of fatality rates, is also borne out by the data (see Table A2). 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 World War 1 do exhibit variation in the fatality rates for the regiments that were exposed, particularly the ultimate failed attempts to breakthrough the German lines at the Somme in 1916 or the Chemin des Dames in 1917 (Col 1). However, despite the differences stemming from fatalities to regiments in specific battles, their home *municipalities* ultimately had similar overall military fatality rates in World War 1 (Col 3).[37] Moreover, the regiments exposed to Verdun itself were not exceptional in terms of their overall fatality rates, either compared to those exposed to other battles throughout the war (Col 1) or those of 1916 (Col 2). In other words, even if Pétain's generalship reduced the fatality rates during the battle, by the end of the war, his regiments had experienced similar losses to other regiments, and the P-a-V municipalities experienced similar World War 1 losses to other municipalities.

As a final note, Table I shows that the Germans also did not perceive P-a-V municipalities to be particularly more or less desirable to directly control than other towns during the Battle of France in 1940. P-a-V municipalities had similar populations in 1936, were not more likely to be exposed to more days of fighting during the Blitzkrieg, to be more or less close to the demarcation line or end up in German-occupied or Vichy France.

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[36]We are able to match nearly $1,150,000$ soldiers to (present-day) municipalities and construct municipality-level overall death rates. In the Appendix, we also construct measures at the municipal level on the relative share of officers among the dead, and find similar results

[37] There is one exception: those municipalities whose troops were deployed in the relatively successful landings at Salonica to fight the Ottoman Empire had fewer fatalities ultimately relative to the vast majority of regiments that served on the Western Front. This was, again, hard to know *ex ante*, however, as the severe losses the Allies faced during the Gallipoli campaign of 1915 amply demonstrates.

# 4 Context: The death of the Third Republic and collaboration during World War II

Before we present and interpret our main results, it is useful to provide some context on France and Pétain's role in the inter-war years and during the Occupation.

## 4.1 The death of the Third Republic and the road to Vichy

The Third Republic had proved robust enough to deliver the *Union Sacrée*- a cross-party unity agreement- that won the Great War despite France's appalling losses. However, this coalition began to unravel soon after France's victory. France's political polarization became further accentuated during the Great Depression (Jackson, 2001, p56). It became hard to maintain sustained majorities in the Parliament given the intense political polarization, with some cabinets lasting less than a week. Demonstrations that turned bloody in 1934 were perceived to be an attempted coup by the Left, raising the level of mistrust, even while the subsequent victory of the Leftist Popular Front in 1936 headed by the socialist (and Jewish) Prime Minister Leon Blum raised the threat of social change and radicalized the Right.[38] 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 for its military defeat. Authoritarianism and even collaboration with Germany were viewed as potential solutions to restore order and prevent a social revolution.

Despite these divisions, Pétain, seen as a "genuine national hero" (Paxton, 2001, p.34), maintained broad popularity. He was seen as embodying France's traditional values, those of "Old France: an erect soldier of austere tastes, of Catholic peasant stock, marshal of France" (Paxton, 2001, p.35). When a newspaper organized a public consultation on who should lead France as its dictator, Pétain received the highest support (see Figure A2). He was revered by conservative right-wing circles, but even Léon Blum called Pétain France's "noblest and most humane soldier."

Yet, despite the active engagement of large veterans' organizations, like the *Croix de Feu* in politics in the inter-war period, Pétain himself kept mostly aloof. After his retirement from France's highest military position in 1931, Pétain held no "visible ties to the politics of the sorry 1930s" (Paxton, 2001)[p.34].[39] On the rare occasions that he did voice his views, it was, however, to support anti-communist efforts, and to express contempt for politicians and parliamentary institutions.[40]. In fact, as we document below, municipalities exposed to Pétain

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[38]As the historian, Julian Jackson (2001) describes (pg.65): "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."

[39]After the events 6th February 1934, Pétain reluctantly agreed to become Minister of War, a position he only held for a few months. He was then made France's ambassador to (Fascist) Spain in 1939.

[40]For example, *He described the position of President of the Republic as only "suitable for defeated marshals"* in (**?**, p.134)

at Verdun also begin to diverge in their vote choices in the 1920s, with lowered support for the Communists, and higher support for right-wing parties that becomes accentuated in 1934 and 1936.

To rescue France once more from Germany as he had done at Verdun, Pétain was called to head France after her crushing defeat in World War II. However, "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 and patriotism in the French Army.[41] 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 was named in 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. 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.

Upon gaining power, Pétain's regime quickly began dismantling liberal institutions and adopted an authoritarian course. Even the motto of Republican France: "Liberty, Fraternity, Equality" was banned in favor of "Work, Family, Fatherland". In October 1940, Pétain's collaboration took a more 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."[42] 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.[43] Any possible ambiguity about the nature of Pétain's regime was resolved by 1942, when the Vichy government even offered Germany to join the war against the Allies (Paxton, 2001, p.143). The regime took on a further repressive turn after 1943, when it formed a *Milice* [militia] to hunt down and kill the French Resistance.

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[41]He had initially turned down a position in the government when World War II had begun in September 1939.

[42]Extract of Pétain's speech on 10 October 1940. The choice of collaboration is often explained by historians by the fact that Pétain and those around him thought that a German victory in the War was inevitable, a view that contrasted sharply with that of Charles de Gaulle, who simultaneously was calling on French soldiers to join him in resistance.

[43]Pressures on 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).

## 4.2 The nature of Collaboration and the Paillole Dataset

Initially, Pétain's authority as a war hero was such that most of France did appear to be behind him in the summer and autumn of 1940. Collaboration was also encouraged by an active propaganda machine put in place both by the Vichy regime and by the German occupation authorities (Burrin (1996), p.179).[44]

The degree of support varied, from what Burrin (1996) describes as viewing collaboration as a way to accommodate and secure advantages in difficult circumstances to viewing it as a "providential" chance to implement authoritarian reforms and align with Nazi Germany (Burrin (1996), p. 183). Accordingly, collaboration took several forms, from economic collaboration (trading with the occupying forces), joining collaborationist political parties, participating in para-military groups that conducted the repression of internal Resistance and the deportation of Jews, free-masons, communists, providing voluntary labour in German factories [45], or directly joining the Gestapo or the SS. In Appendix 4.2, we provide useful historical background on the different forms of collaboration in our dataset.

Our measure of collaboration itself comes from a remarkable 2,106 page list of 105,300 names collected in 1944 and 1945 under the supervision of Colonel Paul Paillole, the head of French army intelligence at the end of the war (Lormier, 2017). 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 onwards, he had also served in the *Deuxieme Bureau*- the counter-intelligence services- of the Armistice Army of the Vichy government itself between 1940 and 1942. The French Armistice Army was allowed to maintain its counter-intelligence services on the condition that they did not act against Germany or Italy.[46] However these services not only acted against Gaullist resistants and communists, they also targeted German spies within the unoccupied zone.[47] In fact more than 2000 suspected German spies were arrested by Vichy state services between September 1940 and June 1942, and more than 40 executed (Lormier, 2017)[chp 2.].[48] 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

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[44] 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, which made an Allied victory more likely. Support for Pétain himself, however, was believed to be higher and even more enduring (Burrin, 1996, Paxton, 2001)).

[45] An *involuntary* system of forced labor (*Service du Travail Obligatoire* or STO), was also instituted in 1942 for all males born between 1920 and 1922

[46] Nonetheless, the former Allied commander and Vichy Minister for National Defense, Weygand, encouraged the Deuxieme Bureau to create an official *Bureau des menées antinationales* [BMA: Bureau of Anti-National Activities], but also underground organizations, including the innocuous-sounding *Entreprise des Travaux ruraux* [Business of Rural Work], headed by Paillole.

[47] In Paillole's own words, as related to Dominique Lormier: "The underground TR service that I directed performed research outside of the free zone and overseas; it was in charge of infiltrating enemy services. The information that was collected in the free zone was given to the BMA, who used them mainly in collaboration of the military justice system.".

[48] At German insistence, the BMA was dissolved but was surreptitiously reconstituted under the name *Service de Sécurité militaire*, again headed by Paillole. Ultimately, more than half of the BMA leadership would be arrested and would die in Nazi concentration camps.

organizations and supporting resistance networks. For example, a successful raid in 1943 abducted six collaborators and captured a file that contained the names of all the members of the *Parti populaire francais* (PPF- see Appendix 4.2).[49]

The goal of the complete list that we use was to assemble data from a range of organizations in order to "signal the names of suspect and doubtful individuals who should be subject to a thorough investigation". [50] Under the 70 year rule, the document was declassified in 2015, but still has not been made publicly available due its enduring sensitivity: in fact, many on the list are not widely known to be collaborators (Lormier, 2017). The file records information on the first and last name of each suspected collaborator, his or her address at the end of World War II, the nature of collaboration, and, in some cases, additional information on place and date of birth (or age) and economic occupation. Figure A7 shows an anonymized example of these files and Figure A8 shows the granularity of the addresses in central 1940s Paris.

We photographed and then digitized the entire file, geo-referencing the municipality of birth or residence of each collaborator. Our final dataset includes $96,636$ names of individuals and families, representing at least $97,242$ individuals. For almost 80 percent of them, we have information on the nature of collaboration, recorded as membership to one or several of 50 different collaborationist groups.[51] Figure A9 provides the breakdown of membership into the 13 major groups in our data. The largest groups include the right-wing parties, the RNP (*Rassemblement national populaire*) ($17,865$ individuals) and PPF ($9,423$ individuals) as well as the resistance-hunters, the *Milice* ($15,442$ individuals). Other major groups include other collaborationist political parties that emanated from the 1930s Fascist Leagues, such as the Francist Movement or the Revolutionary Social Movement. Beyond the Milice, other major right-wing paramilitary groups include the SOL (*Service d'order légionnaire*) and the LVF (*Légion de volontaires français contre le bolchevisme*). The most prevalent forms of direct Nazi collaboration were those that worked with the *Service Renseignement Allemand* (German Intelligence Service: $3,088$ individuals) and the *Gestapo* ($5,234$ individuals). $1,544$ people were recorded as economic collaborators. We are able to geo-reference the precise address of $86,269$ collaborators.[52] For an additional $2,560$ individuals, the list only includes information on birthplace.

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[49]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 and now form part of our dataset.

[50]*Le présent document a pour but de signaler le nom des individus suspecs ou douteux qui doivent faire l'object d'une enquête approfondie*. 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 he 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 Pommiés, curator of the Centre National Jean Moulin, who was also the related to a famous resistant with whom Paillole worked during the war.

[51]Some of the same people showed up multiple times if they were on different organization lists. We correct for these duplicates. In addition, some entries are listed as couples or couples and their children. To get a lower bound at the individual level, we assume one child in those instances.

[52]For $12,983$ individuals, the list includes additional information on birthplace, in the event that the birthplace municipality is different from their residence in 1945. This suggests that 15.05% of the collaborators in our list are internal migrants, a figure that matches estimates of internal migration available from the 1931 Census (16.41%). Nearly 30% (26.43%) of these movers live in the Paris region.
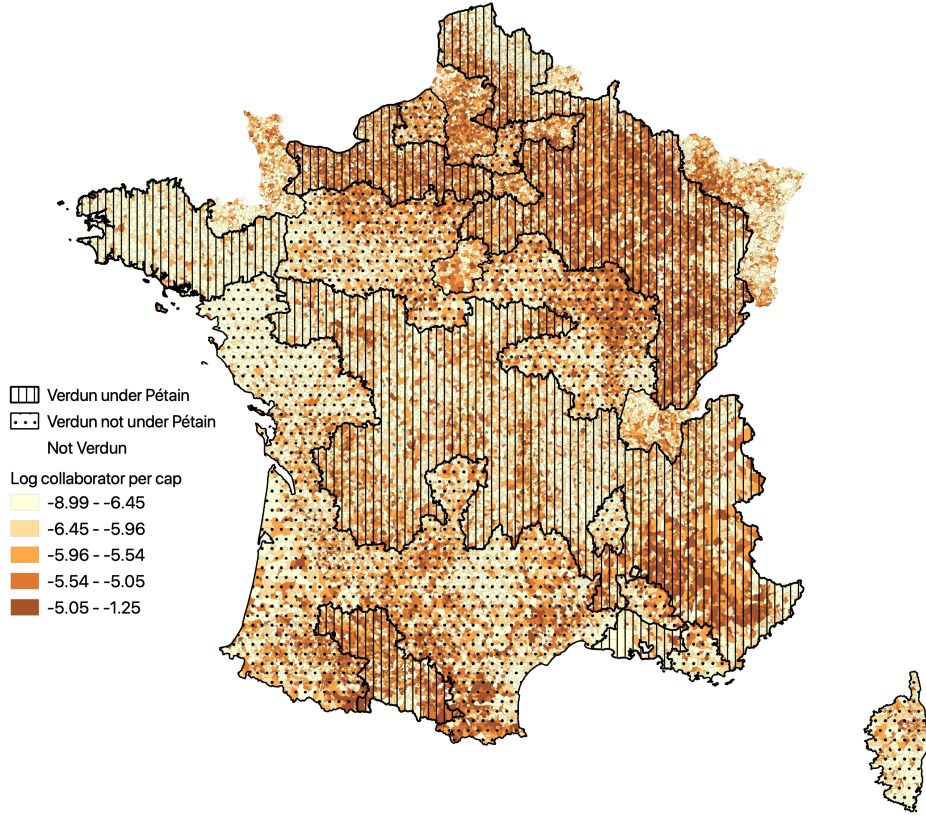
**Notes:** The map shows quintiles of the log. distribution of collaborators per capita across municipalities in 1945, overlayed with their regimental combat experience in World War 1. This map shows information for the 36,571 municipalities within France's 1945 borders.

Figure 3: Quintiles of the distribution of collaborators – municipality of residence

We therefore have information on the birthplace municipality of 88,829 collaborators, on which we focus the rest of our analysis.[53]

# 5 Results: Combat Exposure to Pétain in WWI and Collaboration in WWII

Figure 3 maps the quintiles of the log. distribution of collaborators per capita across municipalities in 1945, overlayed with their 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 P-a-V municipalities, even compared to those just across the border from a P-a-V catchment area during the First World War.

Although they account for only 49.71 percent of all municipalities, municipalities home to a regiment that served under Pétain's command hosted as much as 61.53 percent of the

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[53]We retain an indicator variable for movers for robustness analysis.

Table II: **Regression: Collaboration and Resistance in WWII**

| | Log Collaborators pc | | | Log Resistance members pc | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Verdun under Pétain | 0.052** | 0.048** | 0.049** | -0.113*** | -0.133*** | -0.135*** |
| | (0.025) | (0.024) | (0.024) | (0.039) | (0.032) | (0.032) |
| Verdun | -0.017 | -0.017 | -0.018 | 0.031 | 0.004 | 0.015 |
| | (0.033) | (0.033) | (0.032) | (0.048) | (0.039) | (0.039) |
| Log pop 1936 | -0.560*** | -0.539*** | -0.541*** | -0.164*** | -0.616*** | -0.614*** |
| | (0.013) | (0.041) | (0.041) | (0.012) | (0.035) | (0.035) |
| WWI fatality rate | | -0.003** | -0.003* | | 0.005** | 0.005** |
| | | (0.002) | (0.002) | | (0.002) | (0.002) |
| Log pop 1911 | | -0.029 | -0.028 | | 0.513*** | 0.511*** |
| | | (0.039) | (0.039) | | (0.036) | (0.036) |
| Share Centre, 1914 | | -0.000 | -0.000 | | -0.001 | -0.001 |
| | | (0.000) | (0.000) | | (0.001) | (0.001) |
| Share Right, 1914 | | -0.001** | -0.001** | | -0.002*** | -0.002*** |
| | | (0.000) | (0.000) | | (0.000) | (0.000) |
| Combat days in 1940 | | | 0.000 | | | -0.011* |
| | | | (0.005) | | | (0.007) |
| Log dist demarcation line | | | 0.011 | | | -0.017 |
| | | | (0.008) | | | (0.018) |
| Vichy France | | | -0.077*** | | | 0.069 |
| | | | (0.029) | | | (0.050) |
| Fixed effects | Dept | Dept | Dept | Dept | Dept | Dept |
| RI p-val | | | | | | |
| R-squared | 0.62 | 0.62 | 0.62 | 0.31 | 0.34 | 0.34 |
| Observations | 34,942 | 34,942 | 34,942 | 34,942 | 34,942 | 34,942 |
| Mean DepVar | | | | | | |
| Sd DepVar | | | | | | |

**Notes:** This table provides an OLS regression of the log collaborators in 1944 per 1936 pop. and log. resistance fighters (1940-45) per capita on an indicator for whether municipalities which fought at Verdun under direct command of Pétain in 1916. We impute zeros for observations with missing information, and control for an indicator for whether a specific variable is missing. Robust standard errors clustered at Regiment level in parentheses (*** p<0.01, ** p<0.05, * p<0.10).

collaborators for whom we have location information.

Table II shows that these raw differences are robust. Column 1 reports the uncontrolled results within departments, showing that the share of collaborators is 5.1 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 effect on collaboration.

Column 2 adds controls for political pre-trends before World War 1. The P-a-V effect remains relatively stable and significant ($\beta$=0.046 [se=0.023]), confirming that the long-run trends in French society, although important drivers of political choices in WWII, were largely unrelated to the assignment to treatment. Further, the pre-trends themselves highlight the role of pre-existing polarization and radicalization. Municipalities where right-leaning, pro-

authoritarian Royalists and Bonapartist groups had engaged in more violent demonstrations before 1914 have a significantly higher share of collaborators in WWII. Yet, this is also true for violent demonstrations by Communists and Socialists, though there are more collaborators where the Socialists won *fewer* votes in 1914. These results are consistent with the continuity between collaborationist groups and right-wing parties, as well as historical accounts noting how some collaborated with the Germans due to a perceived 'red scare'.[54]

Column 3 further adds controls for key factors related to the invasion and occupation in World War 2, including combat intensity in 1940, an indicator for Vichy versus occupied France, and the log. distance for the demarcation line. The share of collaborators in our data is 7 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 addition of these controls ($\beta$=0.047, se=0.023).

## 6    Mechanisms

We adopt a series of strategies to unpack the mechanism. We first present a series of placebo and local comparisons to help isolate the specific link between exposure to Pétain at Verdun and collaboration. We then examine other outcomes, including resistance activity, different forms of collaboration and electoral results.

### 6.1    Placebos and Local Comparisons

Could the effects on collaboration be due to combat exposure at Verdun more generally rather than exposure specifically to Pétain? Figure A4 shows the coefficient on a dummy variable for regiments exposed to any set of two (left panel) or three (right panel) consecutive months of rotation at Verdun.[55] No other consecutive set of months of fighting, apart from those during which regiments were exposed to Pétain's leadership, are significantly associated with collaboration.

A second possibility is that, by being rotated through Verdun, a regiment was unlikely to be deployed to the Somme offensive. To check that our results are specifically driven by exposure to Pétain at Verdun rather than by the absence of exposure to the carnage of the Somme, Table A5 shows that our results are robust to adding a control for those regiments that were also rotated through the Somme or other major battles or theaters of war. Columns 1 and 2 of Table A5 shows that rotation at the Somme or on the South-Eastern front have no effect on collaboration. Moreover, the inclusion of these controls does not affect the magnitude of the

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[54]The Francist and Social Revolutionary movements were the continuation of 1930s Fascist movements. See also Robert Forbes (2006) *For Europe: The French Volunteers of the Waffen-SS*. Though it is worth noting that the leaders of the two main political collaborationist parties (RNP and PPF) were former leaders of the Socialist and Communist party.

[55]We focus on 2 and 3 months to best compare with the effect of the 2 months and a few days of exposure to Pétain (Feb 26 - May 1).

Pétain at Verdun effect. Rotation in the major battle prior to Verdun, the First Battle of the Marne, similarly has no effect (Column 2 of Table A5).

Finally, fortress regiments had different recruiting protocols, and were more likely to face the frontier. This led them to experience more deaths in battle ($3,526.94$ deaths for fortress regiments against $3114.28$ for others (P-value=0.000). However, our results are unchanged when excluding fortress regiments (Table A5, Col 3).

Does exposure to Pétain at Verdun also manifest itself in differences in the propensity to collaborate in communities right next to one another, but one of which happened to have troops rotated through Verdun under his command? Consistent with the broader patterns in Figure 3, Figure 4 shows that there is indeed a sharp discontinuity in the local shares of collaborators either residing or being born in the municipalities within 26km (the ? bandwidth) of relevant regiment catchment borders.[56] This confirms that combat exposure to Pétain encouraged collaboration, even in municipalities that are geographically extremely close to one another. In contrast, there are no pre-existing differences in political preferences between the two sides of the regiment catchment border (Figure A5).

Table A7 in the Appendix complements these figures, presenting results based on a fuzzy spatial regression discontinuity design (RDD) on the regiments' catchment boundaries sample and controlling for pre-1914 socio demographic characteristics, WWI casualty rates, WWII (but pre-Vichy) related controls, department fixed effects, and a quadratic polynomial in latitude and longitude of the centroid of the municipality. We also present sensitivity checks that vary the bandwidth to half (13km) or double (52km) the optimal Calonico, Cattaneo and Titiunik (2014) bandwidth around the military boundary. [57] The results in Table A7 confirm that combat exposure to Pétain in 1916 increased the share of collaborators in the municipality during WWII.[58]

## 6.2 Resistance

So far we have focused upon the incidence of active collaboration. But the people of France had other choices in World War 2: to passively collaborate, to wait and see (*attentisme*), or to actively resist. In contrast to the patterns of collaboration, Figure 5 shows the per capita distribution of municipalities of origin for close to 600,000 officially recognized resistance fighters that we georeferenced from the French military archives at Vincennes in our companion paper (Cagé, Dagorret, Grosjean and Jha, in progress). Notice that, while some regions, particularly

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[56]There is also a sharp discontinuity in combat exposure to Pétain (see left panel of Figure 4).

[57]Since some municipalities belonged to a catchment that garrisoned more than one regiment with possible different battle histories, ours is a fuzzy RD design. We instrument exposure to Pétain at Verdun by the distance to the military boundary. This first stage has a high predicting power, with a F-statistics between 30.80 and 65.02 depending on the estimation sample (see Table A8 in Appendix). Figure A6 shows that the density of municipalities on either side of the military catchment areas that served under Pétain at Verdun or not is smooth.

[58]Tables A3 also shows the robustness of these results to alternative functional forms, reporting the results of a Poisson specification using the number of collaborators as the dependent variable. We also check that our results are robust to excluding the collaborators who were movers, ie for whom municipality of birth was different than municipality of residence. Results are presented in Column 1 to 3 of Table A4.
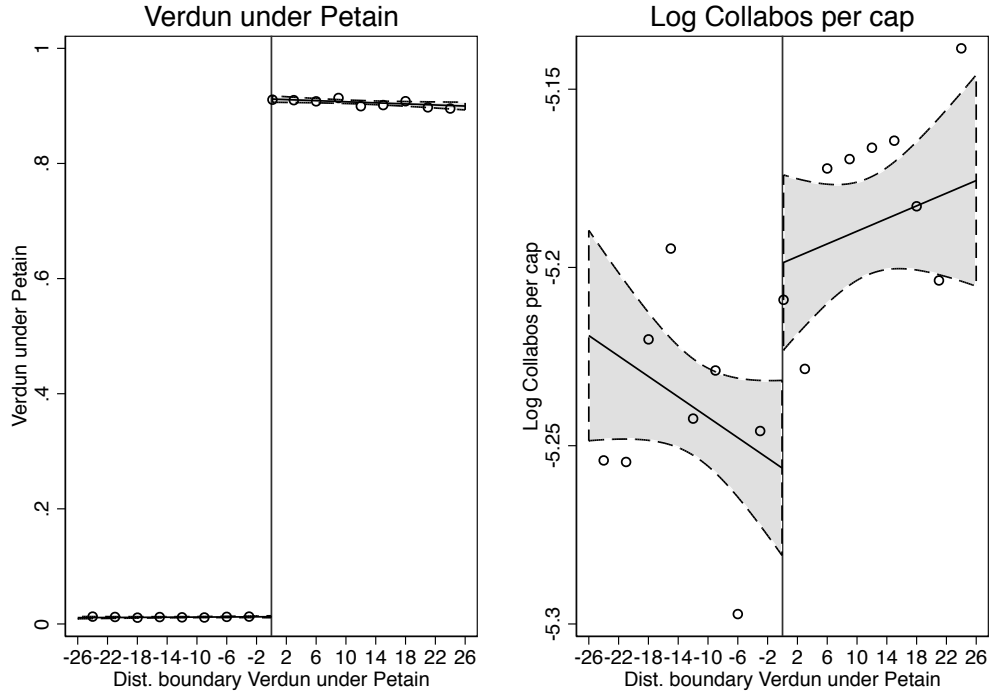
**Notes:** See notes to Figure A5. The Figure shows a sharp discontinuity in our treatment: combat exposure to Pétain at Verdun, and in our main outcome: the local shares of collaborators in the municipalities that raised regiments that served under direct command of Pétain at Verdun in 1916 or not. See Tables A7 and A8 in Appendix for the corresponding regression results and bandwidth sensitivity analysis.

Figure 4: Regression Discontinuity plots

near the northeastern frontier that were traditionally important recruitment areas of the French army (Jha and Wilkinson, 2019), saw relatively more engagement by both collaborators and resistance fighters during the war, in other regions, like parts of Normandy, collaborators were relatively more active, while other locations, famously in Brittany, were more likely to hold out against the invaders (see also Goscinny and Uderzo, 1959).

These data also allow us to shed further light on the mechanism. If serving under Pétain at Verdun provided veterans solely with a heroic credential or more organizational capacity (**?**) that enabled collective action, then we should expect increased political involvement by *both* resistance fighters and collaborators, each potentially driven by differing conceptions of patriotism. If, on, the other hand, exposure to heroes also tends to foster ideological support for authoritarianism, we would expect there to be more active military collaborators, at the expense of those in the resistance.

Columns 4 to 6 of Table II show that Resistance membership fell by a remarkable 12-13% in municipalities whose troops had fought at Verdun under Pétain. This effect is around three times higher in magnitude than the P-a-V effect on the rise of collaborators. Given that these are percentages of levels of participation by resistants that are 6 times higher on average,
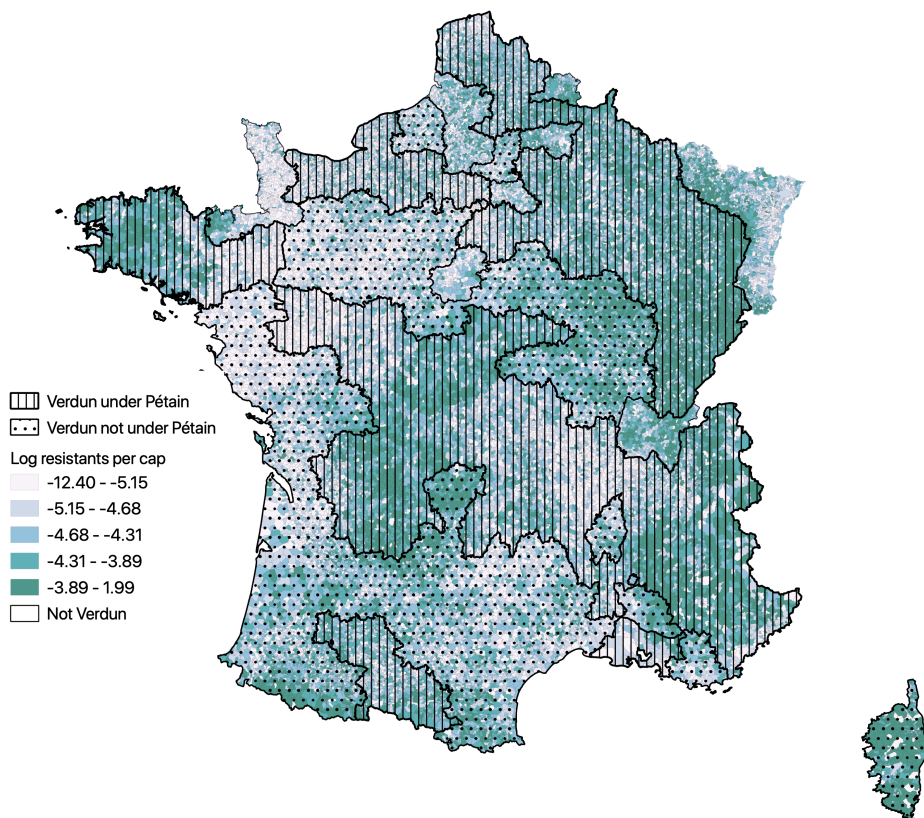
**Notes:** The map shows quintiles of the log. distribution of World War 2 Resistants per capita across municipalities in 1945, overlayed with their regimental combat experience in World War 1. This map shows information for the 36,571 municipalities within France's 1945 borders.

Figure 5: Quintiles of the distribution of birthplaces of members of the French Resistance

these effects suggest that the Pétainist effect was in large part not necessarily to drive active collaboration but instead to convert those who might otherwise have been resistance fighters into non-participants. In fact, ironically, this may have in turn *reduced* polarization in France after the war, as we discuss below.

Table II can provide still further insight. Notice that, unlike collaboration, the resistance was stronger in socialist and Communist strongholds before World War 1. Notice also that a municipality's military fatality rate in World War I goes in the opposite direction to the Pétain effect: being negatively associated with the share of collaborators during World War 2 but positively correlated with resistance. This suggests that, contrary to popular accounts that claim that French resistance in World War 2 was weakened by the trauma of World War I and an unwillingness to avoid another bloodletting on French soil, those municipalities that suffered the most in the Great War were less likely to collaborate and *more* likely to resist.

### 6.2.1 Results by collaborationist organization

Were certain types of collaborationist activities more encouraged by exposure to Pétain at Verdun? Did this exposure only sway participation in more tepid ways such as membership in political parties, or did it also encourage more dangerous activities such as increased paramilitary collaboration? Were those exposed to the hero of Verdun and those that served with him ironically also more likely to assist their erstwhile enemies, the Germans?

Figure 6 plots the coefficient associated with combat exposure to Pétain at Verdun in the specification with the full set of controls for the share of members in each collaborationist organization in our data (see also the detailed descriptions in the Appendix and Table A6.). As Figure 6 suggests, combat exposure to Pétain at Verdun raised the propensity to collaborate across the whole spectrum of collaboration, from participation in political parties, paramilitary groups, Nazi organizations, as well as economic collaboration. Municipalities that had been exposed to Pétain's leadership at Verdun were particularly more likely to raise members in the two major collaborationist fascist political parties, the RNP and the PPF, as well as in the Francist movement. Exposure to Pétain's leadership is also associated with higher participation in Groupe Collaboration, which was a less violent and more elite pro-Nazi movement that gathered mainstream intellectuals and notables. We also examine membership to a marginal yet symbolic group: the –explicitly named– "Friends of the Marshal" movement. This movement was non-violent and only 338 "Friends of the Marshal" are recorded as its members in our database. Yet, we observe a significantly higher proportion of them in municipalities that had had direct exposure to Pétain.

For paramilitary collaboration, we observe a contrast between the SOL and its later incarnation: the Milice, which was formed at the start of 1943. As discussed in the Appendix, the SOL, and before it the Legion of Combatants, was firmly based in WWI veteran organizations and had a clear allegiance to Pétain. As such, membership to the SOL was significantly higher in municipalities that had direct combat exposure to Pétain in the first World War. The Milice, although the successor of the SOL, attracted a more disparate membership, not only of WWI veterans, and not necessarily of Pétain's supporters.[59]

Ironically, those exposed to the hero of Verdun were ultimately also more likely to engage in Nazi collaboration, including volunteering for the Gestapo, collaborating with the German intelligence, joining the *Waffen-SS* and the SS intelligence service (*Sicherheitsdienst*), as well as trading with the occupying forces. These actions that might otherwise been seen as repugnant, seem to have been legitimized by the credentials of heroism earned at Verdun.

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[59]Historians such as Burrin (1996) indeed highlights the declining role played by pro-Pétainism in explaining collaboration over the course of the war and hence, in our context, membership to the Milice, which was only created in 1943. These reasons may explain why the Pétain effect, although of similar magnitude as for the SOL, is, less precisely estimated for the Milice.
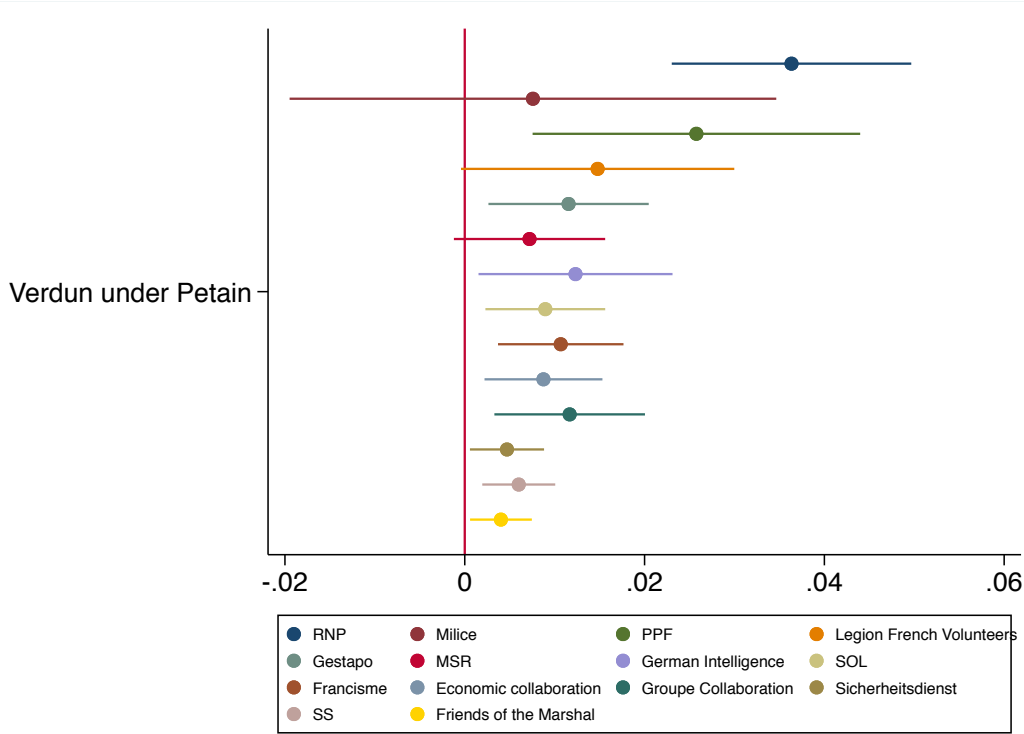
**Notes:** The figure shows coefficients obtained from a specification regressing the log of collaborators per capita, for membership to each group, as indicated. Groups are ordered by membership size. Each line is a separate regression, which includes the full set of controls and department fixed effects. Standard errors are clustered at the regiment level. 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 or economic collaboration.

Figure 6: Effects on membership in each of the main collaborationist organizations.

## 6.3 Loyalty and the organizational capacity of the veterans

One possible mechanism that may explain why municipalities that served under direct command of Pétain in 1916 had a higher share of collaborators in World War II is though the organizational capacity of the veterans themselves. 8 million men had served in World War I . In 1939, 40% of the French male population were veterans of the Great War. The main collaborationist paramilitary organizations, such as the Legion and the SOL emanated directly from veterans' organizations. Their members swore their allegiance to Pétain. The heads of former veteran organizations created the main collaborationist political party, the RNP, along with Déat, himself a veteran (Burrin, 1996). We study here the role played by WWI veterans, and more particularly how those directly connected to Pétain, in the organization of local collaboration.

First, we measure the extent to which local exposure to Pétain's leadership operated through the World War I veterans. We define the proportion of veterans among collaborators as the ratio of men of World War I draft age classes over the proportion of male collaborators. Information on age is only available for a subset of collaborators, and we only use information on the intensive margin of collaborators so the number of observations drops substantially. Yet, Column 1 of In

Table III, shows that combat exposure to Pétain's leadership raises the local share of veteran-age men among collaborators by about 3%, while it has no effect on the share of collaborators too young to have served, nor on female collaborators of veteran-age (Columns 2 and 3).

We can also track more specifically the veterans who had a direct connection to Pétain. We have two alternative ways in our data to do so. The first is from the composition of the Second Army Corps. Before the Battle of Verdun, Pétain had been in charge of the Second Army since June 1915. These soldiers would thus be the ones with the longest, and probably deepest connection to Pétain. The Second Army included eight line infantry regiments, who mostly served in the same sector in 1915. However, after Pétain was promoted as commander in chief at Verdun, those regiments experienced a different 1916. Only two regiments served at Verdun (and did so under Pétain), while the others served in different sectors before fighting the Somme, and one was dispatched to the Salonica front. As Table III shows, the effect on collaboration in P-a-V municipalities is robust to controlling for their pasts as part of the Second Army or of other previous formations. Moreover, municipalities assigned to the Second Army did subsequently also have higher shares of collaborators. These results suggest that deeper personal connections to Pétain do seem to have subsequently shaped collaboration.

A third way to capture the influence of the veterans "treated" by Pétain's direct command, is to rely on the variation across regiments in the number of these "treated' ' veterans who survived the war and came back to tell the tale of their heroic commander at Verdun and in the IId Army. We exploit data on the number of World War I military fatalities at the municipality level from the *Memoire des Hommes* data on each of 1.3 million soldiers who died in combat in World War I .[60] Columns 1 to 4 of Table III shows that, consistent with our hypothesis on the organizational capacity of veterans, the effect stemming from exposure to Pétain's command either at Verdun or in the Second Army is attenuated in municipalities where fewer veterans came back. The effect is particularly robust for the SOL: the paramilitary organization of World War I veterans.

Both the additional effect of the Second Army and the attenuating effect of World War I military losses are consistent with our hypothesized mechanism of organizational capacity of the loyal veterans themselves. However, this effect alone cannot explain our full set of results, which also indicate a positive and significant Pétain effect beyond veterans-based paramilitary organizations, on collaborationist political parties that were not connected to veterans, and even on Nazi collaboration. In the next section, we provide direct evidence of a more transformative effect of loyalty to Pétain on political preferences, which started materializing even before the start of the Second World War.

## 6.4 Loyalty and ideology

Although Pétain assumed no major political role in the interwar, he was widely recognized as a right-wing political figure, with a a conservative stance and a moral aura. As mentioned above,

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[60]The average number of fatalities in a municipality is 33.69 (min: 1; max: 7829; s.d.: 129.95).

Table III: **WWI Veterans and Collaboration**

| | Prop. Veterans | Prop. Too Young for WWI | Prop. Women | Log collabos pc | | | SOL |
|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Verdun under Pétain | 0.029+ | 0.005 | -0.021 | | 0.045** | 0.056** | 0.014** |
| | (0.019) | (0.030) | (0.018) | | (0.023) | (0.025) | (0.006) |
| Verdun | -0.055** | 0.030 | 0.041* | | 0.007 | -0.001 | -0.001 |
| | (0.022) | (0.038) | (0.023) | | (0.031) | (0.030) | (0.005) |
| II Army | | | | 0.082** | 0.098** | 0.090** | 0.007 |
| | | | | (0.032) | (0.038) | (0.036) | (0.006) |
| Milit. deaths in WWIXVerdun under Pétain | | | | | | -2.857 | -1.643+ |
| | | | | | | (3.112) | (1.039) |
| Milit. deaths in WWIXII Army | | | | | | -4.164** | -1.551** |
| | | | | | | (1.789) | (0.690) |
| Milit. deaths in WWI | | | | | | 16.505*** | 4.610*** |
| | | | | | | (2.953) | (0.944) |
| Fixed effects | Dep | Dep | Dep | Dep | Dep | Dep | Dep |
| Pre and WWI controls | | | | | | | |
| WWII controls | | | | | | | |
| Political pre-trends | | | | | | | |
| R-squared | 0.03 | 0.07 | 0.04 | 0.62 | 0.62 | 0.65 | 0.98 |
| Observations | 4,801 | 1,339 | 4,801 | 34,942 | 34,942 | 34,466 | 34,466 |
| Mean DepVar | | | | | | | |
| Sd DepVar | | | | | | | |

**Notes:** This table shows how the effect associated with Pétain's combat leadership on collaboration in World War I is channelled through the WWI veterans. Column 1 shows that the effect of Pétain's leadership at Verdun specifically explains the share of veterans among collaborators, as opposed to the share of collaborators who were too young to be drafted in WWI (Column 2), or the share of women among collaborators (Column 3). Column 4 shows that the effect of Pétain's leadership on collaboration extends to other units that Pétain commanded, even prior to Verdun. Column 5 shows that the effects of Pétain's leadership before Verdun and at Verdun compound with one another. Column 6 shows that the effect of exposure to Pétain's leadership on collaboration, either before or at Verdun, is attenuated in municipalities where fewer men came back from the war. Column 7 shows that these effects are particularly robust for collaborationist paramilitary units that gathered WWI veterans (the Legionary Order Service, or SOL). See notes to Table II for description of controls, data sources and imputation methods for missing historical information. Robust standard errors clustered at Regiment level in parentheses (*** p¡0.01, ** p¡0.05, * p¡0.10).

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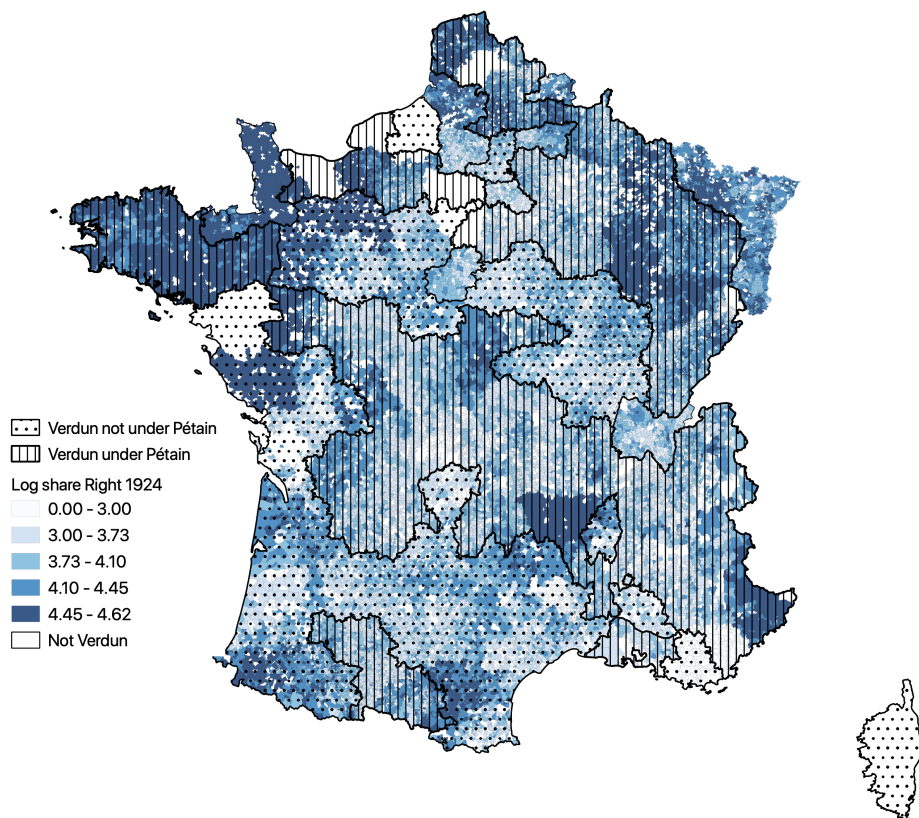
**Notes:** The map shows the 1924 election vote share, overlayed with a municipality's regimental combat experience in World War 1. This map shows information for the 36, 571 municipalities within France's 1945 borders.

Figure 7: Vote share for right-wing parties, 1924

revealing is the fact that when a referendum entitled *"Is dictatorship up for discussion?"* was organized in November 1934 by *Le Petit Journal* – a right-wing newspaper – Pétain came first with 20% of the votes (followed by Pierre Laval with 16% and Gaston Doumergue with 12%).[61]

To investigate whether local exposure to Pétain had already shaped political preferences in a way that prefigured collaborationist political inclinations during the Second World War, we turn to political behavior in the interwar period. To do so and as described in the Data Section B.1, we collected data on the electoral results in the three interwar legislative elections of 1924, 1932 and 1936. If the effect of the direct exposure to Pétain partly happens through ideology, one should indeed expect an increase in the share of the votes for right-wing parties in the Interwar period.

Our dependent variable of interest is the log of the share of the votes obtained by a political party or formation in commune $i$. For each of the elections, we consider alternatively the total share of the votes obtained by the right (summing upon the right-wing parties), and the share of the votes obtained by each party taken individually.

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[61]Overall, 194, 785 readers participated in this referendum.

**Results**  Table V presents the results. We find that the direct exposure to Pétain during World War I led to an increase in the vote share obtained by the right during the interwar period. The effect is steadily increasing over time, as political polarization and political radicalization in France were deepening over the period leading up to World War II (Jackson, 2001). In 1936, we consider both the votes for the right and for the far right, given that a number of extreme-right candidates were running at the time. We obtain an increase in the share of the votes in both cases; however, this increase in only statistically significant for the right.[62]

To better understand the mechanisms at play, we perform the same analysis in Appendix, but at the party level. Table A9 shows the results. Interestingly, the increase in the vote share of the right is driven by two political parties: the "Alliance Démocratique" on the one hand (Column 6), and the Union Républicaine Démocratique (URD) on the other hand (Column 7). The URD was created by Pierre Taittinger, who later founded the *"Jeunesses Patriotes"*, one of the important collaborationist groups.

To sum up, we have shown so far that combat exposure to Pétain forged loyalties and shaped political ideology. In the inter-war period, municipalities with a direct connection to Pétain, a conservative figure, voted more for Right and Extreme Right parties. In the Second World War, they followed Pétain in the course of collaboration by joining pro-collaborationist political organizations. In the next section, we show that after the Second World War, the effect persisted through a long-lasting Left-Right swing that shaped post World War II French politics until the 1980s.

## 6.5  The Long-Term Effects on Political Behaviour

Last, we explore the long-term effect of exposure to Pétain on political behavior. We collected information on each legislative election in post war France and classified each party consistently along a Extreme Left - Extreme Right axis (see Appendix for more detail on the elections and party classifications). Figure 9 below shows the estimated coefficient associated with combat exposure to the "Victor of Verdun" on the share of vote for the Right or the Extreme Right in each election of the post war. Each line is a separate estimation of equation ?? for a different election.

The results provide a clear picture of a postwar Left-Right swing in municipalities directly exposed to Pétain, which lasted up until the 1980s. Point estimates suggest that the size of the swing over that period amounts to more than 3 percentage point on average, across all elections. Considering that about half of all French municipalities fought under Pétain at Verdun, these results suggest a roughly 1.5 percentage point durable advantage for the Right in those elections. The analysis of individual elections reveal a striking picture of a durable Pétain effect on reversion to traditionalism in times of real or perceived crisis. The elections for which the Pétain effect is most significant and largest in magnitude are in 1981 (5.95), 1968 (4.13), 1958 (4.81) and 1956 (3.95). 1981 was a crucial year in France with the election of

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[62]It is worth noting that the far-right vote was so low at the time that there was not a lot of variation.

Table IV: Exposure to Pétain and the 1924 legislative election results:

| | Far-Left | Left | | | Right | | |
|---|---|---|---|---|---|---|---|
| | (1)<br>Bloc Ouvrier Paysan | (2)<br>Socialist | (3)<br>Rad-Soc | (4)<br>Rep-Soc | (5)<br>Union Rep | (6)<br>Rep Gauche | (7)<br>PRDS |
| Verdun under Pétain | -0.152** | 0.061** | 0.012 | -0.005 | 0.006 | 0.029* | -0.034 |
| | (0.065) | (0.029) | (0.009) | (0.004) | (0.050) | (0.015) | (0.024) |
| Verdun | -0.023 | -0.031 | -0.015* | 0.003 | -0.081 | -0.013 | 0.055 |
| | (0.073) | (0.046) | (0.008) | (0.002) | (0.054) | (0.011) | (0.043) |
| Fixed effecs | Dep | Dep | Dep | Dep | Dep | Dep | Dep |
| Pre and WWI controls | | | | | | | |
| Political pre-trends | | | | | | | |
| R-squared | 0.41 | 0.85 | 0.96 | 0.86 | 0.95 | 0.95 | 0.97 |
| Observations | 29,137 | 29,137 | 29,137 | 29,137 | 29,137 | 29,137 | 29,137 |
| Mean DepVar | | | | | | | |
| Sd DepVar | | | | | | | |

**Notes:** This Table shows that municipalities that raised regiments that served at Verdun under Pétain voted increasingly for Right-wing political parties during the interwar period. The models are estimated using OLS estimates. An observation in Column 1 is a municipality; it is a canton in Columns 2 to 5. See notes to Table II for description of controls, data sources and imputation methods for missing historical information. Robust standard errors clustered at Regiment level in parentheses (*** p¡0.01, ** p¡0.05, * p¡0.10).

Table V: Exposure to Pétain and the 1924, 1932 and 1936 legislative election results: Vote for the right

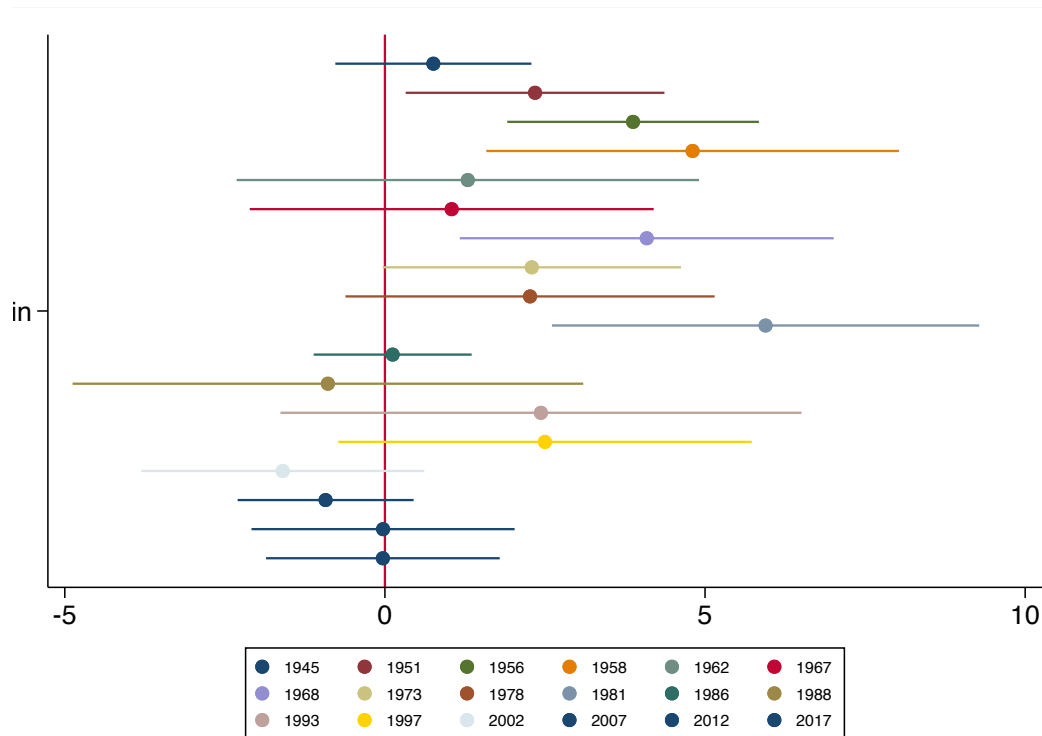| | Right 1924 (log) | Right 1932 (log) | Right 1936 (log) | Extr Right 1936(log) |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Verdun under Pétain | 0.082* | 0.461** | 0.558** | 0.001 |
| | (0.046) | (0.204) | (0.282) | (0.002) |
| Verdun | -0.051 | 0.008 | -0.721* | 0.002 |
| | (0.055) | (0.366) | (0.398) | (0.003) |
| Fixed effecs | Dep | Dep | Dep | Dep |
| Pre and WWI controls | | | | |
| Political pre-trends | | | | |
| R-squared | 0.59 | 0.30 | 0.36 | 0.19 |
| Observations | 29,137 | 28,221 | 30,536 | 30,536 |
| Mean DepVar | | | | |
| Sd DepVar | | | | |

**Notes:** This Table shows that municipalities that raised regiments that served at Verdun under Pétain voted increasingly for Right-wing political parties during the interwar period. The models are estimated using OLS estimates. An observation in Column 1 is a municipality; it is a canton in Columns 2 to 5. See notes to Table II for description of controls, data sources and imputation methods for missing historical information. Robust standard errors clustered at Regiment level in parentheses (*** p¡0.01, ** p¡0.05, * p¡0.10).

the first Socialist president of the Fifth Republic, whose radical program was seen by many as a threat to economic and social order. The 1968 elections were held in the aftermath of one of France's most profound social unrest in the post-war period, "May 68", punctuated by general strikes, large demonstrations, and occupation of universities and factories, and the French President De Gaulle even fleeing to Germany. As for the 1956 and 1958 elections, these were held in the context of France's military defeat in Vietnam and in Algeria. The crisis in 1958 was so deep, with rebellious generals opposing Algerian independence even taking control of Corsica and threatening to conduct an assault on Paris, that the Prime Minister was sacked, a government of National Unity nominated in his place, and a new Constitution (France's current Constitution) drawn. Thus in times of crisis, the legacy of Verdun, and of Pétainisme returns to shape French politics.

# 7    Conclusion

"Whatever happens, the flame of French resistance must not be extinguished and will not be extinguished."- Charles de Gaulle, June 18, 1940.

In this paper, we have shown that in 1940, the heroes of the First World War, the saviours of the nation in 1916, took France down a path of collaboration with one of the most oppressive regimes in history. The attitudes forged in that war continue to influence its politics to this day.

Figure 8: Pétain and the vote share for the Right and Extreme Right in post-war France

Yet, it is also true that the day after Pétain offered a "gift of himself" as dictator in 1940, another veteran, a relatively obscure and recently promoted Brigadier-General, who had himself served under Marshal Pétain in the First War, broadcast his appeal from London, calling on the French people to resist. De Gaulle, himself embodying the spirit of the French resistance, would gain a heroic credential through the Second World War, which though he would step away from politics in 1946, would later enable him to forge a Fifth Republic from the collapse of the Fourth, and a constitution that granted stronger powers to a democratically-elected President, a person who should embody *le esprit de nation*. This constitution remains that of France to this day.

The threat that heroes might pose for democracy, yet the need that democracies might have for heroes, is not limited to France. See for example, this letter written during a period of crisis for another resilient democracy:

January 26, 1863: Major-General Hooker:

I have placed you at the head of the Army of the Potomac. I have heard, in such a way as to believe it, of your recently saying that both the Army and the Government

**Notes:** The figure plots the results of individual specifications identical to using the share of votes for the Left or the Extreme Left in each election (as indicated in the bottom of the table) as the dependent variable, with the full set of usual controls and department fixed effects. Standard errors clustered at the canton level (political administrative unit).
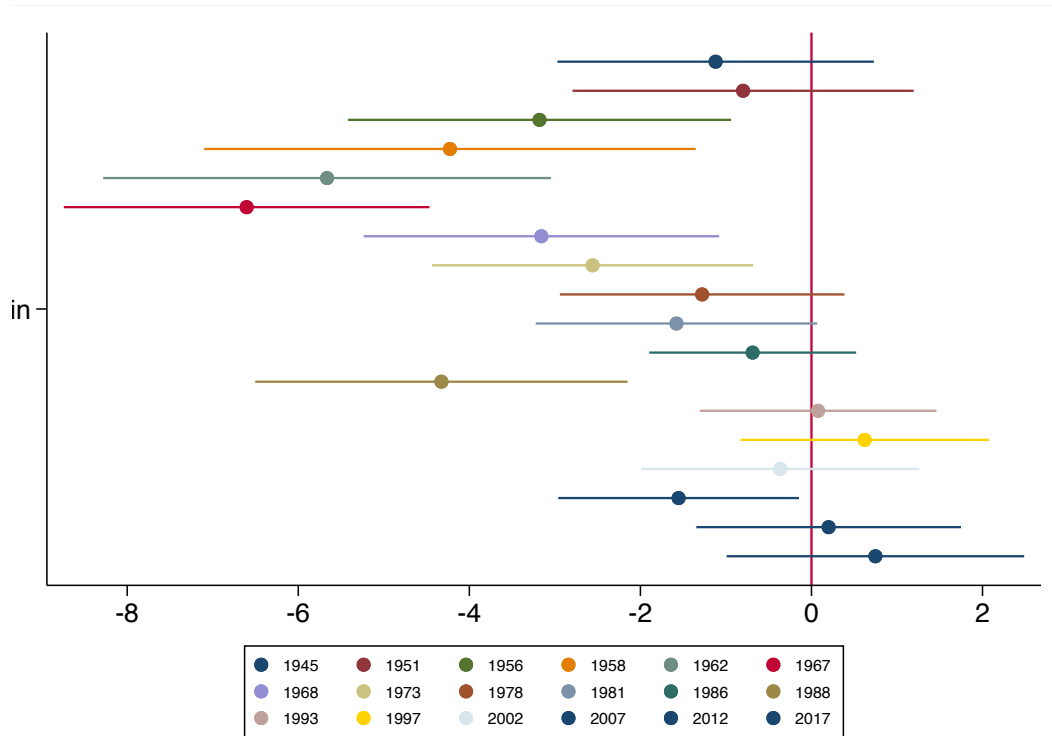
Figure 9: Pétain and the vote share for the Left and Extreme Left in post-war France

needed a Dictator. Of course it was not for this, but in spite of it, that I have given you the command. Only those generals who gain successes, can set up as dictators. What I now ask of you is military success, and I will risk the dictatorship . . . And now beware of rashness. Beware of rashness, but with energy, and sleepless vigilance, go forward, and give us victories.- A. Lincoln[63]

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The role of heroes in shaping events is the stuff of both the oldest historic sagas written by mankind and the newest movies yearning for the superhumans of the Marvel universe. Yet, our paper suggests that the legitimacy generated from heroic acts can shape institutions in important ways. In particular, heroes may gain license that allows them to adopt extreme preferences that can both strengthen and undermine democratic values. Heroes may also form networks that can be particularly potent in swaying political preferences towards authoritarianism in a long-lasting way.[64] Heroes can provide a great resource that can protect and save societies, but

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[63]Abraham Lincoln to Joseph Hooker (January 26, 1863).

[64]Further, heroes, while often emerging out of a crisis of war, like that of Verdun, may also emerge from a courageous commitment to non-violent resistance to injustice as well (Bhavnani and Jha, 2012). Beyond the

unless better understood, may also pose a great risk to egalitarian values and democracy.

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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. One example is Nixon's famous reapprochement with China. However, our interpretation resonates with the greater set of options available to war heroes to shape politics regardless of party. 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 6 Day War, was also able to pursue the Oslo Peace Accords, as head of the center-left Israeli Labour party.

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# A   APPENDIX (For Online Publication)

## Heroes and Villains (Cage, Dagorret, Grosjean and Jha): Supplementary Tables and Figures

**List of Figures**

Figure A1: Map of the 18 Military Regions and 144 sub-Regions of France, with the regimental bureaux de recruitment, 1914. Source: British Imperial General Staff *Handbook of the French Army, 1914*.
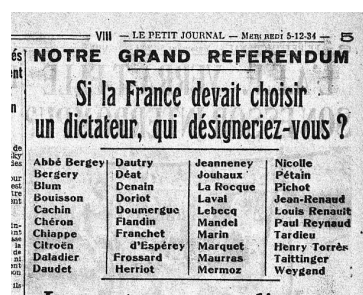


Figure A2: Referendum on "If France had to choose a dictator, who would you pick?" in the "Petit Journal" newspaper, on 5 December 1934
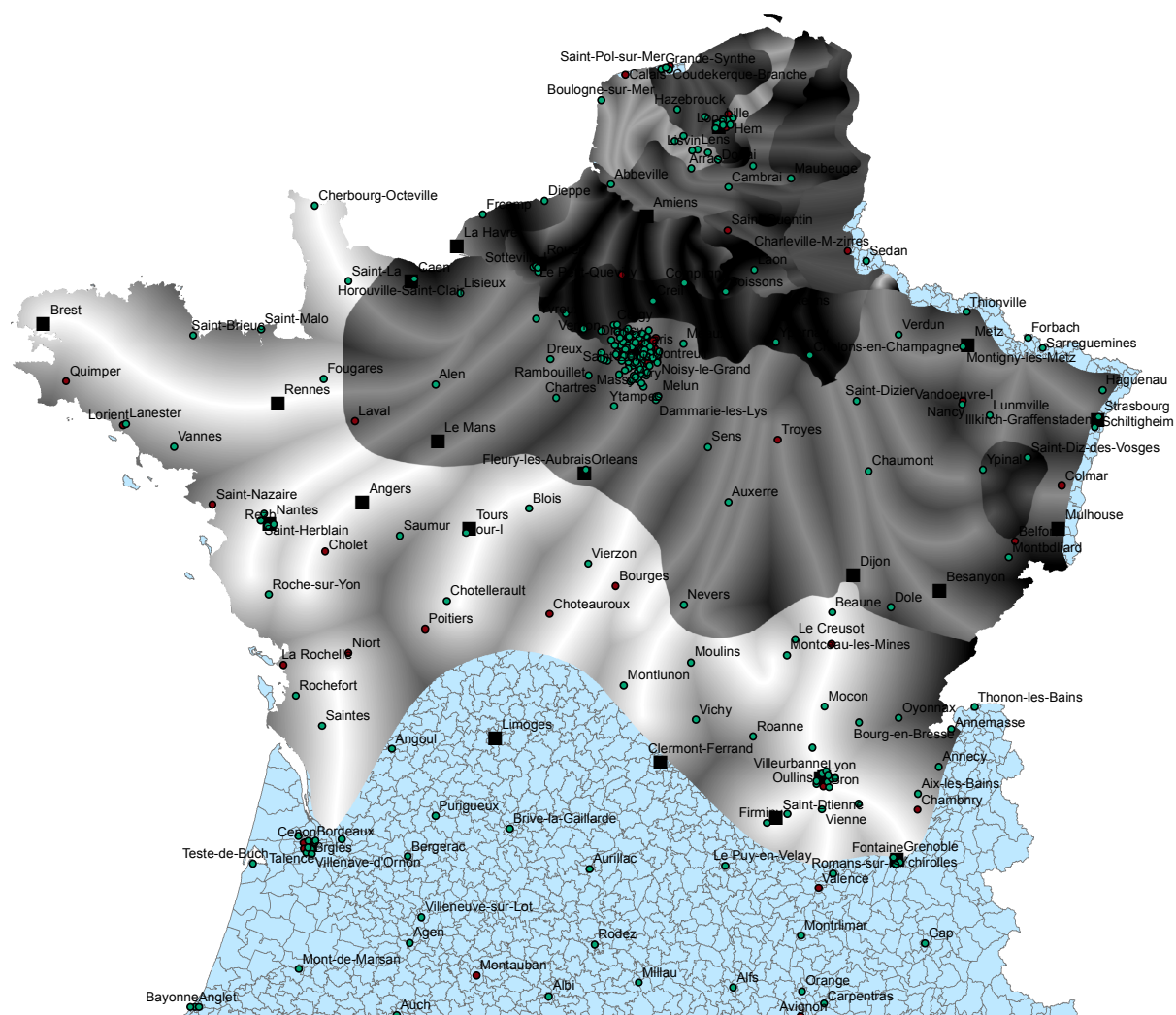
Figure A3: Heat map of combat intensity in 1940. Own calculations based upon weekly German individual unit movements derived from the *The West Point atlas of American wars*.
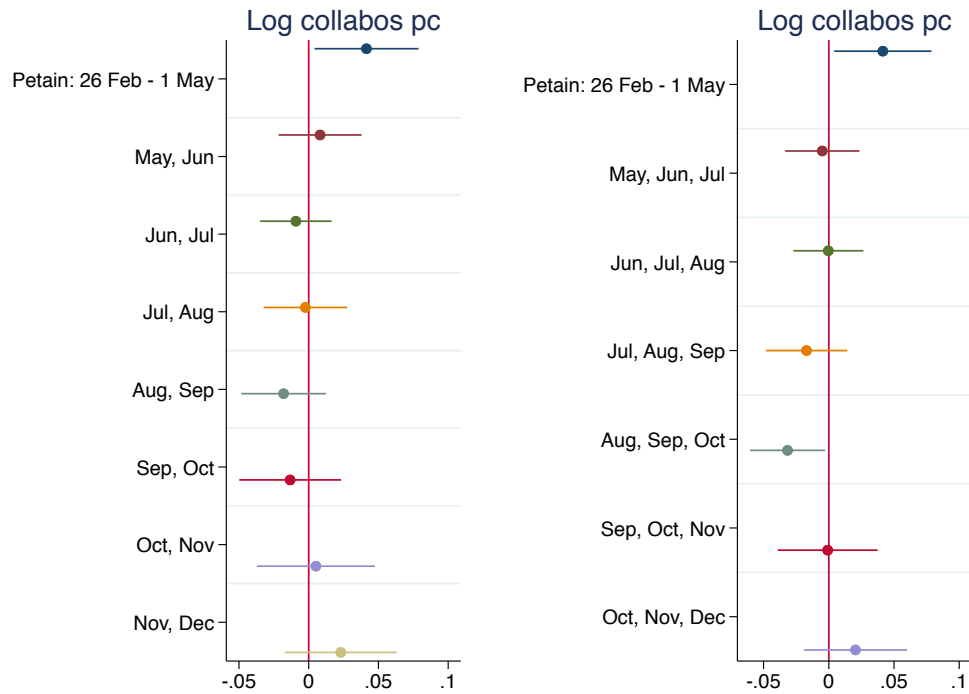
**Notes:** The figure shows coefficients obtained from separate regressions of the log share of collaborators in the municipality on consecutive months of fighting at Verdun, as indicated, controlling for the full set of controls and department fixed effects. Standard errors are clustered at the regiment level. Horizontal bars indicate 90% CI. 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 the general in command of the battle (i.e. February, March, April).

Figure A4: Estimated effect of fighting at Verdun in different months on the share of collaborators

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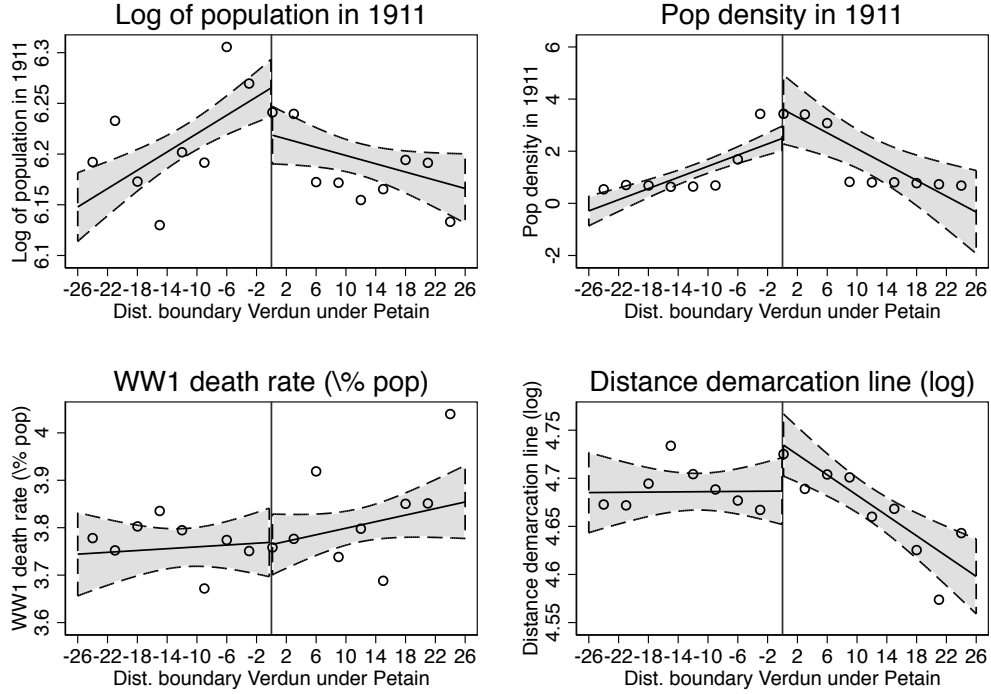
**Notes:** This figure uses only municipalities in an area 26km or less of the boundary between two military catchment areas: one that did sent troops to Verdun under direct command of Pétain, and the other that did not. The top panel shows that there is no difference in political preferences measured by local demonstrations for: Royalist or Bonapartist groups, or Communist or Socialist groups, before 1914. The bottom panel shows that there is no difference in the military casualty rate in WWI, or in population in 1911. Dots correspond to data aggregated into 3-km (1.86-mile) bins for visualization, while the lines are based on all underlying observations, with the shaded areas representing 90% confidence intervals. The 26km bandwidth is based on the **??** optimal bandwidth selection procedure.

Figure A5: Regression Discontinuity plots
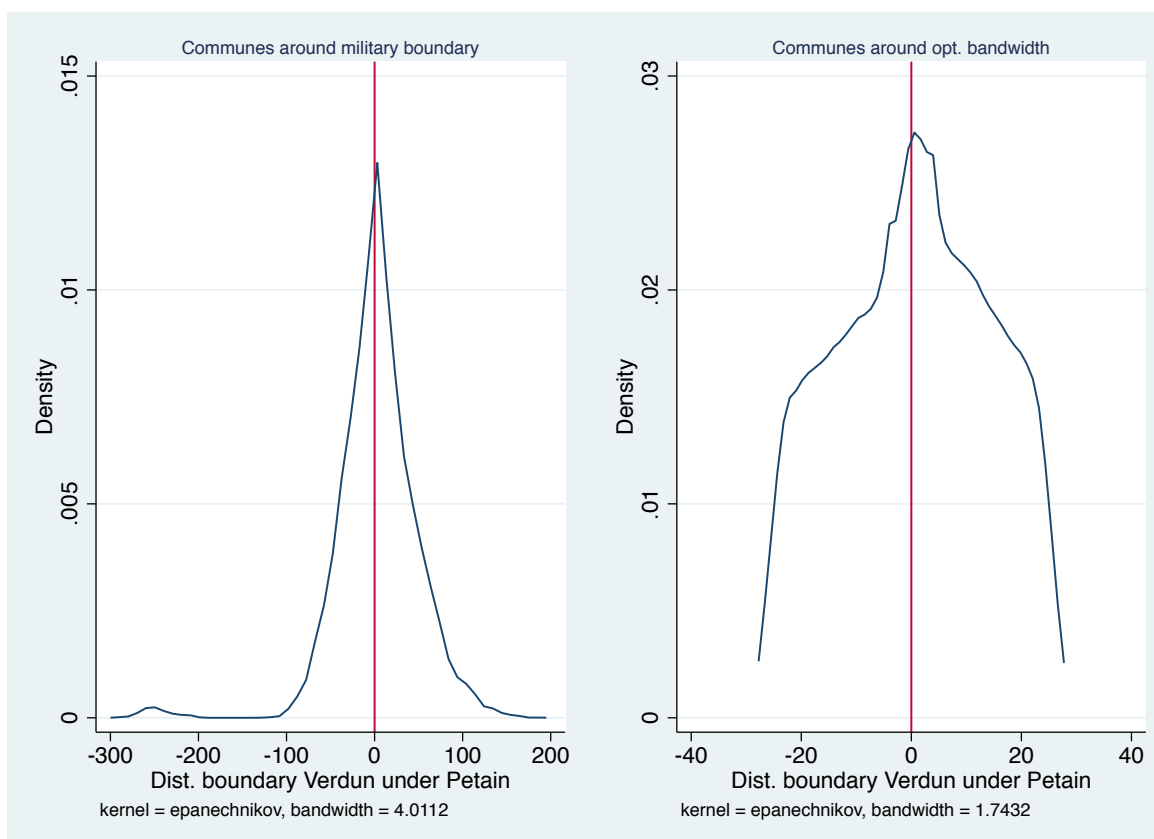
Figure A6: Density of municipalities around the military catchment boundary between regiments that served at Verdun under Pétain (right) and those that served at Verdun but not under Pétain.

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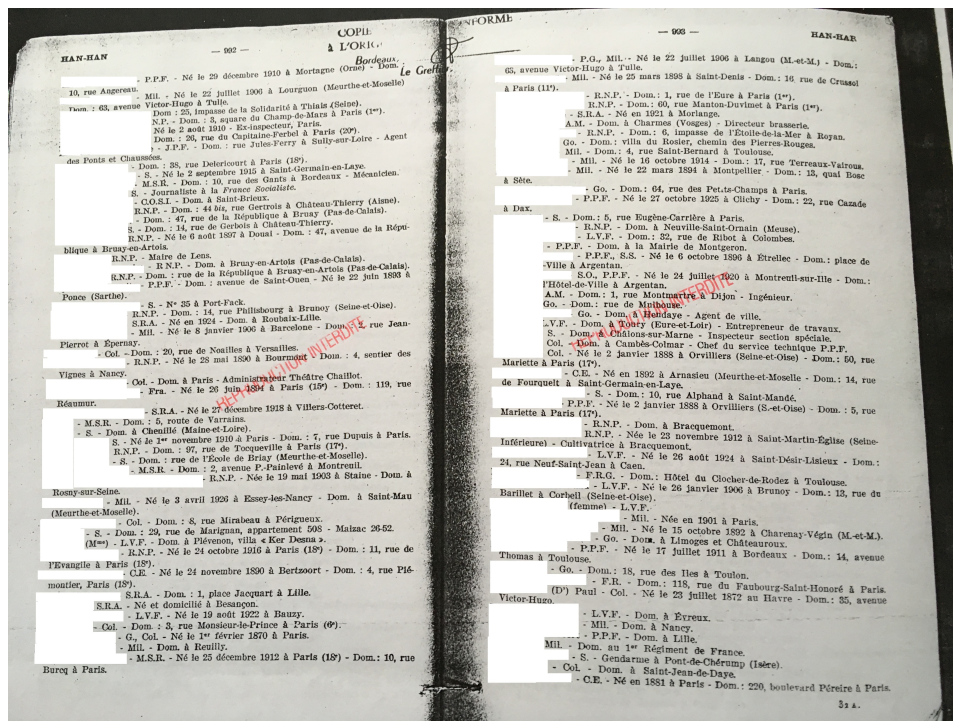
Figure A7: Example page from the secret list of collaborators collected in 1944 and 1945 under the supervision of Colonel Paul Paillole, the head of French army intelligence at the end of the war.

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Figure A8: Authors' maps plotting the addresses of collaborators in central Paris collected in 1944 and 1945.
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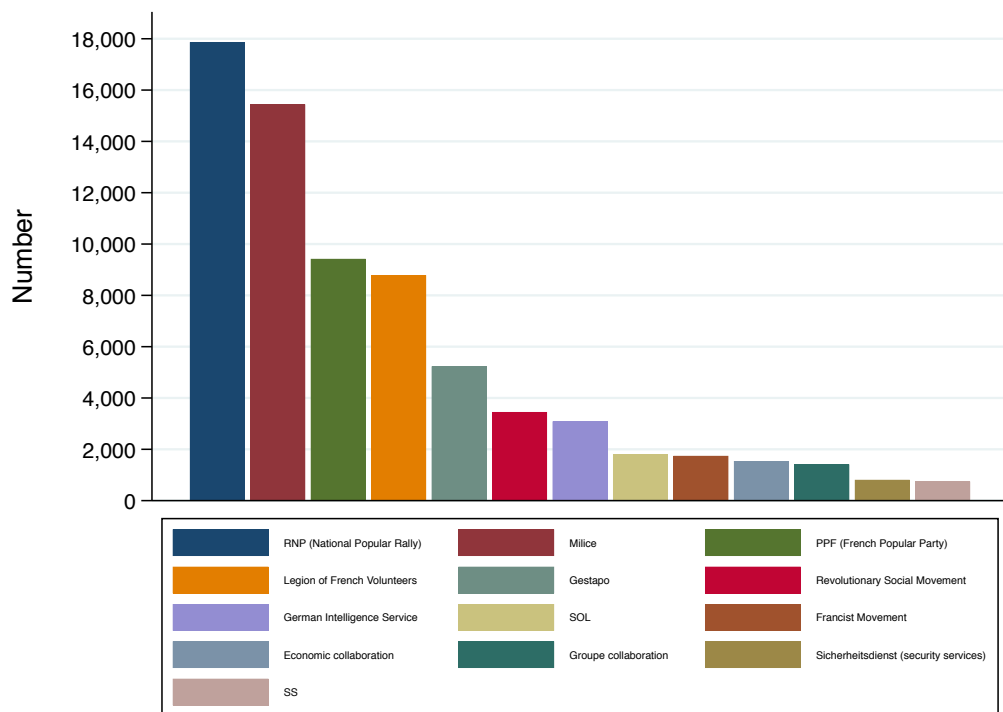
**Notes:** The figure plots the number of collaborators in the main groups.

Figure A9: Number of collaborators by category, main categories
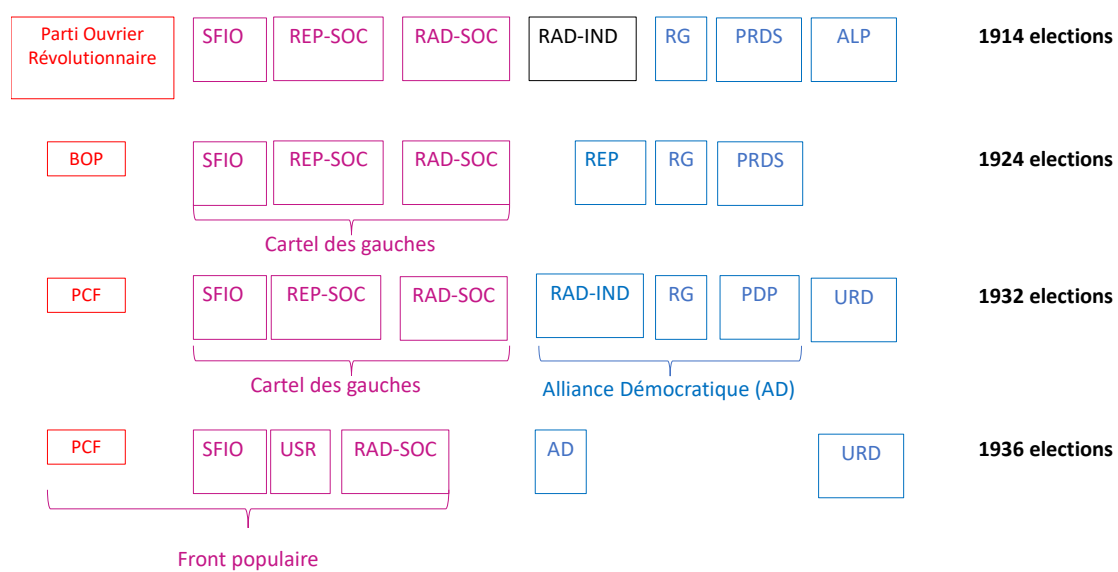
Figure A10: Evolution of political parties between 1914 and 1936.

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Table A1: Summary Statistics for Main Variables

|                                              | Obs    | Mean    | Std. Dev. | Min    | Max      |
|----------------------------------------------|--------|---------|-----------|--------|----------|
|                                              |        |         | *Collaboration* |    |          |
| Collabos per 10,000                          | 34,942 | 9.154   | 29.046    | 0      | 1666.67  |
| Log Collabos pc                              | 34,942 | -5.743  | 0.833     | -8.99  | -1.25    |
| *Other World War II variables*               |        |         |           |        |          |
| Resistance members                           | 34,942 | 113.173 | 426.197   | 0      | 73163.27 |
| Log Resistance members pc                    | 34,942 | -4.536  | 0.823     | -12.40 | 1.99     |
| Log population 1936                          | 34,942 | 6.072   | 1.064     | 1.95   | 12.55    |
| Combat days 1940                             | 34,942 | 4.459   | 3.477     | 0      | 23       |
| Log dist. demarcation line                   | 34,942 | 4.659   | 1.149     | 0      | 6.35     |
| Vichy (=1 if under Vichy administration)     | 34,942 | 0.375   | 0.484     | 0      | 1        |
| *World War I*                                |        |         |           |        |          |
| Verdun under Pétain                          | 34,942 | 0.497   | 0.468     | 0      | 1        |
| Verdun                                       | 34,942 | 0.887   | 0.297     | 0      | 1        |
| WWI death rate                               | 34,576 | 3.803   | 2.099     | 0.01   | 100      |
| Log population 1911                          | 34,917 | 6.238   | 0.984     | 2.89   | 13.22    |
| *Political pre-trends*                       |        |         |           |        |          |
| Share Right 1914                             | 14,777 | 38.11   | 32.75     | 0      | 100      |
| Share Centre 1914                            | 14,777 | 12.77   | 25.83     | 0      | 100      |
| Share Left 1914                              | 14,777 | 48.21   | 35.50     | 0      | 100      |

*Notes*: The table shows summary statistics for our main variables of interest. **Data sources:** Data on collaborators from the list of suspected collaborators from *"Bureau central de renseignement et d'action"*, data on commune assignment to WWI battles from the 1915 *Dictionnaire des Communes*, data on military fatalities in WWI from Memoire des Hommes and (Gay, 2017), data on combat intensity in WWII derived from overlaying weekly troop disposition maps from the West Point Atlas of American Wars. Data on the military histories of each of the 173 line French infantry regiments engaged at the start of WWI and on 1914 elections reconstructed by the authors from regimental histories. Data on political protests from Tilly and Zambrano (2006-01-12).

Table A2: **Regiment-level deaths by battle**

|  | Deaths by regiment | | Municipality WWI fatality rate |
|---|---|---|---|
|  | (1) | (2) | (3) |
| Marne | 183.391 |  | -0.064 |
|  | (115.171) |  | (0.096) |
| Verdun under Pétain | -121.491 | 55.777 | 0.140 |
|  | (136.321) | (34.850) | (0.100) |
| Verdun | 179.021 | 113.940** | 0.006 |
|  | (209.036) | (53.712) | (0.157) |
| Somme | 571.526*** | 170.820*** | -0.082 |
|  | (128.507) | (33.114) | (0.090) |
| Chemin des Dames | 291.999** |  | 0.004 |
|  | (117.555) |  | (0.091) |
| Abroad | -791.867*** | -217.970*** | -0.320** |
|  | (205.813) | (52.163) | (0.153) |
| Unit of obs. | Regiment | Regiment | Municipality |
| Time-period |  |  |  |
| R-squared | 0.25 | 0.31 | 0.00 |
| Observations | 173 | 173 | 34,579 |
| Mean DepVar |  |  |  |
| Sd DepVar |  |  |  |

**Notes:** This table shows that municipalities that raised regiments that served at Verdun under Pétain's did not suffer higher overall military causalities from WWI compared with municipalities that raised regiments that served at Verdun, but not under Pétain; municipalities that raised regiments that served at the other major battle of 1916, at the Somme; or municipalities that raised regiments that served at the major battle prior to 1916, at the Marne in 1914. The Table shows, however, that municipalities that raised regiments that served in Europe's South-Eastern front suffered lower fatalities. Data is from the 1915 *Dictionnaire des Communes*(Baron and Lassalle, 1915) and the narratives of the military histories of each of the 173 line French infantry regiments engaged at the start of WWI combined with military fatalities data from Memoire des Hommes and (Gay, 2017). Robust standard errors clustered at Regiment level in parentheses (*** p¡0.01, ** p¡0.05, * p¡0.10).

Table A3: **Robustness of Table II to Poisson estimation**

| | Number of Collaborators | |
|---|---|---|
| | (1) | (2) |
| collabos in municip. | | |
| Verdun under Pétain | 0.239** | 0.124 |
| | (0.108) | (0.078) |
| Verdun | 0.100 | 0.200** |
| | (0.125) | (0.099) |
| Fixed effects | Dept | Dept |
| Pre and WWI controls | No | Yes |
| Political pre-trends | No | Yes |
| WWII controls | No | Yes |
| R-squared | | |
| Observations | 34,941 | 34,575 |
| Mean DepVar | 2.45 | 2.39 |
| Sd DepVar | 32.65 | 32.37 |

**Notes:** This table shows the Poisson regression estimation results of specification 3 with the full set of controls (equivalent to Column 3 in Table II), excluding the top outlier. The regression is at the municipality level. See notes to Table II for description of controls, data sources and imputation methods for missing historical information. Robust standard errors clustered at Regiment level in parentheses (*** p¡0.01, ** p¡0.05, * p¡0.10).

Table A4: **Robustness of main estimates to excluding movers**

| | Log collabos pc - excluding movers | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Verdun under Pétain | 0.064** | 0.052* | 0.053* | 0.069*** | 0.060*** | 0.060*** |
| | (0.032) | (0.029) | (0.029) | (0.019) | (0.020) | (0.020) |
| Verdun | 0.001 | 0.003 | -0.003 | -0.025 | -0.037 | -0.032 |
| | (0.051) | (0.049) | (0.046) | (0.027) | (0.025) | (0.026) |
| Fixed effects | Dept | Dept | Dept | Dept | Dept | Dept |
| Pre and WWI controls | | | | | | |
| Political pre-trends | | | | | | |
| WWII controls | | | | | | |
| R-squared | 0.52 | 0.52 | 0.52 | 0.77 | 0.78 | 0.78 |
| Observations | 9,338 | 9,338 | 9,338 | 9,338 | 9,338 | 9,338 |
| Mean DepVar | | | | | | |
| Sd DepVar | | | | | | |

**Notes:** Results in this table re restricted to the subsample of collaborators whose residence in 1945 is not different from their municipality of birth (75,023 out of 96,350 collaborators ). All regressions are at the municipality level with department fixed effects. See notes to Table II for data sources and imputation methods for missing historical information. Robust standard errors clustered at Regiment level in parentheses (*** p¡0.01, ** p¡0.05, * p¡0.10).

Table A5: **Accounting for differences in battle experiences in 1916**

| | Log collabos pc | | | |
| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Verdun under Pétain | 0.049** | 0.044* | 0.039* | 0.041* |
| | (0.024) | (0.023) | (0.023) | (0.023) |
| Verdun | -0.018 | -0.029 | -0.024 | -0.027 |
| | (0.032) | (0.032) | (0.032) | (0.031) |
| Somme | 0.002 | -0.003 | -0.002 | |
| | (0.019) | (0.018) | (0.019) | |
| South Eastern Front | | -0.037 | -0.036 | |
| | | (0.039) | (0.039) | |
| Marne | | | 0.024 | |
| | | | (0.025) | |
| Sample | Whole sample | Whole sample | Whole sample | No Fortress |
| Fixed effects | | | | |
| Pre and WWI controls | | | | |
| Political pre-trends | | | | |
| WWII controls | | | | |
| R-squared | 0.62 | 0.62 | 0.62 | 0.62 |
| Observations | 34,942 | 34,942 | 34,942 | 33,331 |
| Mean DepVar | | | | |
| Sd DepVar | | | | |

**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 battle experience in 1916, or before. Columns 1 and 2 consider the influence of the other major theatres of operation for the French Army in 1916: the Battle of the Somme and the European South-Eastern front. Column 3 considers the potential influence of another major battle prior to 1916: the Battle of the Marne in 1914. Column 4 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. See notes to Table II for description of controls, data sources and imputation methods for missing historical information. Robust standard errors clustered at Regiment level in parentheses (*** p¡0.01, ** p¡0.05, * p¡0.10).

Table A6: **Effects by Collaborationist Organization**

| | RNP | PPF | MSR | Franc. | GC | SOL | Milice | LVF | Germ. Int. | Gestapo | Eco. coll. | Friends M. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Verdun under Pétain | 0.036*** | 0.026** | 0.007 | 0.011** | 0.012** | 0.009** | 0.008 | 0.015 | 0.012* | 0.012** | 0.009** | 0.004 |
| | (0.008) | (0.011) | (0.005) | (0.004) | (0.005) | (0.004) | (0.016) | (0.009) | (0.007) | (0.005) | (0.004) | (0.00 |
| Verdun | -0.029** | 0.000 | -0.009 | -0.012* | -0.014*** | -0.003 | 0.006 | 0.007 | -0.008 | 0.001 | -0.000 | -0.00 |
| | (0.014) | (0.012) | (0.006) | (0.006) | (0.005) | (0.004) | (0.015) | (0.013) | (0.006) | (0.005) | (0.004) | (0.00 |
| Fixed effects | Dept | Dept | Dept | Dept | Dept | Dept | Dept | Dept | Dept | Dept | Dept | Dept |
| Pre and WWI controls | | | | | | | | | | | | |
| Political pre-trends | | | | | | | | | | | | |
| WWII controls | | | | | | | | | | | | |
| R-squared | 0.89 | 0.92 | 0.97 | 0.98 | 0.99 | 0.98 | 0.90 | 0.93 | 0.98 | 0.97 | 0.99 | 1.00 |
| Observations | 34,942 | 34,942 | 34,942 | 34,942 | 34,942 | 34,942 | 34,942 | 34,942 | 34,942 | 34,942 | 34,942 | 34,94 |
| Mean DepVar | | | | | | | | | | | | |
| Sd DepVar | | | | | | | | | | | | |

Table A7: **Regression Discontinuity across regiments' catchment boundaries**

| | Log collabos pc | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Verdun under Pétain | 0.111* | 0.083* | 0.148* |
| | (0.062) | (0.045) | (0.082) |
| Verdun | -0.081* | -0.029 | -0.089[+] |
| | (0.044) | (0.046) | (0.055) |
| Sample | Optimal bandwidth: 26km | Half bandwidth: 13 km | Double bandwidth: 52 km |
| Fixed effects | | | |
| Pre and WWI controls | | | |
| WWII controls | | | |
| Political pre-trends | | | |
| R-squared | 0.6 | 0.6 | 0.6 |
| Observations | 20,943.0 | 12,285.0 | 30,532.0 |
| Mean DepVar | | | |
| Sd DepVar | | | |

**Notes:** This Table displays the results of instrumental variable estimation results for different bandwidths (as indicated in Column header). The variable "Verdun under Pétain" is instrumented by the distance to the catchment boundary between military regions that raised regiments that served in Verdun under Pétain and those that did not. Results of the first stage are presented in Table A8. All regressions are at the municipality level with department fixed effects. In addition to the usual municipal-level controls (see Table II), we control for a second order polynomial in the latitude and longitude of the municipality centroid. See notes to Table II for data sources and imputation methods for missing historical information. Robust standard errors clustered at Regiment level in parentheses (*** p¡0.01, ** p¡0.05, * p¡0.10).

Table A8: **Regression Discontinuity across regiments' catchment boundaries: First Stage Results**

| | Verdun under Pétain | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Distance from military boundary | 0.012*** | 0.027*** | 0.005*** |
| | (0.002) | (0.003) | (0.001) |
| Sample | Optimal bandwidth: 26km | Half bandwidth: 13 km | Double bandwidth: 52 km |
| Fixed effects | | | |
| Pre and WWI controls | | | |
| WWII controls | | | |
| Political pre-trends | | | |
| F-stat | | | |
| R-squared | 0.85 | 0.84 | 0.86 |
| Observations | 20,944 | 12,286 | 30,536 |
| Mean DepVar | | | |
| Sd DepVar | | | |

**Notes:** This Table displays the results of the first stage of instrumental variable estimation results for different bandwidths (as indicated in Column header). The variable "Verdun under Pétain" is instrumented by the distance to the catchment boundary between military regions that raised regiments that served in Verdun under Pétain and those that did not. All regressions are at the municipality level with department fixed effects. In addition to the usual municipal-level controls (see Table II), we control for a second order polynomial in the latitude and longitude of the municipality centroid. See notes to Table II for data sources and imputation methods for missing historical information. Robust standard errors clustered at Regiment level in parentheses (*** p¡0.01, ** p¡0.05, * p¡0.10).

Table A9: Exposure to Pétain and 1936 legislative election results: Party-level analysis

| | Communist | SFIO | USR | Rad. Soc. | Dem. pop. | Alliance Democratique | URD | Conservateurs |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Verdun under Pétain | 0.053 | -0.040 | -0.197* | 0.140 | -0.023 | 0.458* | 0.482* | 0.075 |
| | (0.096) | (0.103) | (0.116) | (0.337) | (0.093) | (0.253) | (0.247) | (0.148) |
| Verdun | -0.116 | 0.098 | 0.322** | -0.665* | 0.256** | -0.641 | -0.457 | -0.143 |
| | (0.153) | (0.174) | (0.154) | (0.392) | (0.111) | (0.408) | (0.398) | (0.132) |
| Fixed effecs | Dep | Dep | Dep | Dep | Dep | Dep | Dep | Dep |
| WWI Death rate | | | | | | | | |
| Political pre-trends | | | | | | | | |
| R-squared | 0.45 | 0.48 | 0.31 | 0.37 | 0.26 | 0.30 | 0.36 | 0.26 |
| Observations | 30,536 | 30,536 | 30,536 | 30,536 | 30,536 | 30,536 | 30,536 | 30,536 |
| Mean DepVar | | | | | | | | |
| Sd DepVar | | | | | | | | |

**Notes:** * p<0.10, ** p<0.05, *** p<0.01. The models are estimated using OLS estimates. An observation is a canton. All the estimations include department fixed effects.

Table A10: **Balance on 1872 Industrial and Religious Characteristics**

| VARIABLES | Mean | SD | Coeff [Petain at Verdun] | SE | R2 | Coeff [Petain at Verdun] | SE | R2 | Obs |
|---|---|---|---|---|---|---|---|---|---|
| Fixed Effects | | | None | | | Department | | | |
| Log. Population 1872 | 9.151 | 0.960 | -0.035 | (0.102) | 0.001 | -0.086 | (0.206) | 0.291 | 400 |
| **Pre-Treatment Demographic Characteristics** | | | | | | | | | |
| Men 1872 | 48.48 | 3.052 | 0.196 | (0.359) | 0.004 | -0.341 | (0.761) | 0.371 | 400 |
| Women 1872 | 51.52 | 3.052 | -0.196 | (0.359) | 0.004 | 0.341 | (0.761) | 0.371 | 400 |
| Foreigners 1872 | 2.894 | 6.880 | 1.839 | (1.385) | 0.017 | 0.288 | (0.760) | 0.505 | 400 |
| Illiterate 1872 | 17.87 | 7.222 | 1.101 | (1.028) | 0.047 | 1.162 | (1.002) | 0.493 | 400 |
| **Pre-Treatment Religious Characteristics** | | | | | | | | | |
| Catholic places of worship | 97.34 | 6.923 | 0.036 | (0.908) | 0.006 | -1.224 | (1.496) | 0.366 | 400 |
| Protestant places of worship | 1.692 | 5.462 | -0.729 | (0.811) | 0.007 | 0.028 | (0.462) | 0.461 | 400 |
| Jewish places of worship | 0.165 | 0.607 | 0.129 | (0.088) | 0.011 | 0.027 | (0.032) | 0.721 | 400 |
| Other places of worship | 0.292 | 1.300 | 0.051 | (0.148) | 0.003 | 0.285 | (0.198) | 0.237 | 400 |
| **Pre-Treatment Occupation Shares** | | | | | | | | | |
| Farmers | 18.42 | 15.26 | -1.537 | (2.176) | 0.015 | -0.854 | (3.714) | 0.458 | 400 |
| Industry workers | 33.84 | 16.70 | 4.278* | (2.300) | 0.019 | -0.365 | (4.131) | 0.382 | 400 |
| Merchants | 14.74 | 7.443 | 1.006 | (0.834) | 0.017 | 1.422 | (1.485) | 0.255 | 400 |
| Liberal occupations | 11.64 | 6.357 | -0.391 | (0.779) | 0.012 | -0.852 | (1.649) | 0.338 | 400 |
| Unemployment | 1.289 | 2.565 | -0.088 | (0.297) | 0.002 | 1.772* | (0.962) | 0.317 | 400 |

**Notes:** This Table shows that the chef-lieux that were rotated at Verdun under Pétain are similar to other chef-lieux across a range of 1872 industrial and religious characteristics. An observation is a chef-lieux. A chef-lieux is one of the 400 main towns of each arrondissement in France in 1872. Each row represents the coefficient of an OLS regression of the chef-lieux characteristic on an indicator for whether that chef-lieux raised troops for a regiment that served under Pétain at Verdun, controlling for deployment to Verdun. We present specifications with and without department fixed effects. Standard errors are clustered at the regiment level. * p<0.10, ** p<0.05, *** p<0.01.

# B  Data Appendix

## B.1  Electoral data

To study the effect of combat exposure to Pétain on political preferences and to control for pre-trends, we collected, digitized, and consistently coded the results of all but two of the 24 legislative elections in France since 1914. Section B in Appendix provides more institutional detail on elections and political parties over that period. One of the main empirical challenge is to classify the different political parties from the extreme-left to the extreme-right over such a long period of time. The French political system is indeed characterized by a lot of entries and exits of parties, and parties regularly change their name. In Section B of the Appendix, we provide – for each election – a list of all the parties running, briefly describe them and precise the associate label (from extreme left to extreme right we use to tag them). To do so, we rely mainly on Agrikoliansky (2016), Poirmeur (2014), and Haegel (2007). Here, we briefly describe the data for three crucial time periods in our analysis: 1914, in order to control for pretrends; the interwar, when an alignment in political preferences along with Pétain's conservative right-wing agenda may have emerged; and the post World War II period, after the fall of the Vichy regime and the restoration of the French Republic.

### B.1.1  The 1914 Elections and Political Pre-trends

Elections took place in May 1914, three months before the outbreak of WW1. We collect and digitize the 1914 electoral results at the municipality level from the paper archives of the Interior Ministry.[65] We check that there is no pre-existing difference across municipalities that were to fill the regiments that fought at Verdun under Petain, or not.

In addition to the 1914 electoral data, we capture longer political trends with data on violent political protests in France between 1830 and 1914 from (Tilly and Zambrano, 2006-01-12). We only focus on the subset of these data that deals with pre-WWI events, as post WWI events may be influenced by our main treatment of interest. We clean and aggregate at the commune level all the violent events described in (Tilly and Zambrano, 2006-01-12). 440 communes have one or more event listed in the database, which we match to the rest of our data. We retaining information on the political affiliation of demonstrators in the following main categories: Anarchists, Bonapartists, Communists, Socialists, and Royalists.

### B.1.2  The Interwar Period: 1924, 1932, 1936

We focus here on the 1924, 1932 and 1936 elections. All these elections 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.[66] The 1936 elections saw the victory of 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.

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[65]These results are available in the boxes C//7241 to C//7254 at the National Archives.

[66]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

The Right gathered a number of parties over that period (see Section B in Appendix for more detail). Although fascist and extreme-right leagues were active during that period, they rejected participation in elections, until the 1936 elections. The Parti Franciste and the Jeunesses Patriotes ran in the 1936 elections, but obtained a very low electoral score. Online Appendix Figures 1 and 2 presents the results of the 1932 and 1936 elections.

Results are available at the municipal level for 1924 [67] but only at the canton level in 1932 and 1936. A canton is a geographical subdivision in France, smaller than the department, but larger than the municipality. In 1932, there were 2,227 cantons.

### B.1.3 The Post-WW2 Legislative Elections

Finally, 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.[68] Data for these elections are from Cagé (2020) and Bekkouche and Cagé (2018), and further detail on the different parties in the online Appendix Section B.

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 (Agrikoliansky, 2016)[69] until the first electoral success of the National Front in 1983.

## B.2 Other data on WWII

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.

### B.2.1 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 A3 in Appendix shows the resulting heat map of combat intensity across France. The mean number of days of combat in a given municipality in 1940 was 4.45 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 (6.46 days) compared to the Vichy-controlled area (1.26 days).

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[67]These results are available in the boxes C//10010 to C//10019 at the National Archives.

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

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

### B.2.2 Resistance

While the battle of France was extremely short, resistance movements organized to fight the German occupation. To measure the "intensity" of the resistance movement at the local level, we use data on individual membership to Resistance networks. We geo-reference a unique dataset using $585,485$ individual files including information on the first and last names, place of birth and affiliation to different Resistance networks of each individual. These files come from *"Mémoire des Hommes"* and draws up a list of all the individual files established by a number of administrations – and in particular the Resistance Bureau – at the end of WWII in order to recognize and compensate (with war pensions for some) the activities of various Resistants during the war.[70] As the example Paillole himself, the head of French army intelligence at the end of the war who assembled the list of collaborators, suggests, along with countless other controversial examples[71], that some individuals may have both collaborated and resisted. For some, the motivation was to save their skin when the war turned in favour of the Allies. For others, the decision to join the Resistance was motivated by the same patriotic impulse that had made them initially follow Pétain, until the full occupation of France in 1942 left them no choice but join the Allied side.[72] Based on an exact match of last and first names at the municipality level, 238 individuals appear both in our collaboration dataset and in the Resistance dataset. While we cannot decipher their motivations from the available data, we check that our results are robust to excluding them from the analysis, and we determine to what extent the presence of these double agents can be explained by exposure to Pétain.

## C    Forms of Collaboration in our Data

**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 Fascist party; and with other occupied countries, where political parties were not tolerated by the German occupant.[73] Collaborationist parties were most active in 1941-1942. They 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)[74].[75] Both parties were created by two former Left-wing prominent politicians (respectively former number two of the Communist and Socialist parties), both heroic veterans of the first World

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[70] "Titres, homologations et services pour faits de résistance". $http$ : $//www.memoiredeshommes.sga.defense.gouv.fr/en/article.php?larub$ $=$ $268\&titre$ $=$ $titres -$ $homologations - et - services - pour - faits - de - resistance$

[71] Francois Mitterand was a resister but he was accused of having collaborated. Maurice Papon, convicted in 1997 for collaboration, claimed that he had been a resistance member. Several high profile members of the Vichy government, such as Pucheu, tried to join the Free France.

[72] General Giraud himself, put in charge of North Africa by the Allies after the 1942 landing, remained a fervent admirer of Pétain and initially maintained the Vichy legislation.

[73] This was due in part to the fact that Vichy only ruled over part of France, and even there, Pétain did not encourage any particular political party.

[74] French: Parti Populaire Francais, PPF) and Rassemblement National Populaire (RNP)

[75] 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 ((Burrin, 1996), p. 417, 469), and between $20,000$ (Burrin, 1996)[p. 393] and $30,000$ (Paxton, 2001)[p. 253] for the RNP.

War: Jacques Doriot and Marcel Déat.[76] 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.[77] 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. All were united 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 ((Burrin, 1996), p.382) and some, such as the leader of the RNP, accepted positions at Vichy. [78]

**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 Francaise des Combattants* (The Legion). Its statutes 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 the "National Revolution". The role of the Legion, its Verdun roots, 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."[79]. However, the Legion never engaged in violent actions. This was the prerogative of two other groups, the *Service d'Ordre de la Legion* (SOL) and, later on, of the *Milice*.

To substitute for the Legion, which was seen as too ideologically disparate and hard to mobilise, the SOL was constituted in January 1942. It morphed into the Milice in January 1943, after fighting against the Allies in North Africa during Operation Torch. The SOL and the Milice were paramilitary organisations as well as a political movement[80]. The SOL and the Milice informed on, executed, or 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. Historians believe $45,000$ people volunteered for the Milice and the SOL (Paxton (2001), p.298), 15 percent of them women ((Burrin, 1996), p.). However, in the course of the SOL's transformation into the Milice, historians have noted that membership fell considerably and became more and more remote from the original veterans organizations ((Burrin, 1996), p.440), while the organization itself became more and more violent in internal repression.

The "Legion des Volontaires Francais contre le Bolchevisme" was created in 1941 by the collaborationist parties to raise volunteers to fight alongside the Wehrmacht on the Eastern front. The "Legion des Volontaires Francais contre le Bolchevisme", created in 1941, was controlled by the collaborationist

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[76]An active combatant for the whole duration of the war, Déat had been awarded the highest French order of merit (the Legion dHonneur) 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 (French: Croix de Guerre) for valourous service. Doriot eventually joined the Eastern Front in the "Legion des Volontaires Francais 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 then Italy at the end of the War.

[77]Both movements had also been formed by WWI veterans Marcel Bucard and Eugene Deloncle.

[78]As Burrin describes: "The Paris leaders were rivals, not opponents, extremists of Pétainism, not anti-Pétainists" ((Burrin, 1996), p.383).

[79]Xavier Vallat, quoted in *D'Ordre du marechal Pétain. Documents officiels réunis et commentés par Jean Thouvenin* (Paris, n.d.1940 in (Paxton, 2001), p.190)

[80]The political objectives of the SOL are set against: "bourgeois selfishness", "egalitarianism", "individualism", "global capitalism", as well as against "gaullist dissidence", "bolshevism", "the Jewish plague", "free-masonry and in favour of: "discipline", "authority", "truth", "nationalism", and "Christian civilisation" (21 points of the SOL, in Germain, p. 481).

parties, and the SS Charlemagne, created in 1944, by the Milice in 1944. While controlled by home-grown factions, the volunteers for

**Nazi collaboration**  An estimated total of $22,000$ French people directly served Germany in combat or auxiliary units ((Burrin, 1996) p.433). They joined the Gestapo or the Waffen-SS or joined the Wehrmacht on the Eastern front under the "Legion des Volontaires Francais contre le Bolchevisme" or the SS Charlemagne division. 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 (Burrin, 1996) 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 Francais contre le Bolchevisme" was created and controlled by collaborationist parties but fought under the Wehrmacht uniform. Hence, although useful to paint a rough picture of the facets of collaboration, we prefer to focus on specific groups in our analysis.

# D Reconstructing French Electoral Returns, 1914-1956

## D.1 The 1914 Elections

First, we collect the 1914 electoral results at the commune level from the paper archives of the Interior Ministry.[81] These elections took place in May 1914, i.e. three months before the beginning of WW1, and thus allow us to ensure that there is no difference from a political point of view between the commune exposed / not exposed to Pétain during WW1. We are the very first to compile commune-level information before WW2 in France

In 1914, the voting system was the *"scrutin uninominal à deux tours par arrondissements"*, a two-round system.

### D.1.1 Political parties

To classify the candidates, we mostly rely on Lachelle, and rank the main parties as follows (from the left to the right):

- Parti Ouvrier Révolutionnaire;
- Parti Socialiste Unifié (SFIO);
- Républicain Socialiste (REP-SOC);
- Radical Unifié (RAD-SOC);
- Radical Indépendant (ou Gauche Radicale) (RAD-IND).
- Républicain de gauche (RG);

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[81]These results are available in the boxes C//7241 to C//7254 at the National Archives.

- Parti Rpublicain Démocratique et Social (PRDS)[82]

- Action Libérale Populaire (ALP).

We include in the PRDS the "Républicains démocratiques" that present themselves as "indépendants" in 1914 (alternatively, we can rank them among the "miscellaneous right"). We also classify the "Fédération des gauches" (that, despite its name, was on the right) as part of the PRDS.

These elections were won by the *"Radical Unifié"* (Radical Party or RAD-SOC).

## D.2    The 1924 Elections

The 1924 elections were held in May. Here, we first describe the 1924 voting system, then the different parties that run in the elections, and finally the results.

Legislative election results for the 1924 elections are available at the commune level[83], and, as for 1914, we are the very first to collect this information. While candidates run at the level of the department (e.g. in the Aisne department, there were eight seats to be filled), the within-department variations in the score obtained by each list highlights us of the role played by the exposure to Pétain.

### D.2.1    The 1924 voting system

In 1924, the voting system is the *"scrutin mixte à un tour"*.[84] The *"scrutin mixte á 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 a candidate to be elected, he must have won a number of votes greater than half the average number of votes on the list of which he is part. In the event of an equal number of votes, the election is won by the oldest candidate.

### D.2.2    Political parties

A number of different lists run during the 1924 elections. The main ones are:

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[82]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.

[83]These results are available in the boxes C//10010 to C//10019 at the National Archives.

[84]This voting system has been used exceptionally two times 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 (**?**).

- The "Liste du Bloc Ouvrier Paysan-Parti communiste" (BOP) (formed of the Communist Party and the Socialist Party SFIO) (on the left).

- The *"Liste du parti socialiste"* (SFIO) (on the left).

- The *"Liste Républicaine Socialiste"* (REP-SOC) (on the left).

- The *"Liste radicale-socialiste"* (RAD-SOC) (on the left).

- The *"Liste dunion républicaine"* (REP) (on the right; part of the lAlliance démocratique).[85]

- The *"Liste des républicains de gauche"* (RG) (on the right... despite the name!)

- The *"Liste Républicaine Dmocratique et Sociale"*, most often called PRDS (on the right; part of the l'Alliance démocratique).

Besides, we classify as "diverse right" (DVD) other parties on the right, including the "Entente rpublicaine démocratique", the *"Liste daction républicaine et sociale"*, the *"Liste des Familles Nombreuses de France"*, the *"Liste Républicaine Indépendante"*, as well as a number of other lists that just appear in one department (to do the classification here, we rely strongly on **??**). Similarly, we classify as "diverse left" (DVG) smaller lists on the left, including the "Liste de l'Union Socialiste Communiste" and the "Liste Socialiste Indépendante."

### D.2.3 Results

The 1924 legislative elections resulted in a victory for the left-wing *"Cartel des Gauches"*, an alliance between the Radical-Socialist Party (RAD-SOC) and the French Socialist Party (SFIO), as well as the independent radicals and the Socialist Republicans (REP-SOC).

## D.3 The 1932 Elections

### D.3.1 The 1932 voting system

The 1932 (as well as the 1936 elections) took place with the *"scrutin uninominal majoritaire á 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 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.

For now, the results for the 1932 elections (as well as for the 1936 ones) are at the canton level (while the results for the 1914 and 1924 are at the commune level; we are collecting the information on the 1930's elections at the commune level). A canton is a geographical subdivision in France, smaller than the departments and than the districts, but larger than the commune. In 1932, we have information on the electoral results in 2,227 different cantons.

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[85]To simplify the analysis, we also include in the REP category the *"Liste de concentration Républicaine"* that includes candidates from the center, "radicaux modérés" and "républicains de gauche" (and that some may consider on the center left). Besides, we include the *"Liste républicaine de concorde nationale"*, and the *"Union nationale républicaine"*.

### D.3.2 Political parties

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. The political nuances set out below are based in particular on Lachapelle's classifications.

From the extreme-left to the right, the main parties are:

- The Communist party (PCF) (that also includes the so-called socialist-communists);

- The Socialist party (SFIO);

- The Républicains Socialistes (REP-SOC);

- The Radicaux Socialistes (RAD-SOC);

- The Républicains de gauche (RG) (that are part of the "Alliance Démocratique");

- The Radicaux Indépendants (RAD-IND) (which also include candidates from the "gauche radicale", the "gauche sociale et radicale", and the "indépendants de gauche") (part of the "Alliance Démocratique");

- The Parti Démocrate Populaire (PDP) (Christian-democrats; also part of the "Alliance Démocratique");

- The Union Républicaine Démocratique (URD).

Besides, there were also a number of "diverse right", mostly under the label "Conservative".

The 1932 legislative elections have seen the victory of the second *Cartel des gauches* (the first one been the 1924 Cartel). The main parties constituting this Cartel are, as in 1924, the SFIO, the REP-SOC, and the RAD-SOC.

## D.4 The 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).

Similar to 1932, candidates in the 1936 elections are often difficult to classify, particularly for candidates from the right half of the political spectrum, who are often more characterized by their opposition to the three major parties of the left and centre-left (PCF, SFIO, Radicals) than by their membership in a specific 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.

From the extreme-left to the right, the main parties are:

- The Communist party (PCF);

- The Socialist party (SFIO);

- The Union Socialiste Républicaine (USR);

- The RAD-SOC;

- The Alliance Démocrate (AD) (in which we include the Radicaux Indépendants and the Démocrates Populaires).

- The "Fédération Républicaine / Union Républicaine et Démocratique (URD) (we simply call it URD here to make it more comparable with 1932).

Finally, in 1936, there were a number of small extreme-right parties running, in particular the Parti Franciste and the Jeunesses Patriotes. However, they obtained a very low electoral score.

## D.5   The post-WII legislative elections

### D.5.1   The 1945/1946 election

Jeune République (JR) – political party created from the Ligue de la Jeune République (Marc Sangnier). This is a party with a strong catholic bias but that should be considered at the center left. Also on the Center Left / Left, the Rassemblement Républicain (that will become in 1946 the Rassemblement des gauches républicaines.)

On the right, there is also the creation of the Union Gaulliste (Un. gaul.). As well as of the Cartel Républicain (Cart. Rep.) (liberal right). Rassemblement des Républicains (RR) (right / gaullist).

On the right, number of smaller parties / lists (including mainly "peasant" parties):

- Action Républicaine et Sociale (ARS)

- Entente républicaine et sociale (ERS)

- Union républicaine paysanne et sociale (URPS).

- Union paysanne (Un. pays.).

- Union Paysanne et Sociale (Un. P. et S.).

- Indépendante d'Union Républicaine et Agricole (IURA)

- Résistants Républicains Gaullistes (RRG).

- (liste) Républicaine et d'Unité Paysanne (RUP)

- (liste) Gaulliste Républicaine et Sociale (GRS)

- Rassemblement de la Résistance Républicaine (RRR) (linked to the MRP)

A Parti paysan created in 1945. Should be considered on the right (even if one may claim more center right). At the end gave rise in 1951 to the Centre national des indépendants et paysans (CNIP).

Center right:

- Concentration Républicaine (CR).

- Entente Républicaine (ER).

- Radicale-Socialiste Résistante (R.-S.R.).

- On the center right, there is also the Républicains Indépendants, including a number of smaller parties:

  - Républicaine Indépendante de Rénovation Sociale et Agraire (RIRSA).

- (liste) Indépendante d'Action Républicaine et Sociale (IARS)

- Rassemblement Républicain de la Liberté (RRL)

- Réconciliation française (Rec. fr.)

Center left:

- (alliance) Républicaine démocratique (Rép. dém.).

Left:

- Résistance républicaine et socialiste (RRS).

- A left-wing list regrouping a number of different parties: Union des Gauches (Un. g.).

- Socialiste de la Résistance (Soc. res.).

- Rassemblement des Socialistes et Républicains de la Résistance (RSRR)

Between left and extreme-left, the Union Républicaine (Un. Rep.) which is an antifascist alliance between mainly the SFIO and the Communist party (some of the members then join the SFIO, others the Communist Party...) For now we have classified it as left but it may be discussed (and rather put it at the extreme left).

On the extreme-left, not only the Communist party but also the Parti communiste internationaliste (PCI),

And also a number of local parties:

- In Moselle, the Union Gaulliste d'Action Républicaine (UGADR) (gaullist party / right).

- In the North, the Union des républicains du Nord (center right).

- In Gironde, Défense des Intérêts Girondins (D.I.G.) (part of the Républicains Indépendants so center right).

- In Haute-Loire, (liste) Républicaine d'Action Sociale et Paysanne (RASP) (right).

- In Eure-et-Loir, (liste) Républicaine de Rénovation et d'Action Sociale (RRAS) (P.R.L. / right).

- In Cantal, (liste) Républicaine d'Action Paysanne et Sociale (RAPS) (right).

### D.5.2   The 1951 election

In 1951, for the first time since WW2, there are a number of candidates who can be considered as extreme-right candidates (even if only a very few). In particular: l'Union des nationaux indpendants et rpublicains (UNIR).

In 1951, the main political party on the right is the Gaullist party *"Rassemblement du Peuple Français"* (RPF) founded by the Général De Gaulle in 1947. There is also on the right the Christian Democrat party "Mouvement Républicain Populaire" (MRP).

Other parties on the right:

- Union des Indépendants, Paysans et Républicains Nationaux (UIPRN).

- Groupement national de défense des libertés professionnelles et des contribuables.

- Républicains Indépendants

On the center right:

- Concentration Républicaine.

Center:

- Rassemblement des groupes républicains et indépendants français (RGRIF).

- Radical socialiste.

- Liste de concentration républicaine et d'action économique et sociale (list of René Pleven).

On the center left:

- The *"Rassemblement des gauches républicaines"* (RGR).

- Union démocratique et socialiste de la Résistance (UDSR).

On the left, the main political party is the SFIO (as before).

And on the extreme left the Communist Party (as well – but much smaller – as the Parti Communiste Internationaliste (PCI). Also on the extreme-left, the liste d'Union républicaine résistante et antifasciste which is a communist list.

Overall, the political landscape in 1951 is far from obvious to interpret given the "Troisième force" will govern the country following the elections, including the SFIO (left), the MRP (right), the Parti radical and the UDSR. A number of electoral lists are hardly classifiable on the left or on the right given that they include both candidates from the left and from the right. We have made the following choice: when a list includes candidates from a right-wing party and from a center-right party, the list is classified on the right. Same thing for the left. We classify at the Center lists that include both center-right and center-left candidates.

Also a lot of list constituted at the local level, e.g.

- The liste d'union républicaine et de progrès social in the Landes (gaullist / right).

- In the Aisne, liste d'Union des forces républicaines socialistes et progressistes (on the left but against both the socialists and the communists).

- In Nice (Alpes-Maritimes), the liste du Rassemblement Républicain (led by Jacques Médecin - right)

### D.5.3   The 1956 election

In 1956, as before, we found the SFIO on the left and the Communist party on the extreme left. In 1956, the SFIO is part of the Front républicain led by Pierre Mend`es France at the National Assembly, together with the Parti radical, the UDSR, the Républicains sociaux, as well as Jeune République (JR should be considered in 1956 as part of the left). In 1956, under the leadership of François Mitterrand, the UDSR should be considered as a left-wing party.

On the right / extreme-right, we see the apparition of a new party, Union et Fraternité Française (UFF) which is the Poujadiste group. We classify this party at the extreme-right here. The UFF is the name of the parliamentary group associated to the Poujadist Party Union de Défense des Commerçants et Artisans (UDCA). For the 1956 elections, this party made alliances with a number of small lists, such as the "Action civique de dfense des consommateurs et des intrts familiaux" or the "Dfense des intrts agricoles et viticoles".

(There is also a radical-right party, Réforme de l'Etat but that, even if it is more radical than the CNIP, as to be considered on the right rather than on the extreme right)

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On the right, as before, we find the MRP, as well as the CNI (or CNIP) A new party appears, the Républicains Sociaux which is a Gaullist political party (considered at the center-right or the right; here we classify it on the right). As well as the Groupement National des Indépendants d'Action Démocratique et Paysanne (GNIADP).

In 1956, the Radical Socialist should be consider as the center-left. At the center, there is the Rassemblement des Gauches Républicaines (RGR), as well as the Rassemblement des groupes républicains et indépendants français (RGRIF) (that some people consider on the center-right).

On the center-right, there is a "défense des classes moyennes" movement.

The main difficulty for 1956 come form the fact that locally there are a number of lists with candidates both from the right and from the left. When it is the case, we have decided to classify these lists as center.