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

Julia Cagé¹, Anna Dagorret², Pauline Grosjean³, and Saumitra Jha⁴

¹Sciences Po Paris and CEPR
²,⁴Stanford Graduate School of Business
³University of New South Wales

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Abstract
Can heroes legitimize strongly-proscribed and repugnant political behaviors? We exploit the purposefully arbitrary rotation of French regiments to measure the legitimizing effects of heroic credentials. 53% of French line regiments happened to rotate under a specific general, Philippe Pétain, during the pivotal WWI battle of Verdun (1916). Using recently-declassified intelligence data on 85,389 individuals matched to 34,942 municipalities, we find that the home municipalities of regiments serving under Pétain at Verdun raised 7-10% more Nazi collaborators during the Pétain-led Vichy regime (1940-44). The effects are similar across joining Fascist parties, German forces, paramilitaries that hunted Jews and the Resistance, and collaborating economically. Collecting novel electoral data, we show that these municipalities also increasingly vote for right-wing parties between the wars, but not before WWI. We argue these results reflect the complementary role of the heroes of Verdun in legitimizing and diffusing the authoritarian values of their former leader.

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* julia.cage@sciencespo.fr; dagorret@stanford.edu; p.grosjean@unsw.edu.au; saumitra@stanford.edu. We are grateful to Philippe Douroux, Victor Gay, Dominique Lormier, and Fabrice Virgili for sharing valuable sources. We are also grateful both for feedback and for the 2020 Oliver Williamson Award for best paper from the Society for Institutional and Organizational Economics. We further thank Oriana Bandiera, Sascha Becker, Christian Dippel, Quoc-Anh Do, Guido Friebel, Kai Gehring, Bob Gibbons, Maxime Grosjean, Jessica Leino, Hongyi Li, Leslie Martin, Andrea Prat, Vincent Pons and Steven Wilkinson, as well as other participants at presentations at ASREC, Bocconi/Collegio Carlo Alberto, Columbia, CIVOE, Deakin, LSE, MIT, NES, Oz Virtual, Sciences Po Paris, Stanford, UC Louvain and Virtual Econ History for insightful comments. Alvaro Calderon, Jeanne Dorlencourt, Stella Hadzilacos, Morgane Fridlin, Paul Gioia, Romain Morgavi and the Stanford GSB Circle Team provided outstanding research assistance. Julia Cagé and Pauline Grosjean acknowledge financial support from the Institute for New Economic Thinking (grant INO1800004) and the Australian Research Council (grant FT190100929). This project received Ethics Approval from UNSW (HC190869). An Appendix with additional empirical material is available on our websites.
“Certain of the affection of our admirable army that has fought with a heroism worthy of its long military traditions..., certain of the support of veterans that I am proud to have commanded, I give to France the gift of my person in order to alleviate her suffering.” – Maréchal Philippe Pétain, June 17, 1940.

“What is our task? To make Britain a fit country for heroes to live in.” – Prime Minister David Lloyd George, 24 November 1918.

1 Introduction

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

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

¹Even the rallying cry of the 1789 Revolution and motto of Republican France: Liberté, Égalité, Fraternité [Liberty, Equality, Fraternity], was banned in 1940 in favor of Travail, Famille, Patrie [Work, Family, Fatherland].
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 1940-1944. 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 among the 34,947 municipalities of 1914 France, which at the time excluded the parts of the Alsace-Moselle region ceded to Germany in 1871. This dataset includes unique individual data on more than 96,102 collaborators in those municipalities that we hand-coded from a secret 1945 French intelligence report that has been only recently declassified.²

We first document how the French army adopted a systematic rotation system, the Noria [millwheel], that was expanded across much of France to rotate and rest troops from the battlefield at Verdun. By design, the French army sought to maintain inter-changeability of its line regiments, and the timing of when different regiments happened to be assigned to the battle was unrelated to the specific characteristics of the home municipalities from which they were raised. Indeed, consistent with the arbitrary nature of the rotation system, municipalities that raised regiments that served under Pétain at Verdun are similar along a range of pre-war characteristics to other municipalities, both within the same department and more generally. Importantly, we use hand-collected novel data to show that this includes similar vote shares for different political parties from the last pre-war election in 1914. These municipalities are also balanced on other pre-war demographics and even their overall fatality rates in the First World War, as well as on a wide range of historical and geographic characteristics.

Despite these initial similarities, individuals in municipalities that served under Pétain at Verdun were around 7 to 10% more likely to join collaborationist organizations that emerged once Pétain assumed dictatorial powers in 1940, compared to individuals in otherwise similar municipalities within the same department. Our estimates suggest 9,582 additional active collaborators in municipalities rotated under Pétain, compared to municipalities rotated under another general at Verdun. The effects appear across all forms of collaboration in our data, including Fascist political parties, deep economic collaboration with the Nazis, joining paramilitary groups that conducted the internal repression of the regime against Jews and the Resistance, or directly enlisting in German combat or auxiliary units. In magnitude, the overall effect is comparable in size to the approximately fifteen thousand members of the Resistance-hunting militia, the Milice in our data, or the five thousand French individuals who joined the notorious German secret police, the Gestapo.

We show that our results are not driven by the presence of unobservable differences across municipalities nor by spatial correlation. They are robust to using alternative functional forms, including Poisson regressions of the number of local collaborators. They also hold in a Spatial Regression Discontinuity setting around regiment catchment boundaries. Our dataset on

²As we describe below, of these 85,389 also had identifiable address information in metropolitan France.
collaboration provides, to the best of our knowledge, the most exhaustive list of collaborators in occupied Europe. We nevertheless show consistent results when analyzing two alternative datasets. First, data from a 1944 secret document compiled by US intelligence, the Office of Strategic Services (OSS), identifying 1,327 high-end political collaborators with leadership positions in the Vichy regime. Second, data from various archival sources on 9,239 volunteers to a violent paramilitary group that fought under the Wehrmacht on the Eastern front (the Legion of French Volunteers Against Bolshevism).

We interpret our results as consistent with the legitimization of values diffusing through a complementary hierarchical network of heroes. In particular, we argue that those regiments that were rotated through the Battle of Verdun under Pétain’s command were exogenously imbued with a credential of heroism. We show that the resultant network of those sharing this heroic credential proved to be a complement to the message of their heroic commanding general in subsequently spreading and legitimizing anti-democratic political values and otherwise repugnant behavior.

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

We next examine the different mechanisms through which the complementary heroic network influenced collaboration, and the extent to which it reflects a change in values. We first assess the main alternative: whether the effects instead reflect differences in the nature of the combat—or the resulting trauma—that just happened to have coincided with Pétain’s generalship. However, using individual data on 1.3 million French military fatalities, we show that the lethality of combat under Pétain at Verdun was actually not substantively different, both when compared to fatalities at Verdun itself following Pétain’s reassignment, and to other battles on the Western Front throughout the war. Further, rather than the violence ‘begetting more violence’ among the survivors, we do not find that those exposed are more likely to join militarist collaborationist organizations relative to other less violent groups.

We consider other alternative channels, including pecuniary incentives, the presence of coordination and bandwagon effects, and the development of organizational skills. We exploit detailed individual level data on both collaborators and on more than four hundred thousand resistance fighters to provide evidence that each of these channels provides an incomplete explanation on its own but could play a plausible role when combined with changing support for

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4These data also include those who volunteered but were deemed physically incapable and those who died on the front, providing a useful complement to our main dataset, which mainly consists of those still alive in 1944.
anti-democratic values. We also find that for those who moved, the treatment status of their birth municipality matters in determining their collaboration choices. This suggests a strong role for internalized values.

To further single out the role of heroism, we use data on individual medal citations between January 1915 and June 1917. We first show empirically validate that rotation at Verdun under Pétain was viewed by contemporaries as more heroic: we show that these treated regiments were awarded more citations for valor, even compared to rotation at Verdun under another general. Second, we confirm that there is a relationship between military citations and later collaboration, but this relationship can be entirely explained by rotation at Verdun under Pétain. We next take the ambitious step of using the rotation at Verdun under Pétain as an instrument for heroism, as measured by military citations. We therefore compare municipalities whose soldiers gained more citations for heroism due to exogenous exposure to Pétain at Verdun relative to those that would have got those citations had they happened to have rotated at that time, and find that a positive and significant relationship between heroism garnered due to rotation at Verdun-under-Pétain with subsequent collaboration with the Pétain-led regime.

We next seek to understand the dynamics. To measure the effects on these values directly and evaluate the extent to which voters in the home municipalities of Pétain’s Verdun regiments select right-wing and far-right parties that mimicked Pétain’s own values, we hand-collected a novel dataset on French legislative elections at the local level. Even though Pétain assumed a limited political role through much of the inter-war period, he was widely recognized as a right-wing conservative strongly opposed to communism, and at least as early as 1918, seen as displaying an increasing propensity to espouse authoritarian values. We show that municipalities whose regiments served under him at Verdun, although politically similar to other municipalities in the 1914 elections, increasingly vote for the right (and later the extreme right) in the interwar period. These patterns accentuate the severe inter-war polarization that afflicted France, strengthening a trajectory towards violent internal conflict later considered akin to a civil war (Jackson, 2001). Further, we provide suggestive evidence that these differences in political preferences survive the Liberation of France in 1944, when the collaborationist regime fell, far-right parties were banned, and Pétain himself would be convicted of high treason.4

Overall, we interpret these results as reflecting the role of a network of individuals with complementary heroic credentials in legitimizing and propagating political values. At the individual level, heroic credentials provide a strong, often tragically costly, signal of an individual’s type, particularly in demonstrating their relative willingness to forego private interests in the interests of the nation. In environments of moral hazard and hidden information, possessing a heroic credential can engender greater trust by others.5 This can make heroes not only more desirable as agents in trust-based economic relationships in general, but can be perceived to be

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4Pétain’s deputy, Pierre Laval, was executed, along with a number of other high-ranking Vichy ministers. De Gaulle, who had served under Pétain in World War I, commuted Pétain’s sentence to life imprisonment in recognition of Pétain’s military contributions in World War I.

5On costly investments and hierarchies inducing trust, see Athey et al. (2016).
a particularly relevant signal when it comes to the delegation of political authority and decision making. Heroic credentials engender greater trust in heroes’ endorsements of policies as reflecting the public good rather than their personal interests. This can in turn enable heroes to be more credible when publicly supporting extreme and even hitherto proscribed policies relative to other public figures, whose type and thus motives are less clear.

Further, while heroes often distinguish themselves by showing individual initiative, their credentials as heroes do not operate in a vacuum. While we cannot measure the effects of Pétain’s legitimization of anti-democratic values on France as a whole – and in that sense our measures should be considered as underestimates – we can compare which municipalities were more responsive to his message. Our results suggest that Pétain’s legitimization of authoritarian values was complemented by the persuasive presence of the regular citizen-soldiers, the poilus [hairy ones], who shared a common, and complementary, heroic credential with Pétain.

The presence of such complementarities in a hierarchical network can, we argue, also explain some of the more puzzling aspects of Nazi collaboration that we uncover and document. For example, why was it that the heroes of Verdun, symbols of French fortitude and the will of the French Republic to resist, were more likely to instead collaborate with the invading forces? The logic of robust comparative statics, implied by the presence of complementarity (Milgrom and Roberts, 1990, Milgrom et al., 1991), provides likely answers. If others that share a heroic credential are now considered traitors, this will reduce the value to each hero of their own. This is particularly the case for the most public face of the network— in our case, Pétain. As a result, the heroes of Verdun have more incentives to support their leader: it is costlier to turn against him than for others because of the complementarity of their heroic credentials. Further, there are incentives to invest in participation in organizations and other reinforcing devices that strengthen the value of their heroic credentials and the network as a whole. Yet, the more individuals invest, the costlier it is to abandon the network. These reinforcing incentives over time may explain why the home communities of the heroes of Verdun still supported Pétain even when it was clear that the Nazis were losing.6

To the best of our knowledge, our paper is the first to measure the effects of heroes and heroic networks in legitimizing and propagating policy preferences. We are able to exploit an arbitrary process7 that formed a network of heroes, those who did Verdun, who were themselves connected to a heroic leader – Pétain – who would assume national political leadership in World War II. Our setting overcomes two major hurdles in the empirical literature on leadership.8 It

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6Pétain’s natural death in prison in 1951 sparked demonstrations in most French cities, orchestrated by veterans of Verdun (Williams (2005, p. 271) and online Appendix B10). See also Jha (2018) for a parallel formalization and other historical examples where reinforcing complementary investments can induce institutional persistence even after the central complementary relationship ceases to exist.

7Our identification strategy builds on Jha and Wilkinson (2012, 2019), who use the arbitrary assignment of army units overseas to measure the effects of different combat exposures. Whereas those works focus mainly on grass-roots political organizations among veterans and on the spread of democratic ideas among them, our paper focuses on a distinct channel: that of heroic human capital operating through a complementary hierarchical network, both in legitimizing racist authoritarianism and undermining democratic values. Our paper relates to other papers on violent mobilization as well, including Rogall (2021) and Bai et al. (2021).

8The ways through which leaders can influence individuals actions are explored in a growing, though mainly
solves the reflection problem— the fact that leaders emerge endogenously from their communities— by analyzing a setting where the leaders had already emerged elsewhere. In that, our paper complements work by Dippel and Heblich (2018), who compare American towns where exiled German leaders of the 1848 revolutions chose to settle to otherwise similar towns and find that towns with more leaders were more likely to develop local athletic societies, open German newspapers and mobilize volunteers in the American Civil War. In addition, we are also able to overcome the challenge of the endogenous choice of the communities in which leaders choose to operate by examining the effects on political action in the communities—determined at birth—of the network of those that acquired heroic credentials complementary to the leader’s.

Our results highlight the importance of heroism in providing a form of capital that can broaden the spectrum of policy preferences that individuals can publicly adopt (i.e., the Overton Window). By imbuing heroes with a credential of proven willingness to sacrifice for the nation, heroes can also challenge other sources of political legitimacy, including traditional sources such as stemming from religion or descent (Greif and Rubin, 2020) or the legitimacy of democratic elections themselves (Levi et al., 2009). Thus, heroes can become potent champions of democracy and freedoms as in Dippel and Heblich (2018), or, as in our case, potentially their greatest challengers. Thus our paper links to a literature on the determinants of declines in democratic values and political extremism more generally.

Finally, to the best of our knowledge, ours is the first paper to measure the causal determinants of collaboration in Nazi-occupied Europe. This question has been relatively ignored by the literature in economics and political science, which mostly focuses on the determinants of insurgency and resistance. This is in part because collaboration, by its nature, tends to be more theoretical literature. Leaders can persuade and organize followers (Hermalin, 1998, Caillaud and Tirole, 2007). They can coordinate group action by defining a reference behavior (Akerlof and Holden, 2016), affecting expectations and social norms (Bursztyn et al., 2017, Acemoglu and Jackson, 2015), or directly shaping group identity (Akerlof, 2016). See also Lenz (2012) on how US party leaders can sometimes change the policy preferences of those who identify with that party.

People choose to follow or reject leaders based on their own preferences, making it difficult to disentangle the causal influence of leaders from the preferences and actions of their followers. Other solutions to this reflection problem include the use of experimental methods that randomly assign leaders temporarily in lab-like settings (see e.g. Bhalotra et al., 2018, d’Adda et al., 2017), and the measuring of changes in outcomes when managers or leaders turn over or die (e.g. Bertrand and Schoar, 2003, Jones and Olken, 2005, Bandiera et al., 2020).

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

See for example Gagliarducci et al. (2018), Kocher and Monteiro (2016), Ferwerda and Miller (2014) on
covert than overt acts of resistance and insurgency, and thus harder to measure. Collaboration in France, in particular, has been the object of a recent fascinating, yet still mostly qualitative historical literature (e.g. Burrin, 1996, Jackson, 2001, Paxton, 2001, Ott, 2017). We exploit a range of unique and hitherto largely untapped sources, including contemporary intelligence reports, to create, to the best of our knowledge, the most exhaustive list of collaborators in occupied Europe to date.

We exploit a range of unique and hitherto largely untapped sources, including contemporary intelligence reports, to create, to the best of our knowledge, the most exhaustive list of collaborators in occupied Europe to date. We contribute to 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. Further, there has been no attempt to measure the extent to which this depended on the presence of a network of heroes who also served at Verdun.

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

2 An Exogenous Heroic Network: Verdun, Pétain, and the Noria

2.1 The Battle of Verdun 1916

On the 21st of February 1916, the German Army launched Operation *Gericht*. The German commander, Erich von Falkenhayn, aimed to exploit the great symbolic importance of Verdun to either lure the French into contesting a concentrated static position where they could be “bled to death” by artillery or crush French morale by capturing the fortress-city (Horne, 1962, p. 36).

Yet, up until February 1916, Verdun had remained a quiet sector of the front. The Germans were able to maintain great secrecy despite their massive buildup to the attack, and consequently found the French grossly unprepared. The rapid German advance led to disastrous French losses and the successive removal of four ineffective French generals in the first five days of battle. A ‘snap decision’ was made that Pétain should be placed in command at Verdun on February 26th (Horne, 1962, p.129).

Pétain immediately implemented a number of major innovations. First, he began to rely more heavily on artillery to spare the infantry where possible, while reorganizing the slender supply line that would later be commemorated as the Voie Sacrée. Second, he instituted a system of troop replacements, known as the Noria [millwheel]. Like the simple wheel of buckets

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13 Some key aspects of the data are summarized in Lormier (2017).

14 Verdun’s symbolic importance goes back at least to a treaty in 843 that ended the civil war between Charlemagne’s grandsons, largely delineating the borders of what would become France, Germany and (disputed) Lotharingia.
on a stream for which it was named, under the Noria system, line regiments were rotated after a few days, before their numbers were decimated and morale impaired, and sent to rest away from the front. They were then returned to the line, then rested again. By May 1st, 53% of the entire French line infantry had been rotated through Verdun.\(^{15}\)

These innovations stopped the German advances and arguably saved the French army from collapse. However Pétain, already lionized by the Paris press as the *Héros de Verdun*, rankled both the High Command and politicians with his increased visibility and disdain for their directives.\(^{16}\) As a result, Pétain was promoted away from direct command at Verdun on May 1st. Under his successors, Robert Nivelle and Charles Mangin, the furious contest at Verdun continued, even as the major Allied offensive on the Somme on July 1st diverted German resources. The French gradually clawed back German gains until the 17th of December, 1916, when the battle was declared over.

By then, the Battle of Verdun had become the longest in history. French casualties reached around 378,777 while Germany lost around 330,000 men. 305,440 soldiers were killed, almost a death a minute (Ousby, 2007).\(^{17}\) The battle was also a watershed of World War I. As Horne (1962)[pp. 1-2] notes: “Before it, Germany still had a reasonable chance of winning the war; in the course of those ten months this chance dwindled away.... In the aftermath, too, Verdun was to become a sacred national legend, and universally a household word for fortitude, heroism, and suffering... Long after the actual war was over, the effects of this one battle lingered on in France.” Because of the rotation system, more men of that generation would have the Battle of Verdun engraved on their memory than any other. The profound significance of the simple phrase “J’ai fait Verdun” [I did Verdun], adopted broadly among its veterans, was understood throughout the country (Ousby, 2007).

### 2.2 Pétain: the unexpected Hero of Verdun

Pétain had not been born to greatness, but was assigned to Verdun because he happened to be available at the time. Of peasant background, he graduated 229 out of 386 from the Saint-Cyr military academy, and advanced only slowly up the ranks. He spent five years as sous-lieutenant, seven years as lieutenant, and ten as captain (Horne, 1962). In 1914, he was a 58-year old colonel on the verge of retirement (Williams, 2005, p.41).

His slow progress may be explained in part by his modest origins, but also by his disdain for publicity, political networking and his military philosophy, favouring artillery, which was at times at odds with High Command’s. Pétain was also known for his clipped tones and

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\(^{15}\) By contrast, the Germans deployed the same regiments until they had been literally pulverized by artillery.

\(^{16}\) The Paris press struggled to find a ‘suitable photograph’ of Pétain when he assumed command at Verdun, but none existed. Prior to the battle, “he was simply not a public figure” (Williams, 2005, p.71). But with his increased visibility, Joffre sought his replacement. His rudeness to Premier Poincaré during his visits probably did not help (ibid).

\(^{17}\) These figures can be compared to the 405,399 military deaths the United States suffered during the entire Second World War, and the 22,654 soldiers killed on both sides in its bloodiest battle in history, Antietam.
delivery.\textsuperscript{18} His lack of willingness to ‘manage up’ may have also played a role. His superior officers found him sarcastic and cautious, while politicians and many peers found him irreverent and cold.\textsuperscript{19}

Yet, even though he appears to have lacked the skills or the inclination to be a charismatic populist demagogue in the vein of Hitler and Mussolini, or an effective manipulator of internal party politics, like Stalin, Pétain was a soldier’s general, beloved by the soldiers under his command for the genuine concern he showed for their well-being.\textsuperscript{20} In this management style, he would differ markedly from his successors at Verdun, Nivelle and Mangin.\textsuperscript{21}

Yet, as Horne (1962) writes: “The choice of Pétain to command at Verdun was made less because of his qualities than because he happened to be available at the moment” [p.141]. The dramatic failure of French military plans in 1914 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.\textsuperscript{22}

It is important to stress that although Pétain was in charge of military and logistic decisions at Verdun, he had no say in the rotation of specific regiments to Verdun. This was exclusively the responsibility of Joffre, and subject to broader strategic considerations. Joffre’s decisions about troop rotations were dictated by the possibility of other attacks and subordinate to the main strategic objective of 1916, the Somme Offensive scheduled for that summer.\textsuperscript{23}

\subsection{2.3 The Noria Rotation and Heroic Networks}

Our empirical identification of heroic networks exploits the fact that the line infantry regiments of the French army, in common with that of many militaries, were designed to be inter-

\textsuperscript{18}His nickname while a professor at the École de Guerre was Précis-le-Sec [Precise-the-Dry] (Williams, 2005, p.35).

\textsuperscript{19}A common refrain of his military evaluations note his ‘cold’ character (Williams, 2005, p.26). His fellow-officers too noted his “icy formality” (Horne, 1962, p.139).

\textsuperscript{20}According to Alastair Horne (1962, p.139), Pétain “was the paternal figure, the leader who was devoted to his men, who suffered what they suffered”.

\textsuperscript{21}The anti-thesis of Pétain, the ‘silver-tongued’ and much-admired by politicians Nivelle was never popular with the soldiers. He was known for not even consulting the casualty lists after a battle (Williams, 2005, p.71). His subordinate, Mangin, was nicknamed the “Butcher”. Both Nivelle and Mangin were later discredited by the catastrophic Chemin des Dames offensive of 1917 and subsequent mutinies in the French army, a situation that Pétain would again be called upon to rescue. See also Bandiera et al. (2020) on how the fit between leadership styles and firms’ needs can shape managerial performance.

\textsuperscript{22}The order was unanticipated by Pétain himself, who was away from his Noailles headquarters in a Gare du Nord hotel with his mistress at the time of his summons (Williams, 2005, p.67).

\textsuperscript{23}As Joffre’s letter to Pétain on 5 March 1916 states: “The headquarters of army corps, after their replacement by those who will be sent to you, will also be under my disposal” (emphasis added, Army Ministry, 1926, p.334). Op. cit. Army Ministry, 1926, p.331-333, and Williams (2005, p.70).
changeable in strength and equipment, and thus easily deployable in response to the needs of the moment.\textsuperscript{24} Yet despite this inter-changeability in deployment, 144 of the 173 regiments of the French army in August, 1914 were recruited from specific subregions, each with their own recruitment bureau and military depot.\textsuperscript{25} We digitized the 9th edition of the \textit{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 1914 borders.\textsuperscript{26}

On August 2nd, 1914, France mobilized every man between 20 and 48 years of age. 92.76\% of 1915 France’s municipalities sent troops that served in one of the 153 line regiments that were rotated through the Battle of Verdun. 56.86\% of all French municipalities did so in one of the 92 regiments rotated through Pétain’s command. The remaining 19 line regiments were those kept in reserve for the major—and ultimately more bloody—Allied offensive at the Somme in July 2016, or those already assigned to the fronts in the Dardanelles, Greece, or Serbia.\textsuperscript{27} We use the resulting quasi-random variation in infantry regiments’ exposure to direct command of Pétain at Verdun, conditional on being rotated at Verdun. We consider a regiment to be \textit{treated} by Pétain’s leadership at Verdun if it served between February 26th and May 1st, as opposed to those that served from May to December, under Nivelle and Mangin’s command.\textsuperscript{28} Both in its conception and, as we show, in its implementation, the rotation to Verdun was based upon the needs of the moment and unrelated to the home characteristics of the regiments involved.

Figure 1 shows the rotation of home municipalities of the regiments assigned to Verdun for each of the ten months of the battle. Figure 2 summarizes these monthly figures, showing which municipalities ultimately raised regiments that served under Pétain at Verdun, which served there under other commanders, and which were deployed elsewhere. As the figures reveal, consistent with the arbitrary nature of the rotation system, almost every area of France sent troops to Verdun, with regiments recruited from different sub-regions arriving at the same time without any systematic distinction as to who was assigned when.

\subsection*{2.4 Pétain’s imprint on the regiments he commanded at Verdun}

That Pétain became a national hero after Verdun is undisputed. Williams (2005, p.63) describes: \textit{“Those dreadful months, however also saw the birth of a legend. Individual memories...”}\textsuperscript{24} See e.g. Jha and Wilkinson (2012) on the British army and other forces as well.

\textsuperscript{25}The remaining ‘Fortress’ regiments, numbered from 145 to 173, were recruited from specific border areas and were complemented with excess troops from Paris and other population centers in order to allow an increased peacetime concentration at the frontiers (see Imperial General Staff (1914)). We assign these fortress regiments to each of their recruitment sub-region in population-weighted shares. Our results are robust to excluding fortress regiments (see Section 6.1). Other army corps, such as the artillery, were organised at the broader region level and are therefore less suitable for our analysis.

\textsuperscript{26}To replace war-time losses, there was more mixing of recruits from outside the original sub-regions as the war continued (Bracken, 2018). This should attenuate the effects on the original municipalities, making our effects a likely lower bound.

\textsuperscript{27}One further line regiment – the 145th – had been captured in 1914 and served 4 years of the war in German POW camps. Thus, it too was not part of the rotation.

\textsuperscript{28}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.
Notes: From the top left (February) to the bottom right (December), different regiments were dispatched to the Battle of Verdun. Pétain commanded between February and May 1st. The figure displays where all (dark blue), some (light blue) or none of the regiments from each municipality were rotated through Verdun each month.

Figure 1: Rotation of regiments through Verdun, by month, February-December, 1916
Notes: The figure displays whether all (vertical lines), some (horizontal lines) or none of the regiments from each municipality were rotated through Verdun. Thin blue lines indicate department boundaries and illustrate our within-department identifying variation. 92.76% of 1915 France’s municipalities sent troops that served at Verdun. 56.86% sent troops that served at Verdun under Pétain.

Figure 2: Municipalities raising regiments under Pétain at Verdun

of the hideous slaughter faded as the collective heroism was honored. In time, too, legend developed into myth. [...] As it happened, no was a greater beneficiary of that particular myth than Philippe Pétain.” But did Pétain leave a particular imprint on the regiments that he commanded during these first few months of the battle, more than on other regiments rotated at Verdun later in the battle? Appendix Table A1 shows that he did. We analyze the Regimental Histories and Operation Journals and code the number and context of references to Pétain and to Nivelle and Mangin, who succeeded him in command of Verdun after May 1st 1916.

The results in Table A1 show that all regiments rotated at Verdun mention Pétain more often, but those that were rotated under his command in those first months do so even more (Column 1). Regiments rotated at Verdun under Pétain mention him in their Journal and History 29.2% more often than regiments rotated at Verdun at another point of the battle. This is true even when we restrict the sample to regiments that were rotated at Verdun (Column

\footnote{These documents, published after the war, were generally written by the commanding officers of the regiment and were based on regiments’ operation documents. Although of unequal quality, these documents are helpful descriptions of the operations of each regiment during the war (see Supplementary references in the Appendix).}
The vast majority of these references are in the context of Pétain personally reviewing or decorating the regiment (67.8% of mentions, with other mentions referring to his strategic command or direct involvement in command). No other major battle, be it other heroic battles as the Marne or disasters as the Chemin des Dames (where Pétain was called again to crush mutinies), would forge such a connection to Pétain (Column 3).

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

3 Empirical Strategy

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

\[ Y_{i,1919-1945} = \alpha + \beta VerdunPétain_{i,1916} + \gamma Verdun_{i,1916} + X_{i,<1916}' + \eta D_i + \epsilon_i \]

where our unit of analysis \( i \) is a municipality. Our analysis deals only with the municipalities within France’s 1914 borders (i.e. excluding most municipalities in Alsace-Moselle). Municipalities are the smallest unit in the Census, with an average population of 1,146 inhabitants in 1936. We project all geographies to the 2015 municipalities definition from GeoFrap. This leaves us with 34,947 municipalities corresponding to France’s 1915 borders, among which 34,942 are populated in 1936.31

\( Y_{i,1919-1945} \) denotes a series of outcomes, including our main dependent variable of interest: the intensity of collaboration, measured as the logarithm of the share of collaborators listed in 1944/1945 as having been born in municipality \( i \), normalized by the population.32 We show that our results are robust to using alternative sources of data on collaboration, as well as alternative functional forms, including estimating a Poisson regression using the number of local collaborators as the dependent variable. To explore mechanisms, we also use as dependent variables the (log) vote shares for different parties in four interwar elections (1919, 1924, 1932, 1936) in Section 6.7.

---

31 The remaining five consists of three municipalities that were destroyed and permanently depopulated as a result of the Battle of Verdun itself, and two municipalities that were created after 1936.
32 Given no Census was taken during the war and to avoid our estimates being contaminated by potentially endogenous population movements during and immediately after the war, we report the log ratio of the number of collaborators to the pre-war population of the municipality, measured in the last pre-war Census of 1936. More precisely, to deal with the zeros, we use the log of \( \frac{\text{number of collaborators} + 1}{\text{pre-war population} + 1} \).
The measure of combat exposure to Pétain, $V_{\text{Petain},i,1916}$, is the share of regiment(s) raised in municipality $i$ that served under Pétain at the Battle of Verdun.\(^{33}\) We control for the Verdun overall rotation itself, $V_{\text{Verdun},i,1916}$. Alternatively, we estimate our coefficient of interest, $\beta$, excluding the municipalities whose regiments were not rotated at Verdun in 1916. We control for $\eta_D$, a set of 90 department-level fixed effects, as well as for $X_i$, a vector including municipality-level pre-treatment variables. Importantly, these include municipal vote shares for the left or the right in the last pre-war legislative elections in 1914 (the excluded category being the vote share for centrist or miscellaneous parties). We also control for the logarithm of the population measured in the last pre-war Census, in 1911.

Figure 2 illustrates our identifying variation. We exploit within-department variation in combat exposure to Pétain at Verdun, conditional on having been rotated at Verdun and on a set of municipal characteristics that capture pre-WWI demographics and political preferences. We condition on the Verdun rotation as the very few municipalities (7.24% of municipalities) that raised regiments that were not rotated at Verdun may have had a different experience during and after the war. Our results are more precisely estimated and larger in magnitude if we exclude those municipalities from the estimation sample. Our preferred specification only includes department fixed effects and pre-WWI controls but in order to shed light on the mechanisms, in some specifications we also control for a municipality’s military fatality rate in World War I and variables that capture France’s early experience in World War II. We cluster standard errors at the level of the treatment: the regiment (173 regiments). In specifications with vote shares as the dependent variable, we use two-way clustering, and cluster the standard errors at the regiment and at the electoral district level.

We also implement standard checks that our results are not driven by the presence of unobservable differences across municipalities or by spatial autocorrelation of the error terms.

Our identification exploits the exogeneity of the timing of the rotation of 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 of Pétain before May 1st, or after. Our identification is thus based on the fact that the processes through which regiments were rotated through Verdun in 1916, and through which Pétain himself was assigned and redeployed, were due to coincidence, military exigency and German action that were independent of the home characteristics of specific regiments themselves.

Consistent with this, Table I shows that municipalities that raised regiments rotated at Verdun under direct command of Pétain are statistically very similar to others, both across France and within the same department, along a wide range of relevant characteristics.\(^{34}\)

\(^{33}\) We reconstruct the battle history of each regiment from each of the 173 “Histoire du Régiment” books, which describe the day-to-day operations of each regiment. For each regiment, we manually code whether, and when, it was rotated at Verdun in 1916. We then define an indicator variable ($V_{\text{Verdun}}$) equal to one if the regiment fought at Verdun in 1916; and an indicator variable equal to one ($V_{\text{Petain}}$) if the regiment fought at Verdun under Pétain’s command, i.e. between the 26th of February and the 1st of May 1916. We then construct a municipality exposure share by averaging the battle history over the regiments raised from the municipality.

\(^{34}\) Overall, we are able to compare 55 characteristics at the municipality, grid-cell, historical district, town,
importantly, whether it be comparing with no controls or comparing communes within the same department, Verdun-under-Pétain municipalities have very similar vote shares for left-wing, centrist or right-wing parties. In fact, comparing within the same department, we fail to reject that Verdun-under-Pétain municipalities exhibit the same pre-treatment vote shares for the left, center, or right. Similarly, we fail to reject differences in election turnout.

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

<table>
<thead>
<tr>
<th></th>
<th>Observations (municipalities)</th>
<th>Mean (sd)</th>
<th>Coeff (se)</th>
<th>p-value</th>
<th>Coeff (se)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controls</td>
<td>None</td>
<td>Dept FE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Treatment Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Vote Share 1914</td>
<td>33,641</td>
<td>10.735 (16.184)</td>
<td>-0.132 (1.809)</td>
<td>0.942 (1.788)</td>
<td>-1.484 (1.788)</td>
<td>0.408 (1.797)</td>
</tr>
<tr>
<td>Centre/Other Vote Share 1914</td>
<td>33,641</td>
<td>51.239 (31.894)</td>
<td>-3.348 (4.472)</td>
<td>0.455 (4.119)</td>
<td>-1.063 (4.074)</td>
<td>0.797 (4.119)</td>
</tr>
<tr>
<td>Right Vote Share 1914</td>
<td>33,641</td>
<td>42.998 (32.589)</td>
<td>3.789 (4.831)</td>
<td>0.434 (3.534)</td>
<td>2.985 (3.534)</td>
<td>0.400 (3.534)</td>
</tr>
<tr>
<td>Turnout 1914</td>
<td>33,641</td>
<td>79.518 (9.862)</td>
<td>1.264 (1.168)</td>
<td>0.281 (0.871)</td>
<td>0.168 (0.871)</td>
<td>0.847 (0.871)</td>
</tr>
<tr>
<td>Log Population 1911</td>
<td>34,922</td>
<td>6.237 (0.985)</td>
<td>0.032 (0.085)</td>
<td>0.702 (0.052)</td>
<td>-0.012 (0.052)</td>
<td>0.822 (0.052)</td>
</tr>
<tr>
<td>Inter-War and WWII Charact.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log Population 1936</td>
<td>34,942</td>
<td>6.072 (1.064)</td>
<td>0.030 (0.090)</td>
<td>0.737 (0.060)</td>
<td>-0.053 (0.060)</td>
<td>0.377 (0.060)</td>
</tr>
<tr>
<td>Combat Days 1940</td>
<td>34,942</td>
<td>4.469 (3.477)</td>
<td>1.212 (0.637)</td>
<td>0.059 (0.207)</td>
<td>-0.069 (0.207)</td>
<td>0.738 (0.207)</td>
</tr>
<tr>
<td>Log Distance Demarcation Line</td>
<td>34,942</td>
<td>4.659 (1.149)</td>
<td>0.153 (0.210)</td>
<td>0.467 (0.081)</td>
<td>0.004 (0.081)</td>
<td>0.963 (0.081)</td>
</tr>
<tr>
<td>Vichy France 1940-44</td>
<td>34,942</td>
<td>0.375 (0.484)</td>
<td>-0.015 (0.091)</td>
<td>0.870 (0.016)</td>
<td>0.009 (0.016)</td>
<td>0.574 (0.016)</td>
</tr>
</tbody>
</table>

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

Table II disaggregates the 1914 electoral results party by party. There are no significant differences in vote share for any of the parties in Verdun-under-Pétain municipalities. Notably, or canton level. 4 out of these 55 (and none at the level of our treatment, the municipality) are statistically significantly different at the 10% level in our treated sample, no higher than what we would expect by pure chance.

We provide details on elections and political parties in 1914 in the online Appendix Section B.3.1.
this includes not only parties on the right-wing but also the Socialist party (SFIO) of prominent anti-militarist Jean Jaurès, whose assassination crippled the final efforts to stave off war.

Table II: Exposure to Pétain and log. 1914 legislative vote shares

<table>
<thead>
<tr>
<th></th>
<th>Left Center</th>
<th>Left Center</th>
<th>Center Right</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>SFIO</td>
<td>0.026</td>
<td>0.056</td>
<td>-0.067</td>
<td>0.003</td>
</tr>
<tr>
<td>RAD-SOC</td>
<td>(0.083)</td>
<td>(0.044)</td>
<td>(0.072)</td>
<td>(0.053)</td>
</tr>
<tr>
<td>RAD-INC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRDS</td>
<td>0.033</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Progressistes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed effects</td>
<td>Dept</td>
<td>Dept</td>
<td>Dept</td>
<td>Dept</td>
</tr>
<tr>
<td>1911 pop</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.72</td>
<td>0.90</td>
<td>0.88</td>
<td>0.91</td>
</tr>
<tr>
<td>Observations</td>
<td>33,640</td>
<td>33,640</td>
<td>33,640</td>
<td>33,640</td>
</tr>
<tr>
<td>Mean DepVar</td>
<td>1.27</td>
<td>2.20</td>
<td>0.89</td>
<td>1.47</td>
</tr>
<tr>
<td>Sd DepVar</td>
<td>1.58</td>
<td>2.03</td>
<td>1.86</td>
<td>2.09</td>
</tr>
</tbody>
</table>

Notes: This Table shows that in the 1914 elections, municipalities that raised regiments that served at Verdun under Pétain did not vote differently than other municipalities. Political parties are ordered in the table from most left-wing (“SFIO”) to most right-wing (“ALP”). Political parties are described in details in the online Appendix Section B.3.1. An observation is a municipality. “1911 pop” stands for the logarithm of the 1911 population. Models are estimated using OLS, with robust standard errors two-way clustered at the Regiment level and at the 1914 canton (electoral district) level (** p < 0.05, * p < 0.10).

Similarly, using the last pre-war Census in 1911, we observe that Verdun-under-Pétain municipalities had similar populations to other towns in the same department or more widely across France. Further, in the Appendix Table A2, we 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 among the 400 chef-lieux – the main towns of the French districts in the most detailed pre-war census that took place in 1872. In Tables A3 and A4, we compare several other historical characteristics collected by Squicciarini (2019) and similarly show that areas with greater exposure to Verdun-under-Pétain do not differ from other areas.37

As a final note, Table I also shows that the Germans do not appear to have perceived Verdun-under-Pétain municipalities to be particularly more or less desirable to directly control than other municipalities during the lead up to the Battle of France in 1940. These municipalities had similar populations in 1936. They were also neither more proximate to the demarcation line that separated German-occupied and Vichy France nor more likely to be assigned to either

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36Squicciarini (2019)’s data are at the canton level (N=2,765) or historical Baillage level (N=533). These include the number of schools (as well as share of Catholic school, student sex ratio, and a proxy of school quality) in 1873 and 1894, household expenditures in 1901, number of plague outbreaks between 1517 and 1786, number of refractory clergy during the French Revolution, number of firms in 1800 and wheat suitability.

37Likewise, Appendix Table A5 shows that areas with greater exposure to Verdun-under-Pétain also do not systematically differ from others in the same department in terms of annual average temperature, precipitations, elevation (at the municipal level, N=34,947) or a wide range of soil characteristics (at the 16X16km grid-cell level, N=1,750).
of these zones.\textsuperscript{38} These similarities are true both comparing municipalities across France and locally within the same department.\textsuperscript{39}

The lack of pre-existing differences is consistent with the historical record that suggests that the French Army engaged in interchangeable deployment of regiments that happened to expose soldiers from a specific set of otherwise similar Verdun-under-Pétain municipalities. To supplement this evidence, we can also test alternative possibilities. For example, it could be the case that the regiments from Verdun-under-Pétain municipalities were either specially selected to be \textit{cannon fodder} in the early months at Verdun or ended up being so. They might therefore have experienced greater fatalities in the Great War, and that may explain subsequent differences in willingness to collaborate in the Second World War. Another possibility is that Verdun-under-Pétain municipalities were the opposite: that despite having similar vote shares and other demographics, they were selected from favored municipalities by the French High Command, perhaps from more pacifist or politically influential areas, and thus their soldiers were shielded from war-time fatalities.

To examine this, we code whether each line regiment participated in specific battles from their regimental histories, and combine this with data on 1,276,661 military fatalities of French soldiers born in metropolitan France from the \textit{Mémoire des Hommes} online database (see also Gay, 2017), which we are able to match to their birth municipalities in order to construct fatality rates relative to each municipality’s 1911 population. This new dataset constitutes in itself a contribution to the cliometrics of the First World War.

As Table III shows, France suffered a tragedy in World War I, with the average municipality losing 4.05\% of its population to military fatalities. First note that it was, of course, hard to know \textit{ex ante} which battles would be successes or failures for France, and the major battles of the Great War – and even those solely of 1916 – do exhibit variation in the fatality rates for the regiments that were exposed. This is particularly true of the ultimately failed attempts to break through the German lines at the Somme in 1916 and the Chemin des Dames in 1917 (Column 1 and 2). However, despite the differences stemmng from fatalities to regiments in specific battles, their home \textit{municipalities} ultimately had similar overall military fatality rates (Column 3 and 4). Moreover, the regiments exposed to Verdun under Pétain were not exceptional in terms of their overall fatality rates. This is true whether comparing fatality rates to those in other regiments serving at Verdun after Pétain, other \textit{heroic} battles – like the First Battle of the Marne that saved Paris – or other battles in 1916, such as the Somme Offensive. In other words, by the end of the war, the regiments that fought at Verdun under Pétain had experienced similar losses than other regiments, and municipalities home to those regiments suffered similar World War I losses than other municipalities.

These patterns run contrary to both the cannon fodder and positive selection hypotheses,

\textsuperscript{38}On the strategic choices of positioning the demarcation line, see Kocher and Monteiro (2016).

\textsuperscript{39}As the table suggests, Verdun-under-Pétain municipalities did experience about 1.2 extra days of combat in the Blitzkrieg on average (p-value 0.059) compared to others across France, but had very similar experiences when compared to other municipalities in the same department.
Table III: Regression: Combat Fatalities by Battle

<table>
<thead>
<tr>
<th></th>
<th>Deaths by regiment</th>
<th>Municipality WWI fatality rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Marne</td>
<td>181.69</td>
<td>-0.09</td>
</tr>
<tr>
<td></td>
<td>(115.15)</td>
<td>(0.09)</td>
</tr>
<tr>
<td>Verdun under Pétain</td>
<td>-107.21 51.32</td>
<td>0.15 0.14</td>
</tr>
<tr>
<td></td>
<td>(136.39) (35.20)</td>
<td>(0.10) (0.10)</td>
</tr>
<tr>
<td>Verdun</td>
<td>175.81 106.53*</td>
<td>-0.12 -0.12</td>
</tr>
<tr>
<td></td>
<td>(212.16) (54.90)</td>
<td>(0.21) (0.20)</td>
</tr>
<tr>
<td>Somme</td>
<td>567.48*** 168.44***</td>
<td>-0.11 -0.11</td>
</tr>
<tr>
<td></td>
<td>(129.15) (33.49)</td>
<td>(0.10) (0.10)</td>
</tr>
<tr>
<td>Chemin des Dames</td>
<td>289.44**</td>
<td>-0.03</td>
</tr>
<tr>
<td></td>
<td>(117.33)</td>
<td>(0.09)</td>
</tr>
<tr>
<td>South Eastern Front</td>
<td>-791.18*** -219.54***</td>
<td>-0.25 -0.26</td>
</tr>
<tr>
<td></td>
<td>(206.53) (52.66)</td>
<td>(0.17) (0.17)</td>
</tr>
</tbody>
</table>

Unit of obs. | Regiment | Regiment | Municipality | Municipality |
Time-period   | Whole war | 1916     | Whole war    | Whole war    |
R-squared     | 0.25      | 0.30     | 0.00         | 0.00         |
Observations  | 173       | 173      | 34,115       | 34,115       |
Mean DepVar   | 3,141     | 520      | 4            | 4            |
Sd DepVar     | 823       | 223      | 3            | 3            |

Notes: The models are estimated using OLS. An observation is: a regiment in Columns 1 and 2; a municipality in Columns 3 and 4. Robust standard errors clustered at Regiment level (*** p<0.01, ** p<0.05, * p<0.10). This table shows cumulative battle deaths by regiment exposed to different battles over the whole war (Column 1) or battle deaths in 1916 only (Column 2). Columns 3 and 4 show overall municipality WWI death rates (computed as the number of soldiers born in a municipality who died in combat divided by the municipality population in 1911) based upon the regimental shares assigned to each battle.

and instead are consistent with one implication of quasi-random deployment: the fact that over time there will be regression to the mean in terms of fatality rates.⁴⁰

4 Collaboration during World War II: Background and Data

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

4.1 Heroes and the Death of the Third Republic

The Constitution of the Third Republic had been designed specifically to prevent a Napoleon-style ‘heroic’ takeover: a weak executive faced a strong assembly, with shifting coalitions (Reynolds, 2014). The Republic had, nevertheless, proved robust enough to deliver a unity government –

⁴⁰In fact, we fail to reject a test that home regimental assignment to these different battles has zero joint effect on municipality-level fatality rates at the 43% level across battles within the Western Front, and 13% if we include the South-Eastern Front.
the Union Sacrée – that won the Great War despite France’s appalling losses. However, this coalition unravelled shortly thereafter. France’s political polarization became further accentuated during the Great Depression, making it hard to sustain majorities. France went through 26 separate cabinets between 1930 and 1940 alone (Steiner, 2005).

The inter-war period also saw the creation and increasingly active engagement of large ex-combatant organizations in politics. Of 6.4 million French war veterans in 1920, about 3 million would join a veterans’ association between the wars. Among these was the Croix de Feu [Cross of Fire], a society initially limited only to decorated veterans, many of whom had served at Verdun, that later grew to about 600,000 members. Other right-wing veterans groups included Union nationale de combatants (UNC), with 900,000 members (Millington, 2012) as well as more militant networks such as La Cagoule [the Hood], set up to violently break up Communist meetings, and the Corvignolles, another anti-communist organization set up by Pétain’s former aide-de-camp, Captain Léon Bonhomme (Williams, 2005, p.140).

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

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

Pétain developed increasingly authoritarian tendencies. However, after his retirement

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41 It is important to note that not all the veterans organizations were right-wing however: there was also the center-left Union fédérale with 900,000 veterans as members (Millington, 2012).
42 As the historian Julian Jackson (2001) describes: “The date 6 February 1934 marked the beginning of a French civil war lasting until 1944. The truth about that night was that a demonstration had turned ugly and the police had panicked. But since civil wars require the enemy to be demonized, the left interpreted the events of 6 February as an abortive fascist coup, the right as a massacre of fifteen innocent patriots by the Republic... this was the bloodiest week in French politics since the Commune.” (p.65)
43 When, in 1934, the right-wing newspaper Le Petit Journal organized a survey on who should lead France as its dictator, Pétain received the highest support (see Appendix Figure B8). La Victoire proclaimed “C’EST PÉTAIN QU’IL NOUS FAUT!” [It is Pétain whom we need!], a cry taken up by Le Jour, and the far right L’Action Française. Perhaps more surprising was a 1935 endorsement by the left-wing Vu (Williams, 2005, p.135).
44 This was accentuated while serving with the dictator of Spain, Primo de Riveira, in the Rif War in 1925. On September 9, 1925, The New York Times reported Pétain’s toast to Riveira: “...who through his intelligence and patriotism was able to re-establish discipline and order in Spain. Perhaps circumstances may make it necessary to do in France as was done in Spain”.

20
from France’s highest military position in 1931, Pétain refrained from explicit political position-taking (Paxton, 2001, p.34). On the occasions that he did voice his views, it was, however, to support anti-communist efforts, to express contempt for politicians and parliamentary institutions, and in support of the army’s potential role to intervene in domestic politics.

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

As the Victor of Verdun, Pétain was highly focal among the other heroes of that battle in particular. Along with numerous local reunions, he gave prominent speeches at Verdun, including at the dedication of the immense ossuary on the battlefield in 1927 and, adopting a more explicit right-wing tone, for the twentieth anniversary of the battle in 1936.

Four years later, when called upon finally to rescue France once more as he had done at Verdun, Pétain would once again invoke the ‘support of the veterans [he had] commanded’.

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

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

46 Pétain’s best man, Marshal Émile Fayolle (1964, p.197), noted as early as January 1917 that “Pétain believes he is a great man; he says seriously that the Republic is afraid of him.” He was not alone. In April 1918, Williams (2005, p. 81) writes: “the politicians in Paris objected [to his assuming command] that Pétain was now so widely known for his dislike of politicians in general, and of President Poincaré in particular, that he would be a threat to the Constitution.” See also Williams (2005, p. 142) and Appendix Figure B9.

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

Initially, Pétain’s heroic status was such that most of France did appear to be behind him in the summer and autumn of 1940. Upon gaining power, however, Pétain’s regime quickly began dismantling liberal institutions and adopted an authoritarian course. In October 1940, Pétain’s collaboration took an overt turn, when a photograph of him shaking hands with Hitler at a summit at Montoire was widely publicised and distributed. He promised the French “a new peace of collaboration” and “golden prospects.” 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. The regime took an ever more repressive turn after the full occupation of France by Germany in November 1942. In early 1943, a Milice [militia] was formed from a grouping of existing veterans organizations to hunt down and kill the French Resistance. In the Appendix Section B.2, we illustrate our mechanism with the examples of two soldiers who happened to be assigned to Verdun under Pétain, one prominent and one much less so. Both would be decorated for their heroism, and both would later join the Milice. One, Joseph Darnand, would lead it.

4.2 Collaboration and the Paillole Dataset

Our measure of collaboration comes from a remarkable 2,106-page list collected in 1944-45 under the supervision of Colonel Paul Paillole, the head of French army intelligence at the end of the war (Lormier, 2017). Colonel Paillole was well-qualified to generate this list as he had not only served in the Free French forces, running intelligence networks in France from 1942 onward, but also in the Deuxième Bureau – the counter-intelligence services – of the Armistice Army of the Vichy government between 1940 and 1942. Following the German occupation

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

49 Extract of Pétain’s speech on 10 October 1940. The choice of collaboration is often explained by some historians by the fact that Pétain and those around him thought that at the time that a German victory was inevitable. This view contrasted sharply with that of Charles de Gaulle, who in parallel was calling upon French soldiers to join him in resistance.

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

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

52 The French Armistice Army was allowed to maintain its counter-intelligence services on the condition that they did not act against Germany or Italy. The former Allied commander and Vichy Minister for National Defense, Weygand, encouraged the Deuxième 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. These services not only acted against Gaullist resisters and communists, but also targeted German spies within the unoccupied zone. At German insistence, the BMA was dissolved but was surreptitiously reconstituted under the name Service de Sécurité.
of the South of France, Paillole joined the Free French in Africa, while continuing to run his networks in France, infiltrating collaborator organizations and supporting resistance networks. For example, a successful raid in 1943 abducted six collaborators and captured a file containing the names of all the members of the Parti Populaire Francais (PPF), which is also part of our dataset.53

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

We digitized the entire file, linking the same individuals if they appear separately as members of different organizations, and geo-referencing the municipality of birth or residence of each entry. Our final dataset includes 95,401 names of individuals and families, representing at least 96,012 individuals overall.54 For almost eighty percent of entries, we have information on the nature of collaboration, recorded as membership in almost fifty different specific collaborationist groups.

The largest groups in our dataset include the Fascist parties, the RNP (17,970 individuals) and PPF (9,403 individuals) as well as the Resistance-hunters, the Milice (15,401 individuals – see also Figure A1). Other major groups include 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 Service d’Ordre Légionnaire (SOL) from which it grew, as well as the Légion des Volontaires Français contre le Bolchevisme (LVF), both of which had roots in veterans’ organizations. The most prevalent forms of direct Nazi collaboration consisted in working for the Gestapo (5,271 individuals) or the Service de Renseignement Allemand (German Intelligence Service: 3,088 individuals). 1,550 people were considered economic collaborators, clearly a subset selecting those with deep economic relationships. We are able to geo-reference the birthplace of 86,947 collaborators, including 85,389 individuals within France’s 1915 borders.55

53 Similarly, on March 1st, 1944, the head of the department of the Rassemblement National Populaire (RNP) [National Popular Assembly] was abducted in broad daylight, along with all of his documents, which were eventually given to Paillole. See Appendix B.1.
54 For example, when an entry refers to M. et Mme [X] et leur famille, we assign a lower bound of one additional family member for a total of three at a specific address.
55 We confirm using the military records for a sample (from Oise and Gard departments) that for individuals where only an address is listed, this corresponds to their birthplace. 13,235 individuals on the list have separate information on birthplace and address. This suggests that 15.22% of the collaborators in our list are internal migrants, a figure that matches estimates of internal migration available from the 1936 Census (16.41%).
5 Effects on Collaboration

In this section, we show that direct command of Pétain at Verdun during WWI is associated with an increase in collaboration in WWII. We discuss the robustness of this empirical finding in Section 5.2 as well as its external validity, using alternative sources of data on collaboration in Section 5.3.

5.1 Main Result

Figure 3 maps the quintiles of the distribution of collaborators per capita across municipalities in 1945, overlayed with the regimental combat experience in World War I. Notice that there is significant regional variation in the shares of collaborators. However, there are disproportionately higher shares of collaborators in Verdun-under-Pétain municipalities, even compared to others close by. The raw proportions in the data back these geographic patterns. There were 9.66 active collaborators per 10,000 people in municipalities home to a regiment that served under Pétain’s command, against 7.81 in municipalities whose home regiment served at Verdun, but not under Pétain, a 23.67% difference (P-value of difference in means: 0.000).

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

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

Columns 3 and 4 replicate the estimates from Columns 1 and 2 excluding municipalities that were not rotated at Verdun (therefore dropping the control for the Verdun rotation). The estimation sample drops to 32,412. The coefficient associated with exposure to Pétain at Verdun becomes larger and more precisely estimated.

Columns 1 to 5 show that these results are robust to Poisson estimation, using the count of collaborators in the municipality as the dependent variable and controlling for the 1936 municipal population.

The magnitude of our estimates suggests that exposure to Pétain at Verdun increased collaboration rates by 6.5%, comparing otherwise similar municipalities within the same department, and by 8.9%, comparing otherwise similar municipalities within the same department that were also rotated at Verdun. The Poisson estimates suggest that exposure to Pétain at Verdun led

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56Section B.3 in Appendix describes how we classify different political parties on the left-right political spectrum in each election. See also Table II for the breakdown of political categories by party in the 1914 election.
### Table IV: Regression: Collaboration in World War II

<table>
<thead>
<tr>
<th></th>
<th>Log collaborators per capita (OLS)</th>
<th>Number of collaborators (Poisson)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td></td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td></td>
<td>(7)</td>
<td>(8)</td>
</tr>
<tr>
<td>1915 France</td>
<td>0.074* (***)</td>
<td>0.173* (***)</td>
</tr>
<tr>
<td>1915 France</td>
<td>0.067***</td>
<td>0.187* (***)</td>
</tr>
<tr>
<td>Verdun only</td>
<td>0.139***</td>
<td>0.223**</td>
</tr>
<tr>
<td>Verdun only</td>
<td>0.091***</td>
<td>0.219**</td>
</tr>
<tr>
<td>Log collaborators per capita (OLS)</td>
<td>(0.041)</td>
<td>(0.018)</td>
</tr>
<tr>
<td>Log Share Left, 1914</td>
<td>0.035***</td>
<td>-0.082*</td>
</tr>
<tr>
<td>Log Share Right, 1914</td>
<td>0.011**</td>
<td>0.027</td>
</tr>
<tr>
<td>Log pop 1911</td>
<td>-0.591***</td>
<td>0.873***</td>
</tr>
<tr>
<td></td>
<td>(0.007)</td>
<td>(0.045)</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.026)</td>
</tr>
<tr>
<td></td>
<td>(0.012)</td>
<td>(0.110)</td>
</tr>
<tr>
<td></td>
<td>(0.013)</td>
<td>(0.109)</td>
</tr>
<tr>
<td>Fixed effects</td>
<td>Dept</td>
<td>Dept</td>
</tr>
<tr>
<td>Moran P-Val</td>
<td>0.30</td>
<td>0.16</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.23</td>
<td>0.60</td>
</tr>
<tr>
<td>Observations</td>
<td>34,942</td>
<td>34,942</td>
</tr>
<tr>
<td>Mean DepVar</td>
<td>-5.75</td>
<td>2.44</td>
</tr>
<tr>
<td>Sd DepVar</td>
<td>0.83</td>
<td>0.83</td>
</tr>
</tbody>
</table>

**Notes:** Columns 1 and 2 provide OLS estimates of equation (3). The dependent variable is the log collaborators in 1944-1945 per capita (1936). Columns 3 and 4 provide OLS estimates of equation (3) estimated only in the sample of municipalities that sent a regiment to Verdun (and therefore dropping Verdun as a control). Columns 5 to 8 replicate these estimates using a Poisson specification with the number of collaborators in the municipalities as the dependent variable and controlling for the log population in the municipality in 1936. All regressions control for the 90 department fixed effects. The excluded category for the results of the 1914 elections is the share of votes for candidates running for centrist or “miscellaneous” parties in 1914. For observations with missing historical information (see Table I for summary statistics), we impute zeros and we control for an indicator equal to one when the variable is missing. Robust standard errors clustered at Regiment level in parentheses (** p<0.01, ** p<0.05, * p<0.10).
Notes: The map shows quintiles of the distribution of the log of collaborators per capita across municipalities in 1944/1945, overlayed with municipal regimental combat experience in World War I. This map shows information for 85,389 collaborators in the 34,947 municipalities within France’s 1914 borders.

Figure 3: Collaborators in France, 1940-45 (quintiles).

to 9,582 additional collaborators in municipalities rotated at Verdun under Pétain compared to other municipalities from the same department rotated at Verdun under another general.

5.2 Robustness

We provide additional robustness checks in the Appendix Section A. We check that our results are not driven by functional form assumptions. In addition to our results being robust to a Poisson specification (Columns 5 to 8 of Table IV), Columns 1 to 4 of Table A7 shows that the results are robust to using the inverse hyperbolic sine of local collaborators as an alternative dependent variable. We also show in Columns 5 to 8 of Table A7 that our results are robust to excluding movers.

As discussed above, there is no observable difference in Verdun under Pétain’s municipalities on a wide range of characteristics, including pre-WWI detailed vote outcomes, demographic, historic, and geographic characteristics. A comparison between our uncontrolled specification in Column 1 of Table IV and Column 2 in which we add controls for pre-WWI vote shares and
population reveals that the coefficient is stable in magnitude and more precisely estimated with the addition of controls. A bounds exercise based on Oster (2019) suggests that the influence of unobserved variables would need to be 10 to 20 times the influence of pre-treatment political preferences and population in order to explain the treatment effect away. 57

A recent concern in empirical studies based on comparing local outcomes at different points in time consists in the possibility that any significant relationship may be driven by spatial noise and spatial autocorrelation in residuals (see e.g. Kelly, 2019)). We implement several strategies that address this potential concern and more generally establish the robustness of our results. First, we calculate Moran statistics (a spatial version of the Durbin-Watson statistic) based on a distance matrix. The related p-values, displayed at the bottom of Columns 1 to 4 of Table IV, are between 0.16 and 0.91. These statistics suggest that correlation in spatial noise is unlikely to drive our results.

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

Third, we provide in the Appendix the results of a permutation inference based on reassigning the treatment (1,000 times each) at two different levels: at regiment level, keeping the allocation of each municipality to ‘its’ regiment as the actual allocation; and at municipal level. These permutation inference tests account for potential issues related to imbalance across clusters and spatial correlation. Results of both exercise displayed in Figures A2 and A3 show that our effect size is well outside the range of estimated effects from these placebo treatments. The fact that we obtain similar results when we reassign treatment at regiment or municipal level additionally suggests that our effects are not driven by a specific allocation of municipalities to specific regiments.

57 delta ratio: 10.08 based on a maximum R-squared of 1; delta ratio: 21.67 based on a maximum R-squared of 1.3 times the estimated R-squared.
5.3 External validity

Our data on collaboration represents the largest and most comprehensive dataset available on collaboration. It was collected by a network of different agents under the supervision of Paillolle, who himself had no direct ties to Pétain.\(^{58}\) To address the possibility that some areas may be overrepresented and others underrepresented on the list, Figure A5 shows that the results are not sensitive to particular regions being dropped out of the estimation sample. Results are similarly insensitive to individual departments being dropped out of the sample one by one, with the main coefficient of interest having a mean of 0.067, standard deviation of 0.0027, min of 0.056 (p-value=0.000) when excluding Orne and a max of 0.077 (p-value=0.000) when excluding Vienne.

Nevertheless, we verify the validity of our results using two additional sources of data on collaboration. First, we use data collected in 1944\(^ {59}\) by the United States Office of Strategic Services (OSS) (Office of Strategic Services, 1944) on high level political collaboration. This dataset lists 1,327 people, who were top personnel of the Vichy government (cabinet members and top Ministry personnel), and members of the diplomatic service, press, radio and executive committees of political parties. Second, we use newly and independently collected data on 9,239 volunteers to a violent paramilitary organization that served on the Eastern front in the Wehrmacht uniform: the Legion of French Volunteers against Bolshevism (hereafter, LVF). This dataset was collected from various archival sources, including the national Archives, the Service Historique de la Défense de Caen, and the financial institution that was responsible for the payment of LVF members (Comptoir National d’Escompte).\(^ {60}\) Complementing our list, it also contains data on those who volunteered but were deemed unfit to serve, and those who were killed before the end of the war.

Table V replicates Columns 2 and 4 of Table IV using the sum of local collaborators from these two additional data sources as the dependent variables. Despite the fact that these alternative sources are less comprehensive and reflect two very different types of collaboration – high end administrative Vichy leadership versus direct Nazi footsoldier volunteers – our results remain robust and comparable in magnitude. Section 6 further confirms that our results are stable across different kinds of collaboration in our main dataset.

\(^{58}\)Paillolle, born in 1905, was too young to have served in the first World War and had no visible ties during the interwar period to either veteran organizations or to Pétain himself. It would be far-fetched to suppose that the construction of the list could in any systematic way be associated with the treatment of interest in our paper. For this to be the case, it should be that Paillolle, as well as those who helped him assemble the list locally, have not only exact knowledge of the order of rotation of line infantry regiments at Verdun but also of the assignment of each municipality to its infantry regiment, for each of the 34,947 municipalities. In some cases, such as in the previously cited examples of the RNP and PPF, we can entirely rule out any such possibility of selection, since the list was based on complete listings confiscated from captured collaborators.

\(^{59}\)This dataset was declassified in 1949.

\(^{60}\)We thank Philippe Douroux for sharing this data with us.
Table V: **Collaboration in WWII: Evidence from alternative data sources**

<table>
<thead>
<tr>
<th></th>
<th>OSS + LVF</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>1915 France</td>
<td>0.051***</td>
<td>0.062***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.013)</td>
<td>(0.017)</td>
<td></td>
</tr>
<tr>
<td>Verdun under Pétain</td>
<td>0.037</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.031)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed effects</td>
<td>Dept</td>
<td>Dept</td>
<td></td>
</tr>
<tr>
<td>1911 pop</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Pre-WWI vote shares</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.90</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>34,942</td>
<td>32,412</td>
<td></td>
</tr>
<tr>
<td>Mean DepVar</td>
<td>-6.01</td>
<td>-6.00</td>
<td></td>
</tr>
<tr>
<td>Sd DepVar</td>
<td>0.96</td>
<td>0.96</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** The Table reproduces Columns 2 and 4 (excluding municipalities not rotated at Verdun) of Table IV. The dependent variables are the log of collaborators per (1936) capita computed from alternative data sources on collaboration: the OSS and independently collected data on volunteers to the LVF. Column 1 uses the (log) of the sum of collaborators across these two data sources (per capita) as the dependent variable. Robust standard errors clustered at Regiment level in parentheses (*** p < 0.01, ** p < 0.05, * p < 0.10).

6  **Mechanisms**

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

6.1  **The violence of battle or a network of heroes?**

Municipalities that sent troops to fight at Verdun under Pétain not only could claim to have raised a set of heroes on their return, but also faced the tragedy that many did not come back. Perhaps, instead of a heroic network, it was the violence and the losses faced by these municipalities that shaped subsequent propensities to actively collaborate with Germany. Indeed, a growing post-conflict literature points to the importance of exposure to violence, death and memories in changing subsequent outcomes.\(^\text{61}\)

As noted above, however, neither Verdun-under-Pétain regiments nor their home municipalities were significantly different in their overall military death rates. We add controls for World War I military fatality rate in Column 1 of Table VI. Notice that the fatality rate itself does not affect the propensity to actively collaborate with the Nazis. Neither does it change the effect of Verdun-under-Pétain exposure on active collaboration.\(^\text{62}\)

\(^{61}\)See Bauer et al. (2016) for a recent review and Ochsner and Roesel (2019), Tur-Prats and Valencia (2020) for subsequent contributions.

\(^{62}\)However, as we discuss in our companion paper (Cagé et al., 2020), the fatality rate in World War I is positively correlated with the propensity to join the Resistance.
Perhaps, rather than losses in the First War, the effect was due to differential exposure to the German invasion and occupation in the Second World War. Column 2 adds controls for key factors related to the invasion and occupation in World War II. The duration of a municipality’s exposure to combat in 1940 does not seem to have an effect, nor the position of a municipality relative to the demarcation line. However, the share of collaborators in our data is 6.6 per cent lower in Vichy France compared to German-occupied France, potentially reflecting the greater opportunity for working with the Germans in the latter. The effect of exposure to Pétain, however, remains stable with the addition of war-related controls.

Could the effects on collaboration be driven by combat experience at Verdun more generally rather than exposure specifically to Pétain? We have already established that those municipalities that sent troops to fight at Verdun at other times do not show these patterns. The coefficient associated with Verdun in Table IV is never statistically significant. However, it may be that two or three months of exposure to Verdun at different times led to similar heroic networks and esprit de corps. Figure A4 shows the coefficient on an indicator variable for regiments exposed to any set of two (left panel) or three (right panel) consecutive months of rotation at Verdun.\textsuperscript{63} No other consecutive months of fighting, apart from those during which regiments were exposed to Pétain’s leadership, are significantly positively associated with collaboration.

Another source of heterogeneity in combat experience that may drive our results is that, by being rotated through Verdun, a regiment was less likely to be deployed at the Somme offensive of the same year. Table A11 in the Appendix shows that our results are robust to adding a control for those regiments that were also rotated through either the Somme or other major battles or theatres of war (Column 1). Rotation through the other heroic battle before Verdun, the first Battle of the Marne (that saved Paris), similarly has no effect (Column 2). Finally, fortress regiments had different recruiting protocols, and were more likely to face the frontier. This led them to experience more deaths in battle – 3,527 deaths for fortress regiments against 3,115 for others (P-value=0.000). However, our results are unchanged when excluding fortress regiments (Column 3).

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

So far, we have shown that being exposed to war, or even Verdun itself, without Pétain does not have the same effect as exposure under Pétain’s command. But to establish that complementarities exist, we need to also show that the effect is stronger among those exposed to the network of heroes that served with Pétain at Verdun than among those exposed to Pétain’s own personal network.

Several recent papers have highlighted how charismatic leaders can shape norms and identity by simple contact, either through public rallies, individual meetings, or personal communications with selected audiences (Masera et al., 2020, Assouad, in progress, Becker and Rubin,\textsuperscript{64} We focus on two and three months to best compare with the effect of the two months and a few days of exposure to Pétain (Feb 26 - May 1).
Table VI: Regression: Personal Exposure to Heroic Leaders: Pétain & Foch

<table>
<thead>
<tr>
<th></th>
<th>Log Collaborators pc</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>(1)</td>
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<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
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<td>(7)</td>
</tr>
<tr>
<td>Verdun under Pétain</td>
<td>0.067*** (0.018)</td>
<td>0.068*** (0.017)</td>
<td>0.068*** (0.018)</td>
<td>0.069*** (0.018)</td>
<td>0.051** (0.020)</td>
<td>0.065*** (0.019)</td>
<td>0.070*** (0.017)</td>
</tr>
<tr>
<td>Verdon</td>
<td>0.027 (0.041)</td>
<td>0.028 (0.039)</td>
<td>0.028 (0.040)</td>
<td>0.029 (0.040)</td>
<td>0.039 (0.042)</td>
<td>0.015 (0.036)</td>
<td>0.026 (0.042)</td>
</tr>
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<td>WWI fatality rate</td>
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<td></td>
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</tr>
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<td>Combat days in 1940</td>
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<tr>
<td>Log dist demarcation line</td>
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<td></td>
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<td>Vichy France</td>
<td>-0.066** (0.028)</td>
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<tr>
<td>Pétain before Verdun</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II Army</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Pétain after Verdun</td>
<td>-0.039 (0.027)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Log dist Cauchy</td>
<td>0.033 (0.036)</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Foch</td>
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</tr>
<tr>
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<td>Dept</td>
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</tr>
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<td>Whole</td>
<td>Whole</td>
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<td>0.60</td>
<td>0.60</td>
<td>0.60</td>
<td>0.61</td>
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</tr>
<tr>
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<td>34,942</td>
<td>34,942</td>
<td>34,942</td>
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<td>-5.75</td>
<td>-5.75</td>
<td>-5.75</td>
<td>-5.75</td>
<td>-5.75</td>
<td>-5.75</td>
</tr>
<tr>
<td>Sd DepVar</td>
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<td>0.83</td>
<td>0.83</td>
<td>0.83</td>
<td>0.83</td>
<td>0.83</td>
<td>0.83</td>
</tr>
</tbody>
</table>

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

As described above, qualitative accounts suggest that Pétain was not known for his charisma per se, but he did emerge as a soldier’s general who inspired strong loyalties among some. We gathered information on whether a municipality’s home regiments were exposed to Pétain at any of his field and staff postings both in peace-time and before (and after) Verdun during the war (Etat-Major de l’Armée, 1922, Williams, 2005). If our results were driven by Pétain’s own network rather than operating through the complementary network of heroes under his command at Verdun, we should expect that controlling for Pétain’s personal network...
should attenuate our coefficient.\textsuperscript{64} In contrast, if it was the exogenous complementary network of heroes forged at Verdun that legitimized collaboration, then the effect should be robust.

Column 3 of Table VI adds a variable that captures the exposure of a municipality’s regiments to Pétain’s command in his preceding career. Before the war, Pétain was an infantry colonel who had held staff or field command positions in eight different regiments (or 3% of the line infantry). At the start of the war, he commanded the 33rd infantry regiment in the field, but quickly rose through the ranks to command the II Army from 22 June 1915 to 19 April 1916 (through which 31 infantry divisions – or 36% of the line infantry – were to be rotated) at the eve of Verdun. We group these together and construct a variable that captures exposure to Pétain’s command before Verdun (“Pétain before Verdun”: mean: 0.38, s.d.: 0.46). After Verdun, he oversaw the command of the Center Army Group (to which 176 infantry divisions – or 84% of the infantry – were attached at various points). He later became Commander-in-Chief of all French armies in the West, exposing close to 95% of municipalities to his command.

Naturally, personal exposure to Pétain is likely to be more intensive within commands where Pétain was a more proximate commander – in peacetime and earlier in the war – than when he was commanding a large and rotating cast of regiments. However, as the table suggests, the coefficients associated with exposure to Pétain either before Verdun, specifically in the II Army (Column 4), or after Verdun (Column 5) are insignificant in explaining subsequent collaboration (ranging between 0.007[0.03] and 0.010[0.03]). Distance to Pétain’s municipality of birth (Cauchy-à-la-Tour) is also statistically insignificant (Column 6). Thus, it does not appear that exposure to Pétain’s own network raises collaboration relatively more than elsewhere. Further, note that the coefficient associated with exposure to Pétain at Verdun remains statistically significant and is broadly unchanged in magnitude with the addition of these additional exposure variables. This suggests that those at Verdun exposed to Pétain for longer at other times do not seem different than those first (and exogenously) exposed to Pétain at Verdun. This highlights the importance of a common heroic credential, shaped out of a common experience.

Another question is whether all hierarchical heroic networks inherently lead to support for authoritarianism, and further whether the effects would have been the same if Pétain had not survived to personally legitimize the Vichy regime. While the latter counterfactual is hard to measure, we can examine whether other heroic networks show similar patterns after the war after the demise of their leader. The main rival to Pétain in terms of personal heroic leadership status coming out of the war was the other Maréchal awarded his baton in 1918, Ferdinand Foch. In the inter-war period, Foch’s political sympathies echoed Pétain.\textsuperscript{65} However, he died in 1929 with his reputation as a soldier of the Republic intact. As the point estimates in Table VI suggest,

\textsuperscript{64}Unlike the timing of Pétain’s assignment to Verdun, he had more influence on other postings over his career, and thus could have chosen posts, like the 33rd regiment based at Arras, that were closer to home and where people might also be more responsive to his message. Thus we interpret the coefficient on Pétain before Verdun itself as correlational rather than causal.

\textsuperscript{65}Foch was the honorary president of the Redressement Français, a group formed by industrialist Ernest Mercier in 1925 aimed at ‘scientific management’ of the state to fight Marxism, with army involvement, even if this risked suspending democracy. Pétain also had ties to this organization (Williams, 2005, p.125).
exposure to Foch’s personal command is not significantly associated with collaboration (Column 7), even when considered together with Pétain’s own network. Taken together, our results suggest that complementarity did indeed exist between Pétain’s presence and legitimization of collaboration and the network of heroes forged at Verdun under his command.

6.3 Singling out heroism: Medal citations

To single out the specific role of heroism gleaned at Verdun under Pétain’s command, we use data from a contemporaneous newspaper source (L’Illustration) on 16,489 individual medal citations during World War I. Among those, 8,545 soldiers received a citation for service in the infantry. We sum the numbers of medals by line infantry regiment and municipality. The number of medals exhibits quite a lot of variation across observations, with a mean of 36 and a standard deviation of 11. Columns 1 and 2 of Table VII show that, consistent with the historical background and our suggested mechanism, exposure to Pétain at Verdun is associated with more heroism, proxied by a 23.4% increase in individual military citations. This is true even within the subset of those who served at Verdun (Column 2), with those serving under Pétain obtaining 15% more medals compared to those serving at Verdun under another general.

Furthermore, any relationship between military citations and later propensity to collaborate is channeled by Pétain exposure at Verdun (Columns 3 to 6 of Table VII). Among those who served at Verdun, military citations are associated with more collaboration in WWI (Column 5), although the relationship is not statistically significant in the broader population (Column 3). However, any effect of military citations is explained away by Pétain exposure at Verdun (Column 6).

In the last two columns of Table VII, we instrument the (log.) number of military citations by Pétain exposure at Verdun using a Limited Information Maximum Likelihood (LIML) instrumental variable estimator. The second-stage estimate can be interpreted as the Local Average Treatment Effect, for those whose military heroism status was shifted by the exogenous rotation under by Pétain in Verdun. It is positive and statistically significant, whether considering all municipalities (Column 7) or only those who were rotated at Verdun (Column 8).

Overall, these results highlight that exposure to Pétain at Verdun forged military heroism, and that this exogenous shift is itself associated with a higher propensity to collaborate. Together with our previous results on complementary, they highlight the role of complementary heroic network in driving collaboration with the Pétain-led regime in WWII.

\footnote{We use the log. number of citations, but the results are unchanged if we use the number of citations instead, with coefficients of 7.87 (P-value: 0.001) and 5.57 (P-value: 0.031) corresponding to Columns 1 and 2, and all other results carrying through.}
Table VII: Direct evidence on heroism: Medal citations

<table>
<thead>
<tr>
<th></th>
<th>Log. Citations</th>
<th></th>
<th>Log collabos pc</th>
<th></th>
<th>Log collabos pc - IV</th>
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<tr>
<td></td>
<td>(1)</td>
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<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td></td>
<td>1915 France</td>
<td>Verdun only</td>
<td>1915 France</td>
<td>Verdun only</td>
<td>1915 France</td>
<td>Verdun only</td>
</tr>
<tr>
<td>Verdun under Pétain</td>
<td>0.234***</td>
<td>0.148*</td>
<td>0.069***</td>
<td>0.086***</td>
<td>0.292***</td>
<td>0.616*</td>
</tr>
<tr>
<td></td>
<td>(0.077)</td>
<td>(0.076)</td>
<td>(0.019)</td>
<td>(0.024)</td>
<td>(0.111)</td>
<td>(0.327)</td>
</tr>
<tr>
<td>Log. Medal Citations</td>
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<td>0.047*</td>
<td>0.033</td>
<td>0.033</td>
<td>0.033</td>
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<td></td>
<td>(0.027)</td>
<td>(0.028)</td>
<td>(0.024)</td>
<td>(0.026)</td>
<td>(0.028)</td>
<td>(0.028)</td>
</tr>
<tr>
<td>Fixed effects</td>
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<td>Dept</td>
<td>Dept</td>
<td>Dept</td>
<td>Dept</td>
</tr>
<tr>
<td>1911 pop</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pre-WWI vote shares</td>
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<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
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<td></td>
<td>0.68</td>
<td>0.69</td>
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<tr>
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<td>34,830</td>
<td>32,300</td>
<td>32,300</td>
<td>34,830</td>
</tr>
<tr>
<td></td>
<td>34,835</td>
<td>32,305</td>
<td>34,830</td>
<td>32,300</td>
<td>32,300</td>
<td>34,830</td>
</tr>
<tr>
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<td>3.53</td>
<td>-5.74</td>
<td>-5.74</td>
<td>-5.74</td>
<td>-5.74</td>
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<tr>
<td></td>
<td>3.52</td>
<td>3.53</td>
<td>-5.74</td>
<td>-5.74</td>
<td>-5.74</td>
<td>-5.74</td>
</tr>
<tr>
<td>Sd DepVar</td>
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<td>0.32</td>
<td>0.83</td>
<td>0.83</td>
<td>0.84</td>
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<td></td>
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<td>0.32</td>
<td>0.83</td>
<td>0.83</td>
<td>0.84</td>
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</tr>
</tbody>
</table>

Notes: The dependent variable in Columns 1 and 2 is the log. number of individual medal citations in the regiment (mean number of individual medal citations: 35.57; st. dev.: 10.82; Min: 6.5; Max: 69). The dependent variable in Columns 3 to 8 is the log. collaborators per capita. All specifications control for department fixed effects (90 departments) and the usual set of pre-WWI controls at the municipality level (as in Column 2 of Table IV). Columns 1 to 6 report OLS estimates. Columns 7 and 8 report IV estimates estimated with a limited-information maximum likelihood estimator. The F-statistics of the excluded instrument (log. medals) is 9.14 in Column 7 and 3.82 in Column 8. Robust standard errors clustered at the regiment level are reported in parentheses (*** p<0.01, ** p<0.05, * p<0.10).
6.4 Why collaborate? Incentives, trauma or values

We can exploit the fact that we have detailed data on individual memberships in different collaborationist organizations to shed further light on the mechanisms at play. We consider three alternatives in particular. The first, and most obvious, is pecuniary – perhaps being connected with Pétain meant a greater possibility for economic and financial opportunities when he assumed power, irrespective of a change in one’s democratic values ((as in Fisman, 2001). This would suggest that Verdun-under-Pétain municipalities should be more likely to engage in economic collaboration than other types.

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

A third possibility is our favored explanation. Like Joseph Darnand (see Appendix Section B.2), the heroism of those that served under Pétain at Verdun provided a common heroic credential that not only made it particularly costly to turn against him but to have complementary incentives to invest more over time. This included joining political parties (see below) and veterans organizations, but then going further, joining violent paramilitary organizations like the Milice in 1943, and even German units like the Waffen SS as late as 1944-45, when it was already clear that Germany was losing the war.

Table VIII shows the estimation results of equation (3) for each main kind of collaboration separately. Combat exposure to Pétain at Verdun raises the propensity to collaborate across the whole spectrum of collaboration, from participation in political parties, paramilitary groups, Nazi organizations, as well as economic collaboration. While the effects are somewhat stronger for membership in the main collaborationist political organizations, we cannot reject that the coefficients are the same as for participating in para-military groups, working directly for the Nazis, or engaging in economic collaboration (see also the detailed description of collaboration in Appendix Section B.1 and regression results by organization in Figure A6 and Table A12.)

As another test of whether the effects reflect private pecuniary gains or psychological effects exclusive to the treated set of individuals, or a broader effect on values due to their ability to legitimize behavior, we can exploit the fact that, for a subset of 30.18% of the individuals on the list, the file records their age or date of birth (collaborators are 37.25 years old on average), and for 76% of the sample, we can assign a gender as well (19% are women, and women are on average 2.34 years younger than men). If the effect is due to private pecuniary gains exclusive to those in veteran networks or psychological effects, including those due to the effects of specific battle experience, we should expect those collaborators from municipalities
Table VIII: Effects on different types of collaboration

<table>
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<tr>
<th></th>
<th>Political</th>
<th>Paramilitary</th>
<th>Nazi</th>
<th>Economic</th>
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<td>(1)</td>
<td>(2)</td>
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<td>(4)</td>
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<tr>
<td>Verdun under Pétain</td>
<td>0.078***</td>
<td>0.047***</td>
<td>0.064***</td>
<td>0.056***</td>
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<td></td>
<td>(0.017)</td>
<td>(0.014)</td>
<td>(0.015)</td>
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<tr>
<td>R-squared</td>
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<td>34,942</td>
<td>34,942</td>
<td>34,942</td>
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<tr>
<td>Mean DepVar</td>
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<td>0.91</td>
<td>0.97</td>
<td>1.03</td>
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</table>

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

exposed to Verdun under Pétain who were most likely to be assigned to serve there at that time – males of World War I military age – to show a significantly heightened effect. If instead, they help legitimize and spread a broader change in values, we should expect the increase to spread to family members and beyond, and muted differences between age groups and gender.

As Figure A7 shows, the increase in the (logarithm of the) share of collaborators due to exposure to Verdun under Pétain is statistically significant for each demographic. Notice that the size of the effects are somewhat higher for men than for women, and somewhat higher for those of military age or just short of military age in World War I than for some other groups. However, women and those born after the First World War in Verdun-under-Pétain municipalities receive the lion’s share of the treatment as well, and the differences are statistically indistinguishable. This again suggests a diffusion of values rather than private gains or exposure effects accruing solely to the network of individuals personally connected with Pétain.

6.5 Coordination and bandwagon effects vs inherited values

We have shown so far how the effect diffused through Pétain’s network of heroes, who followed their leader and swayed others around them. However, how did such diffusion operate? Was it due purely to coordination and bandwagon effects (see e.g. Kuran, 1997)? or to the imitation of others, particularly of heroic Verdun veterans? Or was it really a deeply transformative process, which reshaped values? We now present direct evidence on the relative roles of coordination
Table IX: Collaboration among movers in the same destination, as a function of treatment status of the municipality of birth

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

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

versus internalized values in explaining our results.

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

Our analysis is now at the level of the municipality of residence of collaborators. We focus on the sub-sample of movers (i.e. those whose birth municipality is different from their residence in 1944-45, N=13,235) and we retain information on the Verdun-under-Pétain exposure of both their birth and residence municipalities.\(^{68}\) We then compute, within residence municipalities, the overall per capita share of collaborators who were born elsewhere but who were born in a Verdun-under-Pétain municipality (“Collabo V-u-P”) as well as their relative share among all local collaborators who are internal migrants (“Share V-u-P”). We proceed in the same way for collaborators who were born in a non Verdun-under-Pétain municipality (“Collabo Not from V-u-P” and “Share Not V-under-P”). We then estimate equation (3) using these shares as dependent variables.

\(^{68}\) About half of collaborators who migrated originate from a Verdun-under-Pétain municipality (54.97%), which is consistent with the share of municipalities rotated at Verdun under Pétain, and suggests no selective outmigration from Verdun-under-Pétain municipalities. We consider a municipality of birth as a “Verdun under Pétain” municipality if more than a third of home regiments has been rotated at Verdun under Pétain.
Table IX presents the results. They show that the treatment status of both birth and residence municipalities influence whether people collaborate. The coefficient associated with the Verdun-under-Pétain status of residence municipalities is positive and significant in explaining both the numbers of collaborators from “V-u-P” municipalities (Column 1) and from other municipalities (Column 2). In other words, both people from Verdun-under-Pétain municipalities and non Verdun-under-Pétain municipalities are more likely to collaborate when they reside in a Verdun-under-Pétain location. However, migrants born in “V-u-P” municipalities are over represented compared to those born in other municipalities, both in absolute and relative shares. Even though migrants from non “V-u-P” municipalities are also more likely to collaborate in Verdun-under-Pétain municipalities (Column 2), those from “V-u-P” municipalities are even more likely to do so: the coefficient associated with Verdun-under-Pétain is larger in Column 1 than in Column 3, and this difference is statistically significant at the 4.53% level. Collaborators from “V-u-P” municipalities are also overrepresented among local collaborators who are also migrants (Column 2), as opposed to those from non “V-u-P” municipalities (Column 4). In other words, the treatment status of birthplaces also matters in predicting collaboration, even within the same destination location. Overall these results reinforce our interpretation that the effect of exposure to Pétain operates at least partly through internalized values and preferences that individuals carry with them, even when they move, rather than through pure bandwagon effects.

Similarly, we can check whether the effect is different among municipalities that raised several regiments, with some exposed to Verdun-under-Pétain exposure while others were not. We present in Appendix Figure A8 the results of specifications in which we either exclude those split municipalities, or redefine their treatment status as different indicator variables depending on the share that was rotated at Verdun under Pétain. The magnitude of the results increases when we exclude split municipalities and peaks at a 9.96% increase in collaboration in Verdun-under-Pétain municipalities when we define an indicator variable equal to one for our treatment when more than half of the regiments was rotated at Verdun under Pétain and exclude those where exactly one half was rotated. Thus having a coherent network of heroes increases the effect somewhat relative to one with differential exposures and identities.

6.6 Collaboration versus Resistance

So far we have focused upon the incidence of active collaboration. But the people of France had other choices in World War II: to passively collaborate, to wait and see (attentisme), or to

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

70 The difference between the coefficients in Columns 2 and 4 is itself statistically different from 0 at the 5.60% level.
actively resist.

If, as we have argued, serving under Pétain at Verdun provided veterans with a heroic credential also engendered more organizational capacity (Jha and Wilkinson, 2012) that enabled collective action, then we should expect more organizations to emerge of both resistance fighters and of collaborators, each potentially driven by differing values and conceptions of patriotism. If, on the other hand, exposure to heroes mainly legitimizes the undermining of democratic values in favor of authoritarianism, we would expect there to be more active collaborators, at the expense of those in the resistance.

In our companion paper (Cagé et al., 2020), we exploit data we collected on more than 425,966 recognized participants from Metropolitan France in another important set of local political organizations, those of the French Resistance. Consistent with a change in values diffusing to the population and a pattern of escalating commitment, we also find that those municipalities exposed to Pétain at Verdun raise 8.45% fewer civilian members of the French resistance (the maquisards) late in the war in 1943-44 (s.e.: 0.04). This was by far the most numerous form of resistance participation. However, these effects are not uniform: these same municipalities were also more likely to raise participants in the intelligence and escape networks (FFC) that aided the Allies earlier in the war, and the French soldiers, including those evacuated from Dunkirk in 1940, that chose to support another veteran of Verdun under Pétain, Charles de Gaulle.

6.7 The Timeline of Commitment: Votes in Interwar France

To what extent is the shift in active collaboration with an extreme authoritarian regime during the war reflected in political behavior in the inter-war period? As mentioned above, this was also a time of rising political polarization.71

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

Estimation results displayed in Table X show that Verdun-under-Pétain municipalities swung to the right during the interwar period. They were 17.7% more likely to vote for the right (Column 5) and 1.6% more likely to vote for the extreme right, when the extreme right presented candidates in the 1919 and 1936 elections (Column 6). These results cannot be explained by a change in turnout (Column 7).

71The first post-war election of 1919 saw a victory of the right-wing Bloc National headed by Clemenceau. The elections of 1924, 1932, and 1936 all saw the victory of a left-wing coalition, the first and second “Cartel des Gauches” in 1924 and 1932, and the “Front Populaire” in 1936, which for the first time also included the Communist party (see the Appendix Table B4 for summary statistics and Section B.3 for a detailed description of inter-war politics). Far-right leagues rejected participation in the formal Parliamentary process until the 1936 elections (when they gathered only 0.40% of the total vote).
As we have discussed, one implication of complementarity is that the effect of the heroic network can escalate, as individuals face additional incentives to invest further time and resources in augmenting the value of their common heroic credential. Figure A9 displays the coefficients associated with Verdun-under-Péétain in separate regressions, in which the dependent variable is the log vote share for the right and extreme right combined in municipality \(i\) in each legislative election of 1914, 1919, 1932, and 1936 (estimation of equation (3)). From similar vote shares for the right in 1914, municipalities exposed to Verdun-under-Péétain show a jump in right-wing vote shares in the 1930s, becoming particularly stark in 1936. As mentioned above, these elections were held just after Péétain, already known to be anti-Communist, made his first explicit political speeches honoring the *Croix de Feu* and favoring the Right.

In Appendix Section A, we further analyze how exposure to Péétain at Verdun affects the vote share in each post-war election, party by party. The results are reported in Table A13.\(^72\) In the 1919 and 1924 legislative elections, Verdun-under-Péétain municipalities were significantly more likely to vote for the “Entente Républicaine Démocratique” (ERD), a conservative right-wing party part of the “Fédération Républicaine” (FR-URD), which moved closer to the Fascist Leagues over the interwar period. In 1932, this trend is confirmed, with a a large and statistically significant increase in the vote share for two parties from the right. Both the “Alliance Démocratique” (AD-RG) and the right-wing “Union Républicaine Démocratique” (URD: part of the “Fédération Républicaine” (FR-URD)) gained in V-u-P municipalities.\(^73\) In 1932, the URD was close to the extreme right fascist league of the *Jeunesses Patriotes*, founded by the future collaborator Pierre Taittinger.

Yet, despite these patterns, the 1932 elections were overall a defeat for the right and the center-right. Following the elections, several groups appeared even further to the right of the FR-URD. In particular, Marcel Bucard, a war veteran “whose conduct at the front had earned him Péétain’s praise and the rank of captain” (Sirinelli, n.d., p.140) created the “Francisme” movement in 1933. This fascist and anti-Semitic movement, partly financed by Mussolini, fielded candidates in the 1936 elections. As A13 suggests, Verdun-under-Péétain municipalities are associated with a 3.0% increase in the vote share for the Francist candidates in 1936. We also observe a 8.0% increase in the votes for more mainstream conservative right-wing candidates, the “agrarians” (AGR).\(^74\)

Overall, the party-level analysis of the inter-war electoral results brings to light the role played by exposure to Péétain at Verdun on changing ideologies in the inter-war period. First

\(^72\)We only present results for parties that gathered at least 3% of the vote nationally for 1924, 1932, and 1936, except to capture vote for the Extremes, such as the Francist party in 1936 (1.40%). In 1919, due to the multitude of political parties, we only present results for parties that gathered at least 10% of the vote nationally, except for the Extremes, such as the Communists (1.64% of the vote) and the Extreme Right Action Francaise (1.71%).

\(^73\)The number of observations is lower for the 1932 elections than for the other two elections. It is due to the fact that for that year, the national archives have lost the electoral results in the departments whose first later is A and B (i.e. Ain, Aisne, Allier, Alpes Maritimes, Ardèche, Ardennes, Ariège, Aube, Aude, Aveyron, and Basses Alpes.).

\(^74\)This group had emerged to the right of the FR-URD, which by 1936 had split.
Table X: Increasing Vote Shares for the Right in Verdun under Pétain Municipalities in the Interwar Period

<table>
<thead>
<tr>
<th></th>
<th>Ext. Left</th>
<th>Left</th>
<th>Centre</th>
<th>Right</th>
<th>Ext Right</th>
<th>Turnout</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>Verdun under Pétain</td>
<td>-0.021</td>
<td>0.005</td>
<td>-0.050***</td>
<td>0.182**</td>
<td>0.015**</td>
<td>-0.007</td>
</tr>
<tr>
<td></td>
<td>(0.039)</td>
<td>(0.069)</td>
<td>(0.019)</td>
<td>(0.077)</td>
<td>(0.007)</td>
<td>(0.010)</td>
</tr>
<tr>
<td>Fixed effects</td>
<td>Dept</td>
<td>Dept</td>
<td>Dept</td>
<td>Dept</td>
<td>Dept</td>
<td>Dept</td>
</tr>
<tr>
<td>Year Fixed Effects</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1911 pop</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pre-WWI vote shares</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.46</td>
<td>0.37</td>
<td>0.43</td>
<td>0.54</td>
<td>0.73</td>
<td>0.36</td>
</tr>
<tr>
<td>Observations</td>
<td>129,033</td>
<td>129,033</td>
<td>129,033</td>
<td>129,033</td>
<td>137,267</td>
<td>129,019</td>
</tr>
<tr>
<td>Mean DepVar</td>
<td>1.46</td>
<td>2.43</td>
<td>3.47</td>
<td>2.43</td>
<td>0.39</td>
<td>4.39</td>
</tr>
<tr>
<td>Sd DepVar</td>
<td>0.86</td>
<td>1.17</td>
<td>1.22</td>
<td>1.55</td>
<td>0.52</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Notes: This table provides OLS estimates of equation (3) with interwar (log) vote shares and turnout as the dependent variables. The estimation sample is the pooled cross section of vote shares and turnout over the four interwar legislative elections of 1919, 1924, 1932, and 1936. All regressions are at the municipality level with department fixed effects and the usual set of pre-WWI controls at the municipality level (as in Column 2 of Table IV). Robust standard errors two-way clustered at the Regiment and canton (electoral district) levels (using 1936 boundaries) are displayed in parentheses (*** p<0.01, ** p<0.05, * p<0.10).
through an opposition to the communist party consistent with Pétain’s well-known anti-communism, second through an increase in the vote for Taittinger’s URD and then for the fascist Francist movement, electoral choices seem to have both mimicked Pétain’s own views and escalated over time, increasing political polarization and paving the way for collaboration.75

Finally, to explore the long-term effect of exposure to Pétain on political behavior, we use data on 18 legislative elections in post-war France (Bekkouche and Cagé, 2018, Cagé, 2020). We again classified each party consistently along an extreme-left to extreme-right axis (see Appendix). Results for each election are displayed in Figure 4. Panel A shows the estimated coefficient associated with Verdun-under-Pétain for the log vote share for the left (combined with extreme left) in each separate election. We do the same for the log vote share for the right (combined with extreme right) in Panel B. The analysis of individual elections reveals a striking picture of a persistent and relatively stable lower vote share for the left (except from a particularly large decline in 1988) combined with a durable Pétain effect on reversion to traditionalism.

7 Discussion

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 have continued to influence France’s politics throughout much of the century.

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 l’esprit de la 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

75 These differences in electoral outcomes cannot be explained by turnout. As mentioned above, Pétain’s approach, in common with others (Levitsky and Ziblatt, 2018), was to assume power through (initially) democratic means.
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\textsuperscript{76}

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 complementary networks and organizations that can be particularly potent in swaying political

\textsuperscript{76}Abraham Lincoln to Joseph Hooker (January 26, 1863).
preferences and can last after the heroes themselves are gone. Heroes can provide a great resource that can protect and save societies, but unless better understood, may also pose a great risk to egalitarian values and democracy.

References


Assouad, Lydia, “Charismatic leaders and nation-building,” in progress. mimeo, PSE.


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


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77Our paper points to the aftermath of war as being particularly potent moments for political change, as these are moments where complementary networks of heroes are most likely to exist. This resonates with findings that democratization often follows war. Yet heroes, while often emerging out of a crisis of war, may also emerge from a courageous commitment to non-violent resistance to injustice as well (Bhavnani and Jha, 2012). Beyond the effects on domestic politics, it is a common observation in international relations that politicians from relatively hawkish parties are, ironically, often better positioned to make politically risky overtures for peace with long-standing adversaries than their dovish counterparts. 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.


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


Gay, Victor, “The Legacy of the Missing Men: The Long-Run Impact of World War I on Female Labor


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


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


Office of Strategic Services, A Selected Who’s who in Vichy, France, June 1940-August 1944, United States. Office of Strategic Services (OSS), 1944.


