Political Breakthroughs in the Trenches

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July 25, 2025

Abstract

We show how exposure to partisan peers, under conditions requiring high stakes cooperation, can trigger the breakthrough of novel political beliefs. We exploit the large-scale, exogenous assignment of soldiers from each of 34,947 French municipalities into line infantry regiments during World War I. We show that soldiers from poor, rural municipalities—where the novel redistributive message of the left had previously failed to penetrate—voted for the left by nearly 45% more after the war when exposed to left-wing partisans within their regiment. We provide evidence that these differences reflect persuasive information provision by both peers and officers in the trenches that proved particularly effective among those most likely to benefit from the redistributive policies of the left. In contrast, soldiers from neighboring municipalities that served with right-wing partisans are *inoculated* against the left, becoming moderate centrists instead.

Keywords: Political Persuasion, Transmission, War, Voting Behavior, Conflict, Peer Effects, France, World War I
JEL: D74, N44, L14.

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1   Introduction

When do new political messages succeed in converting voters? In some contexts, exposure to unfamiliar political ideas produces lasting ideological change; in others, it has little effect or even provokes backlash. Explaining this variation is central to the study of political behavior, belief updating, and ideological persuasion (DellaVigna and Gentzkow, 2010; Bursztyn et al., 2020; Zhuravskaya et al., 2020). However, less is known about the conditions through which agents with novel political messages can successfully overcome these divisions and credibly bridge identity-based divides, realigning politics towards (arguably easier to solve) questions of redistributive policy and shared economic gains. Understanding when and how exposure to new political ideas leads to such realignments remains an open question. Yet, identifying causal effects in this domain is challenging: individuals often self-select into ideologically homogeneous communities—whether geographic (Bishop, 2009; Diamond, 2016; Brown, 2022; Brown and Enos, 2021) or informational (Levy and Razin, 2019; Levy, 2021)—making it difficult to disentangle the impact of exposure from the selection of those who choose to be exposed.

This paper addresses these challenges by studying a setting in which exposure to partisan political agents was both large-scale and exogenous: the universal conscription of French soldiers into line infantry regiments during World War I (WWI). Because regimental assignment was determined by geographic catchment areas that were established well before the war, otherwise similar neighboring rural municipalities were regularly assigned to different regiments and thus encountered different peers and authority figures during the war. We leverage this regiment-based assignment to identify how exposures to partisan peers with different political messages, under high-stakes conditions that required mutual trust and cooperation, reshaped subsequent political behaviors in these neighboring municipalities.

The context of WWI France provides a very valuable setting for studying how political breakthroughs. First, the advent of the war preceded, and as we demonstrate played an important role in, the breakthrough of a novel political message— redistributive socialism— beyond its urban and industrial strongholds into rural areas. Second, the timing of legislative elections immediately before the war (April-May 1914) and immediately after the official cessation of hostilities and French demobilization (November 1919), provides clear pre- and post-exposure measures of political behaviors. Third, the combination of universal male suffrage and universal male military conscription in WWI ensures that our highly granular voting data – covering 34,947 municipalities—effectively captures the political behavior of the (male) population directly exposed to the war.

In the trenches, French infantry soldiers, who constituted close to 90% of all troops,

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interacted with their peers and officers in a high-stakes environment where their very lives depended on mutual cooperation and trust.[1] The appealing idea that, when citizens are thrown together with an existential need to cooperate and trust one another, they develop deep and lasting ties of solidarity, has a name popularized from the French language: the *esprit de corps*. The universal nature of conscription brought urban industrial workers (the hammer) and rural agricultural workers (the sickle) into the same trenches, creating a unique opportunity for the exchange and transmission of political ideas — including the redistributive message of socialism.

We use this setting to study whether exposure to partisan peers in the trenches shifted political preferences after the war, and whether such shifts depended on the novelty and material appeal of the partisan message. To this end, we distinguish between established *mainstream* parties, whose messages and mainly identity-based platforms were entrenched throughout rural France, and the novel political message of the Socialist party (SFIO), which had emerged to their left. Despite espousing a redistributive, economic justice platform that explicitly sought to protect poor rural agricultural workers as well as their industrial counterparts, the Socialist party, founded in 1905, had yet to penetrate most of the countryside by the eve of WWI.

Our empirical analysis proceeds in three steps. First, we document that municipalities assigned to the same regiment converged in partisan voting after the war. Second, we show that this convergence is asymmetric: rural municipalities exposed to left-wing partisans voted more for the left in 1919, while exposure to right-wing partisans led to an *inoculation* effect, with municipalities shifting toward moderate centrists. Third, we unpack the mechanisms driving this asymmetric conversion, drawing on both peer and officer exposure.

To identify the causal effect of partisan exposure, we exploit 435 local discontinuities in regimental assignment across multiple military boundaries, adapting the regression discontinuity framework with multiple thresholds (see e.g., Dell and Querubin, 2017) to the spatial setting. We find clear evidence of asymmetric partisan persuasion: when soldiers from poor rural municipalities, where the novel redistributive message of the left had not previously taken hold, were exogenously exposed to left-wing partisans in the trenches of WWI, their home municipalities vote substantially more for the left after the war. In contrast, neighboring municipalities assigned to right-wing partisans became *inoculated*, voting durably less for the left. Quantitatively, we find that exposure to a left-wing regiment increases the postwar left vote share by about 45% (relative to baseline) in rural municipalities where prewar

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[1]Of the 8.4 million Frenchmen mobilized during the war, the likelihood of being killed or wounded was greater than 65%, with more than 1.3 million fatalities. 22% of infantry soldiers were killed, accounting for 86.08% of total French fatalities in WWI (Gay and Grosjean, 2023).

support for the left had been minimal. Specifically, a one percentage point increase in the average regiment-level left vote share in 1914 is associated with a 0.16 percentage point increase in the municipality's vote share for the left in 1919. This implies 24 additional votes for the left (out of an average of 150 registered voters) in municipalities assigned to an all left-wing regiment.

These results are robust to alternative RD specifications, including alternative geographic bandwidths, treatment definitions, and estimation samples. Importantly, the effects are specific to post-war voting outcomes: we observe no discontinuity in a wide array of municipal-level characteristics before, during, or after the war. These include population, literacy, and socio-economic structure, and crucially, the *pre-war* vote, as well as participation to particularly bloody or focal battles of WWI or military death rate.

What explains this asymmetric response? Local convergence in political opinions may arise either because individuals prefer to *conform* to the views of the majority or because they are being exposed to new *information*, including novel political messages. If driven purely by conformity, one would expect *symmetry*: regiments should converge towards either the left or the right depending on their initial assignment. In contrast, if the convergence is due to novel political messages or other information, then the response can be *asymmetric*, having greater impact on those for whom the messages are more novel or materially resonant. Consistent with this information-based mechanism, we find stronger effects among the *poorest* agricultural municipalities and those with low pre-war support for the left. To formalize this interpretation, we present a stylized theoretical model in which individuals update beliefs based on trusted peer interactions and coordinate on partisan behavior. The model yields equilibrium convergence within regiments and asymmetric responses to novel information, matching our empirical patterns.

We then shed further light on the transmission channel by investigating the main pathways of transmission of political information. Did effective political messaging derive from formal hierarchical authority or from the high-stakes need to cooperate with peers and officers from different initial political backgrounds? We provide evidence for the latter.

We find that the left vote gains were greater in infantry regiments where rural and urban foot-soldiers were more likely to interact. We also examine the hierarchical network as a potential channel of ideological transmission. We distinguish between lower-ranked commissioned officers who served in the front-line trenches alongside the soldiers, and higher-ranked officers who, though formally imbued with more authority, commanded from the rear. Our results show that the hierarchical transmission of values is limited to those who served alongside their men in the trenches, rather than higher ranks. We further exploit a change in the political profile of officers after the first few months of the conflict. As many of

France's professional—and disproportionately conservative— commissioned officers died in the disastrous first few months of the war, they were replaced by reserve officers, many of whom were university-educated teachers, hailing from more left-leaning regions. We confirm that the effective transmission of left-wing values is specific to these reserve officers rather than the professional officer corps.[2]

We can also rule out several alternative explanations for our findings. One concern may be that left-wing regiments may have been disproportionately assigned to the front lines as *cannon fodder*, or conversely, may have been less likely to be put in the line of fire, and that different exposure to battle intensity and trauma may drive our results. However, consistent with French republican doctrines of fairness and the military's doctrine of interchangeable regiments, we show that left-leaning regiments faced similar battle assignments and fatality rates during the war. Moreover, military death rates, or military engagement at particularly bloody battles do not mediate our results. Further, using data on registered versus actual voters, we are also able to rule out that our results are due to selective post-WWI migration or shifts in political mobilization. Finally, the absence of pre-war political differences implies that our effects cannot be simply driven by pure contact, since men from rural and urban areas did their compulsory military service side-by-side within the same regiments in peacetime. These differences only emerged subsequently, with the strong incentives for mutual trust within teams that served together in the trenches that was engendered by the war.

As a final exercise, we show that these local political realignments persisted for decades after the war. Our regression discontinuity estimates imply that the vote share for the left in the last pre-WWII election of 1936 was 32.5% higher on the "left" side of the regimental boundary. These differences endured even after the Second World War, before eventually fading with the resurgence of identity politics in the 1990s.

This paper contributes to several strands of the literature. First, it adds to recent research on how exposure to new political messages can shape beliefs and behavior (see DellaVigna and Gentzkow (2010); Zhuravskaya et al. (2020) for overviews). Much of this work focuses on the role of media exposure. We contribute to this literature by providing causal evidence that exogenous group formation under conditions requiring high-stakes cooperation can lead to ideological convergence and even the breakthrough of new ideas. We further provide evidence for the conditions through which group-level convergence can foster political partisanship or moderation, which we show depends on the material circumstances, message novelty, level of trust, and the partisanship of those trusted peers.

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[2]To illustrate how self-sacrifice and the need to rely on one another in the trenches fostered trust and facilitated the propagation of left-wing ideas both by fellow-soldiers and by reserve officers, in Appendix C we present a case study drawing upon the war-time notebooks of Corporal Louis Barthas, a barrelmaker and trade unionist who provides a contemporary trench-level perspective of all four years of the war.

Second, we contribute to an important literature on peer influence in politics. Recent studies have empirically demonstrated the influence of peers in campaign mobilization (Bond et al., 2012), voting behavior among legislators (Saia, 2018; Harmon et al., 2019; Canen et al., 2023), political views among college students (Algan et al., 2025), and participation in political movements (Bursztyn et al., 2021).[3] Related recent work also examines ideological conversion and political identity formation. Bai et al. (2023) examines the role of propaganda in explaining the conversion of educated elites to communism in China, while Chen and Kung (2022) the impact of military resistance against the Japanese occupation and nationalism in explaining the rise in organizational capacity of the Chinese Communist Party. Our paper extends these literatures by showing how peer influence at large scale, including among exogenous networks of regular non-elite citizen-soldiers, can lead to political breakthroughs, overcoming rural-urban divides and identity differences and leading to asymmetric and lasting changes in voting behavior and horizontal ideological transmission under conditions requiring mutual trust.

Third, we speak to research on intergroup contact and nation-building. In military units, the need to cooperate with peers from diverse social and regional backgrounds can promote tolerance, trust, and shared group identity (Jha, 2013; Cagé et al., 2023; Jha and Wilkinson, 2023). Recent papers show that compulsory military service reduces regional prejudice and increases national identification (Cáceres-Delpiano et al., 2021; Ronconi and Ramos-Toro, 2022; Bagues and Roth, 2023; Okunogbe, 2024).[4] We contribute to this literature by showing how high-stakes contact in wartime trenches had an important imprint on political behavior.

Last, we contribute to an emerging literature on the political legacy of WWI in Europe. In Germany, De Juan et al. (2021) show that areas with more war fatalities voted more for the Nazi Party, but the effect came mostly from family members of dead soldiers, rather than the veterans themselves. On the other hand, Acemoglu et al. (2022) argue that, in Italy, areas with more fatalities in WWI experienced a surge of political support for the left after the war, which spurred a fascist reaction. In contrast to these papers, we do not focus on war fatalities (although we do account for them). Instead, we focus on a completely different mechanism: quasi-random assignment to partisan peers in regiments. By highlighting and measuring the importance of trench-level interactions on the spread of redistributive socialism, we also differ in important ways from Cagé et al. (2023), who show

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[3]See also Guo et al. (2025) who show that quasi-random peer exposure at West Point influenced allegiance choices of elite military cadets during the U.S. Civil War.

[4]More generally, social contact and shared experiences, for example through compulsory education (Bandiera et al., 2019), sporting events (Depetris-Chauvin et al., 2020), or resettlement programs (Bazzi et al., 2019) have been shown to foster national unity. However, the overall evidence for pure contact reducing prejudice is mixed (Paluck et al., 2019).

the effects of heroic networks— linking to apex leaders— on the transmission of autocratic values in France. Finally, by documenting the spread of socialism beyond urban elites and industrial workers into the countryside, we illustrate how political realignment can shift from identity-based divisions to concerns about economic redistribution. This complements work on the rise of redistribution-based cleavages (Besley and Persson, 2021) and the recent turn back toward identity-based politics in many democracies (Autor et al., 2020; Bonomi et al., 2021; Gennaioli and Tabellini, 2025).

Section 2 provides the relevant historical background. Section 3 documents the pre-war political landscape and the dynamics of regimental political convergence during the war. Section 4 outlines our RD empirical strategy before presenting our main empirical results. Section 5 investigates the mechanisms underlying ideological conversion, including empirical tests and a stylized model of belief updating and coordination. Section 6 concludes. The Appendix provides details of the model (A), supplementary definitions and robustness checks for our within-regiment political convergence measures (B), and sheds further light on politics in the trenches, providing case evidence illustrating the channels of political transmission by peers and officers who served together (C).

2 Military Recruitment in WWI France

WWI left a lasting legacy on French society, influencing marriage patterns (Abramitzky et al., 2011), female labor force participation (Boehnke and Gay, 2022), and politics (Cagé et al., 2023). Historians debate whether the war served to forge cross-cutting connections across groups that made France more cohesive and less polarized in the face of the severe challenges of the interwar period (e.g., Passmore, 2012), or whether it led to increased political fractures that fed into France's political divides in the 1930s (Millington, 2012; Cagé et al., 2023). This section outlines the military recruitment system that underpins our identification strategy by generating exogenous variation in trench-level exposure to political ideologies.

The organization of the French Army underwent a radical overhaul after the defeat by Prussia in 1870. A series of laws between 1872 and 1905 established two fundamental features of the Army that would remain until WWI: universal conscription and a territorial organization of recruitment, service, and command. Every man was to serve for two years (increased to three years in 1913) in the "active" Army and then joined the Reserves for an additional 15 years. A 1873 law mandated that geography would be the organizational basis for the Army, with a 1875 law further specifying that the Army corps be formed from infantry regiments recruited from geographically delimited areas, to facilitate rapid mobilization in

the event of war (Greenhalgh, 2014, pg.11). In 1914, metropolitan France was divided into 20 Army-corps military regions, with the addition of the Paris military region. Each region was further divided into subregions that corresponded to local recruitment bureaus, from which infantry regiments were formed. This geography-based structure of recruitment, conceived for administrative and strategic purposes, provides the foundation for our empirical design.

We use data from the 9th edition of the *Dictionnaire des Communes* (Baron and Lassalle, 1915), which assigns each of the 34, 947 municipalities within France's 1914 borders to their original military recruitment bureau.[5] Figure 1 shows the boundaries of France's 158 military recruitment bureaus.[6] Due to their overriding imperative of facilitating swift mobilization, recruitment bureau boundaries do not coincide with those of the primary administrative and political division of 1919– the *department* (see Appendix Figure A2).

On August 2, 1914, France ordered the general mobilization of every man between 20 and 48 years of age.[7] At the start of the war, the youngest soldiers (817,000 men from the 1891-1893 cohorts) were already in the barracks serving their 3 years of military service. They constituted the initial core of the line infantry regiments. These troops were supplemented by older cohorts who formed the reserves. By 1918, more than 8 million French troops had participated in the conflict (see Gay and Grosjean (2023)). After the Armistice was declared on 11 November 1918, soldiers were gradually demobilized, with the process largely complete in time for the 1919 elections.

3   Political Realignment within Regiments

We begin by documenting the political landscape of France before WWI. We then show how wartime exposure to politically diverse peers within regiments led to ideological convergence across previously distinct municipalities. We quantify this convergence using several measures of polarization and party-level agreement.

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[5]To replace war-time losses, there was more mixing of recruits from outside the original sub-regions as the war continued (Bracken, 2018) (see also the example in Appendix C.3). This mixing should *attenuate* the effects on the original municipalities, making our measures likely *underestimates*.

[6]In the majority of cases, a recruitment bureau fielded a single line infantry regiment (126 bureaus recruiting from 27,929, or 80% of municipalities). In the remaining cases, a recruitment bureau fielded several regiments. In particular, this was the case in large population centers (such as Paris bureaus) and the "fortress" regions on the eastern border.

[7]On the comprehensive nature of conscription of age-eligible men, see Boehnke and Gay (2022).

3.1 Pre-War Political Sentiment and Geography

The 1914 legislative elections were held as planned in April and May, three months before WWI began, and, thus are well-timed to capture political preferences just before its August outbreak. As in all legislative elections until 1945, elections were held under universal male suffrage, thus capturing the political opinions of those about to be drafted into war. Despite differing views on the war before the conflict began, all parties, including the Socialists, rallied around the *Sacred Union* coalition government after Germany declared war on France, vowing to cooperate for the duration of the conflict. Although the French government considered arresting more than two thousand "*anarchists, trade unionists, and socialists*" in the event of war (Becker (1973), p. 207), this so-called *Carnets B* plan was never implemented. These individuals would join their regular assigned regiments (see also Appendix C.2.)

Prior to WWI, mainstream centrist and conservative parties in France could largely be distinguished by their attitudes towards to the role of the church and their preferences for a republican government as opposed to dynastic or dictatorial rule (Bourbons, Bonapartists etc.). The Dreyfus Affair exacerbated these political divisions (Do et al., 2024).

In the 1914 elections, however, the focus of our analysis, the newly formed Socialist party, the SFIO, emerged as a major political force for the first time. The SFIO encompassed a wide ideological range, including social democrats, Marxists, and anarchists. The SFIO would win 15.84% of the overall vote in 1914, with a novel platform centered on economic justice and redistribution (see Appendix C.1 for details).[8] However, this message largely failed to penetrate the countryside. The distribution of the Socialist vote remained heavily right-skewed, with a median of just 6.06%, reflecting its concentration in major urban and industrial centers (Figure 1, left panel).[9]

The platform of the SFIO in 1919, though radical for its time, was by modern standards a fairly moderate social democratic platform targeting urban and rural poor alike.[10] Yet, we argue, for this political message to breakthrough beyond its traditional urban and industrial strongholds requires trust. If its redistributive platform could be communicated in

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[8]The French Section of the Workers' International (SFIO) was a novel party founded during the 1905 Congrès du Globe in Paris as a merger between the French Socialist Party and the Socialist Party of France.

[9]In contrast to rural areas, left-wing movements had a substantial history in *urban* France, particularly in Paris. The 1848 revolution and the 2nd Republic that followed proved short-lived in large part due to lack of support in rural France and in the professional military, with many deeply skeptical of the left's ability to prevent anarchy and maintain order (Clark, 2023). Similarly, the Commune of 1871 had been associated with several excesses, including the execution of religious leaders like the Archbishop of Paris, before being violently repressed by the Versaillais government that largely reflected rural and conservative interests. Rebel 'Communes' appeared, and were violently suppressed, in the cities of Le Creusot, Limoges, Lyon, Marseille, Narbonne, Saint-Étienne and Toulouse in 1871 as well.

[10]The French Communist Party was only created in 1920, when more radical elements split from the SFIO at the 18th National Congress.

a trustworthy manner, poor rural agricultural workers were more likely to find it particularly attractive, potentially leading to a new left-right divide in place of culturally-defined rural-urban differences.
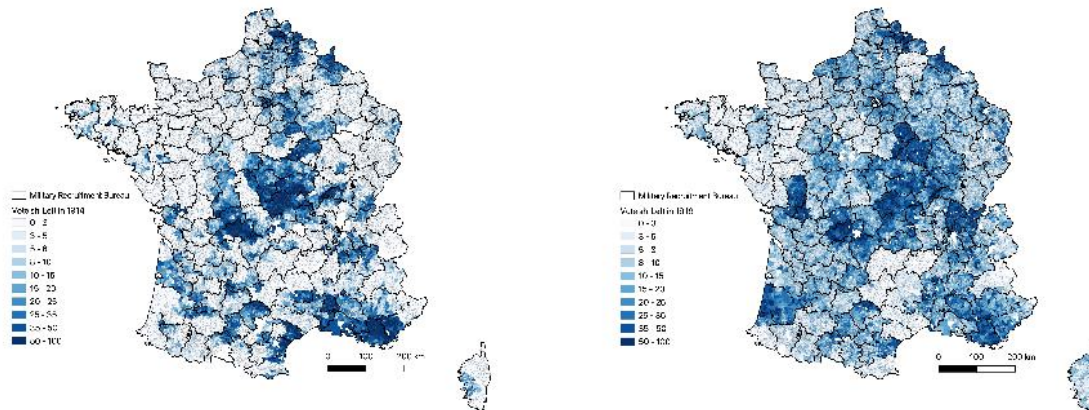
Notes: This figure shows the geographic distribution of left-wing vote share across French municipalities in the 1914 election (left; $N = 33,725$) and the 1919 election (right; $N = 33,680$). Shading reflects vote share quintiles. Overlaid in both maps are the boundaries of military recruitment bureaus as defined within France's territory in 1914.

Figure 1: Left-wing Vote Share Across Municipalities in 1914 and 1919

How could such trust be systematically induced? As we show below, this pre-war geographic concentration of the left vote created exogenous variation in exposure in the trenches to left-wing peers–among otherwise similar municipalities–due to the happenstance of common regimental recruitment.
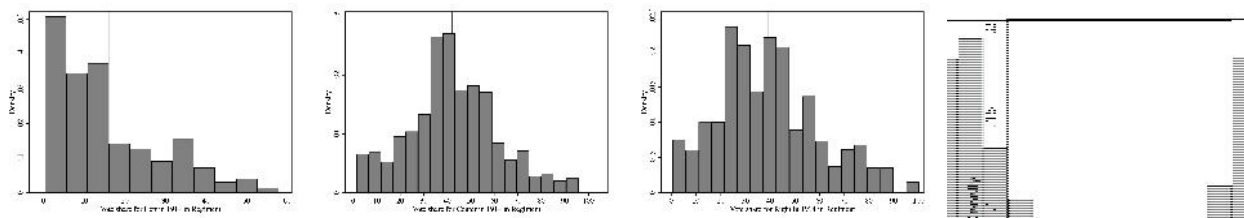
Notes: This figure plots the distribution of vote shares for left-wing (panel 1), centrist (panel 2), and right-wing (panel 3) parties in 1914 at the military recruitment bureau level ($N = 158$), along with the change in majority party between 1914 and 1919 (panel 4). Vertical lines indicate national means.

Figure 2: Vote Shares by Political Alignment in 1914 and Electoral Swing by 1919.

The left three panels of Figure 2 show the distribution of the average vote shares in 1914 for left, right and center parties at the level of the regimental catchment areas (henceforth recruitment bureaus) from which line regiments were raised. The majority of bureaus had extremely low average vote shares for the left, with 25% of regiments having an average

vote share for the left below 5%. The distribution was highly skewed, with 5% recording vote shares of around 42% or higher. In contrast, the average vote share for the mainstream parties of the center or the right show less skewness.

3.2 Post-War Political Realignment

Under the Constitution of the Third Republic, legislative elections were held every four years. Post-war elections were, however, postponed until the end of the official cessation of the conflict and demobilization, to enable soldiers to go back to their home municipalities and cast their votes. The first post-war elections were consequently held in November 1919.

Figure 1 (right panel) illustrates how four years of trench warfare reshaped France's electoral map. The Socialists again fell short of a majority, increasing their national vote share to just 20.66%. Remarkably, however, for the first time, political breakthroughs now occurred in many new rural areas which had never previously voted for the left (right panel of Figure 1). In fact, as we show, the left vote spread from its industrial and urban strongholds to rural municipalities, but only among those that sent soldiers to serve within the same regiment.[11] With a more national spread, the median left vote share in 1919 now stood at 18.5%.

The political platform of the SFIO, while promising substantial social progress for impoverished workers in urban and rural areas alike, did not actually call for any major political or economic upheaval. As we detail in Appendix C.1, it instead aimed mostly at providing social insurance, limiting working hours, creating a minimum wage, increasing the progressiveness of taxation, and guaranteeing the right to unionize and form local producer cooperatives. However, as in past leftist efforts to breakthrough to the countryside, this platform was challenged by voices on the right who claimed that such proposals were precursors to a much more radical agenda.[12]

3.3 Political Convergence within Regiments

We now document the homogenization of voting behavior within regiments over the war, using a set of different polarization measures. We begin with the widely-used polarization

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[11]Appendix Figure A3 maps the distributions (by quintiles) of vote shares in 1914 and 1919 for major political groups—the left, center, and right. The figure highlights a trend of homogenization within military bureaus but not across them.

[12]Historian Kevin Passmore (2012) notes that conservative politicians during the war became convinced that "*social democracy threatened the end of civilization*". Such positions were exacerbated by the Russian revolution, with some conservative journalists writing how "*from the unfathomable depths of Russia, from the atavism of centuries of suffering ferment, a wave is breaking over Europe and threatens to swallow up the Latin conquest of Law and the benefits of civilization.*"

index of Montalvo and Reynal-Querol (2005), based on individual party shares in the 1914 and 1919 elections at different levels: municipality, department (political and administrative district), and recruitment bureau. Table 1 (Columns 1-3) shows the evolution of these indices between 1914 and 1919. The only statistically significant decrease in polarization occurs within a recruitment bureau, where polarization decreased by 7.73% on average between 1914 and 1919. In contrast, the decrease in polarization is not statistically significant within municipalities or, importantly, political districts (departments) in 1919. Nationally, this polarization measure also fluctuates, rising from 0.37 in 1910 to 0.52 in 1914 but then *falling* to 0.44 in 1919. This change may at first seem indicative of an overall unifying effect of the war, as argued by Passmore (2012). However, as we show, it also masks sharp local differences emerging from the war. Indeed, national polarization resurges in the inter-war period, rising to 0.54 by 1936.

Table 1: Changes in Political Polarization After the War

	(1)	(2)	(3)	(4)	(5)
		Polarization		Dist. Mun- Reg.	Rel. Index
	Municipality	Dept	Bureau		
Post War (1919)	-0.033	-0.007	-0.058***	-0.208**	-0.443***
	(0.027)	(0.022)	(0.017)	(0.103)	(0.028)
Fixed Effect	Municipality	Department	Bureau	Municipality	Municipality
R-squared	0.56	0.60	0.59	0.54	0.69
Observations	65,448	186	316	67,450	67,450
Mean DepVar	0.73	0.76	0.75	1.22	0.62
Sd DepVar	0.31	0.17	0.17	1.72	0.41

Notes: This table compares the impact of WWI on three measures of political polarization. Columns 1-3 report the polarization index from Montalvo and Reynal-Querol (2005), computed at the municipality, department, and recruitment bureau levels. Column 4 uses the distance between the municipality's majority party and that of its recruitment bureau. Column 5 presents the Relative Party Index (RPI), described in Appendix B. Each column is estimated on a panel of 1914 and 1919 elections. All regressions include unit of observation fixed effects (municipality, bureau, or department). The unit of observation is a municipality-year in Columns 1 and 4–5. Columns 4 and 5 are weighted by the 1914 adult male population. Standard errors are two-way clustered at the recruitment bureau and department levels.

The measure of polarization used in Table 1 describes how polarization changes over time within a given unit, but does not allow us to measure the convergence process. We introduce two alternative measures of polarization that capture individual variation at the municipality-level within a regiment. The first measure, *the relative majority index*, simply captures the difference between the majority party in a municipality and the average majority party across other municipalities in the same regiment. The second measure, *the relative party index*, captures a more nuanced picture of the distribution of votes across multiple parties within each municipality and regiment. It considers the absolute difference between each political party's share in the municipality and its average share in the regiment. We

provide more details on the definitions of these measures in Appendix B.

Both alternative polarization measures show significant convergence within regiments between 1914 and 1919. In panel regressions with municipality fixed effects (Table 1, Columns 4–5), the relative majority index declines by 21% and the relative party index by 44%.

We further estimate dyadic regressions that compare political similarity across municipality pairs. In 1914, municipalities recruited into the same regiment were no more politically similar than other municipalities. By 1919, however, those in the same regiment exhibited significantly more similar voting patterns, even conditional on geographic distance and pre-war similarity (Appendix Table A2). This result reinforces the interpretation that regimental convergence occurred during the war, not before it.

In sum, although municipalities drafted into the same regiment in WWI were not more likely to vote in a similar fashion before the war, they were more likely to do so *after* the war. As mentioned above, these results are inconsistent with the convergence being driven by pure *contact* with political partisans *per se*, as urban and rural soldiers from the same recruitment bureau did their compulsory military service alongside one another in the same regiment, even in the pre-war times of peace. Instead, they suggest that convergence arose specifically from shared exposure to high-stakes trench warfare, rather than mere co-service during peacetime.

4 Identification and Main Results: Partisan Conversion

Though we uncover striking local homogenization in within-regiment political attitudes, the national pattern is not one of a uniform leftward swing, nor, of generalized increases in polarization. Instead, as shown in Figure 2 (right-most panel), some recruitment bureaus moved to the left while others shifted to the right, resulting in no aggregate national shift.

We now unpack the dynamics of local partisan shifts that underlie these aggregate voting patterns. To do so, we employ a regression discontinuity design across multiple military boundaries to causally estimate how exposure to partisan regiments induced political realignment.

4.1 Empirical Strategy: Spatial regression discontinuity design

Estimating the effect of group assignment on political attitudes involves confronting a number of severe identification challenges. These challenges may stem from *correlated effects*—the tendency of units in a group to behave similarly because they share similar characteristics, *contextual effects*—the tendency of different units in a group to behave similarly due to

common influences or *endogenous effects* that capture the influence of the group on individual outcomes (Manski, 1993). In our setting, the key concern is that regiments may have been intentionally formed to group together municipalities with similar characteristics, potentially confounding exposure with underlying trends in political preferences over the course of the war.

However, this concern is at odds with the underlying principles of army organization. The regiments were explicitly designed to be non-specialized and interchangeable units.[13] Consistent with this, Appendix Table A1 shows that there are no observable pre-war differences across regiments in terms of population density, religion, occupation, and literacy. Nor do we observe differences in battlefield experiences during WWI across municipalities assigned to regiments with differing political leanings.

Nevertheless, one may remain concerned about the influence of unobservable characteristics and the possibility that, for instance, municipalities where the left was already on the rise were more likely to be assigned to left-leaning regiments. The ideal setting to overcome these identification challenges is to compare geographically proximate municipalities that were similar before the war but were assigned to different regiments with sharply different political compositions. Municipalities that are close to each other are more likely to share similar characteristics and local contextual patterns, thereby attenuating concerns that estimated effects are due to unobservable correlated and contextual effects.

The following empirical design approximates this ideal setup. We estimate a spatial regression discontinuity design (RDD) across military boundaries, where the treatment is defined as exposure to a partisan regiment. In our main specification, a partisan regiment is defined as one in which the average vote share for any major political group in 1914 exceeded the national average. We later consider alternative treatment definitions, as well as a fuzzy RDD that accounts for differences in regimental partisan vote shares across boundaries. Given the large number of potential regimental boundaries to consider for each municipality (435 boundaries between 158 bureaus), we adapt the empirical RDD framework with multiple thresholds outlined in Dell and Querubin (2017) to the spatial RD context.[14]

We estimate the following specification:

$$Y_{ib}^{1919} = \alpha + \beta_1 P_{ib} + \sum_{b=1}^{435} \delta D_{ib} + \sum_{b=1}^{435} \gamma_{1b} D_{ib} f_b(geo_{ib}) P_{ib} + \sum_{b=1}^{435} \gamma_{2b} D_{ib} f_b(geo_{ib})(1 - P_{ib})$$
$$+ \theta X_{ib}^{1914} + e_{ib}, \tag{1}$$

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[13]See Cagé et al. (2023), and Jha and Wilkinson (2012, 2023) on how similar imperatives shaped the British Indian army, the French royal army, and other forces as well.

[14]Earlier studies that rely on spatial discontinuities with multiple borders include Black (1999), Grosjean and Senik (2011), and Cantoni (2020).

where Y_{ib}^{1919} is the vote in municipality i in 1919 and P_{ib} is a treatment indicator equal to 1 if municipality i is on the side of the military boundary b that was assigned to a given partisan regiment.[15] To ensure comparisons are made across the same boundary, D_{ib} is a set of dummy variables for each boundary segment b between two regiments. The RD polynomial, $f_b(geo_{ib})$, is estimated separately on each side of each military boundary to control for smooth functions of geographic location around each boundary. We leverage the high granularity of our data to estimate this RD flexibly rather than constrain potential outcomes to be a function of distance to the boundary, but we assess the robustness of our results to alternative specification choices in Section 4.4. The vector X_{ib}^{1914} includes baseline characteristics for each municipality. We estimate local linear regressions and cluster standard errors two-way by municipality and military boundary. In robustness analysis, we consider different estimation weights that account for population size and for the possibility that some municipalities may border multiple military boundaries.

Our unit of observation is the municipality i - boundary b pair. There are 435 regimental boundaries (see the map in Figure 1) and 34,947 municipalities within France's 1914 borders (that is, excluding Alsace-Moselle). However, for the 1919 elections, we observe data from 33,680 municipalities. In our baseline estimates of Equation (1), we use a 10-km bandwidth for our spatial RDD. This choice is informed by the distribution of distances between municipalities and their closest regimental boundaries: the average distance is 377 km, and the average distance to the closest recruitment bureau boundary is 12.84 km. The 10-km bandwidth approximates the 50th percentile (9.05 km) of this distribution. To assess the robustness of our results, we also estimate the model using alternative bandwidths of 5 km and 15 km, corresponding to the 25th percentile (5.12 km), and the 75th percentile (14.70 km) of the distance distribution, respectively.

4.2   Exposure to left-wing regiments

Our main focus is on estimating the conversion power of a new ideological force. As noted earlier, in rural areas, the left, which would emerge as a defining yet deeply polarizing force in the aftermath of WWI, was still a nascent political force during this period. Regimental assignment reshaped politics by exposing many (rural) municipalities to its ideology for the first time. Diaries of veterans from the line infantry portray vividly how this ideology was

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[15]In our baseline empirical application, we employ a log transformation of the vote shares for the left, center, or right. This transformation is appropriate in our context (not subject to recent criticisms by e.g., Chen and Roth (2024)), as no municipality has a vote share of zero for either the left, center, or right as a whole. Moreover, the log transformation is attractive in our context since the vote share for the left, both in 1914 and in 1919, is not normally distributed and has a long right tail. We show the robustness of our results to using the share of votes as the dependent variable in Column 3 of Table A7.

novel to many and left a profound mark on their political preferences, partly due to its novelty, but also because of its appeal for the impoverished agricultural social strata that constituted most of the infantry (see Appendix C). The fact that the same left-wing SFIO party ran in both the 1914 and 1919 elections facilitates direct comparisons over time.

We begin by focusing on municipalities where pre-war support for the left was close to zero.[16] Later we assess the robustness of our findings to alternative estimation samples. These municipalities tend to be less densely populated, poorer, more agricultural, less industrial, and less literate, even compared to municipalities within the same department (see Appendix Table A8). This sample structure highlights the rural character of the municipalities most likely to experience left-wing ideology as a novel influence.

This leaves us with 15,870,975 observations at the municipality-boundary level, including 11,545 observations within a 10km bandwidth of 134 borders across which the treatment status of municipalities varies. Among these 11,545 observations, 9.99% are allocated to a left-wing regiment (according to our partisan definition in Section 4.1). The average municipality in this sample had 181 voters in 1914 and 150 voters in 1919, with the difference accounted for by an average of 30 combat deaths in WWI.

Our empirical strategy identifies a local average treatment effect of partisan exposure due to local quasi-random assignment across regimental boundaries. Before presenting results, we validate the identification assumption by showing that other covariates, as well as the outcome at baseline (the left vote share in the last two pre-WWI elections in 1910 and 1914), vary smoothly across boundaries.

4.3 Regression discontinuity results

Validation checks We begin by examining visually the relationship between exposure to a left-wing regiment and baseline municipality covariates. The left panel of Figure 3 plots 1914 left vote shares against distance to the military boundary using local polynomials and 3-km bins.[17] Dashed lines indicate the 95% confidence intervals. A positive distance signifies that the municipality is allocated to a left-wing regiment. The plot demonstrates that vote shares in 1914 vary smoothly across the boundary, a finding also confirmed through regression estimates of equation (1) (see Appendix Table A4). We find similar smoothness for other municipal-level covariates, including left vote share in 1910, population in the last

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[16]We define this sample as municipalities in which the vote share for the SFIO in 1914 was below 3%, which corresponds to the median of the sample. We test alternative thresholds in robustness checks.

[17]For visualization, we use data averaged at the municipality level. In regressions, we keep data at the municipality boundary level but correct standard errors for clustering at the municipality and boundary levels.

pre-WWI Census of 1911 and municipality size, both graphically (Figure 4) and through regression estimates (Appendix Table A4).

Moreover, consistent with the principle of interchangeability and fairness in deployment of the line infantry, rotation through major battles like the Marne in 1914, Verdun in 1916 (including under the leadership of then-General Philippe Pétain, see Cagé et al. (2023)), and the Somme in 1916 are also smooth across the border, as is the ultimate fatality rate in WWI as well.

These patterns allow us to evaluate a number of other plausible explanations. For example, one could imagine that war-time trauma or social cohesion under duress were driving the effects independent of partisan transmission. However, as the patterns above reveal, municipalities on either side of the catchment border experienced very similar levels of wartime trauma, as measured by fatality rates, and similar assignments to the major traumatic battles of the war, but only show divergence in their political preferences when exposed to left regiments.

Additional validation comes from a wider set of covariates. In Panels B and C of Appendix Table A4, we use data by Piketty and Cagé (2023) as well as data collected by Cagé et al. (2023) on religion from the 1872 Census (only available at the more aggregated level of 429 to 510 arrondissements) to show that municipalities allocated to left-wing regiments are statistically similar to others on a wide array of additional characteristics capturing literacy, religion, wealth, employment, and industrial structure.[18] We consistently observe that all other characteristics vary smoothly at the regimental boundary.

Appendix Figure A4 provides a McCrary test for selective sorting around the threshold. The military plan pre-assigned municipalities to regiments, ruling out manipulations of regimental assignment around the threshold. Consistent with this institutional feature, we observe no discontinuity in the density of observations at the regimental boundary.

Voting outcomes in 1919 We next examine how assignment to a left-wing regiment changes voting outcomes in 1919. The right panel of Figure 3 shows a clear upward jump in left vote share in municipalities locally exposed to left-wing regiments. Table 2 (Columns 1-3) presents the results of estimating Equation 1 across different bandwidths, adjusting standard errors for two-way clustering. The estimated effects demonstrate substantial increases in the left vote share in 1919, ranging from about 26% to 37%, depending on the geographic bandwidth used in the analysis.

Table 2 (Columns 4-9) confirms that these gains for the left come largely at the expense

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[18]In contrast to the characteristics in Panel A, and apart from the 1910 electoral results, other variables are imputed at the municipal level from more aggregated statistics (at departement, arrondissement, or canton level), and thus should be interpreted with more caution because of potential measurement error.
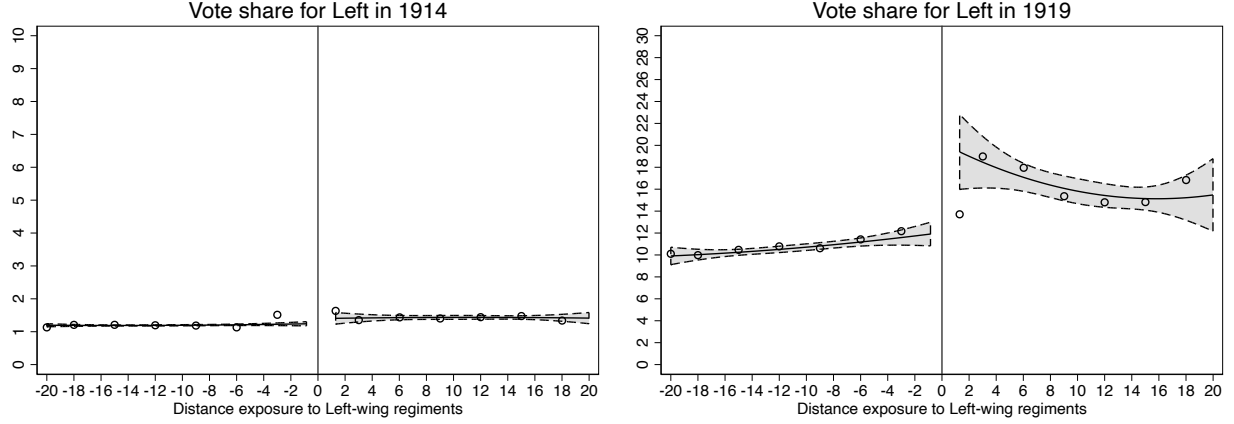
Notes: Each panel plots binned regression discontinuity estimates of left-wing vote share in 1914 (left) and 1919 (right) around regimental recruitment boundaries. Observations are at the municipality level and restricted to locations within 20 km of a regimental boundary. Dots represent mean outcomes in 3-km bins. Solid lines show local quadratic fits with 95% confidence intervals (shaded).

Figure 3: Regression Discontinuity Estimates: Vote shares for the left in 1914 and in 1919
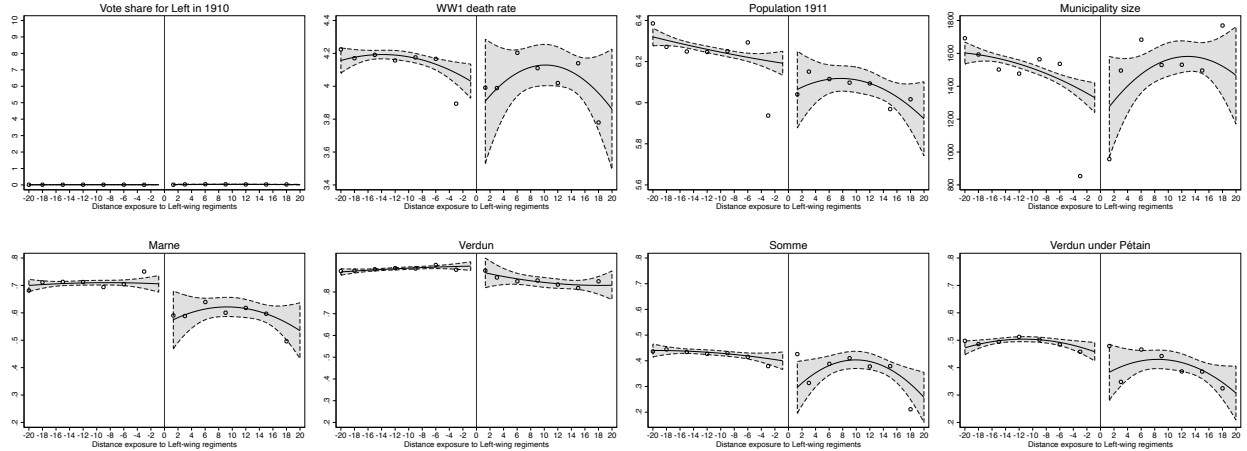
Notes: Each panel presents a regression discontinuity (RD) estimate around regimental recruitment boundaries, with underlying observations at the municipality level. The sample is limited to locations within 20 km of a regimental boundary. Dots represent means in 3-km bins. Solid lines indicate local quadratic fits with 95% confidence intervals (shaded). Outcomes include baseline vote shares (top left), wartime mortality, demographic and geographic characteristics, and exposure to major battles.

Figure 4: Covariate Balance Around Recruitment Boundaries

Table 2: Exposure to Socialist Regiments and 1919 Vote Shares: RD Estimates

	Left vote in 1919			Center vote in 1919			Right vote in 1919		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exposure to Left-wing Regiment	0.259***	0.370***	0.323**	-0.274	-0.381	-0.301	-0.014	0.002	-0.166
	(0.092)	(0.116)	(0.141)	(0.177)	(0.235)	(0.333)	(0.126)	(0.157)	(0.198)
Bandwidth	15	10	5	15	10	5	15	10	5
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.63	0.68	0.72	0.82	0.84	0.85	0.79	0.81	0.82
Observations	19,313	11,177	3,905	19,313	11,177	3,905	19,313	11,177	3,905
Mean DepVar	1.95	1.96	2.01	2.44	2.45	2.48	3.53	3.51	3.49
Sd DepVar	0.96	0.96	0.94	1.63	1.62	1.60	1.14	1.16	1.16

Notes: This table reports RD estimates of the effect of exposure to a left-wing regiment on log vote shares for the left (Cols. 1–3), center (Cols. 4–6), and right (Cols. 7–9) parties in the 1919 election. Each observation is a municipality-boundary pair within 15, 10, or 5 km of a regimental boundary. *Exposure to Left-wing Regiment* is an indicator equal to one if a municipality is on the side of the military boundary that was allocated to a left-wing bureau, defined as a bureau whose average vote share for the socialist in 1914 is higher than national mean. All regressions include flexible local polynomials in distance to the boundary and boundary fixed effects. Robust standard errors two-way clustered at the municipality and boundary levels, are shown in parentheses.

of the mainstream centrist parties. Estimating the effects separately for each political party confirms this pattern, while making explicit that the gains in the left vote are specific to the SFIO (see Appendix Table A5).[19]

Appendix Table A6 (Columns 1-3) confirms robustness to alternative weighting schemes, weighting each observation either by the inverse of the number of times a given municipality enters the estimation sample,[20] by the number of registered voters in each municipality, or by a combination of the two. The results are robust and similar in magnitude.

Our baseline specification considers a binary treatment. In practice, however, the regiment-level average vote share for the left jumps discontinuously, but not discretely, at the military boundary. Appendix Table A7 (Column 1) shows that the average jump across military boundaries in the regiment-level left vote share (corresponding to the first stage of a fuzzy RD specification) is 19.3 percentage points, statistically significant below the 1% level. Column 2 shows that our results are robust to using the regiment-level left vote share predicted by the first stage as the independent variable in Equation 1 (second stage of a fuzzy RD specification). In Column 3, we present the reduced form results (estimation of Equation

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[19]As the table shows, the effects are actually larger (47%) when we consider the SFIO alone, rather than together with the marginal "Parti Communiste" (a different party to the French Communist Party, which will be created in 1920, and garnered only 0.53% of the vote in 1919). The point estimate corresponding to the estimates in Table A5 for the "Parti Communiste" is -0.005, with a standard error of 0.004. We do not present this estimate in Table A5 since the Table only shows estimates for parties that garner at least 2% of the vote nationally. Similarly, since we observe municipalities in the 1914 and the 1919 elections, we can also estimate a first-difference version of Equation 1, where the dependent variable is the inverse hyperbolic sine of the difference in the vote share for the left between 1919 and 1914. We find a 26.5 to 41% increase in the left vote share within a municipality exposed to a left-wing regiment.

[20]A municipality can enter the estimation sample multiple times if it borders multiple boundaries. 61% of municipalities border only one boundary, 97% of municipalities border fewer than 3 boundaries, and 99% of municipalities fewer than four.

1) when we consider the vote share for the left in 1919 in a municipality as the dependent variable. The point estimate in Column 3 suggests that exposure to a left-wing regiment is associated with a statistically significant 3.07 percentage point increase in the left vote share in 1919. The implied Wald estimate, suggests that a 1 percentage point increase in the regiment left vote share converts 16% of voters to socialism (3.04/19.3). This estimate naturally corresponds to the last column of Appendix Table A7, which shows the results of the 2SLS estimation, using predicted regiment-level vote share as the independent variable.

While the SFIO vote remained below 21% nationally in the 1919 election, these estimates imply sizable local ideological shifts in municipalities that had virtually no prior exposure to left-wing politics.[21] Given that the average municipality in our estimation sample had 150 voters in 1919, our estimates suggest that exposure to a fully socialist regiment (versus a regiment with no socialists) could convert 24 voters (16% of 150). This effect size is quantitatively large in the historical context: it implies that the local electoral breakthroughs of the SFIO in many rural areas can be explained almost entirely by trench-level persuasion of returning veterans, without requiring additional spillovers, though naturally such spillovers are likely to have also occurred.[22]

In short, although the left remained a national minority after the war, the documented effects represent a meaningful and novel ideological shift in regions that had previously been highly impervious to socialist appeals.

4.4 Robustness

As we have demonstrated, our results are robust to alternative functional forms, estimation weights, and a fuzzy RD specification. We next show further robustness to different treatment definitions, estimation samples, and spatial RD specifications. We also confirm, by conducting randomization inference tests and placebo analysis at the level of political districts that our results are indeed driven by regimental exposure. Finally, we show that the observed effects are specific to political outcomes, not socio-economic ones.

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[21]A natural question is whether our results reflect voter mobilization rather than conversion. Columns 1 to 3 of Appendix Table A11 show that this is unlikely: we find no significant differences in turnout in 1914 or 1919, indicating that the effect arises from changes in vote choice rather than selective participation.

[22]See the Appendix for an example. The average death toll of 30 men per municipality in our estimation sample, combined with an estimated average military death rate of 16% reaching 22% in the infantry (see, e.g., Gay and Grosjean, 2023) suggests that between 136 and 187 men in a municipality were drafted. At the start of the war, the line infantry comprised 3 out of 28 cohorts of men, accounting for 10% of the Army. As the war went on, and older cohorts were demobilized as they reached the age limit of 48, 4 additional cohorts were incorporated. 24 veterans out of an average of 161.5 drafted men corresponds roughly to 15% of draftees, roughly consistent with the proportion of the line infantry among total troops.

Alternative treatment and sample definitions. We explore alternative treatment definitions based on different thresholds of the average left-wing vote in a regiment. Specifically, we consider exposure to a regiment where the left vote share in 1914 is higher than the sample *median*, as well as alternative percentiles of the average regimental-level left vote share, ranging from the 45th percentile to the 80th, in increments of 5 points.[23] Results, presented in Appendix Table A9 confirm that our findings are robust to these alternative treatment definitions. Furthermore, the estimated jump in the 1919 vote share remains stable, suggesting that even limited exposure to socialists was sufficient to spread these ideas widely.

Our main specification considers only municipalities that had minimal exposure to the left, defined as those where the initial left vote share was lower than 3%, which corresponds to the sample median. We also consider alternative estimation samples, for thresholds from 1% to 6%, in increments of 0.5 percentage points.[24] Results displayed in Appendix Table A10 show that the estimated effect remains robust, and decreases in municipalities where the initial left vote share was higher in 1914, suggesting that the impact of exposure to left-wing regiments is more pronounced in municipalities with *less prior exposure* to the left, where its redistributive message was likely to be more novel.

Alternative spatial RD specifications. We verify that our results hold under a variety of alternative spatial RD specifications. First, we consider a specification that accounts for the geodesic distance between each municipality's centroid and the boundary, instead of coordinates.[25]

The results of this alternative specification, displayed in Appendix Table A6 (Column 4), confirm that our findings are robust and similar in magnitude to those obtained with our main specification. Our results are also robust to a more parsimonious version of our main specification, in which we only include a linear interaction between coordinates (latitude, longitude) and each boundary (Column 5).

Second, we estimate a simple spatial RD specification with a unique boundary for each municipality, considering for each municipality only the *closest* boundary to a left-wing

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[23]In all the robustness tests, we consider our preferred 10km bandwidth.

[24]As we detail in the notes to Table 2, no municipality had an exactly 0 vote share for the left in 1914.

[25]Specifically, we estimate the following specification:

$$Y_{ib}^{1919} = \beta_0 + \beta_1 P_{ib} + \beta_2 f(d_{ib}) + \beta_3 (1 - P_{ib}) f(d_{ib}) + \sum_{b=1}^{435} \delta D_{ib} + e_{ib}, \tag{2}$$

where P_{ib} is a dummy equal to 1 if the municipality belongs to a partisan bureau (as before), $f(d_{ib})$ is a function of the distance between each municipality and the boundary, and D_{ib} is a set of boundary fixed effects.

bureau. Specifically, we estimate a standard spatial RD (Equation 2) with an RD polynomial in latitude and longitude, and fixed effects for each regimental block.[26]

Table A6 (Column 6) shows that our results are robust in this alternative specification. In Table A6 (Columns 7-9), we implement standard error corrections for arbitrary spatial correlation in this simpler specification for different geographic cutoffs. The estimates remain statistically significant at the 1% level.

Randomization of regimental boundary. To provide further evidence that the discontinuous jump in 1919 vote is not driven by potential endogeneity of the regimental boundary and unobservable differences between municipalities in our estimation sample, we perform a permutation inference exercise. In this exercise, we randomly shift the regimental boundary borders 1,000 times within the regimental boundary samples, i.e., within the sample of municipalities in the 15-, 10-, or 5-km bandwidths on either side of a regimental boundary, following Lehner (2024). These permutation inference tests also address potential issues related to imbalance across boundary clusters and spatial correlation. Figure A5 shows that our estimated effect is well outside the range of these placebo estimates.

We also conduct donut tests that exclude the municipalities closest to the border. The results, shown in Appendix Table A12, are stable in magnitude and statistical significance, with the coefficient obtained when excluding the municipalities within 5km of the border being only 4% higher than the original estimate, and statistically indistinguishable. The stability of the estimated coefficients additionally suggests that spatial spillovers in political preferences across the border are limited. If voters were influenced by their neighbors across the border, one would expect the coefficient to be much higher when we exclude the municipalities contiguous with the border, which is not the case. This pattern is consistent with strong *inoculation* against the left taking place on the other side of the border.

Regiment versus political district boundaries. As discussed above, recruitment bureau boundaries were drawn with the key imperative of enabling rapid military mobilization. Thus they do not coincide with political district (department) boundaries. However, in some cases, they do match (see Figure A2). Therefore, it is possible that a discontinuous jump in electoral outcomes after the war could be due to unobservable characteristics specific to political districts, such as local politicians, differences in political campaigning, or other local political factors. To address this concern, we conduct several tests that show that our results are driven by regimental assignment rather than any such unobserved district-level heterogeneity.

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[26]The optimal Calonico et al. (2014a,b) bandwidth is 11 km, very close to our 10km baseline bandwidth.

First, we show that our results are not significantly different across those regimental borders that coincide with departmental borders and those that do not (Appendix Table A6, Column 10). We estimate Equation (1) adding a control variable that takes the value of one if the regimental boundary segment coincides with a department boundary, along with an interaction term between this indicator variable and the treatment variable. The interaction term is, if anything, *negative*, contrary to the expectation that political divergence would be stronger along political district boundaries (though small and statistically insignificant). In contrast, the treatment effect estimated along non-coinciding borders remain statistically significant and comparable in magnitude to our main results.

Second, we show that our results are robust to including a set of (85) department fixed effects in Equation (1). The identifying variation now comes from differences in exposure to left-wing regiments within the bandwidth around the regimental boundary, all within a given political district. The map in Figure A2 illustrates the identifying variation by overlaying the regimental and department boundaries. Appendix Table A13 confirms that there are no discontinuities in covariates or baseline outcomes when department fixed effects are included. Estimation results for the left vote share in 1919 are presented in Table A6 (Column 11). These estimates are comparable in terms of magnitude and statistical significance to our baseline estimates, suggesting that most of the results are driven by regimental assignment.

Finally, to provide further evidence that our results are attributable specifically to regimental assignment, we undertake a placebo analysis that mimics our spatial RD approach but at the political district level rather than the military bureau level. We classify a municipality as "exposed to a left-wing *department*" in 1914 if the municipality is located within a department where the average vote share exceeds the national average. We then estimate Equation (1) replacing our treatment dummy variable by this "Exposure to left-wing *department*" in 1914, employing similar bandwidths around departmental borders. We test whether there is a discontinuous jump in the left vote share in 1919 across department boundaries that do not correspond to regimental boundaries. Results presented in Table A6 (Column 12) show that The left vote share in 1919 does not jump discontinuously across departmental boundaries. Furthermore, we check that these results are not confounded by initial differences across departmental boundaries. Appendix Table A14 demonstrates that pre-determined covariates, WWI battle rotations and military fatalities, and baseline vote share for the left are smoothly distributed at the departmental boundary.

Placebo outcomes. We last show that our findings are specific to voting outcomes. Using data from Piketty and Cagé (2023), Appendix Table A15 shows the absence of any post-war jump in income, literacy, education, unemployment, shares of employment in agriculture or

industrial sector, occupations, and share of foreigners in 1919. These findings provide further evidence that our results reflect a convergence in *political attitudes* among the soldiers of regiments during the war, rather than local economic disruptions that may have occurred as a consequence of the war.

5   Mechanisms of Ideological Conversion

What explains the political realignment induced by trench exposure? In this section, we investigate the mechanisms behind the conversion documented above. First, we examine whether ideological shifts reflect symmetric conformity or asymmetric persuasion. Second, we test whether the effects are stronger where socialist ideas were more novel or materially relevant. Third, we assess the relative importance of peer versus hierarchical channels of transmission. Fourth, we investigate the role of war trauma and battle experience. Finally, we study the persistence of political change over time and interpret our findings through a stylized model of belief updating and coordination.

5.1   Empirical patterns

Asymmetry: Conformity versus novel information provision   If group conformity were the main mechanism of ideological change, ideological change would be *symmetric*: individuals would conform to the prevailing political orientation (or even specific party) of their regiment, irrespective of party identity or message content. Similarly, if conversion were driven by increased loyalty to comrades one would also expect a symmetric effect regardless if the comrades were from the left or the right. In contrast, a trusted information mechanism implies asymmetric effects: change should occur primarily when soldiers are exposed to novel political messages that favor their material interests.

We test this asymmetry by contrasting the influence of exposure to the new left-wing party on voting in 1919 with exposure to long-established *mainstream* centrist or right-wing regiments. We estimate equation (1), where P_{ib} is now defined as a treatment indicator equal to 1 if municipality i is on the side of the military boundary b that was assigned to a centrist (or right-wing) regiment, defined as one whose average vote share for the center (or right) in 1914 exceeds the national mean.[27]

The results are presented in Table 3 for centrist and right-wing groupings (Appendix Table A16 provides breakdowns party by party). Exposure to a centrist regiment increases

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[27]We follow the classification of center and right-wing parties in Cagé et al. (2023). Unlike the dividing line between the left and mainstream center, the classification of centrist versus right-wing parties is more open to debate as the political landscape on the right evolved over time.

support for the center after the war, doing so partially at the expense of the left. This could be consistent with both conformity and information-related channels. In contrast, the effect of exposure to a right-wing regiment shows *asymmetry*: while exposure to a right-wing regiment also reduces support for the left in 1919, it does not lead to an increase in support for the right. Instead, the main beneficiaries of right-wing exposure tend to be centrist parties.[28]

Table 3: Exposure to Mainstream Regiments and 1919 Vote Shares: RD Estimates

	Left	Center	Right	Left	Center	Right
	(1)	(2)	(3)	(4)	(5)	(6)
Exposure to Centrist Regiment	-0.058	0.353**	0.044			
	(0.077)	(0.177)	(0.136)			
Exposure to Right-wing Regiment				-0.278***	0.096	-0.089
				(0.085)	(0.156)	(0.119)
Bandwidth	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓
R-squared	0.67	0.84	0.81	0.68	0.84	0.81
Observations	11,177	11,177	11,177	11,177	11,177	11,177
Mean DepVar	1.96	2.45	3.51	1.96	2.45	3.51
Sd DepVar	0.96	1.62	1.16	0.96	1.62	1.16

Notes: This table reports RD estimates of the effect of exposure to centrist or right-wing regiments on log vote shares for the left, center, and right parties in the 1919 election. Each observation is a municipality-boundary pair within 15, 10, or 5 km of a regimental boundary. *Exposure to Centrist (resp. Right-wing) Regiment* is a binary indicator equal to one if a municipality lies on the side of the boundary assigned to a bureau with a 1914 vote share for the center (resp. right) above the national mean, weighted by registered voters. All regressions include flexible local polynomials in distance to the boundary and boundary fixed effects. Standard errors, two-way clustered at the municipality and boundary levels, are shown in parentheses.

This asymmetry is inconsistent with pure conformity. However, it is consistent with a trusted information channel, where trusted conservative peers, while not persuading poor agricultural workers to change their political positions towards well-trodden right-wing platforms on average, are able to provide counter-arguments that dissuade them from adopting the novel redistributive message of the left. As discussed above, many soldiers that fought in WWI, especially those from rural areas— and, by design, those who constitute our estimation sample— had limited exposure to socialism's redistributive platform before 1914, but gained familiarity with these ideas when exposed to trusted peers in the trenches (see also Appendix C). In contrast, centrist and right wing parties were well-established in rural areas by 1914. While the novel economic redistributive platform of socialism might be attractive to poor agriculturalists, regiments with trusted right-wing voices could instead emphasize the

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[28]Specifically, the results party by party (Appendix Table A16) show that exposure to a centrist regiment is associated with a significant increase in the vote share for the centrist Radical Socialists (PRRS) and exposure to a right-wing regiment is associated with a significant decline of the vote for the SFIO to the benefit of the centrist REP-SOC and the more right-wing ERD (Entente Républicaine Démocratique).

left's *social and cultural* positions, including its history (in France) of excesses with respect to priests, and the perceived threat to existing social order and often deeply-held cultural and religious beliefs made particularly salient by the 1917 Bolshevik Revolution. This exposure could *inoculate* voters against the platform of the left, without necessarily inducing whole-scale adherence to the right.

Novelty and Material Appeal   The asymmetric effects documented above suggest that persuasion was strongest when the message was politically novel. We next test this channel more directly by examining whether the left's impact was amplified in areas where its platform was less familiar or more materially salient. First, we expect conversion to socialism to be particularly pronounced in municipalities where the redistributive agenda of the left was less known. Second, the new political message of the left should also be particularly effective where its novel redistributive platform resonated more strongly with local material conditions–i.e. in poorer areas.

To test these hypotheses, we estimate Equation 1 with the addition of interaction terms between the treatment indicator and baseline characteristics at the municipal or regiment level, while also controlling for the main effect of each interaction variable. Table 4 reports the coefficients of interest. Consistent with the expectation that information about the left's new platform was more impactful where these ideas were novel, our results indicate that exposure to left-wing regiments had a stronger effect in municipalities where the initial left vote share was lower (Column 1). Further, the effects are indeed stronger in poorer and more agricultural municipalities (Columns 2 and 3). The interaction term between mean income and the treatment term is significant at the 10.6% level, which likely reflects measurement error, as income is imputed at the municipality from higher aggregates.

Together, these results suggest that ideological persuasion rather than conformity is the key mechanism behind the observed shifts.

Peer versus hierarchical transmission   We now further unpack how the transmission of left-wing ideas and values occurred: whether horizontally, through trusted peers in the trenches, or obliquely, through formal authority figures (Bisin and Verdier, 2001, 2024). If horizontal transmission was an important channel, we should expect that the effects of left-wing exposure to be accentuated in regiments where individuals, who might otherwise not interact or trust one another in civilian life, are brought together in the trenches. As noted above, a key cleavage in pre-war France, as in many other contexts, was the rural-urban divide. Was transmission greater in regiments where rural soldiers had more opportunities to interact with urban (and disproportionately Socialist) peers?

Table 4: Exposure to Socialist Regiments and Vote in 1919: Mechanisms of political conversion

				Left vote share in 1919		
	(1)	(2)	(3)	(4)	(5)	(6)
Expos. Left-wing Reg.	0.376***	0.557***	-0.139	-0.094	0.262	0.346
	(0.121)	(0.184)	(0.238)	(0.187)	(0.416)	(0.396)
Expos. Left $\times$ Y	-0.102*	-0.245	0.611**	0.804**	0.111*	0.128*
	(0.054)	(0.165)	(0.268)	(0.334)	(0.062)	(0.072)
Expos. Left $\times$ Z						-0.069
						(0.063)
Y	Left 1914	Mean Inc.	Prop. farm.	Urban-rural mix	Left COs	Left >1914 COs
Z	NA	NA	NA	NA	NA	Left 1914 COs
Bandwidth	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓
R-squared	0.69	0.68	0.68	0.68	0.68	0.68
Observations	11,177	11,176	11,177	11,177	11,177	11,177
Mean DepVar	1.96	1.96	1.96	1.96	1.96	1.96
Sd DepVar	0.96	0.96	0.96	0.96	0.96	0.96

Notes: Each observation is a municipality-boundary pair. *Exposure to Left-wing Regiment* is defined as in Table 2. Interaction terms include: (i) *Left in 1914*, the log vote share for the left in 1914; (ii) *Mean inc.*, mean per capita income relative to the national mean in 1913; (iii) *Prop. farm.*, percentiles of the share of farmers in 1913; (iv) *Urban–rural mix*, the standard deviation across municipalities within a regiment of an urbanicity index coded 1 (village) to 4 (city); (v) *Left COs*, the average left-wing vote share in 1914 in the municipality of origin of the majority of fallen commissioned officers in the regiment. Column 6 distinguishes between officers who died in 1914 (*Left 1914 COs*) and later years (*Left >1914 COs*). All specifications use a 10-km RD bandwidth, include the main effects of each interaction variable, and control for the 1914 left vote share in the origin of fallen non-commissioned officers and its interaction with treatment (Cols. 5–6). Robust standard errors, two-way clustered at municipality and boundary level, are reported in parentheses.

We capture urban-rural mixing within regiments using the standard deviation of a variable that reflects both the municipal population size and the urban centrality.[29] This urban-rural mix variable takes lower values in regiments that are homogenous in their composition, and higher values in regiments that mixed rural municipalities with municipalities near or within metropolitan areas. For instance, the lowest value corresponds to the Bar-le-Duc military bureau, the most rural bureau consisting of 95.38% villages and 4.62% towns, while the highest value corresponds to the Versailles recruitment bureau close to Paris, which includes 47% villages, 6% towns, and 47.21% (Parisian) suburbs.

Column 2 of Table 4 shows that the interaction between the urban-rural mix of a regiment and the treatment effect of exposure to left-wing regiments is positive, statistically significant, and large in magnitude. Consistent with the idea that regiments brought together the "hammer" (industrial workers) and the "sickle" (agricultural workers), the coefficient suggests that being assigned to a left-wing regiment that belongs to the 95th percentile of the urban-

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[29]This variable is coded in Piketty and Cagé (2023) and equals 1 if the municipality is a village (one of the 26,529 municipalities in 1913 with less than 2,000 inhabitants), 2 if it is a town (one of the 5,283 municipalities between 2,000 and 100,000 inhabitants), 3 if it is a suburb of a metropolis (one of the 1,404 secondary municipalities of a metropolis), and 4 if it is one of the 41 primary municipalities of a metropolis with more than 100,000 inhabitants. The urban-rural mix is distinct from the average rurality of the regiment. In fact, the correlation between urban-rural mixing and average rurality is only -0.48.

rural mixing distribution rather than a left-wing regiment in the 5th percentile is associated with a 53.6% larger increase in the left vote share across the border.[30] These patterns are consistent with horizontal (peer) transmission among soldiers.

While peer mixing patterns provide evidence for horizontal transmission, we next examine whether political influence also flowed through the formal command hierarchy. To shed light on this channel, we examine whether the treatment effect is moderated by the political orientation of different types of commissioned officers. The idea is that if information flowed through regimental hierarchies rather than among peers, the effect should mostly be driven by the political orientation of the officers' home regions. Due to data limitations, we approximate the origin of officers in each regiment using data from Gay and Grosjean (2023) on the rank of fallen men during the war. For each regiment, we retain the vote shares of the home municipalities of the majority of (fallen) officers. We further distinguish between *officers in the trenches*- those up to the rank of captains, who fought in the trenches with their men, and *higher-ranking officers*—majors and above—who though imbued with greater formal authority, commanded from rear positions (see Appendix C.3 and Norton Cru (1988)).

Column 5 of Table 4 indicates that the effect of exposure to a left-wing regiment was indeed more pronounced when a majority of commissioned *officers in the trenches* hailed from areas with a higher left-wing vote share. The magnitude corresponds to roughly a third of the baseline effect, even while the main effect remains relatively stable. Further, these effects are observed specifically among those who served together in the trenches; commissioned officers of higher rank have no significant effect.[31] These findings suggest that, rather than deriving from formal hierarchical authority, political information transmission occurred both horizontally, among peers, and obliquely, through commissioned officers, but

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[30]This effect is robust and stable in magnitude when we control for the average rurality of a regiment, which itself has no bearing on the treatment effect (the interaction between the average rurality of a regiment and the treatment dummy is small and insignificant (0.012, p-value: 0.964) while the interaction between the treatment and urban-rural mixing remains almost identical (0.822, p-value: 0.065).

[31]We classify the commissioned officers (COs) who fought in the trenches with their men to include: captains (0.62% of total WWI deaths), first and second lieutenants (0.83% and 1.55% of WWI deaths respectively), cadets (0.22% of WWI deaths), officers (0.03% of WWI deaths). The high-ranking officers in the rear include: commandants (0.04% of WWI deaths), colonels (0.01% of WWI deaths), majors (29 deaths out of 1.3 million deaths), and generals (90 deaths or 0.01% of WWI death). Consistent with the fact that these high-ranking officers were seldom in the trenches with their men, our results are unchanged when we consider all COs together. We can nevertheless show that we do not obtain any significant results for these high-ranking officers when we estimate the specification displayed in Column 5 of Table 4 with an additional term that captures the share of votes in the place of origin of these high-ranking officers, as well as its interaction with the treatment. When we do so, the coefficient associated with the baseline share of left votes in places of origin of high-ranking officers is small and insignificant on its own (coeff: -0.001, s.e.: 0.001) and in interaction with the treatment (coeff: 0.002, s.e.: 0.0015), while our main effect of interest, the interaction between treatment and the left vote share in places of origin of the COs that fought in the trenches is unchanged (coeff: 0.11, s.e.: 0.06).

only among those that served in the trenches (see Appendix C.3 for a case illustration of both these channels.)

We further probe how oblique transmission by leaders shaped the transmission of left-wing political values in particular, as the identity (and political background) of commissioned officers changed considerably after the first year of the war (Saint-Fuscien, 2020). As many professional— and disproportionately politically conservative— Army officers were killed in the devastating early months of the war in 1914, they were replaced by non-professional reserve officers from 1915 onwards. These reservists tended to be university educated, and included many teachers and those more likely to support the left (see Appendix C.3).[32] Reserve officers differed from professional officers not only in their political leanings, but also their leadership styles, being closer to the men under their command (Saint-Fuscien, 2020). Indeed, compared to the average municipality in the military bureau, officers who died *during* 1914 came from *less* left leaning places, while officers who died *after* 1914 came from *more* left wing places.[33] We thus expect (and Column 6 of Table 4 confirms) that the oblique transmission of left-wing values tends to be more prevalent among those exposed to officers who perished after 1914.

War experience   To investigate whether political conversion can be explained by particular aspects of war and trauma, we estimate Equation (1) with the addition of interaction terms between the treatment indicator and variables capturing the military fatality rate and rotation to particularly focal or deadly battles. In particular, we consider both defensive battles that were decisive victories for the French Army, such as the Battle of the Marne in 1914, as well as particularly gruesome, deadly, and admittedly failed offensives such as the Chemin des Dames in 1917. Results in Appendix Table A17 show that the interaction coefficients between the treatment of interest and proxies of war-time experiences are largely insignificant. The intensity of fatalities or the participation to particularly focal battles have no mediating effects on our conversion results. The only exception is the coefficient associated with the interaction between exposure to a socialist regiment and rotation at the battle of Verdun in 1916. As indicated at the bottom of this table, 90% of municipalities in the sample were assigned to French infantry regiments rotated through Verdun during the 10

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[32]For example, in the Loir-et-Cher, out of 302 teachers who were mobilised, 63 were officers and 163 non-commissioned officers.

[33]Controlling for military bureau fixed effects and adjusting standard errors for clustering at the military bureau level, a regression using the left vote share in 1914 as the dependent variable yields a negative coefficient associated with the number of COs who died in 1914 (-0.30, s.e.: 0.20) and a positive and statistically significant coefficient for the COs who died after 1914 (0.10, s.e.: 0.05).

months that the battle lasted (between February and December 1916).[34] The results therefore suggest that virtually all regiments that served in France during the war experienced similar conversion.

Persistence   We next ask whether the political effects of trench exposure endured. If the conversion induced by trench exposure was due to the provision of new information by trusted peers, as opposed to due to temporary conformity pressures, we would expect these ideological changes to persist, even long after the war.

Table 5, Column 1, shows that voter conversion to the left persisted throughout the interwar period, remaining relatively unchanged in magnitude into the last election before WWII. The effect further persists after WWII until the end of the 1980s, albeit much attenuated in magnitude.[35]

Interestingly, the emergence and persistence of our effects coincide not only with the era when the left-right divide structured French politics, but also with the period when the left-wing vote was the highest in the countryside, and the rural-urban divide was the least pronounced across all elections between the restoration of the Republic in 1848 and 2020 (Piketty and Cagé, 2023).

Table 5: Exposure to Socialist Regiments in WWI and Long-Run Voting Persistence

	SFIO: 1936	Left: 1945-58	Left: 1962-78	Left: 1981-88	Left: Post 1990
	(1)	(2)	(3)	(4)	(5)
Exposure to Left-wing Regiment	0.325*	0.019**	0.029***	0.019	0.003
	(0.187)	(0.009)	(0.011)	(0.013)	(0.010)
Bandwidth	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓
R-squared	0.74	0.79	0.82	0.66	0.72
Observations	11,344	11,541	11,540	11,500	11,543
Mean DepVar	1.85	0.26	0.29	0.37	0.20
Sd DepVar	1.48	0.10	0.10	0.11	0.09

Notes: An observation is a municipality-boundary pair. *Exposure to Left-wing Regiment* is an indicator equal to one if a municipality is on the side of the military boundary that was allocated to a left-wing bureau, defined as a bureau whose average vote share for the socialist in 1914 is higher than the mean (weighted by registered voters in 1914). All specifications use a 10 km RD bandwidth and report OLS estimates of Equation 1. Robust standard errors two-way clustered at municipality and boundary level in parentheses.

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[34]Regiments that were not rotated at Verdun and that, as suggested by these results, did not experience conversion, were mostly those that had already been dispatched to the South-Eastern European front in the Dardanelles and Salonica or made prisoners at the start of the war.

[35]This may potentially be due to compositional changes on the left and the electorate due to female suffrage post-WWII.

5.2 A Stylized Model of Asymmetric Persuasion and Coordination

To interpret the empirical findings above, we develop a simple model of belief updating and strategic voting under exposure to trench-based peers and officers. The model captures two core mechanisms suggested by the data: (i) asymmetric persuasion through politically novel and credible trench signals, and (ii) coordination motives that amplify ideological convergence within regiments.

Setup Consider a soldier i from municipality m, assigned to regiment $r(m)$. We index this soldier as ir (with m omitted where unambiguous). We observe voting at the municipality level, but the peer interactions in the trenches occur at the regiment level. Thus, $\mathcal{I}_r = 1, ..., n_r$ is the set of individuals allocated to regiment r. All variables are defined in $[0, 1]$, where 0 denotes the far left, 1 denotes the far right, and intermediate values reflect centrist positions.

Timing. At the beginning of the war each soldier enters the regiment with a prior belief. Then, during the war, in the trenches, soldiers receive two noisy ideological signals from their peers (whose average is given by Θ_r) and from trench-level officers (whose average is given by Ω_r). After demobilization, each veteran chooses a voting action x_{ir} in the post-war election, influenced by their updated posterior belief and by the voting choices of their regiment peers.

Information Structure Each regiment $r(m)$ has a pre-war ideological mean $\mu_r \in [0, 1]$, with 0 corresponding to the far left and 1 to the far right. Each soldier ir holds a prior belief $b_{ir} \sim \mathcal{N}(\mu_{ir}, \sigma_b^2)$. Observe that b_{ir} may be different between soldiers from the same regiment r because each regiment r draws on many municipalities.

During wartime trench experience, each soldier ir receives two noisy ideological signals:

$$z_{ir}^P = \Theta_r + \varepsilon_{ir}^P, \qquad z_{ir}^O = \Omega_r + \varepsilon_{ir}^O,$$

where $\Theta_r \in [0, 1]$ and $\Omega_r \in [0, 1]$ denote the mean ideologies of trench *peers* and trench-level *officers* in regiment r, respectively. The noise terms are given by:

$$\varepsilon_{ir}^P \sim \mathcal{N}(0, \sigma_P^2), \qquad \varepsilon_{ir}^O \sim \mathcal{N}(0, \sigma_O^2).$$

Reduced-form signal weights. We let signal precision and hence its weight in the posterior increase with *(i)* interaction intensity and *(ii)* ideological novelty. Formally,

$$\lambda_{ir}^P = \beta \, T_r \, |\mu_{ir} - \Theta_r|, \qquad \phi_{ir}^O = \kappa \, T_r \, |\mu_{ir} - \Omega_r|, \qquad 0 < \beta, \kappa \leq 1,$$

where $T_r \in (0, 1]$ is a regiment-level trench-mixing index.

Posterior ideology. The expected posterior belief of agent ir is given by:

$$\xi_{ir} = (1 - \lambda_{ir}^P - \phi_{ir}^O) b_{ir} + \lambda_{ir}^P \Theta_r + \phi_{ir}^O \Omega_r. \tag{3}$$

Appendix A shows how (3) arises from standard Bayesian updating under normal priors and signals.[36] We also show (see Lemma 1) that, if $b_{ir} \in [0, 1]$ and $\lambda_{ir}^P + \phi_{ir}^O < 1$, then $\xi_{ir} \in [0, 1]$.

Strategic voting with coordination. Post-war, veterans choose a continuous ideology action $x_{ir} \in [0, 1]$. The expected utility is equal to:

$$U(x_{ir}) = -\frac{1}{2}(x_{ir} - \xi_{ir})^2 - \frac{\gamma}{2}(x_{ir} - \pi_r^{-ir})^2, \qquad 0 < \gamma < 1,$$

where γ measures the strength of conformism pressure and $\pi_r^{-ir} := \frac{1}{n_r - 1} \sum_{k \in \mathcal{I}_r, k \neq i} x_{kr}$ is the regimental mean vote leaving out agent ir's vote. This (expected) utility has two terms. The first one captures the fact that soldiers want to be consistent with their posterior beliefs, that is, close to their priors as well as the (average) signals they received from their peers and officers. The second term captures the fact that soldiers want to conform to the average voting of their peers.

The best response function of each soldier ir is given by:

$$x_{ir}^* = \theta \xi_{ir} + (1 - \theta)\pi_r^{-ir},$$

where $\theta := 1/(1 + \gamma)$ and ξ_{ir} is given by (3). This is equivalent to

$$x_{ir}^* = \theta \xi_{ir} + \frac{(1 - \theta)}{n_r - 1} \sum_{k \in \mathcal{I}_r, k \neq i} x_{kr}^*. \tag{4}$$

The optimal voting decision of each veteran is a convex combination between their posterior beliefs and the average voting of their peers, where the weights are θ and $1 - \theta$.

Proposition 1 in Appendix A shows that there exists a unique pure-strategy equilibrium given by (A.3) where, for each individual ir, $x_{ir}^* \in [0, 1]$.

Mapping to the data. In Appendix A, we show that the model yields three implications that mirror our empirical patterns:

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[36]The same rescaling can be micro-founded by an attention-cost choice that raises signal precision with $T_r|\mu_r - \Theta_r|$, in line with rational inattention models.

1. **Ideological novelty and asymmetry.**

   Persuasion is strongest when $\Theta_r < \mu_{ir} < b_{ir}$, that is, when conservative priors (high b_{ir}) encounter novel left-wing trench ideologies. By contrast, when priors are already left-leaning, exposure to right-wing peers induces little or no belief updating, producing an asymmetric pattern consistent with our empirical results.

2. **Trench mixing.** The peer-ideology effect grows with T_r, the regiment-level trench-mixing index, when priors and peer beliefs diverge more sharply.

3. **Officer background.** The leftward shift is amplified when trench officers originate from more left-leaning areas.

These predictions align with our empirical heterogeneity analysis: we find stronger effects of left-wing exposure in initially conservative municipalities, in regiments with greater urban–rural mixing, and when officers came from more left-leaning regions. Throughout, we interpret observed municipality vote shares as reflecting the average equilibrium π_r^{-ir*} of returning veterans.

6   Conclusion

This paper provides new evidence on how exposure to partisan peers under high-stakes conditions can lead to persistent ideological conversion. We show that the shared regimental experience of French infantry soldiers during World War I caused lasting shifts in political preferences, particularly among rural populations previously unexposed to the redistributive message of the left. Municipalities whose soldiers were assigned to more left-leaning regiments in WWI exhibited a marked postwar increase in support for the Socialist party, while those exposed to conservative peers became inoculated against the left. These partisan shifts emerged through interpersonal trust and peer influence forged within the trenches, rather than through formal hierarchy or elite persuasion, and endured for decades after the war. Our findings highlight the asymmetric nature of ideological transmission and the role of trusted peer networks in reshaping political cleavages.

Beyond illuminating the dynamics of partisanship, our work may help with understanding a crucial, and puzzling, shift in French politics: the transition from rural-urban divisions based often on social and cultural issues towards contests between the right and left-wing coalitions that encompassed many rural voters. Indeed, this left-right divide would shape French politics for much of the twentieth century. We show that the emergence and persistence of our effect correspond not only to the time at which the left-right divide structured

French politics, but also the time at which the left-wing vote was highest in the countryside, and the rural-urban divide the least pronounced. To the extent that the politics of redistribution is more capable of policy accommodation and compromise than the politics of cultural identity, our results shed new light on how past alignments in favor of the former were forged.

Finally, while our analysis draws on historical patterns from interwar and wartime France to identify causal effects, our findings more broadly highlight the powerful role of social interactions in shaping political preferences. The dynamics we uncover remain highly relevant today—perhaps even more so in contemporary societies, where individuals increasingly self-select into ideologically homogeneous networks, fostering polarization in attitudes and behavior (Zhuravskaya et al., 2020). Whether such social and informational segregation can produce lasting political consequences is a pressing question. In ongoing work (Grosjean et al., 2025), we show that political convergence within regiments paradoxically gave rise to deeper cleavages after the war, contributing to stark partisan divisions at the local level and laying the groundwork for what some have termed France's "long civil war."

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Political Breakthroughs in the Trenches
Online Appendix

By Pauline Grosjean, Saumitra Jha, Michael Vlassopoulos, and Yves Zenou

A   Theoretical framework

A.1   Bayesian updating

Assume the prior and signal structure described in Section 5.2. Let $\tau_b = 1/\sigma_b^2$, $\tau_P = 1/\sigma_P^2$, $\tau_O = 1/\sigma_O^2$ and $\tau = \tau_b + \tau_P + \tau_O$. Standard *Bayesian* updating with Normal distributions yields the following posterior

$$\xi_{ir} = (1 - \lambda_{ir}^P - \phi_{ir}^O)\, b_{ir} + \lambda_{ir}^P \Theta_r + \phi_{ir}^O \Omega_r, \tag{A.1}$$

where $\lambda_{ir}^P = \tau_P/\tau < 1$, $\phi_{ir}^O = \tau_O/\tau < 1$.

Reduced-form weights used in the main text. To capture how persuasion strength rises with trench mixing (T_r) and ideological novelty ($|\mu_{ir} - \Theta_r|$), we rescale the Bayesian weights in the following way:

$$\lambda_{ir}^P = \beta\, T_r\, |\mu_{ir} - \Theta_r|, \qquad \phi_{ir}^O = \kappa\, T_r\, |\mu_{ir} - \Omega_r|, \qquad 0 < \beta, \kappa \leq 1.$$

This reduced-form specification preserves the Bayesian structure but allows signal precision to depend on behavioral features observable in the data: the intensity of trench exposure and the ideological distance between priors and signals.

Lemma 1. *If $b_{ir} \in [0,1]$ and $\lambda_{ir}^P + \phi_{ir}^O < 1$, then $\xi_{ir} \in [0,1]$.*

Proof: Define
$$\alpha := \lambda_{ir}^P + \phi_{ir}^O < 1.$$

Then we can write:
$$\xi_{ir} = (1 - \alpha)\, b_{ir} + \lambda_{ir}^P \Theta_r + \phi_{ir}^O \Omega_r.$$

This is a convex combination of the three values b_{ir}, Θ_r, and Ω_r, with weights:

$$w_1 = 1 - \alpha, \quad w_2 = \lambda_{ir}^P, \quad w_3 = \phi_{ir}^O, \quad \text{such that } w_1 + w_2 + w_3 = 1.$$

Assuming $b_{ir} \in [0, 1]$, and since $\Theta_r, \Omega_r \in [0, 1]$, it follows that:

$$\xi_{ir} = w_1 b_{ir} + w_2 \Theta_r + w_3 \Omega_r \in [0, 1],$$

because a convex combination of values in $[0, 1]$ remains in $[0, 1]$. Q.E.D.

Observe that for Lemma 1 to hold we assume that b_{ir} is a truncated normal on $[0, 1]$.

A.2 Strategic Voting and Equilibrium

In the text, we have shown that the equilibrium is given by

$$x_{ir}^* = \theta \xi_{ir} + \frac{1 - \theta}{n_r - 1} \sum_{k \in \mathcal{I}_r, k \neq i} x_{kr}^*. \tag{A.2}$$

where $\theta := 1/(1 + \gamma)$ and ξ_{ir} is given by (3).

A.3 Existence and uniqueness of equilibrium

Denote by $\mathbf{x}_r$ the $(n_r \times 1)$ column vector of x_{ir}, $\boldsymbol{\xi}_r$ the $(n_r \times 1)$ column vector of ξ_{ir}, $\mathbf{I}_r$ the $(n_r \times n_r)$ identity matrix, and $\widehat{\mathbf{G}}_r$ the $(n_r \times n_r)$ row-normalized adjacency matrix of the complete network.

Proposition 1. *Assume that $\lambda_{ir}^P + \phi_{ir}^O < 1$. There exists a unique pure-strategy equilibrium given by*

$$\mathbf{x}_r^* = \left(\mathbf{I}_r - (1 - \theta) \widehat{\mathbf{G}}_r \right)^{-1} \theta \, \boldsymbol{\xi}_r. \tag{A.3}$$

This equilibrium is such that each $x_{ir}^* \in [0, 1]$.

Proof: By using standard linear-algebra arguments (Ballester et al., 2006), there exists a unique equilibrium if $1 - \theta < 1$, since the largest eigenvalue of a row-normalized matrix is 1. Since $1 - \theta = \gamma/(1 + \gamma) < 1$, this is always true. Let us now show that $x_{ir}^* \in [0, 1]$.

Recall that the unique pure-strategy equilibrium is given by

$$\mathbf{x}_r^* = \left(\mathbf{I}_r - (1 - \theta) \widehat{\mathbf{G}}_r \right)^{-1} \theta \, \boldsymbol{\xi}_r, \tag{A.4}$$

where $0 < \theta < 1$, $\boldsymbol{\xi}_i \in [0, 1]^n$, and $\widehat{\mathbf{G}}_r$ is the row-normalized adjacency matrix of the complete network.

Step 1: Neumann Series Expansion

Since $\widehat{\mathbf{G}}_r$ is row-stochastic, its spectral radius is $\rho(\widehat{\mathbf{G}}_r) = 1$. Therefore, the spectral radius of $(1-\theta)\widehat{\mathbf{G}}_r$ is $1-\theta < 1$. This ensures that the inverse can be written as a Neumann series:

$$\left(\mathbf{I}_r - (1-\theta)\widehat{\mathbf{G}}_r\right)^{-1} = \sum_{k=0}^{\infty}(1-\theta)^k\widehat{\mathbf{G}}_r^k.$$

Substituting this into the equilibrium expression (A.3), we get for each agent ir:

$$x_{ir}^* = \theta\sum_{k=0}^{\infty}(1-\theta)^k\sum_{jr=1}^{n_r}\left(\widehat{\mathbf{G}}_r^{\,k}\right)_{irjr}\xi_{jr}. \tag{A.5}$$

Step 2: Inner Sum is a Convex Combination

Note that for each $k \geq 0$, the matrix $\widehat{\mathbf{G}}_r^{\,k}$ is also row-stochastic because it is a product of row-stochastic matrices. Therefore, for each ir,

$$\sum_{jr=1}^{n_r}\left(\widehat{\mathbf{G}}_r^{\,k}\right)_{irjr} = 1, \quad \text{and} \quad \left(\widehat{\mathbf{G}}_r^{\,k}\right)_{irjr} \geq 0.$$

Since $\xi_{jr} \in [0,1]$ for all jr, we have:

$$0 \leq \sum_{jr=1}^{n_r}\left(\widehat{\mathbf{G}}_r^{\,k}\right)_{irjr}\xi_{jr} \leq 1. \tag{A.6}$$

Step 3: Bounding x_{ir}^*

Using the bounds from Step 2 in equation (A.6), we obtain:

$$0 \leq x_{ir}^* = \theta\sum_{k=0}^{\infty}(1-\theta)^k\left[\sum_{jr=1}^{n_r}\left(\widehat{\mathbf{G}}_r^{\,k}\right)_{irjr}\xi_{jr}\right] \leq \theta\sum_{k=0}^{\infty}(1-\theta)^k.$$

The geometric series sums to:

$$\sum_{k=0}^{\infty}(1-\theta)^k = \frac{1}{\theta},$$

so we conclude:

$$0 \leq x_{ir}^* \leq \theta\cdot\frac{1}{\theta} = 1.$$

A.4 Comparative statics

As can be seen from the equilibrium vote given by (A.3) or (A.5), x_{ir}^* as well as $\pi_r^{-ir*} := \frac{1}{n_r-1}\sum_{k\in\mathcal{I}_r, k\neq i}x_{kr}^*$ increase with ξ_{ir}, which is given by (3). Thus, we analyze how trench

exposure affects the distribution of $\{\xi_{ir}\}$ across agents. Because all variables are between 0 and 1, an increase in a variable means a move toward the right while a decrease implies a move toward the left.

(i) Ideological novelty and asymmetry. Given $\lambda_{ir}^P = \beta T_r |\mu_{ir} - \Theta_r|$, by differentiating (A.1), we obtain

$$
\begin{aligned}
\frac{\partial \xi_{ir}}{\partial \Theta_r} &= \lambda_{ir}^P + \beta\, T_r\, \text{sgn}(\mu_i - \Theta_r)\Theta_r - \beta T_r\, \text{sgn}(\mu_i - \Theta_r)b_{ir}. \\
&= \lambda_{ir}^P + \beta\, T_r\, (\Theta_r - b_{ir})\, \text{sgn}(\mu_i - \Theta_r).
\end{aligned}
$$

If priors and peer ideologies do not differ, i.e., $\mu_{ir} = \Theta_r$, or, if they differ and $b_{ir} < \Theta_r < \mu_{ir}$, then $\partial \xi_{ir}/\partial \Theta_r > 0$ and, thus, $\partial \pi_r^{-ir}/\partial \Theta_r > 0$. This means that, when the priors are conservative (μ_{ir} is high), a leftward shift in peers' beliefs (i.e., a decrease in Θ_r) pushes the average voting in regiment r to the left (reduction in π_r^{-ir}).

On the other hand, if $\Theta_r < \mu_{ir} < b_{ir}$,[1] then, $\partial \xi_{ir}/\partial \Theta_r < 0$ and, thus, $\partial \pi_r^{-ir}/\partial \Theta_r < 0$. That is, an increase in peer ideology (Θ_r moves to the right) decreases the average voting (move to the left). This is consistent with *asymmetric persuasion* because

$$
\Theta_r < \mu_{ir} < b_{ir} \implies \frac{\partial \pi_r^{-ir}}{\partial \Theta_r} < 0,
$$

while

$$
b_{ir} < \Theta_r < \mu_{ir} \implies \frac{\partial \pi_r^{-ir}}{\partial \Theta_r} > 0.
$$

Soldiers update their beliefs more when exposed to ideologically novel (unexpected) trench signals.

(ii) Trench mixing. By differentiating again, we get

$$
\frac{\partial^2 \xi_{ir}}{\partial \Theta_r\, \partial T_r} = \beta|\mu_{ir} - \Theta_r| + \beta\, (\Theta_r - b_{ir})\, \text{sgn}(\mu_{ir} - \Theta_r).
$$

We find that if either $\Theta_r < \mu_{ir} < b_{ir}$ or $b_{ir} < \mu_{ir} < \Theta_r$, then $\frac{\partial^2 \pi_r^{-ir}}{\partial \Theta_r\, \partial T_r} < 0$. This implies that trench mixing amplifies the leftward shift in ξ_{ir} when priors and peer ideologies differ, increasing π_r^{-ir}. Thus, whenever priors and peers differ, greater trench mixing amplifies the persuasion effect.

---

[1]Indeed, for $\frac{\partial \xi_{ij}}{\partial \Theta_r} < 0$, we need to have: $\lambda_{ir}^P < \beta T_r(b_{ir} - \Theta_r)\,\text{sgn}(\mu_i - \Theta_r)$. This is equivalent to $|\mu_{ir} - \Theta_r| < (b_{ir} - \Theta_r)\,\text{sgn}(\mu_i - \Theta_r)$. In this case, it has to be that $\mu_{ir} > \Theta_r$; otherwise this inequality is impossible. This inequality is equivalent to $\mu_{ir} < b_{ir}$.

(iii) Officer background. Since $\phi_{ir}^O = \kappa T_r |\mu_{ir} - \Omega_r|$, by differentiating (A.1), we obtain

$$\frac{\partial \xi_{ir}}{\partial \Omega_r} = \phi_{ir}^O + \kappa T_r \ (\Omega_r - b_{ir}) \operatorname{sgn}(\mu_{ir} - \Omega_r).$$

It is easily verified that it is negative if either $\Omega_r < \mu_{ir} < b_{ir}$ or $b_{ir} < \mu_{ir} < \Omega_r$. In this case, a more left-leaning officer corps shifts beliefs leftward and increases π_r^{-ir}: a left-leaning officer corps strengthens the leftward shift induced by left-leaning peers, in line with the interaction shown in Table 4, column 5.

B   Within-Regiment Polarization and Political Convergence: Additional analysis

This section provides supplementary definitions, robustness checks, and evidence related to the within-regiment political convergence documented in Section 3.3.

Within-regiment measures of polarization.   To complement the analysis in Section 3.3, we provide the formal definitions of the polarization measures used to capture ideological convergence across municipalities within each regiment.

Consider municipality i within regiment r, in election $t = 1914, 1919$. We define a left-to-right axis and assign the different political parties a number $n = 1, 2, ..., 8$, starting from the extreme left (1) and ending at the extreme right (8). Let $Y_{ir}^t = n$ if party n receives the highest vote share in municipality i at time t.

Our first measure, is simply the difference between the top party in municipality i and the top party in regiment r (computed over municipalities $k \neq i$). WDenote by N_r the number of municipalities in regiment r. Then, we have:

$$\Delta Y_{ir}^t = \left| Y_{ir}^t - Y_r^t \right| = \left| Y_i^t - \frac{\sum_{k \neq i, k \in r} Y_k^t}{N_r - 1} \right|$$

is the absolute difference in political opinions at time $t = 1914, 1919$.

This measure only considers the vote for the top party in each municipality relative to its regiment. To capture more nuanced changes in the distribution of votes over multiple parties in each municipality- regiment pair, we define a *relative party index*. This index considers the absolute difference between each political party's share in the municipality and its average share in the regiment (calculated over all municipalities $k \neq i$ within regiment r). Formally, denoting by s_{irp}, the share of political party p in municipality i in regiment r,

and s_{rp}, the share of political party p in regiment r (averaged over all municipalities $k \neq i$ in r), the relative party index between municipality i and regiment r is:

$$RPI_{ir} = \sum_p |s_{irp} - s_{rp}|.$$

This index decreases the more the composition of political parties in municipality i mirrors the composition of political parties in regiment r.

Panel regressions on Within-Regiment Convergence   In Table 1, we describe the dynamics of political convergence within a recruitment bureau by estimating the following panel specification:

$$Y_{i,r,t} = \alpha_{i,r} + \beta PostWar_t + \alpha_{i,r} + u_{i,r,t}, \tag{B.1}$$

where our unit of analysis is a municipality i raising troops for regiment r observed in election t. Municipalities are the smallest administrative unit in the Census, with an average population of 1,138 inhabitants in 1911. We weigh each regression by the number of adult males in 1914, which we proxy by the number of registered voters in the 1914 election. On average, a municipality had 279 registered voters in 1914 (median: 147).

$Y_{i,r,t}$ denotes the measure of polarization between municipality i and regiment r in election year t. $\alpha_{i,r}$ is a set of municipality fixed effects. $PostWar_t$ is an indicator variable taking the value of one in the Post-WWI period. We cluster standard errors two-way at the regiment and at the political district levels.

The purpose of this analysis is descriptive. The coefficient β describes how polarization within a recruitment bureau changed after the war. The convergence of political opinions over time within a recruitment bureau could simply be due to the fact that regiments bring together municipalities that were more similar to one another and would have converged to one another even in the absence of the war. While municipality fixed effects account for time-invariant municipality-level heterogeneity, the possibility remains that regiments brought together municipalities on the basis of specific dimensions that drive their convergence over time. As we explained in the paper, this concern is at odds with the principles of Army organization, which designed regiments to be non-specialized and interchangeable units. These objectives would be undermined by the systematic sorting of municipalities with specific characteristics into different regiments. An empirical translation of the concern that political convergence is driven by the dynamic influence of omitted characteristics is that regiments in which municipalities were closer politically to one another were also the ones in which these municipalities systematically differed along other characteristics that

could have driven political convergence over the war. We show in Table A1 that this is not the case for a broad range of observable characteristics.

Dyadic regressions In Section 3.3, we report that political convergence is stronger among municipalities drafted into the same regiment. Here, we describe the dyadic model and estimation strategy in more detail.

We can also directly account for the influence of geographic closeness in the following dyadic model:

$$Y_{ij}^t = \beta SameRegiment_{ij} + \gamma Y_{ij}^{1914} + \mathbf{X}_{ij}\phi' + \alpha_i + \alpha_j + e_{ij}, \tag{B.2}$$

where the dependent variable Y_{ij}^t measures the similarity in voting outcomes of municipality pair (i, j) in election year t. $SameRegiment_{ij}$ is an indicator variable for whether municipalities (i, j) were recruited in the same military bureau. X_{ij} is a vector of constructed dyad-specific attributes, including the geographic distance between municipalities (implicitly X_{ij} for $i \neq j$). The specification includes fixed effects α_i and α_j for each municipality in the pair (i, j). The model is estimated on the $N(N-1)/2$ municipality dyads. In Equation (B.2), β thus captures the influence of military recruitment net of the influence of geographic distance and local unobservable municipal characteristics.

This specification has the additional advantage of allowing us to estimate whether municipalities that are in the same regiment are also more similar to each other in voting outcomes prior to the start of the war, in 1914. In this placebo regression, we expect β to be statistically indistinguishable from zero. By contrast, we expect β to be negative and statistically significant when the dependent variable measures polarization between two municipalities after the war. The results are presented in Table A2. Due to the computational challenges related to the large number of possible dyads that can be constructed from our sample of 35,000 municipalities, we estimate the dyadic regressions on a random 1% sample (about 350 municipalities) over 500 replications and report average coefficients, and 95% confidence intervals based on the bootstrap percentile method.

Gains from political homogeneity within units Though our focus is on the process of political homogenization of regiments, a related question is whether politically homogeneous units were advantageous in the high-stakes environment of the war itself. To avoid reverse causality, we can make progress on this question by asking a related one: were there advantages to being a soldier in initially more politically homogeneous regiments? In Columns 1-6 of Table A3, we regress the fatality rate among the line infantry in each municipality on political polarization within a military bureau, measured in the 1914 elections. We show re-

Table A1: Balance on War Experience and Pre-War Characteristics

Variables	Observations (municipalities)	Mean	Coeff (se)	p-value	Coeff (se)	p-value	Coeff (se)	p-value
			Dist Party i-b		Relative Party Index		Sh/ Left Regiment	
Pre-War Characteristics								
Log pop 1911	34,922	6.237	0.030	0.038	-0.056	0.443	0.056	0.233
		(0.985)	(0.014)		(0.072)		(0.046)	
Prop Jewish in 1872	30,333	0.003	0.000	0.988	0.001	0.090	-0.001	0.181
		(0.007)	(0.000)		(0.001)		(0.001)	
Prop Protest in 1872	30,333	0.018	0.000	0.631	-0.002	0.805	0.002	0.616
		(0.057)	(0.001)		(0.007)		(0.005)	
Prop Cathol in 1872	30,333	0.976	0.001	0.465	0.001	0.922	-0.001	0.791
		(0.061)	(0.001)		(0.007)		(0.005)	
Prop Foreign in 1872	30,333	0.021	0.001	0.354	0.001	0.689	0.005	0.149
		(0.031)	(0.001)		(0.004)		(0.003)	
Prop Intern Migrants in 1872	30,333	0.191	-0.002	0.330	-0.010	0.485	0.002	0.823
		(0.108)	(0.002)		(0.014)		(0.007)	
Prop Literate in 1872	29,832	0.619	0.004	0.278	0.025	0.222	-0.020	0.102
		(0.152)	(0.003)		(0.020)		(0.012)	
Prop in agric in 1872	30,333	0.167	-0.003	0.331	-0.002	0.889	0.022	0.018
		(0.142)	(0.003)		(0.017)		(0.009)	
Prop in indus in 1872	30,333	0.322	0.005	0.103	-0.008	0.607	0.003	0.764
		(0.142)	(0.003)		(0.015)		(0.009)	
Prop in commerce in 1872	30,333	0.153	0.000	0.898	0.016	0.085	-0.005	0.275
		(0.071)	(0.002)		(0.009)		(0.005)	
Prop in banks in 1872	30,333	0.046	0.000	0.773	-0.001	0.765	-0.001	0.741
		(0.041)	(0.001)		(0.005)		(0.003)	
Prop professionals in 1872	30,333	0.129	0.000	0.980	0.003	0.712	-0.006	0.191
		(0.063)	(0.001)		(0.008)		(0.004)	
Prop rentiers in 1872	30,333	0.094	-0.001	0.423	0.000	0.971	-0.005	0.054
		(0.049)	(0.001)		(0.005)		(0.003)	
Prop unempl in 1872	30,333	0.013	0.000	0.317	-0.005	0.038	-0.001	0.421
		(0.023)	(0.000)		(0.002)		(0.001)	
War Experience								
Marne	34,947	0.659	0.001	0.939	0.049	0.453	-0.069	0.128
		(0.443)	(0.011)		(0.065)		(0.045)	
Verdun	34,947	0.899	-0.010	0.137	0.034	0.414	0.007	0.819
		(0.280)	(0.007)		(0.041)		(0.030)	
Verdun under Petain	34,947	0.501	-0.005	0.687	0.010	0.883	0.000	0.995
		(0.468)	(0.012)		(0.066)		(0.045)	
Somme	34,947	0.441	0.020	0.111	0.038	0.586	0.005	0.919
		(0.479)	(0.013)		(0.070)		(0.046)	
Aisne	34,947	0.479	0.011	0.399	0.118	0.092	-0.036	0.428
		(0.477)	(0.013)		(0.070)		(0.045)	
Chemin des Dames	34,947	0.378	0.009	0.450	0.076	0.271	-0.032	0.482
		(0.457)	(0.012)		(0.068)		(0.045)	
Outside France	34,947	0.086	0.008	0.235	-0.029	0.466	0.023	0.351
		(0.268)	(0.007)		(0.040)		(0.025)	

Notes: This Table shows the coefficients (and corresponding p-values) of an OLS regression of each characteristic on the two main measures of polarization: distance in top party vote shares and Relative Party Index, as well as on the average (log) share of left-wing vote (in the 1914 elections) in the regiment to which a municipality is assigned. Standard errors are clustered at the military recruitment bureau level.

Table A2: Convergence in voting preferences after WWI: Dyadic results (Monte Carlo)

	Diff in majo. party btw i and j	
	(1)	(2)
	1914	1919
Same recruit. bureau	-0.173	-0.842
	(-0.413, 0.069)	(-1.173, -0.557)
Log dist	0.151	0.066
	(0.077, 0.244)	(0.024, 0.115)
Diff in majo. party btw i and j in 1914		0.082
		(0.026, 0.147)
Municipalities FE	✓	✓

Notes: The table reports average coefficients obtained from estimating the regressions on a random 1% sample (about 350 municipalities) over 500 replications. The parentheses indicate 95% confidence intervals based on the bootstrap percentile method.

sults for the Montalvo and Reynal-Querol (2005) index (computed over bureau-level average vote shares) and our two alternative measures. We control for political district (department) fixed effects and initial municipal population throughout and add controls for initial vote shares for the left or for the right in a municipality in even-numbered columns. We adjust standard errors for two-way clustering at recruitment bureau and department levels in all specifications. As the Table reveals, pre-war polarization has a positive but insignificant relationship with the military fatality rate.

Another indicator is that of the ability to organize collectively. One clear indicator of collective action in the context of WWI is the occurrence of war-time mutinies within the regiment (see below). We obtain this information from each regiment's *Historique*. On average, 31.8% of municipalities raised a line infantry regiment that experienced a mutiny over the course of the war with 24.28% of regiments experiencing a mutiny in 1917 specifically. In Columns 7-12 of Table A3, we regress the probability of mutiny on either proxy of political polarization in a military bureau in 1914. Consistent with the intuition that political homogeneity should facilitate collective action, we observe that the probability of mutinies was higher in regiments raised in military bureaus that were more homogeneous politically.

In the even-numbered columns of Table A3, we include controls for the initial voting patterns in each municipality. We find that both the fatality and the mutiny rates are lower in regiments raised in bureaus that consisted of more left-wing municipalities. However, the coefficients associated with the measures of polarization are barely affected, suggesting that polarization was associated with collective action through separate channels than partisanship.

The negative relationship between the socialist vote share in 1914 and the fatality rate is explained by the fact that although mobilization in 1914 was universal, some industrial workers were recalled as the conflict progressed due to the increasing exigencies of war production. However, left-wing industrial workers, more than any other group, appear to

Table A3: Political cohesion and collective action: Evidence from mutinies and military fatalities

	Line infantry death rate						Mutinies					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Polarization (M-RQ) in regiment	-4.280	-3.489					-0.628*	-0.671*				
	(43.636)	(41.950)					(0.345)	(0.341)				
Distance Majo Party in municip. vs Reg.			0.324	0.109					-0.011*	-0.011		
			(0.830)	(0.809)					(0.007)	(0.006)		
Relative Party Index municip. vs. reg.					-0.100	-0.051					-0.015**	-0.014**
					(1.687)	(1.648)					(0.007)	(0.007)
Left vote, municip. 1914		-0.166*		-0.167*		-0.167*		-0.001**		-0.001**		-0.002***
		(0.094)		(0.095)		(0.095)		(0.001)		(0.001)		(0.001)
Right vote, municip. 1914		0.124**		0.123**		0.124**		-0.000		-0.000		-0.000
		(0.052)		(0.052)		(0.052)		(0.000)		(0.000)		(0.000)
Dept FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.14	0.14	0.14	0.14	0.14	0.14	0.70	0.71	0.70	0.70	0.70	0.70
Observations	34,518	33,407	33,407	33,407	33,405	33,405	34,947	33,725	33,725	33,725	33,723	33,723
Mean DepVar	268.71	269.00	269.00	269.00	269.00	269.00	0.32	0.32	0.32	0.32	0.32	0.32
Sd DepVar	119.72	119.38	119.38	119.38	119.38	119.38	0.43	0.43	0.43	0.43	0.43	0.43

Notes: An observation is a municipality. All regressions include department fixed effects. In Columns 1 to 6, the dependent variable is the (log of) each municipality's WWI fatality rate (computed as the number of soldiers born in a municipality who died in WWI, divided by the municipality population in 1911, see Gay and Grosjean (2023) on data sources for WWI fatalities). In Columns 7 to 12, the dependent variable is a dummy variable taking value one if the line infantry regiment recruited in the bureau to which the municipality is attached experienced a mutiny over the course of the war (mean: 0.39, s.d.: 0.49). "Polarization (M-RQ) in regiment" is the Montalvo and Reynal-Querol (2005) index of polarization, measured at the regiment level. "Distance Majo Party in municip. vs Reg." and "Relative Party Index municip. vs. reg." are our two main measures of polarization between a municipality and its regiment, which we described in Section B. Odd columns control for department fixed effects and municipal population in the 1911 Census. Even columns add controls for vote shares for the left and for the right in 1914 at the municipality level (excluded category is center). We reconstruct the mutiny history of each regiment from each of the 173 *"Historique du Régiment"* books, which describe the day-to-day operations of each regiment. Robust standard errors, two-way clustered at military recruitment bureau level and at department level, are reported in parentheses.

have left a durable imprint in their former regiments. As shown in section 4, exposure to the left within a regiment, indeed, durably affected partisanship.

C   Historical Appendix: Politics in the Trenches

Numerous personal accounts of veterans highlight the intensity of the common experience within a line infantry regiment in the trenches. For example, Jacques Meyer (1967), himself a veteran of the Great War, collected recollections of daily life of soldiers in his *Vie quotidienne des soldats pendant la grande guerre*. He describes how the "*esprit de corps*" of a regiment, forged in "*misery and danger*", "*melted destinies*", taking precedence over the social or political differences of soldiers and durably united them ([p.369] Meyer (1967)). However, there remains substantial debate among French historians about whether World War 1 was a unifying, nation-building moment for France more generally (Passmore, 2012) or presaged the intense polarization of the 1930s (Millington, 2012). Studying the transmission of ideas and the forging of political networks within the regiments provides a means to reconcile these perspectives. Before we discuss accounts of how politics was made in the trenches and socialist ideals spread, we provide more detail on the political platform of the Socialist party.

C.1   Political Platform of the SFIO

While considered radical at the time, the platform of the SFIO appears moderate in light of the later progression of political, social, and economic rights over the 20th century. Figure A1 provides extracts from the program of the SFIO in 1919 ("*programme d'action du Parti socialiste*"), detailing proposed political and economic reforms. The political reforms include: universal suffrage for both sexes, right for petitioning, proportional representation in the Parliament, a unique legislative Assembly, administrative decentralization, preventing deputies from holding, during their legislature, a number of occupations, including lawyer or CEO of a private firm under government contract, in parallel with higher wages for Parliament members, and the regulation of monopolies. Economic reforms include: social insurance for all French and foreign workers, health and safety at work, limitations of working hours, creation of a minimum wage, equal pay for equal work for foreign workers, and right to unionization.

For agricultural workers, specifically, the document states that: (1) Agricultural workers should receive the same rights as industrial workers in regards to: accidents related to work, wages, working hours, health and safety; (2) Sharecroppers should be protected and tax-farming abolished; (3) Landholder's taxes should be regulated and proportional to production; (4) Small landholders should be allowed to come together in agricultural cooperatives that would organize the sale of agricultural produce, the purchase of seeds, machinery and fertilizer, as well as hail and livestock insurance. Other major policies (not reproduced here) included increasing the progressiveness of income taxation, participation of the state

in the ownership of monopolies and major infrastructures (rail, ports), public investment in daycare centers, public health screening of newborns, and public housing (under the local responsibility of municipalities).

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périmé de la société politique, et d'établir les institutions nouvelles nécessaires à l'activité économique et politique du pays.

Ces institutions auront pour base :

Le suffrage universel des deux sexes;

La consultation directe du peuple;

Le droit d'initiative populaire;

La Représentation proportionnelle intégrale, par grandes régions;

L'Assemblée législative unique;

La décentralisation administrative;

L'incompatibilité du mandat législatif avec certaines professions et fonctions, notamment celles d'administrateur, d'avocat ou de chef d'entreprises en rapport d'affaires avec l'Etat, tout en assurant l'indépendance matérielle des élus par une indemnité en rapport avec leurs charges et le coût de la vie;

La création de Chambres économiques, chargées d'étudier et d'organiser la production nationale et régionale;

L'adaptation des fonctions gouvernementales aux nécessités sociales de production et de répartition des richesses;

La réorganisation, sur le type industriel, et avec la collaboration directe des organismes corporatifs, de tous les services publics, et des grands monopoles qui peuvent être établis dès maintenant au bénéfice de la nation, avec fixation de traitements et de salaires proportionnés aux services et aux besoins.

Dès maintenant, le Parti appelle tous ses groupes, toutes ses fédérations, à engager une énergique agi-

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Le développement de l'assurance sociale sous toutes ses formes pour les ouvriers français et étrangers ;

La protection efficace de l'hygiène et de la sécurité dans le travail;

La réduction progressive des heures de travail, afin d'établir un rapport normal entre le développement de la technique de travail dans l'industrie et les avantages qui doivent en résulter pour les travailleurs;

La fixation d'un minimum de salaires, fondé sur le coût normal de la vie;

Le règlement de l'immigration de la main-d'œuvre étrangère, avec égalité de salaire pour l'égalité de travail;

La reconnaissance, sans aucune réserve, du droit syndical;

En ce qui concerne plus spécialement les travailleurs agricoles :

L'extension des lois qui protègent ou protégeront les ouvriers de l'industrie : accidents, salaires, durée du travail, hygiène, couchage, nourriture;

La protection des métayers, — notamment par l'interdiction du système des fermiers généraux.

La tarification des fermages et l'allocation d'indemnités de plus-value à l'expiration des baux;

L'organisation coopérative des petits propriétaires, fermiers et métayers, pour la production, la vente des produits, l'achat des semences, machines et engrais; l'assurance contre la grêle et la mortalité du bétail.

En ce qui concerne la formation et l'affectation sociales :

La protection rigoureuse des mères et de l'enfance; le contrôle médical de tous les enfants; la création

Notes: Source: Program of the SFIO, 1919. Available at Gallica.

Figure A1: Political and economic platforms of the SFIO in 1919

C.2   French political sentiment on the eve of the war

On the eve of World War 1, Socialist leader, Jean Jaurès, the deputy for Tarn, was among the most prominent voices advocating solidarity and peace. Following his assassination on 31 July 1914, the Socialists joined the *Union Sacrée* coalition government in support of the war. Fearing political contagion of disruptive political ideas, the French government had previously laid plans (*Carnets B*) to arrest a set of "*anarchists, trade unionists, and socialists*" in the event of war (Becker (1973), p. 207). However, faced with grave manpower needs and an outpouring of patriotic sentiment at the beginning of the war, this plan was never

implemented, and these politically committed individuals were drafted into their original regiments (Becker, 1973).

As Meyer recalls:"*The industrial workers brought with them and left as an inheritance many of their distinctive traits [...] maybe because of the habit of life in the factory, and because of trade unionism, a sharp feeling of the collective: the regiment must "manage" together, consume together the content of the packages, that the country folks did not always want to share, apart from the folks from the same "country" [village]*" (Meyer, 1967, p.28).

C.3 War-time transmission: the notebooks of Corporal Louis Barthas

A valuable concrete illustration of the mechanisms of information transmission that we describe can be found in the war-time notebooks ('*carnets de guerre*') kept by Corporal Louis Barthas (2014), a barrelmaker from the village of Peyriac-Minervois, in a rural wine-producing region northeast of Carcassonne, who served in the French infantry from 1914 to 1919.[2] Unlike many other memoirs of the period which were written by university-educated officers (see Norton Cru (1988)), Barthas provides a detailed and externally validated contemporary account by an enlisted 'poilu' who served in the trenches and many of the major battles on the Western Front.[3] Further, unlike other potential sources, like letters written by the soldiers, these notebooks were not subject to censorship.[4]

Born in 1879, Barthas was already a 35-year old father of two when WWI began, and a corporal in the reserves. Initially assigned to the territorial army because of his age, he and others were quickly dispatched to replenish losses in the 280eme Regiment, the reserve for the 80eme line infantry regiment (both mustered from the '*Red City of the Midi*': Narbonne, that would later also elect Socialist premier, Leon Blum). He found himself assigned alongside others from his village and nearby in what became called the *Minervois* squad.[5]

Developing trust and transmitting Socialist beliefs

Real courage, for a leader, isn't blindly executing every order that's given to him.

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[2]These notebooks were in the family armoire, without the expectation of publication. They were first published by the historian Rémy Cazals in 1978.

[3]See Cazals (2014) (pg. xix). Barthas had finished first in his district in his primary school exams, but never went on to high school, instead pursuing his father's profession as a barrelmaker.

[4]Indeed, confiscated letters that were later also recovered and published by e.g. do Espirito (2016) show accounts of political activism that are consistent with the notebooks we now describe.

[5]After suffering heavy losses, the 280eme regiment was dissolved in December 1915, and Barthas would be transferred to the 296eme Regiment from Beziers, also from the Midi region. That too was dissolved in November 1917 following the Chemin de Dames offensive and the subsequent protests. Barthas would end the war as an infantry instructor training new recruits in the 248eme Regiment in Brittany.

It's refusing to execute that order that his conscience tells him to, to save human lives from being sacrificed uselessly.- Louis Barthas, 1915 (pg. 77)

Prior to WWI, Barthas had been an SFIO member and active trade unionist involved in forming the Minervois *syndicat des ouvriers agricoles* (agricultural workers' union). In this, he worked alongside the Socialist mayor of Narbonne, Ernest Ferroul, his army captain in 1914, the Socialist journalist Léon Hudelle (see below), and Jean Jaurés himself (Cazals (2014), pg. xxvi). Prior to the war he had also run for (but lost) the municipal elections as a Socialist (pg. 45). During his five years in the war-time infantry, Barthas also became known for his Socialist views, even writing to Socialist deputy Brizon to ask for pamphlets to distribute within his unit (Cazals, 2014, xxiv).

Barthas further assumed a leadership role within his squad that appears to have earned their trust and respect. He reached out to the Narbonne mayor Ferroul to complain about the mis-treatment of sick soldiers, and engaged in other public actions on behalf of his comrades.[6] Barthas also received accolades from officers for his heroism on Cote 304 at Verdun. However, he lost his corporal stripes for refusing to obey an order to dig trenches in daylight rather than at night– an order that would have unnecessarily subjected his men to devastating enfilading fire from the nearby German trenches (pg. 166-167). Other corporals offered to turn in their stripes in protest against Barthas' treatment (pg. 170).

The esteem in which Barthas was held, along with the propagation of Socialist ideas and values came to a head in 1917, in the aftermath of the devastating Chemin de Dames offensive and news arriving about the Russian Revolution. Barthas' regiment had been in the quieter Argonne sector, but like many others, had been denied home leave by the Commander Robert Nivelle. Unrest followed, and two other regiments stationed nearby mutinied against their officers. Barthas was himself offered command of his own regiment by his fellow (would-be mutinous) soldiers, but instead channeled their energies towards a peaceful petition. As Barthas himself describes:

> At noon on May 30, there was even an assembly outside the village to constitute, following the Russian example, a "Soviet" composed of three men from each company, which would take control of the regiment. To my great astonishment, they came to offer me the presidency of this Soviet, that's to say, to replace the colonel–nothing less than that! That would be quite a sight- me, an obscure peasant who put down my pitchfork in August 1914, commanding the 296th Regiment. That went way beyond the bounds of probability.

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[6]As Cazals describes, "*In various archives, researchers have found letters from Barthas to the government minister Marcel Sembat (complaining, on behalf of his comrades, about the poor quality of bread), to social work agencies on behalf of young soldiers without families.*" (xxiv).

Of course I refused. I had no desire to shake hands with a firing squad, just for the child's play of pretending we were Russians. But I did decide to give an appearance of legality to these revolutionary demonstrations. I wrote up a manifesto to give to our company commanders, protesting against the delay in furloughs . . . In the afternoon, the order was given for immediate departure. It included the formal promise that home leaves would begin again, starting the next day, at a rate of sixteen per one hundred men. The military authorities, so arrogant and authoritarian, had to capitulate. They needed nothing more to reestablish order. In spite of that, there were lively disturbances, . . . and the men headed out only after singing the *Internationale* right in the faces of the their stupefied but powerless officers (pg. 327-328).

The role of reserve commissioned officers

"*To know the war, one must have lived through it at the most as a commander of a company . . . Only the man who lived night and day in the trenches knows modern war . . . Our master is our daily misery . . . Comrades are those who range from private up to and including the company commander. The rest are – the chiefs.*" Captain Rimbault, *Propos d'un marmité*, 1920, cited in Norton Cru (1988, pg.7)

As described above, similar dynamics of trust and propagation of socialist ideas appear present among the reserved commissioned officers as well. We focus on commissioned officers up to the rank of captain, following Norton Cru (1988), who distinguishes between eye-witness accounts of those officers who served in the trenches themselves as company commanders (i.e. captains) and below, and those who did not (battalion commanders (i.e. majors and commandants) and above). Further as Saint-Fuscien (2020) describes, and consistent with our evidence above, due to the devastating losses of the opening months of the war, the (mostly politically conservative) career officers were rapidly replaced with more left-wing (and university-educated) reserve officers.

Barthas again provides a useful example of the role played by such officers. In 1914, Barthas was assigned to a company commanded by his childhood friend and fellow-Socialist, Capitaine Léon Hudelle. Hudelle had ran in the legislative elections in 1910 but been soundly defeated by the Radicals. Instead, prior the war, he had edited the regional daily newspaper *Le Midi Socialiste*. A lieutenant in the reserves when war broke out, he was promoted to captain after the devastating losses of August 1914.

Like Barthas, Hudelle gained the trust and admiration of troops under his command for resisting orders that he believed were unjust, earning himself a week in prison for doing so.[7]

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[7]"*For having forgotten to punish four men in his company who didn't pass medical inspection with a grade of "medical consultation justified", our Peyriacois Captain Hudelle saw himself slapped with a week's jail time. I admire him more for this punishment than for all battlefield commendations*"(pg. 65)

Hudelle also was active in propagating Socialist perspectives, including providing special packages to the squad to celebrate May Day in 1915 "*to the non-coms and soldiers, on the occasion of May Day, the holiday of workers who suffer and who yearn to be set free*" (pg. 58), even while sanctioning troops who missed muster calls to attend Easter Mass. After being injured in June 1915, Hudelle would be transferred to the 80me Regiment (of the line infantry) . He would remain at the rank of captain, despite war wounds and medals for valor (including the *Croix de Guerre*), for the duration of the war, and resume his leftist journalism thereafter.[8]

Aftermath   Having been demobilized in February, 1919, Barthas returned home to Peyriac-Minervois, and his barrelmaking and political activities. Overall, the municipalities, like Peyriac, that originally served as the catchment areas for the 80eme regiment would see a 16% increase in the share voting for the SFIO in 1914—to 19.4% in 1919—before rising further to 24.5% in 1924 and 43.6% in 1936. Barthas' son, Abel (born in March 1906), also became a Socialist. In WWII, he appears in our data in the civilian Resistance (FFI), rising to become the mayor of Peyriac-Minervois when France was liberated in 1944 (Cazals (2014), xxi). In total, in our data, the village of Peyriac would see 18 join the Resistance, while one would join the collaborationist paramilitary group, the *Milice*. Among the 18 recorded Resistance members, 14 joined the FFI and 3 the military Resistance (FFC). 3 would be imprisoned and deported to Nazi concentration camps.

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[8]See Cazals: https://www.crid1418.org/temoins/2008/02/18/hudelle-leon-1881-1973/.

D Additional Figures and Tables
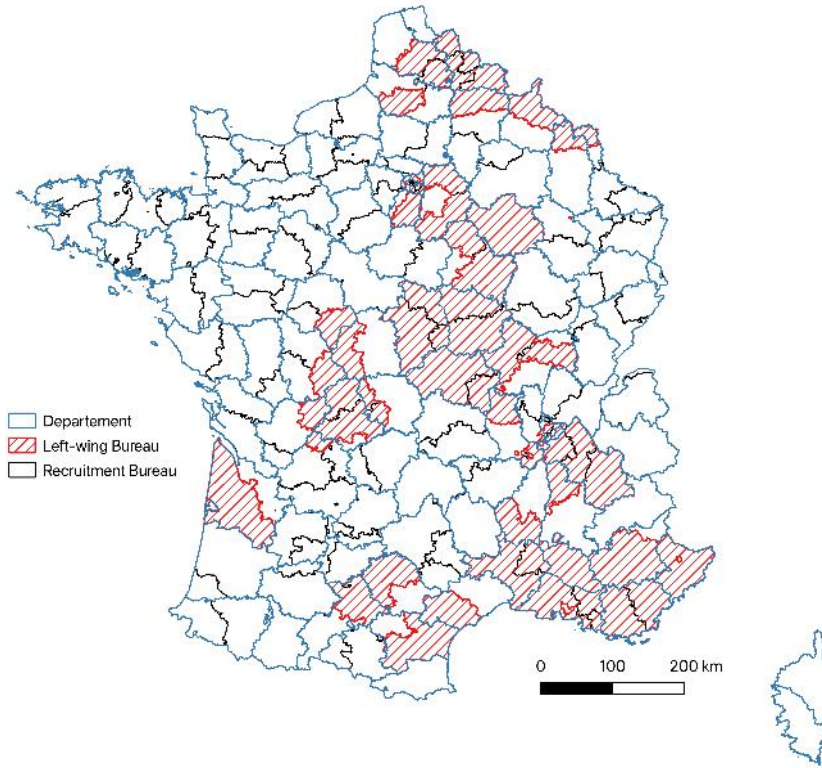
Notes: The map shows the identifying variation in our main specification with the addition of department fixed effects. Black lines delineate department bureaus. Hashed red areas indicate left-wing recruitment bureaus, defined as bureaus in which the average vote share for the left in 1914 was higher than the national average (weighted by registered voters in 1914). Blue lines delineate department. The red borders separate left-wing bureaus from others within a departement.

Figure A2: Military bureaus and Department boundaries
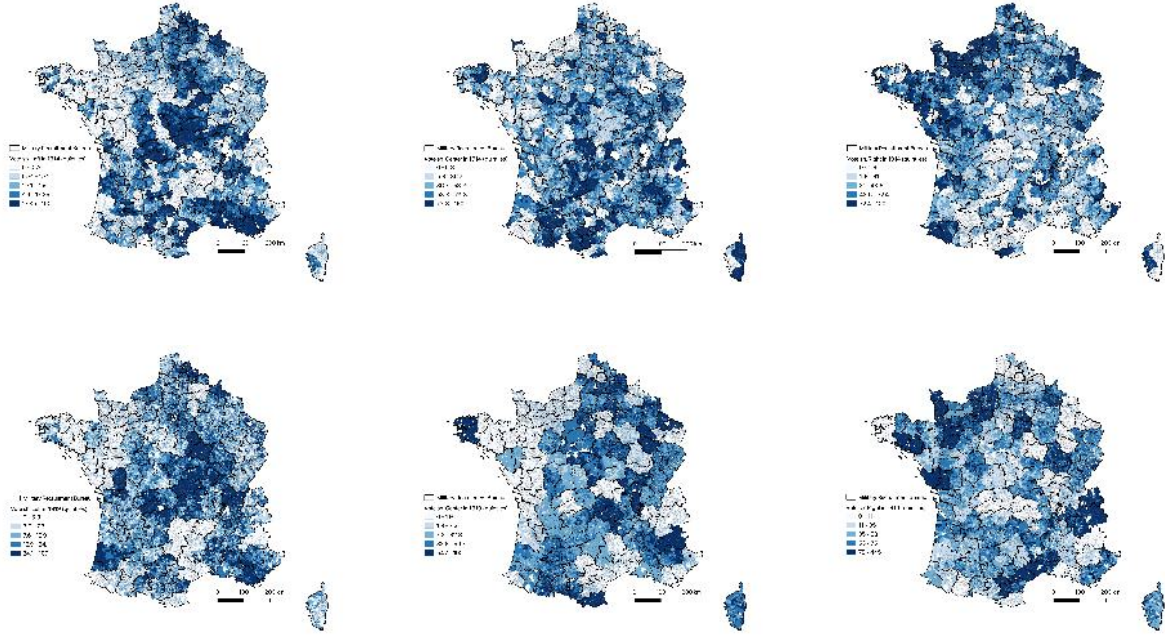
Notes: This figure shows the quintiles of the share of left-wing (left panel), center (center panel), and right-wing (right panel) votes in the 1914 (N=33,725 municipalities) (top panel) and in the 1919 elections (N=33,680 municipalities) (bottom panel) overlaid with the 1914 military recruitment bureaus.

Figure A3: Quintiles of votes for the left, center, and right in the 1914 and 1919 elections and WWI military recruitment bureaus
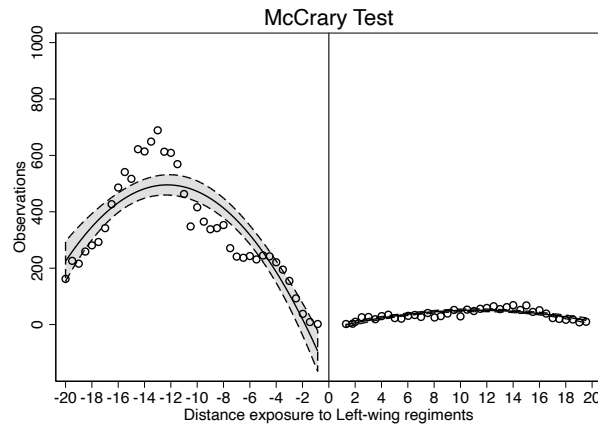
Notes: Underlying observations are at the municipality level (averaged across municipality-boundary observations). The sample is restricted to observations within 10km of a regimental catchment boundary. Dots correspond to average values of each variable aggregated into 0.5-km (0.3-mile) bins for visualization. The solid line plots a local linear regression and the shaded area shows 95% confidence intervals.

Figure A4: Regression Discontinuity: McCrary Test
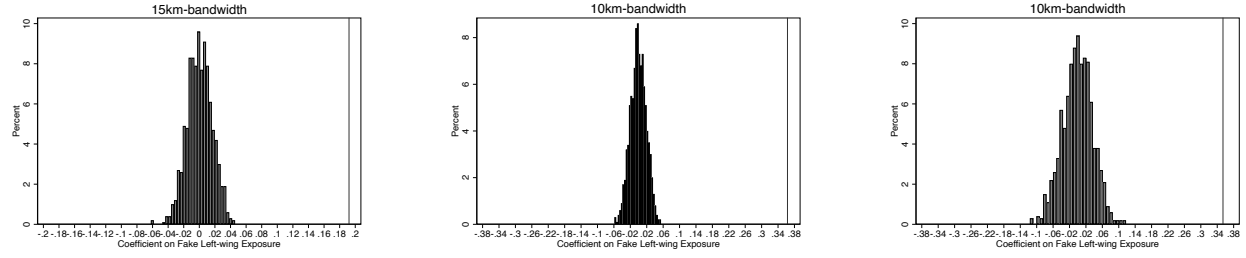
Notes: The histograms show the distribution of coefficients obtained from permutation inference based on 1,000 replications. We perform permutation inference by reassigning treatment status across municipalities within the 15-km, 10-km, or 5-km bandwidths (as indicated) around each regimental boundary. The specification is otherwise identical to specifications displayed in Columns 2, 4, and 6 of Table 2 and specified in Equation 1. The vertical bars indicate the coefficients obtained from the real border (see Columns 2, 4, and 6 of Table 2). T-statistics are shown in Figure A6.

Figure A5: Permutation Inference with Fake Regimental Boundaries: Distribution of Coefficients
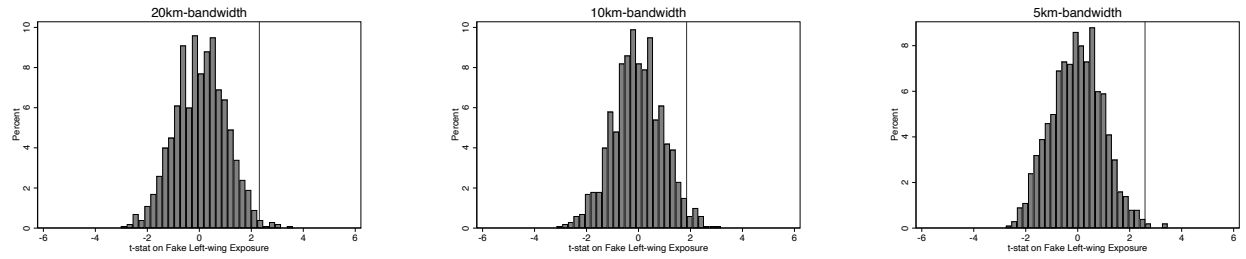
Notes: See notes to Table A5. The vertical bars indicate the coefficients obtained from the real border (see Columns 2, 4, and 6 of Table 2).

Figure A6: Permutation Inference with Fake Regimental Boundaries: Distribution of t-statistics

A19

Table A4: Baseline Vote and Covariates: Regression Discontinuity Estimates

Panel (a)

	Sh. left 1914	WWI death rate	Pop. 1911	Munic. size	Marne	Verdun	Verdun Pétain	Somme
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exposure to Left-wing Regiment	0.099	0.049	-0.050	-173.003	0.016	-0.019	-0.025	-0.028
	(0.076)	(0.136)	(0.062)	(144.283)	(0.093)	(0.055)	(0.069)	(0.060)
Bandwidth	10	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.48	0.29	0.43	0.46	0.90	0.84	0.86	0.88
Observations	11,511	11,511	11,511	11,511	11,511	11,511	11,511	11,511
Mean DepVar	-0.02	4.14	6.22	1,454.57	0.70	0.90	0.50	0.43
Sd DepVar	0.76	1.48	0.81	1,204.92	0.43	0.28	0.48	0.48

Panel (b)

	Sh. Left 1910	Jewish (1872)	Protes. (1872)	Catho. (1872)	Prop. literate	High school	Income score	Prop. foreign.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exposure to Left-wing Regiment	0.004	-0.000	0.003	-0.002	0.000	-0.008	0.051	-0.001
	(0.018)	(0.001)	(0.004)	(0.004)	(0.023)	(0.018)	(0.086)	(0.002)
Bandwidth	10	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.61	0.87	0.65	0.69	0.33	0.23	0.50	0.46
Observations	11,353	9,021	9,021	9,021	11,503	11,511	10,684	11,405
Mean DepVar	0.02	0.00	0.01	0.98	0.65	0.20	1.85	0.01
Sd DepVar	0.06	0.01	0.03	0.04	0.23	0.21	0.97	0.03

Panel (c)

	Farmers	Indep	Managers	Indus. workers	Employees	Interm. prof.	Agr. ind.	Unemp.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exposure to Left-wing Regiment	-0.009	0.002	-0.012	-0.009	-0.012	-0.004	-0.006	-0.005
	(0.011)	(0.025)	(0.016)	(0.023)	(0.015)	(0.017)	(0.012)	(0.016)
Bandwidth	10	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.49	0.10	0.15	0.50	0.29	0.12	0.56	0.11
Observations	31,352	31,352	31,352	31,352	31,352	31,352	31,352	31,352
Mean DepVar	0.81	0.32	0.21	0.36	0.20	0.25	0.79	0.25
Sd DepVar	0.15	0.31	0.18	0.30	0.18	0.20	0.19	0.20

Notes: Each observation is a municipality-boundary pair within 10 km of a regimental recruitment boundary. *Exposure to Left-wing Regiment* is an indicator equal to one if a municipality is on the side of the military boundary that was allocated to a left-wing bureau, defined as a bureau whose average vote share for the socialist in 1914 is higher than national mean. The Table reports OLS estimation results of Equation 1 for different dependent variables, which are indicated in column headers. Vote shares for the left in 1910 and 1914, WWI death rate, and population in 1911 are in logs. Robust standard errors two-way clustered at municipality and boundary segment level in parentheses. Data in Panel A are from **?** and Gay and Grosjean (2023), and are at municipal level. Data on religion in Panel B are from the 1872 Census at arrondissement level. The rest of the data in Panel B and data in Panel C are from Piketty and Cagé (2023) for the year 1913 and, apart from the 1910 election results, are imputed by Piketty and Cagé (2023) from aggregated statistics (arrondissement, canton or departement level). *Prop. literate*: proportion of the population above 20 who are literate; *High school:* percentile in the national distribution of high school graduates; *Mean income*: mean income per capita relative to national mean income; *Prop. foreign.*: proportion of foreigners in population; *Farmers, Indep., Managers, Indus. workers, Employees, Interm. prof., Agr. indep, Unemp.*: are the percentiles in the 1913 distribution, respectively, of the proportion of farmers, independents, managers, workers, employees, intermediate professions, non-agricultural self-employed, and unemployed.

Table A5: Exposure to Socialist Regiments in WWI and Vote in 1919: Regression Discontinuity Estimates for each Party in the 1919 Election

	Left		Center				Right				Ext. Right
	(1) SFIO	(2) PRRS	(3) REP-SOC	(4) ARD	(5) GRD	(6) FRURD	(7) UNR	(8) ARS	(9) ERD	(10) Anc. Comb.	(11) AF
Exposure to Left-wing Regiment	0.464***	-0.398	-0.175	-0.175	0.063	0.179	0.059	-0.100	-0.011	0.185	0.006
	(0.144)	(0.289)	(0.126)	(0.135)	(0.105)	(0.258)	(0.191)	(0.170)	(0.211)	(0.198)	(0.069)
Bandwidth	10	10	10	10	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.67	0.84	0.66	0.78	0.69	0.82	0.81	0.73	0.80	0.71	0.47
Observations	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177
Mean DepVar	1.60	1.25	0.25	0.39	0.22	1.00	1.23	0.31	1.07	0.37	0.01
Sd DepVar	1.12	1.79	1.10	1.42	1.18	1.74	1.94	1.28	1.76	1.21	0.81

Notes: Each observation is a municipality-boundary pair within 10 km of a regimental catchment boundary. *Exposure to Left-wing Regiment* is an indicator equal to one if a municipality is on the side of the military boundary that was allocated to a left-wing bureau, defined as a bureau whose average vote share for the socialist in 1914 is higher than the mean (weighted by registered voters in 1914). Each column reports RD estimates of Equation 1 using the (log) vote share for a specific party in the 1919 election as the dependent variable. The table includes all parties that received more than 2% of the national vote in 1919 (the Action Française party is an extreme right party that ran in 1919. We include it because of this specificity, although it did not collect more than 2% of the vote nationally). Parties are ordered from left to right following the classification in Cagé et al. (2023). Robust standard errors two-way clustered at municipality and boundary segment level in parentheses.

Table A6: Exposure to Socialist Regiments in WWI and Vote in 1919: Robustness and placebo tests at department border

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
						Log. Left vote sh. 1919						
Exposure to Left-wing Regiment	0.373***	0.336**	0.361**	0.359***	0.288**	0.663***	0.663***	0.663***	0.663***	0.412**	0.221**	
	(0.132)	(0.141)	(0.149)	(0.095)	(0.121)	(0.106)	(0.068)	(0.104)	(0.148)	(0.167)	(0.113)	
Exposure to Left-wing Regiment X Dept. border										-0.057		
										(0.219)		
Exposure to Left-wing *Department*												-0.063
												(0.207)
Bandwidth	10	10	10	10	10	10	10	10	10	10	10	10
RD Polynomial	Flex.	Flex.	Flex.	Distance	Lat/Long	Poly	Poly	Poly	Poly	Flex.	Flex.	Flex.
Weight	1/N mun.	1914 voters	1914 voters/N mun.									
S.e.	2-way cl.	2-way cl.	2-way cl.	2-way cl.	2-way cl.	2-way cl.	Conley	Conley	Conley	2-way cl.	2-way cl.	2-way cl.
Conley bandwidth							5	10	20			
Department FE											✓	
R-squared	0.68	0.77	0.77	0.53	0.65	0.17	0.10	0.10	0.10	0.68	0.73	0.63
Observations	11,177	11,177	11,177	11,145	11,177	6,305	6,305	6,305	6,305	11,177	11,175	7,789
Mean DepVar	1.96	1.84	1.83	1.96	1.96	1.92	1.92	1.92	1.92	1.96	1.96	1.98
Sd DepVar	0.97	1.17	1.17	0.96	0.96	1.00	1.00	1.00	1.00	0.96	0.96	0.95

Notes: Each observation is a municipality-boundary pair, except in Column 6, where the unit is the municipality. *Exposure to Left-wing Regiment* is defined as usual. Columns 1 to 3 provide the estimation results of Equation 1 under alternative weighting schemes: the inverse of the number of repeated municipality-boundary observations (Col 1), number of voters in the municipality in 1914 (Col 2), and a linear combination of both (Col. 3). Columns 4 to 9 demonstrate the robustness of our results to different spatial RD designs and different corrections of the error term. Columns 4 and 5 shows the estimation results of Equation 1 but with different specifications of the function of geography: either a function of distance to each boundary (Col. 4) or a simple polynomial in coordinates (not estimated flexibly on each side of the boundary) (Col. 5). Column 6 displays the estimation results of Equation 2 (one dimensional spatial RD). Columns 7 to 9 display the estimation results of Equation 2 but with standard errors corrected for arbitrary spatial correlation of the error term within spatial clusters (Colella et al., 2019) defined for different cutoffs of 5, 10, or 20km, as indicated. Column 10 reports the estimation results of Equation 1 with the addition of an interaction term that takes value one if the regimental boundary segment coincides with a department (political district) boundary. Column 11 reports OLS estimation results of Equation 1 with the addition of department fixed effects. Column 12 reports the result of estimating Equation 1 with an alternative (placebo) treatment variable: *Exposure to Left-wing Department*, which is defined in the same way as *Exposure to Left-wing Regiment* but for a department (administrative and political district) instead of a regiment. In other words, *Exposure to Left-wing Department* is an indicator equal to one if a municipality is in a department whose average vote share for the socialist in 1914 is higher than the mean (weighted by registered voters in 1914). All specifications use a bandwidth of 10km. Robust standard errors, two-way clustered at municipality and boundary segment level (unless indicated otherwise), are reported in parentheses.

Table A7: Exposure to Socialist Regiments in WWI and Vote in 1919: Fuzzy RD results and Functional Form Robustness

	Regiment left-wing share (First stage)	Log. Left vote sh. 1919	Left vote sh. 1919	
	(1)	(2)	(3)	(4)
Exposure to Left-wing Regiment	19.298***		3.070**	
	(1.353)		(1.534)	
Regiment left-wing share (2SLS)		0.019***		0.158**
		(0.006)		(0.079)
Bandwidth	10	10	10	10
Flex Polynomial	✓	✓	✓	✓
R-squared	0.95	0.68	0.67	0.67
Observations	11,545	11,177	11,171	11,171
Mean DepVar	8.38	1.96	11.19	11.19
Sd DepVar	8.59	0.96	12.35	12.35

Notes: An observation is a municipality-boundary pair. *Exposure to Left-wing Regiment* is an indicator with a value of one if a municipality is located on the side of the military boundary allocated to a left-wing bureau. A left-wing bureau is defined as a bureau whose average vote share for the socialist in 1914 is higher than the mean (weighted by registered voters in 1914). "Regiment left-wing share" is the military bureau level average vote share for the left in 1914, weighted by the 1914 (male) voters' population. The first column of the table presents the "first stage", which entails estimating Equation 1 with the bureau-level vote share as the dependent variable. Column 2 (respectively 4) shows the results of estimating Equation 1 with the average bureau-level vote share for the left as predicted by the first-stage as the main independent variable and the log. share of vote (respectively the share of vote) for the left in a municipality in 1919 as the dependent variable. Column 3 shows the results of estimating Equation 1 with the share of votes for the left as the dependent variable. All specifications use a 10-km bandwidth. Robust standard errors, two-way clustered at municipality and boundary segment level, are reported in parentheses.

Table A8: RD estimation sample: Municipalities with less then 3% left vote share in 1914

	Pop. density 1911	Mean income	Prop. farmers	Prop. ind. workers	Prop. literate	High school
	(1)	(2)	(3)	(4)	(5)	(6)
Municip < 3p.p sh. left vote in 1914	-1.264***	-0.109***	0.044***	-0.007	-0.032***	-0.094***
	(0.408)	(0.021)	(0.008)	(0.010)	(0.007)	(0.017)
R-squared	0.00	0.02	0.02	0.00	0.01	0.02
Observations	34,922	34,947	34,922	34,870	34,922	34,922

Notes: An observation is a municipality. The Table reports the results of an OLS regression of each variable on an indicator if the left vote share in 1914 in the municipality is less than 3%, with department fixed effects (for each of the 85 departments). *Pop. density in 1911* is from the 1911 Census at municipal level. Other variables are from Piketty and Cagé (2023) for the year 1913 and are imputed from aggregated statistics (arrondissement, canton or departement level). *Mean income:* mean income per capita relative to national mean income; *Prop. farmers,* and *Prop. ind. workers* are the percentiles in the 1913 distribution respectively of the proportion of farmers and industrial workers. *Prop. literate:* proportion of the population above 20 who are literate; *High school:* percentile in the national distribution of high school graduates. Robust standard errors clustered at military recruitment bureau level are presented in parentheses.

Table A9: Robustness Regression Discontinuity: Vote share in 1919: Alternative definitions of the treatment

				Log. Left vote share in 1919				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exposure to Left-wing Regiment	0.212***	0.204***	0.232***	0.219**	0.223**	0.272**	0.363***	0.342***
	(0.074)	(0.078)	(0.086)	(0.086)	(0.101)	(0.127)	(0.112)	(0.132)
Treatment Threshold	P45	P50	P55	P60	P65	P70	P75	P80
Bandwidth	10	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Observations	11,145	11,145	11,145	11,145	11,145	11,145	11,145	11,145
Mean DepVar	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96
Sd DepVar	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96

Notes: An observation is a municipality-boundary pair. The Table reports OLS estimation results of Equation 1, with a 10 km bandwidth. Each column shows the results of alternative specifications with a different definition of the treatment. *Exposure to Left-wing Regiment* is a series of indicator variables that take value one if a municipality is on the side of the military boundary where the regiment's average vote share for the socialist in 1914 is higher than various percentiles of the distribution, as indicated (weighted by registered voters in 1914). Robust standard errors, two-way clustered at municipality and boundary segment level, are reported in parentheses.

Table A10: Robustness Regression Discontinuity: Vote share in 1919: Alternative definitions of the estimation sample

					Log. Left vote share in 1919						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Exposure to Left-wing Regiment	0.394*	0.353**	0.356***	0.365***	0.370***	0.307***	0.263**	0.268**	0.282***	0.255***	0.236**
	(0.236)	(0.165)	(0.132)	(0.124)	(0.116)	(0.112)	(0.108)	(0.106)	(0.100)	(0.095)	(0.093)
Sample cutoff	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Bandwidth	10	10	10	10	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.79	0.74	0.71	0.69	0.68	0.66	0.65	0.64	0.64	0.63	0.63
Observations	5,081	7,357	9,108	10,349	11,177	11,937	12,569	13,018	13,498	13,894	14,279
Mean DepVar	1.81	1.87	1.91	1.94	1.96	1.99	2.00	2.01	2.03	2.04	2.05
Sd DepVar	1.14	1.05	1.00	0.98	0.96	0.95	0.94	0.94	0.93	0.93	0.93

Notes: An observation is a municipality-boundary pair. *Exposure to Left-wing Regiment* is an indicator with a value of one if a municipality is located on the side of the military boundary allocated to a left-wing bureau. A left-wing bureau is defined as a bureau whose average vote share for the socialist in 1914 is higher than the mean (weighted by registered voters in 1914). Each column reports the results of an OLS estimation results of Equation 1 in a different estimation sample, using different cutoffs for initial left vote shares, as indicated. A cutoff of 1 means that the sample only includes municipalities with a less than 1% vote share for the left in 1914, etc. All specifications use a 10 km bandwidth. Robust standard errors, two-way clustered at municipality and boundary segment level, are presented in parentheses.

Table A11: Exposure to Socialist Regiments in WWI and Turnout

	Turnout in 1914	Turnout in 1919
	(1)	(2)
Exposure to Left-wing Regiment	0.031	0.019
	(0.025)	(0.022)
Bandwidth	10	10
Flex Polynomial	✓	✓
R-squared	0.51	0.45
Observations	11,545	11,185
Mean DepVar	4.39	4.28
Sd DepVar	0.12	0.19

Notes: An observation is a municipality-boundary pair. *Exposure to Left-wing Regiment* is an indicator with a value of one if a municipality is located on the side of the military boundary allocated to a left-wing bureau. A left-wing bureau is defined as a bureau whose average vote share for the socialist in 1914 is higher than the mean (weighted by registered voters in 1914). The Table reports OLS estimation results of Equation 1 with turnout in different elections (as indicated) as dependent variables. All specifications are with a 10 km bandwidth. Robust standard errors, two-way clustered at municipality and boundary segment level, are presented in parentheses.

Table A12: RD Donut Estimates

	Log. Left vote share in 1919				
	(1)	(2)	(3)	(4)	(5)
Exposure to Left-wing Regiment	0.370***	0.368***	0.391***	0.398***	0.386**
	(0.116)	(0.117)	(0.129)	(0.140)	(0.159)
Bandwidth	10	10	10	10	10
Donut exclusion	1	2	3	4	5
Flex Polynomial	✓	✓	✓	✓	✓
R-squared	0.68	0.68	0.69	0.70	0.71
Observations	11,175	11,030	10,153	8,765	7,272
Mean DepVar	1.96	1.96	1.95	1.94	1.94
Sd DepVar	0.96	0.97	0.98	0.98	0.98

Notes: An observation is a municipality-boundary pair. The Table reports OLS estimation results of Equation 1, with a 10 km bandwidth. Each Column shows the results of alternative specifications that exclude different sets of municipalities closest to the RD boundary. Each column indicates the threshold for exclusion, which goes from 1 km from the boundary (Column 1) to 5 km from the boundary (Column 5), in increments of 1 km. In other words, the estimation sample in Column 1 consists of municipalities that are between 1 and 10km away from the boundary, the estimation sample in Column 2 consists of municipalities that are between 2 and 10km away from the boundary, etc. *Exposure to Left-wing Regiment* is defined as usual. Robust standard errors, two-way clustered at municipality and boundary segment level, are reported in parentheses.

Table A13: Baseline Vote and Covariates: Regression Discontinuity Estimates with Department Fixed Effects

Panel (a)

	Log. left vote share in 1914	Log. WWI death rate	Log pop. 1911	Municip. size
	(1)	(2)	(3)	(4)
Exposure to Left-wing Regiment	0.093	-0.005	-0.030	-281.268*
	(0.084)	(0.042)	(0.085)	(158.617)
Bandwidth	10	10	10	10
Flex Polynomial	✓	✓	✓	✓
R-squared	0.50	0.29	0.44	0.47
Observations	11,510	11,510	11,510	11,510
Mean DepVar	-0.02	1.59	6.22	1,454.55
Sd DepVar	0.76	0.32	0.81	1,204.96

Panel (b)

	Marne	Verdun	Verdun under Petain	Somme
	(1)	(2)	(3)	(4)
Exposure to Left-wing Regiment	0.011	-0.086	-0.038	0.092
	(0.069)	(0.056)	(0.052)	(0.063)
Bandwidth	10	10	10	10
Flex Polynomial	✓	✓	✓	✓
R-squared	0.95	0.94	0.96	0.97
Observations	11,510	11,510	11,510	11,510
Mean DepVar	0.70	0.90	0.50	0.43
Sd DepVar	0.43	0.28	0.48	0.48

Notes: This Table reports OLS estimation results of Equation 1 with the addition of a department fixed effects. An observation is a municipality-boundary. *Exposure to Left-wing Regiment* is defined as usual. We consider a 10 km bandwidth. Robust standard errors, two-way clustered at municipality and boundary segment level, are reported in parentheses.

Table A14: Placebo Spatial Regression Discontinuity at Department Border: Covariates and Pre-war Left Vote

	Log. left vote share in 1914		Log. WWI death rate		Log pop. 1911		Municip. size		Marne		Verdun		Verdun under Petain		Somme	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Exposure to Left-wing Departement	-0.002	-0.018	-0.013	0.002	0.015	0.023	171.206	206.469**	-0.036	-0.047	-0.021	-0.048	-0.107	-0.068	-0.230***	-0.212***
	(0.095)	(0.083)	(0.035)	(0.039)	(0.077)	(0.065)	(122.625)	(104.287)	(0.068)	(0.091)	(0.074)	(0.065)	(0.109)	(0.154)	(0.062)	(0.064)
Bandwidth	15	10	15	10	15	10	15	10	15	10	15	10	15	10	15	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.40	0.44	0.24	0.26	0.37	0.41	0.38	0.46	0.87	0.90	0.76	0.79	0.79	0.80	0.84	0.85
Observations	13,730	8,110	13,730	8,110	13,730	8,110	13,730	8,110	13,730	8,110	13,730	8,110	13,730	8,110	13,730	8,110
Mean DepVar	-0.03	-0.03	1.59	1.59	6.20	6.19	1,474.87	1,484.54	0.68	0.68	0.91	0.91	0.49	0.49	0.44	0.44
Sd DepVar	0.76	0.76	0.32	0.32	0.82	0.82	1,213.59	1,269.53	0.44	0.44	0.27	0.27	0.47	0.47	0.48	0.48

Notes: An observation is a municipality-boundary pair. *Exposure to Left-wing Department* is defined in a similar way as the variable *Exposure to Left-wing Regiment* but for a department (administrative and political district) instead of a regiment. In other words, *Exposure to Left-wing Department* is an indicator equal to one if a municipality is in a department whose average vote share for the socialist in 1914 is higher than the mean (weighted by registered voters in 1914). The Table reports OLS estimation results of Equation 1 with this alternative treatment variable and a 10 km bandwidth. Robust standard errors, two-way clustered at municipality and boundary segment level, are presented in parentheses.

Table A15: Economic and other outcomes: Regression Discontinuity Estimates

Panel (a)

	Pop. literate	Tertiary ed. (perc.) in 1919	High school ed. (perc.) in 1919	Mean income (% nat. inc.) in 1919	GNP muni (% nat. mean) in 1919	Land capital per cap. in 1919	Prop. foreign. in 1919
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Exposure to Left-wing Regiment	0.001	0.011	-0.008	-0.023	0.009	-0.018	-0.001
	(0.021)	(0.022)	(0.018)	(0.021)	(0.020)	(0.037)	(0.003)
Bandwidth	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓
R-squared	0.29	0.23	0.23	0.65	0.58	0.66	0.47
Observations	11,503	11,511	11,511	11,511	11,511	10,635	11,405
Mean DepVar	0.68	0.19	0.20	0.81	0.76	0.64	0.02
Sd DepVar	0.22	0.20	0.21	0.33	0.28	0.40	0.03

Panel (b)

	Agric.	Industry	Manag. & comm.	Workers in 1919	Employees	Int. prof. in 1919	Indep. farms	Unemp.	Capitalists
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exposure to Left-wing Regiment	0.001	-0.039	-0.021	-0.004	-0.007	0.006	-0.005	-0.031	0.003
	(0.011)	(0.027)	(0.018)	(0.030)	(0.015)	(0.019)	(0.014)	(0.020)	(0.017)
Bandwidth	10	10	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.51	0.17	0.19	0.56	0.33	0.18	0.57	0.15	0.21
Observations	11,511	11,511	11,511	11,511	11,511	11,511	11,511	11,511	11,511
Mean DepVar	0.82	0.32	0.21	0.35	0.19	0.25	0.80	0.25	0.23
Sd DepVar	0.15	0.31	0.17	0.30	0.17	0.20	0.17	0.20	0.18

Notes: An observation is a municipality-boundary pair. *Exposure to Left-wing Regiment* is an indicator equal to one if a municipality is on the side of the military boundary that was allocated to a left-wing bureau, defined as a bureau whose average vote share for the socialist in 1914 is higher than the mean (weighted by registered voters in 1914). The Table reports OLS estimation results of Equation 1 for different dependent variables, which are indicated in Column headers. Specifications use a 10km bandwidth, as indicated. Robust standard errors, two-way clustered at municipality and boundary segment level, are reported in parentheses.

Table A16: Exposure to Mainstream Regiments in WWI and Vote in 1919: RD Results Party by Party

Panel (a)

	Left		Center			Right					Ext. Right
	(1) SFIO	(2) PRRS	(3) REP-SOC	(4) ARD	(5) GRD	(6) FRURD	(7) UNR	(8) ARS	(9) ERD	(10) Anc. Comb.	(11) AF
Exposure to Centrist Regiment	-0.047	0.564**	-0.106	-0.100	-0.312**	-0.262	0.162	-0.069	0.019	-0.021	-0.112*
	(0.092)	(0.226)	(0.151)	(0.116)	(0.158)	(0.232)	(0.196)	(0.072)	(0.207)	(0.086)	(0.060)
Bandwidth	10	10	10	10	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.67	0.84	0.66	0.78	0.69	0.82	0.81	0.73	0.80	0.71	0.47
Observations	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177
Mean DepVar	1.60	1.25	0.25	0.39	0.22	1.00	1.23	0.31	1.07	0.37	0.01
Sd DepVar	1.12	1.79	1.10	1.42	1.18	1.74	1.94	1.28	1.76	1.21	0.81

Panel (b)

	Left		Center			Right					Ext. Right
	(1) SFIO	(2) PRRS	(3) REP-SOC	(4) ARD	(5) GRD	(6) FRURD	(7) UNR	(8) ARS	(9) ERD	(10) Anc. Comb.	(11) AF
Exposure to Right-wing Regiment	-0.366***	-0.094	0.252**	0.067	0.158	0.089	0.105	-0.294*	0.421***	-0.105	0.077
	(0.106)	(0.204)	(0.098)	(0.138)	(0.098)	(0.149)	(0.187)	(0.161)	(0.157)	(0.092)	(0.051)
Bandwidth	10	10	10	10	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.67	0.84	0.66	0.78	0.69	0.82	0.81	0.73	0.80	0.71	0.47
Observations	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177	11,177
Mean DepVar	1.60	1.25	0.25	0.39	0.22	1.00	1.23	0.31	1.07	0.37	0.01
Sd DepVar	1.12	1.79	1.10	1.42	1.18	1.74	1.94	1.28	1.76	1.21	0.81

Notes: An observation is a municipality-boundary pair. *Exposure to Centrist (resp. Right-wing) Regiment* is an indicator equal to one if a municipality is on the side of the military boundary that was allocated to a centrist (resp. right right-wing) bureau, defined as a bureau whose average vote share for the right in 1914 is higher than the national mean vote share for the center (resp. right) (weighted by registered voters in 1914). Each Column provides the estimation results of Equation 1 for different dependent variables that consist of the (log) vote share for each party in the 1919 elections that gathered at least 2% of the vote, organized from left to right (the Action Française party is an extreme right party that ran in 1919. We include it because of this specificity, although it did not collect more than 2% of the vote nationally). Specifications use a 10km bandwidth, as indicated. Robust standard errors, two-way clustered at municipality and boundary segment level, are reported in parentheses.

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Table A17: Exposure to Socialist Regiments, War Experiences and Left-wing Vote in 1919

	Left vote in 1919						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Exposure to Left-wing Regiment	0.446***	0.235*	-0.170	0.175	0.349**	0.345*	0.457**
	(0.124)	(0.139)	(0.240)	(0.134)	(0.175)	(0.183)	(0.195)
War proxy (see bottom Table)	-0.000	0.173	0.067	-0.245**	-0.261**	-0.158	-0.206*
	(0.008)	(0.119)	(0.129)	(0.111)	(0.113)	(0.097)	(0.112)
Exp. X War proxy	-0.018	0.217	0.623**	0.372	0.027	0.153	-0.115
	(0.019)	(0.208)	(0.303)	(0.245)	(0.257)	(0.256)	(0.254)
War Proxy	WWI fat. rate	Marne	Verdun	Verdun/Pétain	Somme	Chem. Dames	Aisnes
Bandwidth	10	10	10	10	10	10	10
Flex Polynomial	✓	✓	✓	✓	✓	✓	✓
R-squared	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Observations	11,177	11,177	11,177	11,177	11,177	11,177	11,177
Mean DepVar	1.96	1.96	1.96	1.96	1.96	1.96	1.96
Sd DepVar	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Mean War Proxy	4.13	0.70	0.90	0.50	0.43	0.37	0.48

Notes: An observation is a municipality-boundary pair. *Exposure to Left-wing Regiment* is an indicator equal to one if a municipality is on the side of the military boundary that was allocated to a left-wing bureau, defined as a bureau whose average vote share for the socialist in 1914 is higher than the mean (weighted by registered voters in 1914). All specifications use a 10 km RD bandwidth and report OLS estimates of Equation 1. Robust standard errors two-way clustered at municipality and boundary level in parentheses.