

# The American Contribution to the French Revolution\*

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Can exposure to better institutions abroad inspire institutional change at home? We show that the experience of the United States by French combatants during the American Revolutionary War was an important source of support for the French Revolution. Across France, regions that sent more combatants had more anti-feudal revolts, revolutionary societies, military volunteers, and emigration of old elites. To establish causality and mechanism, we leverage a quasi-natural experiment: One-third of the readied army never sailed to America, and among those deployed all fought in Virginia, while only certain regiments were stationed in New England. Only exposure to New England mattered.

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“One may resist an invasion of armies; but one cannot resist an invasion of ideas”  
— Victor Hugo

## 1. Introduction

Political and economic institutions are a fundamental cause of why some nations achieve economic prosperity while others do not (e. g. North, 1990; Acemoglu, Johnson, and Robinson, 2005). Such institutions can be highly persistent with deep roots in the past (Acemoglu, Johnson, and Robinson, 2001), but also can change very quickly at critical junctures (Roland, 2004). To understand institutional change at critical junctures, the empirical literature has typically focused on triggers such as political crises, weather shocks, or bad harvests that increase popular discontent and provide a window of opportunity for revolutions and democratization (e. g. Brückner and Ciccone, 2011; Aidt and Franck, 2015). Yet, revolutions do not always result in better institutions (Buchheim and Ulbricht, 2020), highlighting that support for the direction of institutional change can be crucial for how events unfold. As democracy has been shown to deliver economic growth (e. g. Acemoglu, Naidu, Restrepo, and Robinson, 2019), we typically take it for granted that the people have better institutions in mind when they revolt. Indeed, recent evidence documents that people who experience democratic institutions become more supportive of them (Acemoglu, Ajzenman, Aksoy, Fiszbein, and Molina, 2024). But if a country never had such institutions, how would its inhabitants know that a better social contract is possible?

One possibility is the personal experience of better institutions abroad. Such an explanation fits anecdotal evidence from historical cases such as Greek Independence or the Decembrists in Russia.<sup>1</sup> There is also some systematic evidence that democracy in host countries is linked to democratization at home via foreign students (Spilimbergo, 2009) and permanent emigration (Docquier, Lodigiani, Rapoport, and Schiff, 2016), and that information transfer is a plausible channel (Barsbai, Rapoport, Steinmayr, and Trebesch, 2017). Yet in these settings, causality is inherently difficult to establish. People choose whether to go abroad, which country to go to, and whether to return home. Even abstracting from selection concerns, it would be hard to determine the exact mechanisms since one has to contend with alternative channels of information flow or the confounding effects of trade (e.g. Tabellini and Magistretti, 2022). The ideal experiment to address these concerns would temporarily expose a randomly selected group of persons to better institutions abroad, limit alternative flows of information and goods across borders, and then study changes in demand for better institutions at home relative to suitable control groups. We draw on a historical episode to approximate such a setting.

This paper considers the case of the French Revolution to demonstrate that exposure to

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<sup>1</sup>The Decembrists were a group of Russian officers who experienced post-revolutionary France in 1814 and attempted a revolution in Tsarist Russia in 1825. An important leader in the Greek War of Independence (1821–29), Demetrios Ypsilantis, was educated in post-revolutionary France.

better institutions abroad increases support for institutional change for the better at home. We focus on a French army of five thousand men who could experience the inclusive economic and political institutions of the United States firsthand during the American Revolutionary War. Using newly collected data, we show that, during the constitutional phase of the French Revolution, local support for institutional change was higher in regions where more French veterans originated who had seen the U.S. To establish causality and the mechanism, we draw on two historical coincidences which jointly provide us with a quasi-experimental setting: Troops that should have been deployed as well but never arrived in America give us a placebo control group, and a second army that fought the same battle abroad but was not exposed to inclusive institutions give us a differently treated control group.

The French Revolution was an institutional watershed in history. With ramifications far beyond the initial event, it is widely considered one of the most significant revolutions in history (e.g. Skocpol, 1979). Among the Revolution's chief achievements in France was abolishing the economic privileges and social hierarchies of the feudal order (Woloch, 1994). The political gains were more short-lived but nevertheless set a precedent.<sup>2</sup> From France, the Revolution's institutional reforms spread across Europe through a series of interstate conflicts. It is thus considered as the critical juncture that led to the emergence of inclusive economic institutions in much of Western Europe (Acemoglu and Robinson, 2012).<sup>3</sup> The Revolution's wide-ranging impacts are documented by an emerging literature in economics (Acemoglu, Cantoni, Johnson, and Robinson, 2011; Franck and Michalopoulos, 2017; Giorcelli and Moser, 2020; Finley, Franck, and Johnson, 2021; Chambru, Henry, and Marx, 2024; Gay, Gobbi, and Goñi, forthcoming; Deseau, 2023).

Yet why there was widespread support for reforms toward more inclusive institutions in France in 1789 remains subject to debate. It has been suggested that the experience by French veterans who experienced better institutions in the United States less than a decade earlier could have contributed to why the people of France fought for equality and liberty (McDonald, 1951). At a time when travel was costly and printed media censored, few people in France had any knowledge, let alone first-hand experience, of the more inclusive institutions in the American settler colonies. Yet this hypothesis remains disputed (Scott, 1998).

We assemble data from archival and secondary sources to test this hypothesis empirically. We digitize and gather information on the French combatants of the American Revolutionary Wars from lists based on the original French military records. The key information for us is the birthplaces of each combatant. We aggregate combatants by their origin to regions such as *départements*. At this regional level, we observe four measures of support for institutional

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<sup>2</sup>The absolute monarchy was first transformed into a constitutional one, before monarchy was replaced in 1792 by the first full democracy with universal male suffrage (Furet, 1981; Israel, 2014).

<sup>3</sup>The Revolution was a “critical juncture that led the institutions of Western Europe to converge with those of England” (Acemoglu and Robinson, 2012, 130) by “generat[ing] a series of interstate conflicts that spread institutional reform across much of Western Europe. The economic consequence of these reforms was the emergence of inclusive economic institutions in most of Western Europe, the Industrial Revolution, and economic growth” (Acemoglu and Robinson, 2012, 327).

change to the better: Anti-feudal revolts that ended feudal property rights locally, early political societies through which citizens participated in the new polity, volunteers for the revolutionary army who enlisted to defend the institutional gains against the enemies of the revolution, and emigration by the old elite as a proxy for local revolutionary activity to which the old elite responded by leaving the country. Each of these four dimensions of support relates to distinct revolutionary processes rooted in the year 1789. Each markedly influenced the course of the French Revolution. All four reflect a larger phenomenon: local support for institutional change.

Using this data, we show that regional exposure to *Rochambeau combatants* strongly predicts support for institutional change. Rochambeau combatants were those officers and soldiers who participated in the military expedition to the United States led by General Rochambeau. Unlike other French troops who participated in the war, these combatants had extended contact with American civilians in New England. The positive and highly significant correlations between the number of Rochambeau combatants born in a region and the four dimensions of support for institutional change are robust to various controls. In the baseline, we include controls affecting military recruitment in general, including overall recruiting for the army, the number of infantry and cavalry garrisons, the urbanization rate, population, and an indicator for the capital Paris. Controlling for population also implies that the positive correlation can be interpreted as per capita in our preferred log–log specification.<sup>4</sup> Rochambeau combatants can explain 5–18% of the residual variance in support for institutional change across regions. All else equal, a one standard deviation increase in (log) Rochambeau combatants hailing from a region is associated with an increase in support for institutional change by 0.3–0.5 standard deviations.

There are two core concerns with a causal interpretation of these conditional correlations. First, individuals might have selectively signed up for the regiments that deployed to America. This concern is directly addressed by our historical setting. Regiments were staffed well before their deployment. Indeed, soldiers only learned that their destination was New England, rather than the Caribbean, *after* setting sail. Second, General Rochambeau may have selected whole regiments for characteristics unobservable to us. These characteristics may be reflected in the regions where combatants originated and also relate to whether or not regions supported the French Revolution.

To address the concern of selection on unobservables, we draw on a quasi-natural experiment that provides a placebo control group. Rochambeau originally selected a larger army for the expedition, but one third of the assembled troops had to stay behind at the French port due to an unforeseen shortage of ships. When transport eventually became available, a British naval blockade diverted their convoy to Spain, and their American mission was canceled. These *not-sailed combatants* received a placebo treatment—selected and readied by

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<sup>4</sup>Results are robust to using alternative transformations such as inverse hyperbolic sine or alternative estimation methods such as Poisson regressions. We also tried clustering standard errors spatially but find that it does not affect significance levels.

the same process, but never reaching America—making them a natural control group that addresses selection concerns.

Our empirical approach includes both Rochambeau and not-sailed combatants as separate regressors, interpreting the effect of interest as the difference between their coefficients. We thus do not require that the regional distribution of Rochambeau combatants is random. Instead, our identifying assumption is that, conditional on controls, unobservable regional characteristics affect outcomes symmetrically across both groups. The data support broad regional overlap between the two groups, yet with sufficient variation to separate them empirically. This variation stems largely from historical contingencies, as regiments were regularly rotated across garrisons every three years and recruited from both current and past garrisons.

We find no positive placebo effect for the not-sailed combatants, supporting a causal interpretation of the effect of Rochambeau combatants on support for institutional change. The coefficients on Rochambeau combatants are highly robust to conditioning on the not-sailed placebo group, while those on the placebo group are either small and insignificant or even negative. The difference between the two coefficients is highly significant and, for half of the outcomes, larger in magnitude than the baseline Rochambeau coefficients. This suggests that selection on unobservables, if anything, leads us to underestimate the true effect.

We also use the placebo control group to assess balance on observables. Across more than twenty five covariates—spanning geography, old regime institutions, human capital, and economy—three covariates are differentially correlated with Rochambeau and not-sailed combatants. We address this imbalance by adjusting estimates via the generalized propensity score of receiving the net treatment. Also, we document that results are robust to directly controlling for unbalanced variables.

Why did greater exposure to Rochambeau’s combatants increase regional support for institutional change? Our preferred interpretation is that these combatants experienced more inclusive institutions in the United States firsthand. As we detail in Appendix B.2, they had extensive contact with civilians and ample opportunities to observe local institutions, most importantly those of New England, which was considerably more liberal and equal than old regime France. That said, other experiences during the campaign could also have shifted attitudes. These alternative interpretations include exposure to a foreign country, fighting and winning against the British monarchy, combat experience fostering organizational skills or nurturing a taste for violence, the deployment strengthening social networks, or the heightened status of returning veterans.

To isolate the mechanism of exposure to U.S. institutions from alternative interpretations, we draw on another historical coincidence that provides a differently treated control group. Rochambeau’s troops fought just one major battle during their deployment: the Siege of Yorktown in Virginia. For this very battle, they were reinforced by a second French army, which was garrisoned in the French Caribbean colonies and arrived in Virginia shortly before the battle on Admiral de Grasse’s fleet. These officers and soldiers, which we refer to as *de*

*Grasse combatants*, fought alongside Rochambeau's troops, took if anything higher casualties, and re-embarked almost immediately after the battle. As a result, they spent only two months on American soil with little contact with U.S. institutions or society. Still, they returned to France honored as veterans and recognized as American combatants, just as Rochambeau's troops were.

We find that the alternative treatment received by de Grasse combatants does not account for support for institutional change. Regions with more de Grasse combatants show no elevated support, while the positive impact of Rochambeau combatants remains highly significant and strong in magnitude. Balance checks reveal two additional unbalanced covariates, but estimates are robust to both propensity score adjustments and directly controlling for them. Beyond excluding alternative mechanisms, the de Grasse control group also addresses a residual concern that the not-sailed combatants assigned to the second convoy may have been marginally less battle-ready than those Rochambeau combatants in the first. De Grasse combatants were included in the naval expedition to Virginia to face the British in case of battle, yet still we find no effect.

We also provide suggestive evidence on the channels through which these experiences translated into support for the Revolution. First, the association between Rochambeau combatants and revolutionary activity is specific to institutional conflict. Regions with more veterans experienced more anti-feudal revolts in 1789, but not more food riots, panic-driven unrest, or later support for violent policies during the Terror. Second, the timing of revolutionary conflict indicates that these ideas translated into action only when a political opportunity arose: the relationship between Rochambeau combatants and revolts appears sharply in 1789 and not in earlier or later years. Third, we replicate the analysis at the more disaggregated level of the *arrondissement*. The estimated effects remain positive and significant but are smaller. We document that this is related to the fact that there were important localized spillovers, which are partly captured when we study effects at more aggregate units.

Finally, several pieces of evidence suggest that the veterans themselves were the carriers of these ideas. The effects are strongest for combatants who had re-entered civilian life, and both officers and ordinary soldiers appear to have contributed. Individual-level evidence points in the same direction. Rochambeau officers were disproportionately represented among liberal noble deputies in 1789 and were more likely than comparable officers to join the Paris Jacobin Club by 1790. For Rochambeau's soldiers, the individual-level evidence is fragmentary but several anecdotes show that some of them did become personally involved in the Revolution. Together, these patterns are consistent with the interpretation that returning veterans transmitted experiences of more inclusive institutions abroad into local support for institutional change in France.

The paper proceeds as follows. In Section 2, we detail the paper's contribution to the literature. Section 3 summarizes the historical background, and Section 4 describes the data underlying our analysis. Section 5 presents our main results, documenting a strong conditional correlation between Rochambeau's soldiers and support for the French Revolution. We find

no correlations for the other treatment and placebo group, suggesting that (i) selection cannot account for the results, and that (ii) the mechanism behind this result is prolonged exposure to the United States, and to New England in particular. In Section 6, we summarize the evidence we gathered suggesting how, where, when, and by whom precisely the Revolution was transmitted across the Atlantic. Section 7 concludes.

## 2. Contribution to Literature

The paper contributes to several strands of literature. First, our findings speak to the literature in economics studying national institutional change. While there is some agreement on the factors that can trigger institutional change (Brückner and Ciccone, 2011), there is little causal evidence on what ensures that those triggers will result in more inclusive institutions. Focusing on the French Revolution, a pivotal critical juncture for institutions (Roland, 2004), we show that ideals and ideas embodied in people, acquired by personal experience, can be decisive agents of institutional change. Naturally, personal exposure can create cross-country linkages, providing one reason why institutional change occurs in regional waves (e. g. Markoff, 1996b; Acemoglu et al., 2019).<sup>5</sup> Moreover, personal exposure can help explain why a history of democratic institutions ensures their continued success (Acemoglu et al., 2024).<sup>6</sup> Personal exposure might still be an essential factor in more recent examples of institutional change, but the omnipresence of information due to media hinders causal identification in those contexts. Our findings also relate to the literature showing that ideas have consequences in other settings (e. g. Ash, Chen, and Naidu, 2022), focusing on one of the most important institutional changes in history.

By showing for one particular, but also particularly important, case that better institutions can be imported from abroad, we contribute to the broader literature studying the effect of migration and the corresponding exposure to new ideas on the diffusion of political ideas (e. g. Spilimbergo, 2009; Barsbai et al., 2017), development (e. g. Sequeira, Nunn, and Qian, 2020; Salem and Seck, 2022), and innovation (e. g. Coluccia and Dossi, 2023). We complement this literature by focusing on a brief and non-permanent exposure, highlighting its importance for major institutional change, and advancing an identification approach novel to this literature.

An alternative interpretation might emphasize the role of war veterans in organizing collective political action (Jha and Wilkinson, 2012). Jha and Wilkinson (2023) make this argument about military skills in the context of the American combatants and the French

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<sup>5</sup>Buera, Monge-Naranjo, and Primiceri (2011) study how countries learn from their neighbors about new policies.

<sup>6</sup>Within the political economy literature, our paper further contributes to the debate on the agents driving democratization. In particular, Lizzeri and Persico (2004) argue that members of the elite can be agents of institutional change, whereas Acemoglu and Robinson (2000), in contrast, emphasize that outsiders may threaten to overthrow the elites, thus initiating institutional change. In our setting, both normal soldiers and officers are affected by exposure to new institutions, and we document that both drive institutional change back in their region of origin.

Revolution. While using a broadly similar approach, our independent work differs in several important aspects. Most importantly, we employ two novel placebo tests that strengthen identification and help disentangle ideational mechanisms (e.g., exposure to New England’s institutions) from general military experience. Furthermore, we provide additional pieces of evidence, such as distinguishing between the effects of officers and soldiers, that help pinpoint the mechanism. We view these efforts as complementary, both demonstrating an American influence but with different emphasis on the mechanism.<sup>7</sup>

Our findings further inform nascent literature in economics studying the trans-Atlantic transfer of political ideas and ideals embodied in people. In a seminal contribution, Acemoglu et al. (2001) argue that Europeans exported a particular set of inclusive institutions to the New World when settling there. The institutions established in some of these settlements, for example, New England and Pennsylvania, surpassed the Old World ones in inclusiveness (Israel, 2017). As part of the Atlantic community of the eighteenth century, the settlements were also receptive to Enlightenment ideas about good governance spreading from Europe (May, 1976; Bailyn, 2005). Our paper shows how these institutions and ideas were “re-imported” into Europe through the experience of French officers and soldiers who were deployed for more than a year to New England and also marched through Pennsylvania and Philadelphia.<sup>8</sup> Relative to recent economics studies on the trans-Atlantic exchange of ideas and ideals embodied in people that focus on the transfer from the Old to the New World (Giuliano and Tabellini, 2020; Dippel and Heblich, 2021; Beach and Hanlon, 2022), our findings highlight that the transatlantic transfer also cut the other ways and show how it influenced one of the major events in European history.<sup>9</sup>

Lastly, we speak to the historiography of the French Revolution. A voluminous literature has tried to identify the causes of the French Revolution (de Tocqueville, 1856; Lefebvre, 1939; Furet, 1978; Doyle, 1999; Israel, 2014). Prior empirical and plausibly causal evidence emphasizes economic shocks, in particular the severe drought in 1788 (Waldinger, 2023) and earlier grievances about taxation (Davoine, Enguehard, and Kolesnikov, 2025; Giommoni, Loumeau, and Tabellini, 2026), as causes of social unrest and revolt in the early Revolution.<sup>10</sup> Our paper focuses instead on the link between the American and French Revolutions, connecting the

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<sup>7</sup>They first presented results on the conditional correlation between Rochambeau’s soldiers and several outcomes that we also study in 2019. This earlier work of theirs lacked the crucial placebos for identification and mechanism that our paper features. We first publicly presented results using the placebo of not-sailed combatants in May 2022 and subsequently published our first working paper at the end of February 2023 Ottinger and Rosenberger (2023). Jha and Wilkinson first publicly presented results using the not-sailed placebo group in November 2022 and first published their working paper at the end of March 2023 (Jha and Wilkinson, 2023).

<sup>8</sup>Our mechanisms of idea diffusion complement Israel’s (2017) historical argument. He focused on the role of particular individuals like Thomas Jefferson to argue that ideas from the American Revolution influenced institutional change in the French Revolution.

<sup>9</sup>Our results also complement the literature on the importance of individuals in transferring ideas and institutions within countries (Ochsner and Roesel, 2020; Bazzi, Ferrara, Fiszbein, Pearson, and Testa, 2023a,b).

<sup>10</sup>Chambru (2019) documents a causal link between weather shocks and social conflict in France before the French Revolution.

experience of American institutions by French soldiers to the demand for institutional change back home.<sup>11</sup> McDonald (1951) first documented a spatial correlation between the number of American combatants and agricultural revolts in 1789, but subsequent historical studies failed to confirm the importance of American combatants for revolutionary outcomes (e. g. Scott, 1998). Beyond vindicating McDonald’s hypothesis empirically, we also provide novel evidence on other outcomes and transmission channels. Importantly, we show that not only soldiers who served in America but also the officer corps supported institutional change. Appendix Section B.4 discusses in more detail how we speak to this historical literature.

### **3. Historical Background**

We discuss how the French army came to fight on American soil, what French combatants experienced there, touch upon events during the French Revolution, and distill a discussion among historians whether and how the French combatants contributed. This section provides a very short summary of this historical context; more extensive details can be found in Appendix B.

#### **3.1. The Combatants’ Experience in the American Revolutionary War**

The French monarchy deployed troops to support the American colonists as part of its broader strategy to weaken Britain, a mutual enemy. General Rochambeau chose around 7,500 French soldiers from a larger group initially assembled for a planned but ultimately aborted invasion of Britain. Due to a lack of ships, he left one-third of the force behind. The soldiers who departed with General Rochambeau spent several years in the United States, primarily in New England, where they were exposed to political freedom, economic independence, and social equality. Rochambeau’s troops eventually marched along the Eastern Seaboard to participate in the Siege of Yorktown, the decisive battle of the American Revolutionary War. There, they were joined by French regiments under Admiral de Grasse, who had not been exposed to New England but instead stationed in the slave-holding French Caribbean. By 1783, both contingents returned to France, having suffered relatively low casualty rates, primarily due to disease rather than combat.

Anecdotal evidence suggests that the American experience changed the combatants attitudes toward liberty and equality. Several officers under Rochambeau developed positive beliefs about American institutions. For example, the court aristocrat Comte de Ségur claimed in a letter that he and others brought back to France “a lively passion for freedom and for independence” (Scott, 1998, 122). Behind these shifts in political outlook lay, at least in part,

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<sup>11</sup>The American and French Revolutions were first discussed in a common framework as “Atlantic revolutions” of the late eighteenth century by Palmer (1959, 1970); Godechot (1965). These authors focused, however, primarily on the commonalities in economic and social conditions that caused both revolutions, rather than on soldiers or other individuals linking the revolutions.

the firsthand experience of a society where ideals of liberty and equality were acted out in practice. As described by (Scott, 1998, 122), “what seems to have impressed most of Rochambeau’s veterans... were not abstract political principles but more mundane practices, notably religious toleration and social equality rooted in widespread economic prosperity.”<sup>12</sup>

### 3.2. The French Revolution and the Role of Combatants

The historical literature points to a combination of long-standing political instability and short-run economic shocks as triggers of the revolution. Two broad phases can be distinguished, a more moderate “constitutional” phase up to September 1792 and a more violent “radical” phase after September 1792. Local support for the French Revolution differed across the regions of a country as large as France. We trace these local differences, in particular during the more moderate constitutional phase, with a variety of measures, ranging from revolts targeting feudal institutions over early Revolutionary societies and volunteers for the Revolutionary Army to emigrants from the Old Regime’s elites.

Historians have debated whether and how the American combatants supported the French Revolution and contributed to cross-regional differences. While McDonald (1951) observed a positive correlation between the incidence of American combatants and anti-feudal revolts in 1789, Scott (1979, 1998) rejected the hypothesis that American combatants contributed meaningfully to the Revolution. Scott’s work, although criticized at the time (Godechot, 1979), has shaped most of the assessment in general works on the French Revolution published since, which besides some notable exceptions (e.g. Israel, 2017) downplay that America influenced the French Revolution. We show empirically that American combatants were one quantitatively important source of support for the French Revolution. Specifically, we address concerns of local confounders, pin down the mechanism by exploiting two placebo groups of combatants, and expand the argument by showing that American combatants increased not just anti-feudal revolts but contributed more broadly to support for the French Revolution.

## 4. Data

We collect individual-level data from military records and geo-localize birthplaces to construct variables for the main treatment, alternative treatment, and placebo groups at the region of origin. We further collect a large set of novel outcomes and controls, which we obtain at various geographical or regional levels. We aggregate the data into administrative regions of broadly similar size. Appendix A provides a list describing all variables employed along with their source (Table A.1), summary statistics of the main variables (Table A.2), and additional details on data construction.

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<sup>12</sup>This change in attitude appears to have extended beyond Rochambeau’s army. For example, Marquis de Lafayette, who had signed up for Washington’s army voluntarily, became a proponent of liberty through his experiences in America (Gottschalk, 1950).

## 4.1. American Combatants and Not Sailed Placebo

We focus on French infantry regiments of American combatants, which we separate into treatment group and alternative treatment group, and a French infantry regiment of not-sailed combatants as placebo. The main treatment group is General Rochambeau’s combatants, who were exposed to the United States and especially New England before and after the Siege of Yorktown. Specifically, we consider the French infantry regiments *Bourbonnais*, *Saintogne*, and *Soissonnais*. The alternative treatment group is Admiral de Grasse’s combatants, who participated in the Siege of Yorktown but did not see the United States before and afterward. This group comprised the three French infantry regiments *Agénois*, *Gâtinais (Royal-Auvergne)*, and *Touraine*. The placebo group is the French infantry regiment of *Neustrie*, which would have become American combatants if it was not for logistical problems that forced them to stay behind. We do not include other military units participating under Rochambeau for which we do not have comparable alternatively treated and placebo control groups.<sup>13</sup>

The individual-level data on soldiers relies on the original military records. The handwritten regimental books are preserved in the archive of the French Ministry of War. We first digitized the list of French combatants which was transcribed by historians from the regimental books of 1776–1786 (*Ministère des Affaires Étrangères*, 1903). We also web-scraped the crowd-sourced digitization of this list, which included manual geo-localizations by volunteers with local knowledge,<sup>14</sup> and cross-referenced the two data sets. Additionally, the crowd-sourced data include the revised data on deaths during the campaigns from Dawson (1936). For the not-sailed soldiers from the *Neustrie* regiment, which did not achieve combatant status due to unforeseen circumstances, we transcribed the regimental book of 1776–1786 manually.

We geo-localize birthplaces of combatants and not-sailed soldiers at the highly disaggregated level of municipality (*commune*). We geo-localized birthplaces for 83% of Rochambeau combatants, 85% of de Grasse combatants, and 80% (71%) of *Neustrie* not-sailed combatants.<sup>15</sup>

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<sup>13</sup>Specifically, these are the (i) the *Deux-Ponts* regiment, a German foreign legion infantry regiment raised by the Duke of Deux-Ponts (Zweibrücken) in Germany; (ii) the 2<sup>nd</sup> battalion of the *Auxonne* artillery regiment; and (iii) Lauzun’s Legion of Foreign Volunteers, a mercenary unit of light cavalry raised just in 1778. For (i), we would have a placebo regiment, the *Anhalt/Salm-Salm* German foreign legion, which was intended to sail but also stayed behind. However, no German foreign legion sailed under Admiral de Grasse. Moreover, the origins of these soldiers were by and large in Germany, outside of France during Louis XVI’s reign, as evidenced by the origins of those who fell (Dawson, 1936). For (ii), we do not have a placebo group because the second artillery regiment, which initially stayed behind, was shipped as reinforcement to the U.S. before Yorktown. Moreover, no artillery sailed under Admiral de Grasse who also participated in Yorktown. For (iii), the self-selection into treatment is a concern—the Duc de Lauzun lobbied to be included in the American campaign. Moreover, there are no control groups.

<sup>14</sup>See [www.francegenweb.org/lafayette](http://www.francegenweb.org/lafayette), last accessed 06/30/2022. The general motivation for volunteers to participate in crowd-sourced projects like [www.francegenweb.org](http://www.francegenweb.org) is to construct genealogies of their ancestors. Crowd-sourced data is increasingly used in economics applications, including studies of Ancien Régime France such as Blanc (2022) or Gay et al. (forthcoming).

<sup>15</sup>The match rate to municipalities is 71% and to départements 80%, because we can still assign in many cases a département of birth based on the military province. The main reasons why it is hard to do better are (i) illegible writing or incorrect spelling in the sources, (ii) municipality name changes, and (iii) identical

We thus capture the origins of the great majority of combatants. Importantly, match rates are broadly comparable across treatment and placebo groups.

Figure 1a maps the origins of Rochambeau’s combatants by département, and Figures 1b and 1c provide similar maps for not sailed and de Grasse combatants. As is apparent, the number of combatants varies strongly between départements—and even between immediately adjacent départements. Recruitment levels do visibly correlate across the three groups for some regions, but also are visibly different for some other regions. The bivariate correlation of Rochambeau combatants with the not sailed placebo is  $\rho = 0.58$  and with de Grasse combatants  $\rho = 0.51$ . The differences in recruiting stems largely from historical contingencies: Regiments were regularly rotated across garrisons every three years, and frequently recruited from the regions of both the current and past garrisons.<sup>16</sup> This variation in the combatants’ origins allows us to distinguish their impact empirically.

## 4.2. Support for the French Revolution

We collect data on four proxies measuring different dimensions of support for the French Revolution. The first measure is anti-feudal revolts that attacked the feudal institution of lordship (*seigneurie*), including the lord’s person, property, rights, or symbols.<sup>17</sup> Using data assembled by Chambru and Maneuvrier-Hervieu (2022), we observe 530 anti-feudal revolts at the level of municipalities, with the majority occurring in 1789. Figure A.1a depicts the spatial variation of anti-feudal revolts across départements. In auxiliary analysis, we study conflicts by year and also consider different types of conflicts, food riots, and panics during the Great Fear of 1789.

The second measure is early political societies. We digitized municipal-level data on the first year that a political society was founded in the period 1789 to 1794. To capture the bottom-up aspect, we focus on the 300 political societies formed spontaneously between 1789 and 1790. Figure A.1b depicts the spatial variation in early political societies across départements. In auxiliary analysis, we consider societies established during the “Reign of Terror” (1793–94) as a measure of support for generalized violence.

The third measure is volunteers for the revolutionary army. In total, more than 250,000 so-called “National Volunteers” enlisted voluntarily during 1791 and 1792, before the beginning of forced conscription, to defend the Revolution against its enemies, chiefly the French aristocracy and the monarchies of Europe. We digitized data on the number of companies raised per municipality by the end of 1791 and the number of battalions raised per département by the end of 1792. Figure A.1c depicts the spatial variation in voluntary battalions across

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municipality names creating ambiguity.

<sup>16</sup>While we do know about the actual garrisons in the decades prior to their deployment to America, it remained oblique in our historical sources how the rotation pattern for the over 100 standing regiments of French infantry of the line was determined.

<sup>17</sup>Such revolts are also referred to as anti-seigneurial revolts since they *did not* target royal institutions, which also belonged to the feudal system (Markoff, 1996a).

départements.

The fourth measure is emigration from the old elite. The land-owning elite comprised clergy, nobility, and upper bourgeoisie, which together made up more than half of 130 thousand emigrants. We digitized data on the number of emigrants by social status at the département level. Figure A.1d depicts the spatial variation in elite emigration across départements.

### 4.3. Control Variables

We use a set of baseline controls to hold constant factors that potentially correlate with both military recruitment and revolutionary activity. Specifically, we control for (i) general military recruitment by the total number of soldiers during the eighteenth century sampled by Komlos, Hau, and Bourguinat (2003); (ii) the number of garrisoned infantry regiments and garrisoned cavalry battalions; (iii) total population of the département; (iv) the urbanization rate; and (v) an indicator for the capital Paris (département Seine).

Beyond the baseline controls, we collect a large number of additional variables for probing the balance of treatment and control as well as for heterogeneity analyses. In particular, we construct variables on (i) geography and climatic shocks, including the status as maritime or border regions, ruggedness, the length of Roman roads, wheat suitability, and weather shocks in 1788 (Waldinger, 2023); (ii) on Ancien Regime institutions, including the presence of former administrative centers of different types (juridical, religious, taxation, public order); (iii) on human capital, including soldier's average height, literacy rates, secondary schooling, and enlightenment readership; and (iv) on the economy, including the number of markets and fairs, and stations of the Royal letter post. More detail on each variable is provided in Appendix A.

## 5. Main results: American Combatants and the French Revolution

To what extent did the French “American combatants” personal experience of liberty and equality in America contribute to regional support for the French Revolution? To test this empirically, we use a quasi-experimental setting that effectively provides us with three treatment groups: (i) the baseline treatment group (Rochambeau's combatants), which fought combat and personally experienced New England; (ii) a placebo treatment group (not sailed combatants), which was selected for treatment but never reached American soil; and (iii) an alternative treatment group (de Grasse combatants), which fought combat in the United States but did not experience New England. We will study each of these treatment groups in turn.

## 5.1. Baseline Treatment: Rochambeau’s Combatants

The empirical design focuses on variation across French regions. The baseline treatment is the extent to which regions were exposed to American combatants from Rochambeau’s army, as captured by the number of combatants born in each region. Rochambeau’s combatants not only fought in combat on American soil but also had extended personal experience of the American society, in particular that of New England, which at the time was considerably more liberal and equal than the French society.

By focusing on the number of combatants born in each region, we are effectively estimating a reduced form intent-to-treat effect. After the combatants’ return to France and their discharge from the army, they were in principle free to move about the country. We do not observe the locations where combatants were present in the year of the revolution. But suppose for a moment that we did know these locations: It would not be clear that this would help us to identify their effect on regional support, because the combatants’ choice of residency between 1783 and 1789 could be endogenous to the events to come. Thus, we would most likely want to instrument for their location in 1789 by an exogenous predictor of their locations. In an era when overland travel was slow and local culture highly varied (Blanc and Kubo, 2026), the combatants’ birthplaces would be a prime candidate instrument. In this sense, our research design resembles a reduced form instrumental variable setting when we are using the number of combatants born in each region as an exposure measure.

As unit of analysis, we use post-revolutionary administrative regions. We focus in the baseline on the *département*, an administrative region created of similar size for administrative efficiency in 1790/94 (Chambru et al., 2024). For additional analysis, we also use the *arrondissement*, an administrative district of approximately equal size below the *département* and established in 1800. We prefer the post-revolutionary administrative regions over traditional jurisdictions, because they are less closely aligned with pre-existing institutional and cultural boundaries.<sup>18</sup>

### 5.1.1. Baseline Specification

In the baseline, we estimate simple OLS regressions at the regional level using the following empirical specification:

$$y_i = \beta \ln \text{Rochambeau}_i + X_i' \gamma + \varepsilon_i \quad (1)$$

The dependent variables are the four proxies of support for the French Revolution in each *département*: anti-feudal revolts, revolutionary societies, battalions of volunteers for the revolutionary army, and the number of elites fleeing the Revolution. The main independent

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<sup>18</sup>In principle, we could also aggregate most of our data to other units of analysis, including historical jurisdictions like *généralités* or *baillages*. The traditional jurisdictions varied widely in size, and their boundaries often followed geographical, cultural, and historical regions (e.g. Gay, Gobbi, and Goñi, 2023). The post-revolutionary administrative regions often (but not always) cut across the historical boundaries. This stemmed from the rational approach that aimed to create evenly sized administrative regions that were easier to govern.

variable,  $\text{Rochambeau}_i$ , is the number of combatants serving in Rochambeau’s army originating from region  $i$  in France. We focus on the number of combatants who returned to France; results for the number of combatants who were deployed to America are highly similar.<sup>19</sup> The baseline controls  $X$ , listed in Section 4.3, address the prior literature’s concern that third factors may have affected both military recruitment and revolutionary outcomes.<sup>20</sup>  $\beta$  is the intent-to-treat coefficient of interest. We estimate the equation in logs and always control for log population size, implying that  $\beta$  can be interpreted as per capita.<sup>21</sup>

The baseline sample is 81 départements of mainland France in the borders of 1789.<sup>22</sup> Figure 1a depicts the spatial variation in Rochambeau combatants across départements. Later, in Section 6.1, we also study more fine-grained spatial variation and show that  $\beta$  comprises local exposure effects as well as localized spillovers.

### 5.1.2. Baseline Results

Table 1 presents results. Each column corresponds to a different proxy of support for the French Revolution. Column 1 shows the conditional correlation of Rochambeau’s combatants with anti-feudal revolts across French départements. Départements from which more of Rochambeau’s combatants hailed experienced significantly more anti-feudal revolts from 1789 to 1793. This association is very sizable: A one percent increase in those combatants is associated with an increase in the number of feudal revolts by more than 0.5%, accounting for factors that likely influenced military recruitment.<sup>23</sup> As is evident from Table 1, columns 2 to 4, the associations between Rochambeau’s combatants and the other proxies of support for the French Revolution are highly statistically significant as well. The magnitudes are sizable throughout: A one standard deviation increase in Rochambeau combatants (27 men), which is about equal to moving from the 25<sup>th</sup> to the 75<sup>th</sup> percentile in combatants, is associated with an increase of anti-feudal revolts by 74%, political societies by 34%, volunteer battalions by 39%, and emigrants by 21% relative to the baseline mean. Put differently, for every additional combatant, there would be an additional 0.17 revolts, 0.05 societies, 0.08 volunteer battalions, or

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<sup>19</sup>See Appendix D.2, Table A.12. The main reason for why combatants would not return was disease mortality from malaria, which they contracted in Virginia (and apparently unsystematically).

<sup>20</sup>The unconditional correlations would be even stronger, see Appendix Table A.11.

<sup>21</sup>We add one to a subset of variables that have zeros (cf. Appendix Table A.2) in the baseline and document robustness in Appendix D. Results for the inverse hyperbolic transformation are very similar. Results for Poisson (PPML) regressions are, if anything, stronger.

<sup>22</sup>For these, we have the most complete data. There are four mainland départements that came to be part of France after 1790: Vaucluse (Avignon, Papal state), Mont Blanc (Savoy, Italy), Mont Terrible (Belfort), and Alpes-Maritimes (Nice). These départements have missings for various outcomes and controls. The baseline does not include the Alsace (départements Bas-Rhin and Haute-Rhin) but document robustness to extending the sample to the Alsace in Appendix A.16. The reason is incomplete data and the fact that General Rochambeau was stationed there in the summer of 1789, potentially creating leadership effects, which we discuss separately in Appendix Section C.2.

<sup>23</sup>Figure 2 depicts the partial scatterplot for the regression. The association appears log-linear and is not driven by few outliers départements.

5 emigrants. Moreover, the standardized betas and the partial  $R^2$  demonstrate the importance of this association. The variation of Rochambeau's combatants across départements can explain between 5% (for elite emigrants) and up to 18% (for volunteer battalions) of the residual variation in the outcomes, and standardized effect size ranges from 0.28 (for elite emigrants) to 0.49 (for volunteer battalions).

## 5.2. Placebo Group: Regiment That Did Not Sail to America

### 5.2.1. Identification Concerns

There are two immediate concerns against a causal interpretation of the baseline results. The first concern is the *selection of individual soldiers* into Rochambeau's regiments. For example, soldiers eager to fight for democracy or to experience the lack of feudal institutions in the United States might have been more likely to sign up for Rochambeau's regiment. The historical setting, however, provides direct evidence against this concern. Regiments were staffed well before the French became militarily involved in the American Revolutionary War. The regular enlistment period was eight years, and switching regiments was highly uncommon for soldiers. More importantly, the future combatants of Rochambeau's regiments neither knew nor expected that they were going to the United States. As Scott (1998, 7) asserts,

“[n]one had volunteered to fight for American independence; indeed, they were at sea for seven weeks before being informed of their destination. Although the troops greeted this announcement with loud cheering, the response was one of relief that they were *not* bound for the West Indies ... rather than of enthusiasm for the American cause” (emphasis in original).

Unlike soldiers, some officers did have the private means to sail to America independently, the most famous example being Marquis de Lafayette (c.f. Appendix B.2). Yet, we never include such officers in our sample; in fact, Rochambeau prohibited the taking of volunteering officers (Merlant, 1920, 115).

A second concern relates to the *selection of entire regiments* for the French campaign in the United States. As we describe in the historical background, the regiments of Rochambeau's special expedition were chosen from a larger army mobilized to the northwest of France in 1779 for an eventually aborted invasion of England. Thus, Rochambeau's regiments were undoubtedly among the more fighting-ready French regiments. If the regiments were in addition to their fighting readiness selected based on the officers' and soldiers' characteristics, such as being more brave, violent, liberal, or egalitarian, and if these characteristics of officers and soldiers were also representative of their regions of origin, then the previously documented conditional correlations would be biased. In fact, such bias based on unobserved regimental and regional characteristics could equally work against us. Troop morale and discipline can be critical for the success of military missions, particularly when troops are deployed to a

foreign country where they could desert. Thus, it also seems possible that the regions from which Rochambeau’s regiments recruited were inherently more loyal to the monarchy. In either case, the estimated coefficients could not be interpreted causally.

### 5.2.2. Placebo treatment group

We use a historical coincidence related to the logistics of the French campaign to address these (and similar) concerns related to selection on unobservables. Two of the six infantry regiments were ready to leave but could not board due to an unforeseen shortage of ships. These regiments—the French regiment Neustrie and the German foreign legion Salm-Salm—were supposed to follow the first part of Rochambeau’s army as soon as possible, but a naval blockade by the English delayed the provision of ships and later diverted their deployment: When they ultimately sailed half a year later, the ships were diverted to Cadiz in Spain. At that point, their mission was aborted by the French king. Instead of joining the other regiments in Rhode Island, the second part of Rochambeau’s army returned home to France.

The not-sailed combatants of the French Neustrie regiment constitute a well-suited placebo group. The historical setting suggests that any selection concern should operate similarly for the regiments that were initially chosen by General Rochambeau to participate in the special expedition, whether they sailed to America in the first convoy or stayed behind for the second. In fact, Rochambeau declined to take any military action while waiting for the second convoy to arrive. Also, it is improbable that the treatment status changed after assignment. Enlisted soldiers could not change regiments after the decision was made which regiment sailed. Even the officers of the left-behind regiments had to stay behind, despite pleas to sail with the first army (Merlant, 1920).<sup>24</sup>

### 5.2.3. Empirical Specification and Results

We amend the empirical specification presented in equation (1) by including the log number of not sailed combatants from the placebo regiment hailing from each département:<sup>25</sup>

$$y_i = \beta_1 \ln \text{Rochambeau}_i + \beta_2 \ln \text{NotSailed}_i + X'_i \gamma + \varepsilon_i \quad (2)$$

By including the placebo group  $\text{NotSailed}_i$  in the regression, we intend to capture the effect of selection into treatment. The coefficient  $\beta_2$  will reflect this selection effect, plus any additional

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<sup>24</sup>Some of them may have later gone to America on individual terms. These always-takers are no concern for us because we estimate the intention-to-treat effect. Also, there is a question whether the regiments’ commanders were able to lobby for their regiments inclusion over the others. This was apparently the case for one special corps of light cavalry, *Lauzun’s Legion*, whose commander Lauzun lobbied successfully for its inclusion in the first convoy. As there was no cavalry corps among the not sailed troops, we excluded Lauzun’s Legion from the baseline treatment group.

<sup>25</sup>Plus one to account for zeros. As noted before, our results are robust to alternative transformations like the inverse hyperbolic sine or alternative estimation methods like Poisson regression.

effect of the placebo treatment itself—being readied at the port and eventually sailing but not to America. If selection effects plus the placebo treatment effect were unimportant, we would expect  $\beta_1$  to be similar to the baseline  $\beta$ . Else, we can focus on the net treatment effect  $\beta_1 - \beta_2$  for Rochambeau’s combatants deployment to America and consider for statistical significance p-values from F-tests of  $\beta_1 - \beta_2 = 0$ . The identifying variation for the net treatment effect comes from regions with many Rochambeau combatants but few not-sailed combatants, and vice versa.

This causal interpretation rests on two key assumptions: overlap (common support) and unconfoundedness. Overlap holds in our data. Figure 1b maps the regional origins of the not-sailed combatants. There are broad similarities with the origins of Rochambeau combatants; the bivariate correlation is  $\rho = 0.48$  (log-log). While similar, the regional distributions are not as similar as to prevent us from distinguishing baseline and placebo exposures empirically.

The differences in recruiting between baseline and placebo groups stem largely from historical contingencies. Regiments were regularly rotated across garrisons every three years, and frequently recruited from the regions of both the current and past garrisons.

While overlap is testable, unconfoundedness is not. In our quasi-experimental setting, the unconfoundedness assumption is plausible because the not-sailed placebo lets us directly account for otherwise unobservable factors. However, even with a strong experimental design, treatment and placebo groups may not be fully randomized with respect to observable characteristics in our sample.

To test for randomization in our sample, we assess balance across 27 covariates in Figure 3. These covariates include factors possibly relating to military recruitment (panel a, always included as baseline controls), geographic characteristics (panel b), old-regime local institutions (panel c), and proxies for human capital and economic activity (panel d). Three out of twenty seven covariates—ruggedness, precipitation shock, and bishoprics—correlate significantly with the net treatment, suggesting some imbalance. We address these imbalances through propensity score methods and further demonstrate that these covariates are not systematically related to our outcomes. Overall, we view the balance results as supportive of the overlap and unconfoundedness assumptions.

Table 2 shows that the coefficients on Rochambeau combatants remain strongly positive and significant across all four outcomes. In contrast, not-sailed combatants do not exhibit a significant or sizable positive association with any dimension of support for the Revolution. For the outcomes political societies and elite emigrants, the coefficient on not-sailed combatants is even significantly negative, which is consistent with selection on unobservables working against us. The net coefficient,  $\beta_1 - \beta_2$ , is larger than the baseline  $\beta$  for the outcomes revolts, societies, and emigrants, and only slightly smaller for the outcome volunteers. All F-tests reject that the net coefficient  $\beta_1 - \beta_2$  equaled zero at the 95% significance level, with significance for the outcomes societies and emigration above 99%.

These findings are robust to adjusting for imbalances in observable covariates. We estimated the propensity score for receiving the net treatment given the three unbalanced covariates—

ruggedness, precipitation shock in 1788, and bishoprics—and used this propensity score as inverse probability weights. Figure A.4 compares the baseline estimates of  $\beta_1$  and  $\beta_2$  against the propensity score adjusted coefficients.<sup>26</sup> While we find that both  $\beta_1$  and  $\beta_2$  tend to be somewhat closer to zero after adjustment, they are also more precisely estimated. Crucially,  $\beta_1$ , the coefficient on Rochambeau’s combatants, remains significantly positive while  $\beta_2$ , the coefficient on not-sailed placebo combatants, is indistinguishable from zero or significantly negative. In Table A.13, we document robustness to controlling individually and jointly for each imbalanced variable in the baseline unweighted regressions. Each of the three imbalanced variables appears to be significantly related to at least one outcome, yet none of them is systematically related to all dimensions of support for the revolution.

In sum, these results strongly suggest that local support for the French Revolution increased causally in the combatants’ origins because of Rochambeau combatants’ deployment to America.

### 5.3. Alternative Treatment Group

#### 5.3.1. Alternative Interpretations

Thus far, it is unclear what experiences in America mattered for increasing support for the French Revolution. For instance, participation in the American War of Independence could merely provide battle-hardened veterans. Once the Revolution was imminent, the returned veterans might have provided the combat experience and military networks necessary for inciting anti-feudal revolts. Furthermore, the combatants were fighting (and winning) against the British monarchy, which might have increased their anti-monarchical sentiment.<sup>27</sup> Yet another interpretation is that exposure to *any* foreign country might have affected their values (Clingingsmith, Khwaja, and Kremer, 2009). Further, deployment to the United States might have led Rochambeau’s combatants to develop a preference for conflict (Campante and Yanagizawa-Drott, 2015). Finally, one could imagine that Rochambeau’s combatants were hailed as heroes of the American Revolutionary War which may have changed their economic possibilities and political ambitions.

Moreover, one might be concerned whether Rochambeau’s choice about what regiments should sail first and what regiments should sail later was influenced by some (marginal) difference in their readiness to fight in the American Revolutionary War. For example, one might be tempted to assess that the not sailed regiment was left behind for reasons related

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<sup>26</sup>We report results for inverse probability weighting, but other estimators deliver very similar results.

<sup>27</sup>While possible, this interpretation is not highly plausible because the French had a long history of warfare against the British without experiencing a revolution, winning at some times and losing at others. As explained by Scott (1998, 74), “for the French, the current conflict was but the latest in a long series of conventional wars against a traditional enemy, and the next confrontation might reverse the positions of victor and defeated. The officers of the French and English armies shared a comparable social background, a cosmopolitan culture, and the same professional values. Consequently, the French officers socialized with, entertained, and even loaned funds to their unfortunate brothers in arms from Cornwallis’ forces.”

to inherent characteristics of its leadership or of the soldiers it comprised. The discussion of the historical evidence above, and especially the fact that Rochambeau declined to take military action without these regiments, suggests that this concern is likely minor. However, one would ideally like to find another comparison group which was selected to fight in battle.

### 5.3.2. Another Fighting Army which did not see New England

We address these alternative mechanisms with another placebo—a second army of combatants. This draws on another historical coincidence related to military events in the American Revolutionary War. The only proper battle in which Rochambeau’s combatants participated was the Siege of Yorktown.<sup>28</sup> For this battle, Rochambeau’s combatants received significant reinforcements from a second French army—three full regiments of line infantry, about 3,000 men in total. These troops were transported directly from the French Caribbean colonies by the fleet of Admiral Comte de Grasse.<sup>29</sup> The second army landed on September 2 and effected a junction with the Americans under Lafayette a few days later (Scott, 1998, 60). When the siege began on September 28, the second army participated next to Rochambeau’s and Washington’s troops in the siege works and fierce fighting against the British. Shortly after the British under General Cornwallis surrendered, the second army re-embarked on de Grasse’s fleet, which transported the troops back to the Caribbean colonies. Thus, while spending about two months on American soil in Virginia and being in contact with the American Army, the combatants of the second army (de Grasse combatants) never experienced New England’s distinctively more liberal and equal society. Instead, they were exposed to the Southern U.S. and French colonial societies where slave-holding and large-scale landholding were common (e. g. Engerman and Sokoloff, 1994; Acemoglu et al., 2001).

We summarize the deployment histories of Rochambeau’s and de Grasse’s regiments in Table A.3. De Grasse’s combatants appear well-suited as an alternative treatment group, as their experience was in many aspects similar to that of Rochambeau’s combatants—except for not experiencing New England. Both groups were considered heroes of the American Revolutionary War back in France and thus enjoyed social prestige. Both groups had shown bravery during the Siege of Yorktown, acquiring battle experience and tasting violence. In fact, the *Gatinais* regiment of de Grasse earned recognition for the storming of a British redoubt, taking casualties while doing so, and was subsequently promoted to the status of a royal regiment.<sup>30</sup> Both groups spent many months on ships while sailing to and from the Americas. Two regiments of Rochambeau’s combatants also saw the colonies when sailing

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<sup>28</sup>Besides this Siege, there were less than a handful of skirmishes while the army was on campaign, and these skirmishes were fought by Lauzun’s Legion, whose combatants are not part of our sample.

<sup>29</sup>After disembarking the troops, Admiral de Grasse engaged the British navy at the Battle of the Chesapeake (September 5, 1781), cutting them off from reinforcement and preventing evacuation.

<sup>30</sup>The *Touraine* regiment of de Grasse also saw elevated casualty rates. According to Susane (1876), the *Deux-Ponts* regiment of Rochambeau (which is not part of our sample) also earned distinction at Yorktown and was promoted to royal regiment, but we do not observe higher casualty rates.

home via the Caribbean. Finally, all regiments returned home to France between April and September 1783.

### 5.3.3. Empirical Specification and Results

We further amend the empirical specification presented in equation (2) by including the log number of combatants from de Grasse’s army hailing from each département:

$$y_i = \beta_1 \ln \text{Rochambeau}_i + \beta_2 \ln \text{NotSailed}_i + \beta_3 \ln \text{DeGrasse}_i + X'_i \gamma + \varepsilon_i \quad (3)$$

The interpretation is analogous to before.  $\beta_3$  captures the effect of the alternative treatment, which includes combat experience. If it was important, we would expect the coefficient  $\beta_1$  to fall compared to before. We also consider the treatment effect of experiencing America net of the combat experience,  $\beta_1 - \beta_3$ .

Figure 1c depicts the spatial variation in de Grasse combatants across départements. The bivariate log–log correlation of de Grasse combatants with Rochambeau combatants is  $\rho = 0.52$  and with not-sailed combatants  $\rho = 0.47$ . As with the not sailed placebo group, the de Grasse combatants’ origins are similar but not too similar to those of Rochambeau combatants. This means that we have common support but can still distinguish the groups empirically.

To test for randomization, Figure 5 depicts balance results for the adjusted net treatment, the differential exposure to Rochambeau combatants versus de Grasse combatants. While the general pattern is similar to that observed previously, there are now five imbalanced observable covariates: Treated départements are more likely to be located at the border, more rugged, had a greater precipitation shock, more collèges, and more collège students. We document robustness for all results by using the joint propensity score as inverse probability weights and by directly controlling for these covariates.

Table 3 presents the results when controlling for de Grasse combatants. Across all outcomes, we find no significant or sizable association between de Grasse combatants and support for the French Revolution. Coefficients are essentially zero for anti-feudal revolts, political societies, and old elite emigrants; the coefficient for volunteer battalions is positive but insignificant, with a standardized beta of less than one-third of Rochambeau combatants. Partial  $R^2$  for de Grasse combatants are close to zero throughout. In contrast, the coefficients and partial  $R^2$  for Rochambeau’s combatants remain barely affected by their inclusion. F-tests of the coefficients’ equivalence strongly reject that de Grasse’s combatants had a comparable effect to Rochambeau combatants on anti-feudal revolts and elite emigrants, and weakly reject it for political societies and volunteer battalions. Figure A.5 and Table A.14 show that covariate imbalance does not drive these results.

In sum, the findings show that alternative interpretations, including the combat experience gained in this conflict, successfully fighting against a monarchy, or exposure to a foreign country more generally, contributed little to bringing the American Revolution home to

France. Instead, it appears that what mattered were the veterans' experiences outside the battlefield and, in particular, in New England, where they could witness a functioning liberal and equal society.

## 6. Further Evidence

Having established that the experience of the United States and in particular New England drives the main effects, we now examine how exposure to these experiences translated into support for the French Revolution. While the historical record does not allow to test each step of the transmission chain, we assemble a range of additional evidence that helps shed light on the underlying channels. We proceed in two steps. First, we analyze what type of conflict was affected, as well as when and where these effects materialized. Second, we investigate who carried these ideas, distinguishing between different groups of combatants and their roles in the revolutionary process.

### 6.1. Nature, Timing, and Geography of the Effects

This subsection characterizes the nature of the effects along three dimensions: the type of conflict affected, their timing, and their spatial distribution. Three main findings emerge. First, the effects are specific to institutional conflict: Rochambeau combatants are associated with anti-feudal revolts and political mobilization, but not with subsistence riots or support for generalized violence during the Terror. Second, the effects are sharply concentrated in 1789, indicating that exposure translated into action only when a political window of opportunity opened. Third, the effects exhibit a clear spatial structure: they are also present at finer geographic levels, but their magnitude is largely captured at the *département* level, consistent with localized spillovers within regions. Together, these patterns suggest that the American experience did not generate a general propensity for unrest, but instead shaped targeted support for institutional change that diffused locally once triggered.

**No effect on generalized unrest or violence.** We provide evidence that the American experience did not contribute to generalized unrest or violence. First, the association of Rochambeau combatants with revolutionary activity is not generic. Table 4 documents that for subsistence riots in the same period the coefficient on Rochambeau combatants is smaller in magnitude and insignificant (Column 1). For the “Panics” during the Great Fear of 1789 (Lefebvre, 1932), the coefficient on Rochambeau combatants is negative and insignificant (Column 2).

Second, Rochambeau combatants do not explain support for violence during the “Terror”. We collected data on three variables proxying support for violent policies after 1792, when the revolution turned radical: (i) the vote in the National Convention on whether the King must be punished by death (January 1793); (ii) the total number of death sentences handed

out during the period of “Terror”; and (iii) the number of political societies established during Year II, signaling support for the regime. Table 4 columns 3 through 5 show that Rochambeau combatants are not significantly positively associated with any of the outcomes, and in one case (death sentences) even negatively.

In sum, these findings suggest that the effect of Rochambeau combatants on revolutionary revolts and political societies was not driven by a general inclination towards violence but rather driven by grievances targeted against Old Regime institutions.

**Event study: only revolts in 1789.** To examine the timing, we exploit the temporal variation in one of our outcomes, conflict. Using anti-feudal revolts  $y_{i,t}$  at the département-year level as outcome, we estimate the following equation separately for each of the three groups of combatants:

$$y_{i,t} = \sum_{\tau=1780}^{1794} \beta_{\tau} \ln \text{Combatants}_i \times \mathbb{1}(\tau) + \gamma \sum_{\tau=1780}^{1794} X_i \times \mathbb{1}(\tau) + \mu_t + \mu_i + \varepsilon_i \quad (4)$$

We also include the baseline controls interacted with year dummies and year ( $\mu_t$ ) and département ( $\mu_i$ ) fixed effects.

Figure 7 shows that anti-feudal revolts increased in départements from which more of Rochambeau combatants hailed only in 1789.<sup>31</sup> The effects in 1789 are specific to Rochambeau combatants. We find no comparably sizable or significant effects for not sailed soldiers or those from de Grasse regiments.<sup>32</sup>

The results reinforce the notion that Rochambeau’s combatants were not just hailing from inherently more insubordinate départements, or that they merely acquired a taste for violence during the military campaign. Moreover, the results highlight that revolutionary actions were taken only when a window of opportunity had opened up.

**Results at disaggregated levels and spillovers.** The spatial patterns in the data suggest that our baseline effects comprise both local treatment effects and localized spillovers. The baseline results are estimated at the level of fairly aggregate regions, the *département*. To examine whether the results hold at a more granular level, we replicate the analysis using smaller units of observation, *arrondissements*. Table 5 shows that the positive effect of Rochambeau combatants on revolutionary support is present at the *arrondissement* level (columns 1, 3, and 5). The effects remain mostly highly significant, even when clustering standard errors spatially which is a bigger concern at this finer spatial scale. However, the estimated magnitudes are smaller than in the baseline specification. To explore this further, we added as an additional regressor the number of combatants in neighboring *arrondissements*. Columns 2, 4, and 6 show that coefficients on neighboring Rochambeau

<sup>31</sup>In unreported results, we also find no evidence of a spike in earlier or later years (the data is available until 1800).

<sup>32</sup>Furthermore, Figure A.6 in the Appendix shows that food riots increased generically in all départements with more combatants, both in 1789 and in 1792, whether they have experienced the U.S. or not.

combatants are positive, large, and highly significant. This implies an important role for spatial spillovers at more localized levels. Underlying these spatial spillovers could be several channels, including combatants moving from their birthplaces to neighboring places, the diffusion from their birthplaces of knowledge about American institutions, or revolutionary actions in one place increasing the odds of revolutionary actions nearby. Data limitations prevent us from distinguishing these channels further. Additional evidence in Table A.7 suggests that a large part of these spillovers are occurring within *départements*, and are therefore captured by the baseline.

**Heterogeneity.** Cross-département heterogeneity further clarifies the conditions under which the American experience translated into revolutionary mobilization. Appendix Table A.8 shows that the effect of Rochambeau combatants is stronger in départements where the local aristocracy historically held greater institutional power (proxied by the presence of *parlements*) and weaker where royal administration was comparatively strong (proxied by the density of royal tax centers). This pattern is consistent with historical accounts that early revolutionary action was directed primarily against feudal privileges rather than the monarchy. The relationship is also somewhat stronger in regions experiencing larger subsistence shocks, suggesting that the crisis of 1788–89 may have helped activate the transmission of these ideas. At the same time, the prevalence of Enlightenment readership, proxied by subscriptions to the *Encyclopédie*, does not mediate the effect, indicating that the mechanism did not operate primarily through exposure to abstract political philosophy. Finally, the effects are particularly pronounced in more remote départements with fewer markets, fairs, and post houses, highlighting that direct personal exposure to American institutions mattered most where access to alternative channels of idea diffusion was limited.

## 6.2. Who Transmitted Revolutionary Ideas?

The evidence so far is consistent with the interpretation that exposure to American institutions increased local support for institutional change. We now turn to the question of *who* transmitted these ideas. In particular, we examine whether the effects were driven by returning combatants themselves, and assess whether transmission operated through officers, ordinary soldiers, or a small set of prominent leaders. While the evidence points to returning combatants as carriers of these ideas, we cannot fully trace the subsequent diffusion process at the micro level. In particular, ideas may have spread beyond the combatants themselves through social interactions within families, local communities, and broader networks, or through changes in local political culture triggered by their presence. Our empirical design is well-suited to identify the origins of exposure and its aggregate effects, but less so to distinguish between direct and indirect channels of transmission. We therefore interpret the combatants as the primary source of these ideas, while allowing for the possibility that their impact was amplified through wider social diffusion.

**Discharged, Not Active Soldiers.** A first question is whether the baseline results simply reflect where Rochambeau's regiments happened to be stationed on the eve of the Revolution. Table A.5 shows that this is not the case. Controlling for whether one of Rochambeau's regiments was stationed in a département in January 1789 leaves the estimated effect of Rochambeau combatants essentially unchanged. If anything, the stationing indicator is negatively related to anti-feudal revolts and volunteer battalions.

More importantly, the baseline relationship is instead strongest for those combatants who had re-entered civilian life. Using discharge and retirement information for the *Soissonnais* regiment, Appendix Section C.3 shows that the estimated effects are at least as strong, and often stronger, when attention is restricted to combatants discharged after returning from America. This pattern fits the interpretation that the relevant carriers of ideas were veterans who had left the army and were able to return to their origins.

**Officers and Ordinary Soldiers.** A second question is whether transmission was driven mainly by officers, who possessed greater organizational skills and social standing, or by ordinary soldiers. Appendix Section C.1 shows that both groups contributed, but in different ways. Soldiers account for most of the effect on anti-feudal revolts, political societies, and elite emigration, whereas officers matter more for volunteer mobilization. This difference is informative about the mechanism. If organizational capacity acquired in war was a necessary and complementary factor, one would expect the officer coefficients to dominate throughout. Instead, the evidence points to a broader process in which ordinary soldiers played a more important role for revolutionary support across regions.

**Not Merely Leadership Effects.** A related question is whether the results on soldiers could be explained by a pure leadership interpretation in which combatants merely followed General Rochambeau or a small set of superiors. We review historical evidence speaking against this in Appendix C.2. Rochambeau himself neither became a political entrepreneur nor did he maintain a national communication network. Instead, his efforts were fully focused on his official military duties, which in the revolutionary summer of 1789 tasked him with restoring order in Alsace. More broadly, episodes of obedience and disobedience during the Revolution suggest that soldiers' loyalty was conditional on whether officers were perceived as supportive of the Revolution. What mattered, then, was less hierarchical command than a shared political alignment forged by common experience in America.

**Individual Level Evidence.** Several pieces of evidence show that combatants became personally involved in the Revolution.

Table A.9 considers the political affiliations of officers who served as deputies for the Nobility in the National Assembly (*General Estates*) of 1789. Among the seven officer-deputies who had served under Rochambeau, five became part of a small group of noble liberals who supported the abolition of feudalism and cooperated with the Third Estate. In contrast, among the three officer-deputies who had served under de Grasse, none was a liberal, and one even a far-right royalist. A one-sided Fisher exact test of the null hypothesis that officer-

deputies in both groups became equally likely liberals versus moderates or royalists yields  $p = 10/120 \approx 0.083$ . While the sample is too small to reach conventional significance, the direction of the difference is consistent with the personal experiences in the U.S. and New England shifting individual political attitudes towards favoring liberty and equality.

Two of the liberal Rochambeau officer–deputies made important contributions in their own right to the course of the French Revolution. In the Night of August 4th, 1789, when the National Assembly destroyed the feudal order, the first aristocratic deputy who relinquished his feudal rights voluntarily was the *vicomte* de Noailles, an officer among Rochambeau’s general staff (e.g., Blaufarb, 2016). Another influential liberal officer-deputy who had served in America under Rochambeau was Alexandre *comte* de Lameth, who became the “guiding light” of a commission that implemented revolutionary meritocracy in the military (Blaufarb, 2002, 57).

We also find that officers under Rochambeau were disproportionately more likely to become a member of the Society of the Friends of the Constitution, also known as the Jacobin Club. Table A.10 displays figures from the membership list in December 1790 (see Section C.6 for details). Among the 241 officers under Rochambeau, 24 (10%) were members of the Jacobin club. Among the 208 officers under de Grasse, only 10 (4.8%) were Jacobins. A two-sample z-test for equality of proportions rejects the null of equal rates at the 5 percent level ( $z = 2.08$ ,  $p = 0.038$ , two-sided).

For ordinary soldiers, the surviving evidence is more fragmentary but points in the same direction. Veterans from Rochambeau’s regiments participated in the Storming of the Bastille, the most important revolt. They were also among the early members of the Paris National Guard, and among a notable group of revolutionary local armed mobilization. Appendix Section C.6 reviews these episodes in more detail.

## 7. Conclusion

Why do people support institutional change during a revolution? This paper studies that question in the context of the French Revolution, one of history’s most consequential episodes of institutional change. We focus on a group of French officers and soldiers who were deployed to North America during the American Revolutionary War and were thereby exposed to a society that, in important respects, was more liberal and more equal than Old Regime France. Using newly collected data on the regional origins of these combatants, we show that support for the French Revolution was significantly higher in French regions from which more combatants originated. This pattern is visible across four outcomes capturing support for institutional change during the constitutional phase of the Revolution: anti-feudal revolts, early political societies, volunteers for the revolutionary army, and elite emigration. To sharpen the interpretation of this relationship, we exploit two historical coincidences. First, one part of the army selected for the expedition never reached America. Second, another

French army fought the same battle at Yorktown but did not experience New England's institutions. The absence of comparable effects for these groups suggests that neither selection nor military service, combat experience, or foreign deployment more generally explains the results. Our preferred interpretation is that the personal experience of the United States, and especially New England, increased support for institutional change in France. We also provide suggestive evidence that the relationship is specific to institutional conflict rather than unrest more broadly and that returning veterans themselves were the carriers of these ideas.

Two limitations are important. First, we do not observe directly for the large majority of combatants whether they personally participated in revolutionary acts, nor can we trace at the micro level how their experiences were transmitted from person to person. The historical record allows us to document several suggestive patterns and a small number of individual cases, but not to reconstruct the full social process through which exposure abroad translated into local mobilization at home. Second, the results do not allow us to determine how much American combatants mattered in the aggregate relative to other forces in shaping the course of the Revolution. Nevertheless, the results show that the combatants' experiences were one important factor that explains why support for more inclusive institutions was stronger in some places than in others. In this sense, the findings presented here help to reappraise the American *contribution* to the French Revolution.

With these qualifications in mind, the paper addresses a broader question in political economy: how support for better institutions emerges in societies with little direct prior experience with them. Our findings suggest that personal exposure can matter. Individuals who temporarily experience a different institutional order abroad may return not only with new information, but also with changed beliefs about what is politically and socially feasible. In this sense, the paper highlights one channel through which ideas about liberty and equality can travel across borders and shape institutional change.

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# FIGURES

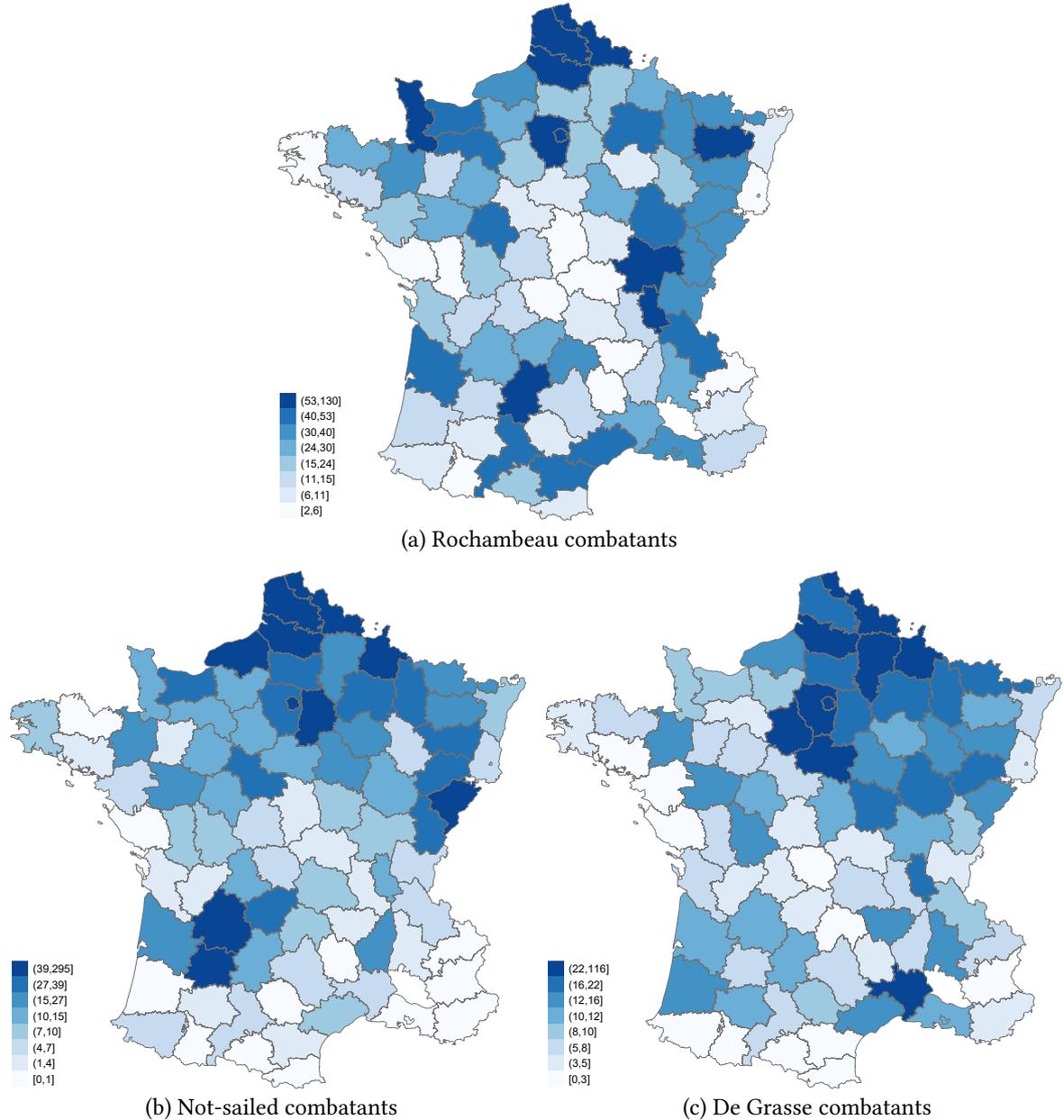


Figure 1: French Origins of Combatants

Note: The maps depict the spatial variation in the origin of Rochambeau’s combatants (panel a), not-sailed combatants (panel b), and de Grasse combatants (panel c) across French départements, with darker blue colors indicating a higher number of combatants born there.

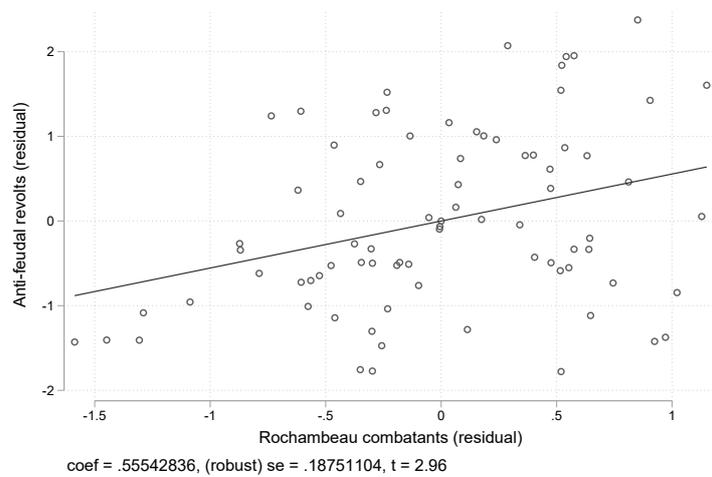


Figure 2: Rochambeau Soldiers and Revolutionary Revolts

*Note:* The partial scatterplot documents a significant and sizeable conditional correlation between the number of Rochambeau combatants originating in a département and anti-feudal revolts (Std.  $\beta = .45$ ). Controls include the log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, the urbanization rate, and an indicator for Paris (dept. Seine).

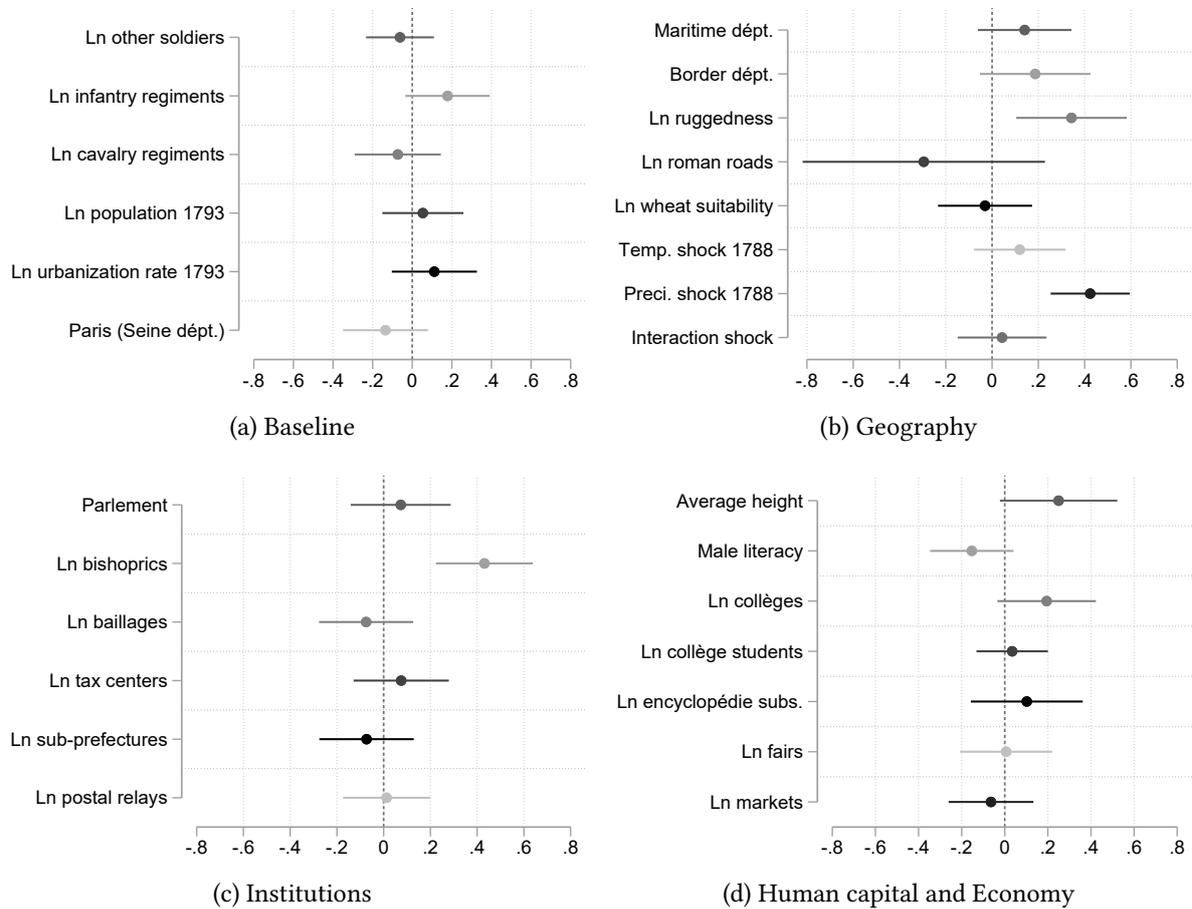


Figure 3: Covariate Balance of Treatment and Not-Sailed Placebo

*Note:* The figure documents the balance on observables for Rochambeau combatants (treatment) and not-sailed combatants (identification placebo). Each coefficient is from a separate regression that explains the covariate by the net treatment, i.e. the differential exposure to treatment and placebo. To allow for a fair comparison, we z-standardize all variables and compute the net treatment as  $z(\ln \text{Rochambeau combatants}) - z(\ln \text{not-sailed combatants})$ . The regressions for the Baseline group control for the respective other baseline covariates; the regressions for the groups Geography, Institutions, and Human capital and Economy control for the baseline covariates. Confidence intervals are reported at 95% significance level, using robust standard errors. The confidence intervals are conservative because we do not correct for multiple hypothesis testing. We provide robustness results for the variables that appear unbalanced (Ruggedness, Precipitation shock, and Bishoprics).

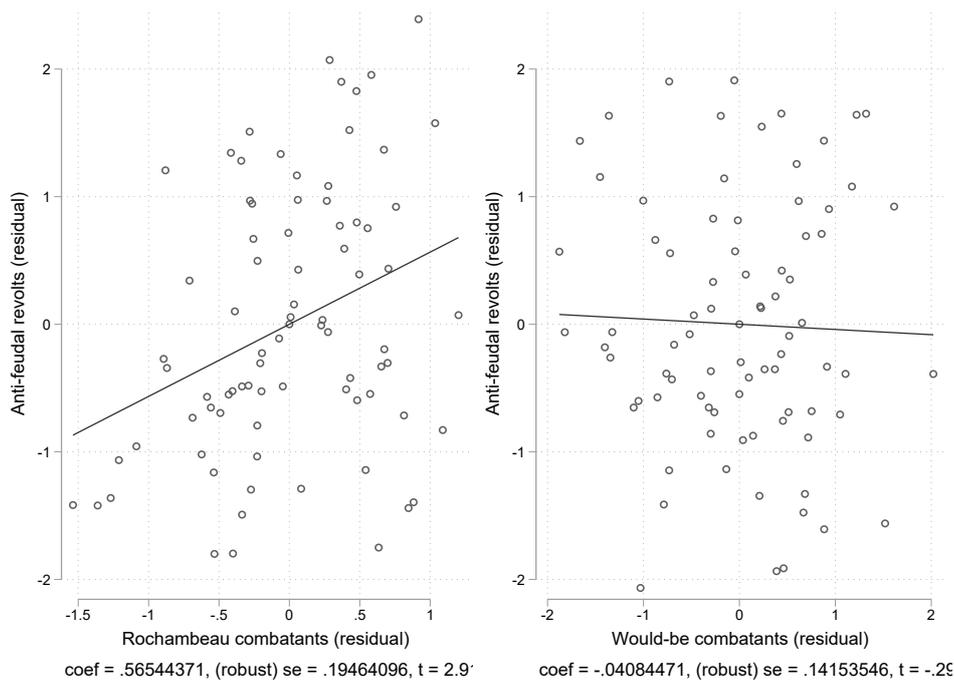


Figure 4: Not Sailed Combatants (Placebo) and Anti-Feudal Revolts

*Note:* The partial scatterplot shows that only troops from Rochambeau's regiments that actually sailed to America are positively associated with anti-feudal revolts in their origins départements (left panel) but not troops from the regiment that should have sailed to America under Rochambeau but never arrived (right panel). Controls include the log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, the urbanization rate, and an indicator for Paris (dept. Seine), and the respective other group.

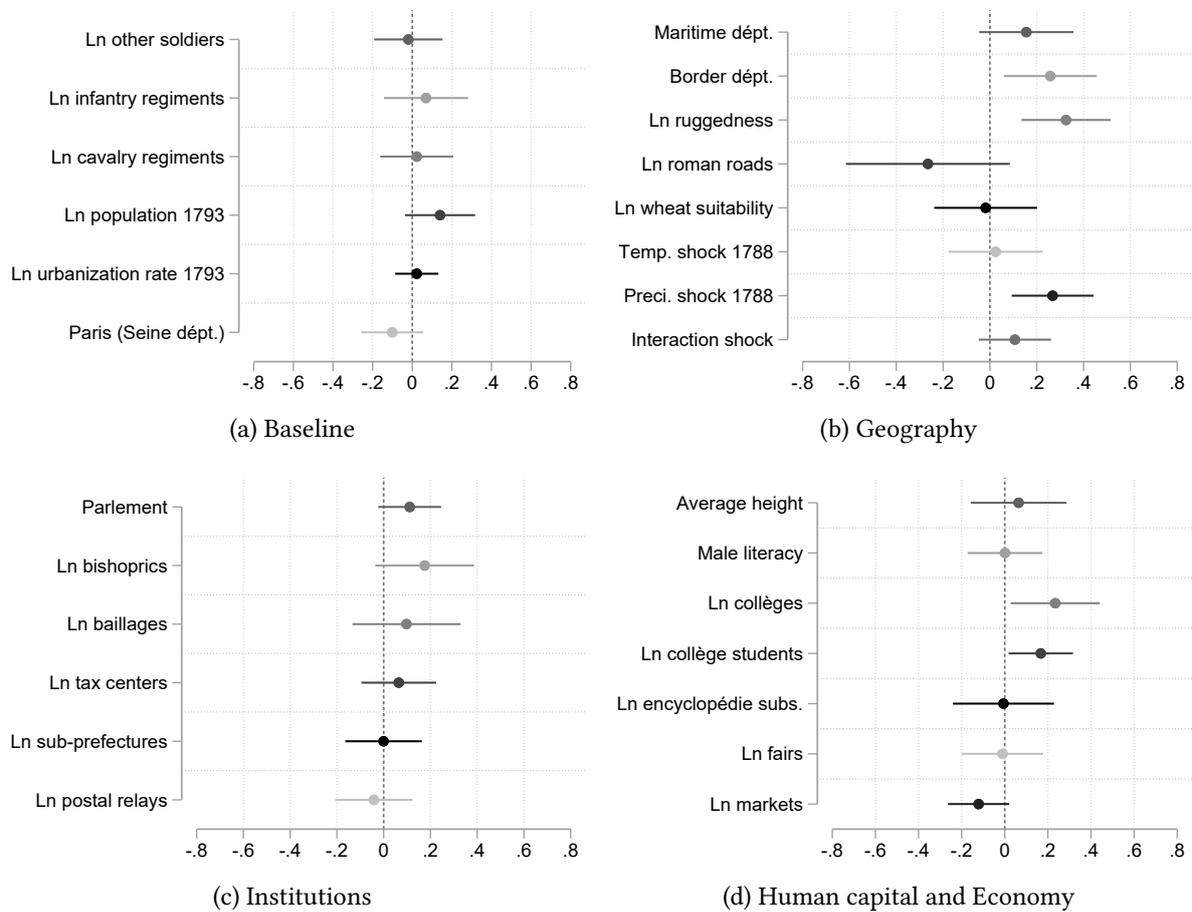


Figure 5: Covariate Balance of Treatment and de Grasse Placebo

*Note:* The figure documents the balance on observables for Rochambeau combatants (treatment) and de Grasse combatants (mechanism placebo). Each coefficient is from a separate regression that explains the covariate by the net treatment, i.e. the differential exposure to treatment and placebo. To allow for a fair comparison, we z-standardize all variables and compute the net treatment as  $z(\ln \text{Rochambeau combatants}) - z(\ln \text{de Grasse combatants})$ . The regressions for the Baseline group control for the respective other baseline covariates; the regressions for the groups Geography, Institutions, and Human capital and Economy control for the baseline covariates. Confidence intervals are reported at 95% significance level, using robust standard errors. The confidence intervals are conservative because we do not correct for multiple hypothesis testing. We provide robustness results for the variables that appear unbalanced (Border département, Ruggedness, Precipitation shock, Collèges, and Collège students).

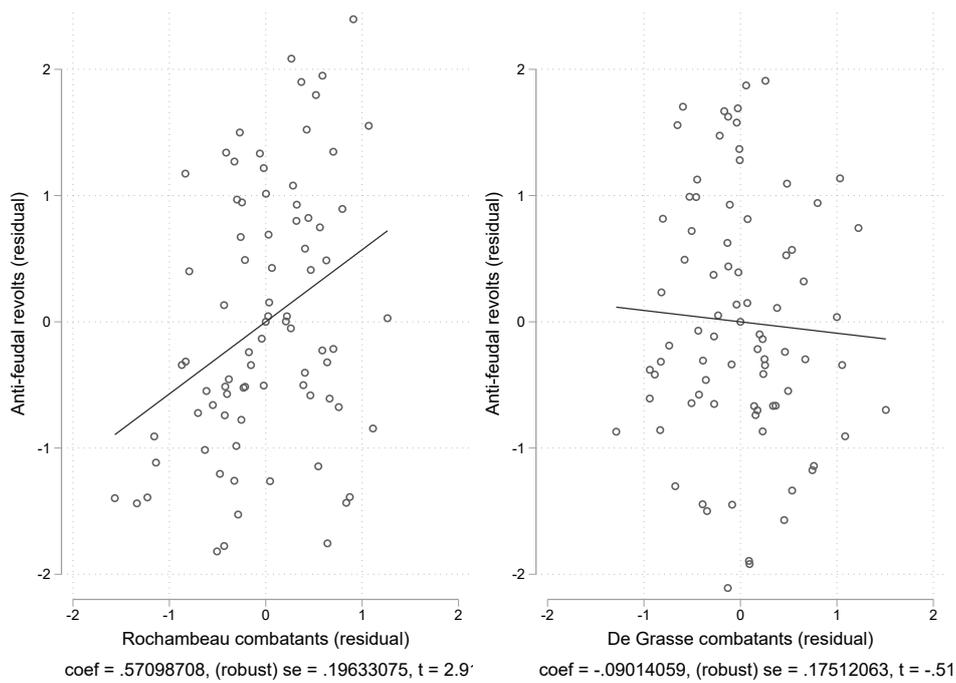


Figure 6: Two Experiences in the American Revolutionary War

*Note:* The partial scatterplot shows that only French combatants from the American Revolutionary War who had experienced the U.S. and New England for a prolonged period are positively associated with anti-feudal revolts in their origins départements (left panel), but not the combatants who only fought the Siege of Yorktown but were otherwise stationed in the French Caribbean colonies (right panel). Controls include the log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, the urbanization rate, and an indicator for Paris (dept. Seine), and the respective other combatants.

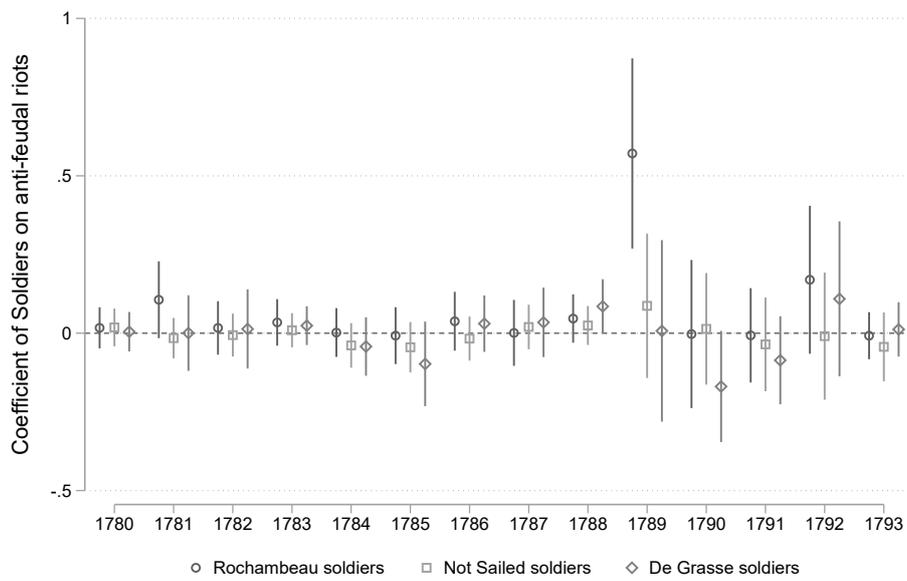


Figure 7: Event-study estimates of soldiers on anti-feudal riots

*Note:* This figure shows that Rochambeau’s soldiers only increased anti-feudal revolts in their origin départements, and only in 1789. We show estimates of the  $\beta_\tau$  coefficients from equation A.3 with anti-feudal revolts as the outcome variable.

## TABLES

Table 1: Baseline regression results

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau combatants	0.555*** (0.188)	0.302*** (0.104)	0.343*** (0.087)	0.212* (0.111)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	81	81	80	65
R <sup>2</sup>	0.19	0.34	0.48	0.35
Partial R <sup>2</sup> (Rochambeau)	0.11	0.10	0.18	0.05
Std. β (Rochambeau)	0.451	0.383	0.488	0.281

The table shows that support for the French Revolution was statistically and economically significantly larger in départements where more Rochambeau's combatants originated.

All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 2: Combatants that did not sail to America (placebo)

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau combatants	0.565*** (0.195)	0.335*** (0.104)	0.330*** (0.087)	0.268** (0.114)
Ln not sailed combatants	-0.041 (0.142)	-0.138* (0.080)	0.055 (0.054)	-0.184** (0.074)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	81	81	80	65
R <sup>2</sup>	0.19	0.37	0.49	0.39
Partial R <sup>2</sup> (Rochambeau)	0.11	0.12	0.17	0.08
Partial R <sup>2</sup> (Notsailed)	0.00	0.04	0.01	0.07
Std. β (Rochambeau)	0.459	0.426	0.468	0.355
Std. β (Notsailed)	-0.047	-0.248	0.109	-0.344
<i>p</i> Rochambeau = Notsailed	0.025	0.000	0.011	0.002

The table shows that support for the French Revolution was statistically and economically significantly larger only in départements where more Rochambeau's combatants originated, who were deployed to the U.S., but not in départements where more placebo combatants originated, who were intended to sail to the U.S. but never arrived. This indicates that deployment to the U.S. had a causal effect on support for the French Revolution.

All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris/dept. Seine). *p* Rochambeau = Notsailed reports the *p*-value of an F-test for the equality of coefficients on Rochambeau combatants and not sailed combatants. Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 3: Exposure to North America matters, *not* combat experience

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau combatants	0.571*** (0.196)	0.330*** (0.103)	0.323*** (0.083)	0.267** (0.114)
Ln not sailed combatants	-0.024 (0.150)	-0.155* (0.087)	0.033 (0.060)	-0.175** (0.081)
Ln de Grasse combatants	-0.090 (0.175)	0.089 (0.112)	0.112 (0.088)	-0.044 (0.138)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	81	81	80	65
R <sup>2</sup>	0.19	0.38	0.50	0.39
Partial R <sup>2</sup> (Rochambeau)	0.11	0.12	0.16	0.08
Partial R <sup>2</sup> (Notsailed)	0.00	0.05	0.00	0.06
Partial R <sup>2</sup> (de Grasse)	0.00	0.01	0.02	0.00
Std. β (Rochambeau)	0.464	0.419	0.459	0.354
Std. β (Notsailed)	-0.027	-0.279	0.066	-0.327
Std. β (de Grasse)	-0.066	0.102	0.143	-0.052
<i>p</i> Rochambeau = Notsailed	0.031	0.000	0.009	0.004
<i>p</i> Rochambeau = de Grasse	0.017	0.115	0.073	0.070

The table shows that support for the French Revolution was only statistically and economically significantly larger in départements where more Rochambeau's combatants originated, but neither in départements with more not-sailed placebo combatants or more de Grasse combatants who participated in the Siege of Yorktown but did not see New England. This indicates that the experience of the U.S. and in particular New England caused greater support for the French Revolution, but not other experiences gained during the military campaign.

All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris/dept. Seine). *p* Rochambeau = ... reports the *p*-value of an F-test for the equality of coefficients on Rochambeau combatants and placebo combatants. Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 4: Other revolt types and support for violence

	Other revolt types		Support for Terror		
	(1) Food riots	(2) Great Fear panics	(3) Voting for King's death	(4) Ln death sentences	(5) Ln societies during Year II
Ln Rochambeau combatants	0.218 (0.173)	-0.099 (0.110)	0.057 (0.077)	-0.324 (0.298)	0.060 (0.105)
Baseline controls	✓	✓	✓	✓	✓
<i>N</i> (Obs = dépt.)	81	81	81	81	81
R <sup>2</sup>	0.15	0.25	0.05	0.43	0.18
Partial R <sup>2</sup> (Rochambeau)	0.02	0.01	0.01	0.02	0.00
Std. $\beta$ (Rochambeau)	0.168	-0.150	0.111	-0.144	0.077

The table shows that Rochambeau combatants are only weakly associated with other types of revolt in 1789 (columns 1, 2) and various proxies of support for violence during period of "Terror" (columns 3–5).

Food riots are subsistence conflicts; Panics are currents of riots during the Great Fear; Voting for King's death is the difference in the number of deputies to the National Convention voting for or against the punishment of the former king by death, normalized by the total number of deputies of a département; Death sentences is the total number of death sentences handed out between 1792 and 1794; Societies in Year II (September 1793 to August 1794) is the number of political societies established in that period. The unit of analysis is départements. All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. Spatially clustered standard errors (cutoff 200km, Bartlett kernel) in brackets. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 5: Disaggregated spatial units and spillovers

	Dep. var.: ln [support for revolution]					
	Anti-feudal revolts		Political societies		Volunteer companies	
	(1)	(2)	(3)	(4)	(5)	(6)
Ln Rochambeau combatants	0.207 (0.060) <sup>***</sup> [0.068] <sup>***</sup>	0.155 (0.063) <sup>**</sup> [0.063] <sup>**</sup>	0.069 (0.032) <sup>**</sup> [0.035] <sup>**</sup>	0.049 (0.036) [0.040]	0.209 (0.054) <sup>***</sup> [0.063] <sup>***</sup>	0.146 (0.060) <sup>**</sup> [0.055] <sup>***</sup>
Ln neighbors' Roch. combatants		0.167 (0.062) <sup>***</sup> [0.060] <sup>***</sup>		0.097 (0.047) <sup>**</sup> [0.055] <sup>*</sup>		0.221 (0.069) <sup>***</sup> [0.089] <sup>**</sup>
Placebo controls	✓	✓	✓	✓	✓	✓
Baseline controls	✓	✓	✓	✓	✓	✓
<i>N</i> (Obs = arrondissement)	340	340	340	340	340	340
R <sup>2</sup>	0.13	0.15	0.21	0.24	0.26	0.29
Partial R <sup>2</sup> (Rochambeau)	0.046	0.023	0.014	0.006	0.047	0.021
Partial R <sup>2</sup> (Roch.—neighbor)		0.018		0.016		0.031
Std. β (Rochambeau)	0.267	0.200	0.136	0.097	0.251	0.175
Std. β (Roch.—neighbor)		0.178		0.159		0.219

The table shows that the number of Rochambeau combatants in neighboring (contiguous) arrondissements had a statistically and economically significant impact on all three measures of support for the French Revolution. Regressions include the full set of placebo controls (log not sailed and de Grasse combatants, both within an arrondissement and of the neighboring arrondissements), and the baseline controls measured at the arrondissement level (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris). Robust standard errors in parentheses. Spatially clustered standard errors (cutoff 200km, Bartlett kernel) in brackets. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

# Online Appendix

## The American Contribution to the French Revolution

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### A. Data Appendix

#### A.1. Overview and Summary Statistics

Table A.1 provides an overview on the variables employed in this paper. Besides a short definition, it also lists the sources if the variable is taken from the literature. Table A.2 presents summary statistics.

Table A.1: Variable definitions

Variable	Definition	Source
<i>Primary outcomes</i>		
Anti-feudal revolts	Attacks on the feudal institution of lordship ( <i>seigneurie</i> ), including the lord's person, property, and rights	Chambriu and Maneuvrier-Hervieu (2022)
Political societies	Voluntary associations of citizens formed during 1789–90 for political participation	see text
National Volunteers	Battalions of voluntary soldiers formed 1791–92	see text
Elite emigrants	Emigrants from clergy, nobility, and upper-middle class	see text
<i>Alternative outcomes</i>		
Food riots	Riots over the availability or the price of food	Chambriu and Maneuvrier-Hervieu (2022)
Panics	Riots oriented to an imaginary enemy	see text
Societies in Year II	Number of political societies established during the Terror, Sept 1793–August 1794	see text
Voting for King's death	Voting of deputies to National Convention for or against punishing the former king, Jan 1793	see text
Death sentences	Number of death sentences carried out during 1792–94	see text
<i>Independent variables</i>		
Rochambeau combatants	Infantry officers & soldiers participating in <i>special expedition</i> under General Rochambeau: Stationed in U.S. during 1780–82, fighting in Siege of Yorktown	see text
Not sailed combatants	Infantry officers & soldiers chosen for <i>special expedition</i> by General Rochambeau but staying behind due to logistics	see text
de Grasse combatants	Infantry officers & soldiers under Admiral de Grasse: Fighting in Siege of Yorktown, stationed in French Caribbean colonies	see text
Rochambeau officers	Commissioned officers (thus, noble and wealthy) of infantry regiments participating in <i>special expedition</i> under General Rochambeau	see text
Rochambeau soldiers	Enlisted rankers and non-commissioned officers of infantry regiments participating in <i>Special Expedition</i> under General Rochambeau	see text
<i>Baseline controls</i>		
Other soldiers	Soldiers enlisting for infantry during 1700–1789	Komlos et al. (2003)
Population 1793	Total inhabitants in 1793	see text
Infantry garrison	Number of infantry regiment garrisoned	see text
Cavalry garrison	Number of cavalry battalion garrisoned	see text
Urbanization rate	Share of population living in towns $\geq 5000$ in 1793	see text
Paris	Indicator for Paris/département Seine	see text
<i>Geography</i>		
Maritime dépt	Indicator for department located at Atlantic ocean or Mediterranean Sea	see text
Border dépt.	Indicator for department bordering a foreign country (Belgium, Germany, Switzerland, Italy, Spain)	see text

Ruggedness	Terrain Ruggedness Index within department	see text
Roman roads length	Total length of roman roads	see text
Wheat suitability	Caloric yield of low-input, rain-fed wheat agriculture	see text
Temperature shock 1788	Temperature deviation in 1788 from mean 1700–1800	Waldinger (2023)
Precipitation shock 1788	Precipitation deviation in 1788 from mean 1700–1800	Waldinger (2023)
<i>Political economy</i>		
<i>Parlement</i>	Seat of a provincial appellate court	see text
Bishops	Seats of bishops and dioceses: church jurisdictions	see text
Bailliages	Seats of bailliages: feudal jurisdictions and election districts	see text
Tax centers	Seats of (royal) tax collectors ( <i>recettes des finances</i> )	see text
Sub-delegates	Seats of administrators below the <i>intendant</i> : (mainly) public order jurisdictions	see text
Postal relays	Number of postal relays per department	see text
<i>Human capital</i>		
Average height of soldiers	Average height in cm of enlisted soldiers 1700–89	Komlos et al. (2003)
Male literacy rate	Share of men signing marriage certificates in 1786	Squicciarini and Vogtländer (2015)
Collèges	Public, endowed secondary schools	Rosenberger (2023)
Collège students	Students at public, endowed secondary schools	Rosenberger (2023)
Encyclopédie subs.	Subscribers to <i>Encyclopédie</i> by Diderot and d’Alembert	Squicciarini and Vogtländer (2015)
<i>Economy</i>		
Markets and fairs	Number of markets and fairs per department	see text

## A.2. Documentation and sources

### A.2.1. Independent variables

**American combatants** Among American combatants, we distinguish two treatment groups. The main treatment group *Rochambeau’s combatants* were exposed to U.S. institutions for an extended period. We collect individual-level data for the infantry regiments Bourbonnais, Saintogne, and Soissonais from the sources described in the main text. We obtain 3655 individuals in total and identified the origin (birthplace) in a comprehensive dataset of all French communes and towns in 1793. This data set includes approximately 35k communes, reports population data starting in 1793, and also includes latitude and longitude.<sup>1</sup> We then aggregate numbers to the department level, using department boundaries circa 1794 from Chambru (2020). In total, we can link 3023 (83%) combatants to the municipality of birth.

The alternative treatment group *de Grasse’s combatants* also participated in the Siege of Yorktown but were not stationed in the U.S. Here, we collect individual-level data for the

<sup>1</sup>The data is part of the Cassini project, *Des villages de Cassini aux communes d’aujourd’hui*, available online <http://cassini.ehess.fr/fr/html/index.htm>. This dataset also underlies internet platforms that offer historical geo-localization services like geonames.org.

Table A.2: Summary statistics

	Obs	Mean	S.D.	Min	Max
Anti-feudal revolts	81	6.19	10.14	0.0	66.0
Early political societies	81	3.65	3.23	0.0	14.0
Volunteer battalions	80	5.55	4.43	1.0	34.0
Elite emigration	65	700.85	516.64	91.0	2889.0
Rochambeau combatants	81	30.44	27.40	2.0	130.0
Not sailed combatants	81	21.64	39.15	0.0	295.0
(sum) returned_degrasse	81	13.06	14.35	0.0	116.0
Rochambeau officers	81	1.80	2.06	0.0	10.0
Rochambeau combatants	81	28.64	26.64	2.0	127.0
Soldiers in Komlos sample	81	279.32	337.44	8.0	1978.0
Infantry regiments	81	1.20	2.37	0.0	16.0
Cavalry regiments	81	0.63	1.22	0.0	6.0
Population 1793 (thousand)	81	316.23	121.52	101.7	721.6
Urbanization rate 1793	81	0.15	0.14	0.0	0.9
1: Paris	81	0.01	0.11	0.0	1.0
1: Maritime dépt.	81	0.27	0.45	0.0	1.0
1: Border dépt.	81	0.20	0.40	0.0	1.0
Terrain Ruggedness Index	81	0.97	1.00	0.1	5.6
Roman roads length (thousand km)	81	318.00	135.44	0.0	783.6
Wheat suitability (caloric yield)	81	8438.07	713.12	4493.9	9459.7
Temperature shock 1788	81	1.05	0.01	1.0	1.1
Precipitation shock 1788	81	0.89	0.08	0.8	1.0
1: <i>Parlement</i>	81	0.16	0.37	0.0	1.0
Bishoprics	81	1.58	1.20	0.0	5.0
Bailliages	81	5.09	3.34	0.0	16.0
Tax centers	81	3.96	2.86	0.0	20.0
Sub-delegates	81	8.16	4.43	0.0	24.0
Post houses	81	16.62	10.73	0.0	49.0
Soldiers average height	81	169.18	0.92	166.3	172.6
Male literacy rate	78	0.40	0.26	0.0	0.9
Collèges	81	6.58	3.70	2.0	21.0
Collège students	81	852.68	744.52	15.0	5000.0
Subscriber density	81	2.15	3.05	0.0	15.2
Fairs	81	197.42	143.70	6.0	731.0
Markets	81	36.59	14.56	2.0	80.0

Observations: Départements. Sample as in baseline results: France proper of 1789 (mainland, non-German speaking).

infantry regiments Agenois, Gâtinais (Royal-Auvergne), and Touraine from the same sources. For Agenois, we observe only officers; for the other two, we have complete data on officers and soldiers. We obtain 2387 individuals in total and, using the same procedure, we link 2034 (85%) combatants to the municipality of birth. Based on information on the date of death, desertion, and discharge, we find that among Rochambeau's combatants, 3084 (84%) returned home to France. Among de Grasse's combatants, 1300 (54%) returned home.<sup>2</sup>

Note that the not complete matching of soldiers to places of origin if anything should attenuate our results, and would only be a concern if it were systematically different for particular groups of soldiers, which is highly unlikely since we employ a similar approach to match soldiers from all three groups of soldiers to places of origin.

**Never sailed combatants** As a control group, we collect individual-level data from the infantry regiment *Neustrie* from the military archive.<sup>3</sup> In particular, we transcribe the handwritten entries for all the soldiers, their origin, and rank from the relevant pages 4 to 265, in total 2343 soldiers from the regiment book 1776 to 1786. We observe information on the place of origin for 2310 soldiers, with 2274 originating in France. We proceed similarly to before to assign the soldiers to their department of origin but use, in addition to the birthplace, information on the military district (36 in total) for geolocation. In total, we identify the department of origin for 1783 (78%) French individuals and the town of origin for 1606 (71%) individuals. Note that the spelling of birthplaces is not standardized in the original sources. Even if the transcriptions were perfect, we would not expect to be able to identify all birthplaces perfectly.<sup>4</sup>

**Officers vs soldiers** We collect and digitize data on ranks to distinguish between officers and soldiers. The key dividing line between officers and soldiers was between *commissioned* officers and everyone else. While it is possible in modern armies to rise from non-commissioned to commissioned officer, this was virtually impossible in the army of the monarchy. Specifically, commissioned officers had to (i) have old nobility status, excluding families who were only recently ennobled as *officers of the robe*; and (ii) purchase the position at a substantial fee, excluding families of old nobility who were impoverished. Commissioned officers included primarily the ranks colonel, mayor, captain, lieutenant, and sub-lieutenant. We exclude a few so-called *officers of fortune*, which were an exception as they were selected from rankers based on merit (Wrong, 1976).<sup>5</sup> Soldiers include all types of enlisted personnel—chiefly soldiers, fusiliers, grenadiers, corporals, and drummers. Following the dividing line by social class, we also count non-commissioned officers (chiefly sergeants) as soldiers because they were recruited from them. In total, we observe 241 commissioned officers among Rochambeau combatants and 208 commissioned officers among de Grasse combatants.

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<sup>2</sup>The difference is largely driven by a naval battle at Cap Français with about 400 deaths on the way back to the Caribbean garrison and by tropical fever.

<sup>3</sup>The regimental books are digitally accessible online at [www.memoiredeshommes.sga.defense.gouv.fr](http://www.memoiredeshommes.sga.defense.gouv.fr)

<sup>4</sup>A key difficulty is the absence of common spelling rules in the presence of homonym town names and towns with many homonyms. For example, the town Meaux, Seine-et-Marne, is a homonym to “mots”, in English “word,” and is written in this homonym form by some (but not all) military clerks.

<sup>5</sup>These included the ranks quarter-master treasurer, standard bearer, and lieutenants of the grenadier company—thus, at most four officers per regiment could have been commoners.

## A.2.2. Outcomes

**Revolts** Following Markoff (1996a), we distinguish between three types of revolts—anti-feudal revolts, food riots, and panics—which were the three most widespread forms of revolts during the period 1788–92. Anti-feudal revolts were attacks on the feudal institution of lordship (*seigneurie*), including the lord’s person, property, rights, or symbols. Importantly, these revolts *did not* target royal institutions, which also belonged to the feudal system. Food riots were revolts over the availability or the price of food, which was scarce because of the bad harvest of 1788 (see also Waldinger, 2023). Panics were riots during the so-called “Great Fear” in which collective action was oriented to an imaginary enemy.<sup>6</sup>

The data on anti-feudal revolts and food riots comes from the Historical Social Conflict Database (Chambru and Maneuvrier-Hervieu 2022, database categories 5 and 1, respectively).<sup>7</sup> Panics during Great Fear we digitized from the map provided by Lefebvre (1932). Figure A.2 documents the time pattern of revolts by type. Anti-feudal revolts were mostly concentrated in the revolution years 1789 (the “first revolution”) to 1792 (the “second revolution”), whereas food riots started in 1788 and extended into 1793 and Panics occurred almost exclusively in 1789.

**Political Societies** Political Societies enabled local political participation and supported the local implementation of new policies. Initially, the political societies were organized from the bottom up, the most famous being the Jacobin club of Paris created under the name *Society of the Friends of the Constitution*. After the establishment of democracy in 1792 but especially in Year II (September 1793–August 1794), a period which became known as Terror, the creation of political societies was bolstered by the government as the main means by which it ruled. During the Thermidorian reaction, the period between the ousting of Robespierre in July 1794 and the Directorate government of 1795, the political societies were suppressed.

The data on political societies was compiled by a large group of historians from department and national archives and secondary sources for the Atlas of the French Revolution (Boutier, Boutry, and Bonin, 1992). We digitized town-level data on the year in which the first political society was founded or its existence attested. Towns could have more than one society but we do not observe the number of political societies by town by year.<sup>8</sup>

Data at the department level on the total number of political societies over 1789–1794 shows that there were 6027 societies in total in 5510 towns and communes. Figure A.3 documents the time pattern of the establishment of political societies. One can discern two waves, which approximately correspond to whether societies were established bottom-up (the first wave) or top-down (the second wave). In the first long year of the revolution 1789–90, citizens established at least one political society in 307 towns based on local initiative. These early

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<sup>6</sup>Imaginary enemies included vagabonds who would steal the harvest from the fields; an invading force of foreigners such as Savoyards, Germans, or English; and aristocrats who were conspiring to violently crush the third estate (see also Lefebvre, 1932).

<sup>7</sup>For revolts of this type during the revolution 1789–1794, this database primarily relies on Ado (1996).

<sup>8</sup>Boutier and Boutry, the lead authors for the political societies project, never published the data documentation that was announced in the Atlas of the French Revolution as *Les sociétés populaires. Sources. Bibliographie* (Boutier et al., 1992, 114). The book would also have provided a catalog of society registers and membership lists, which may have made it feasible for us to collect systematic data on the intensive margin—how many societies, how many members, per town and by year, etc.

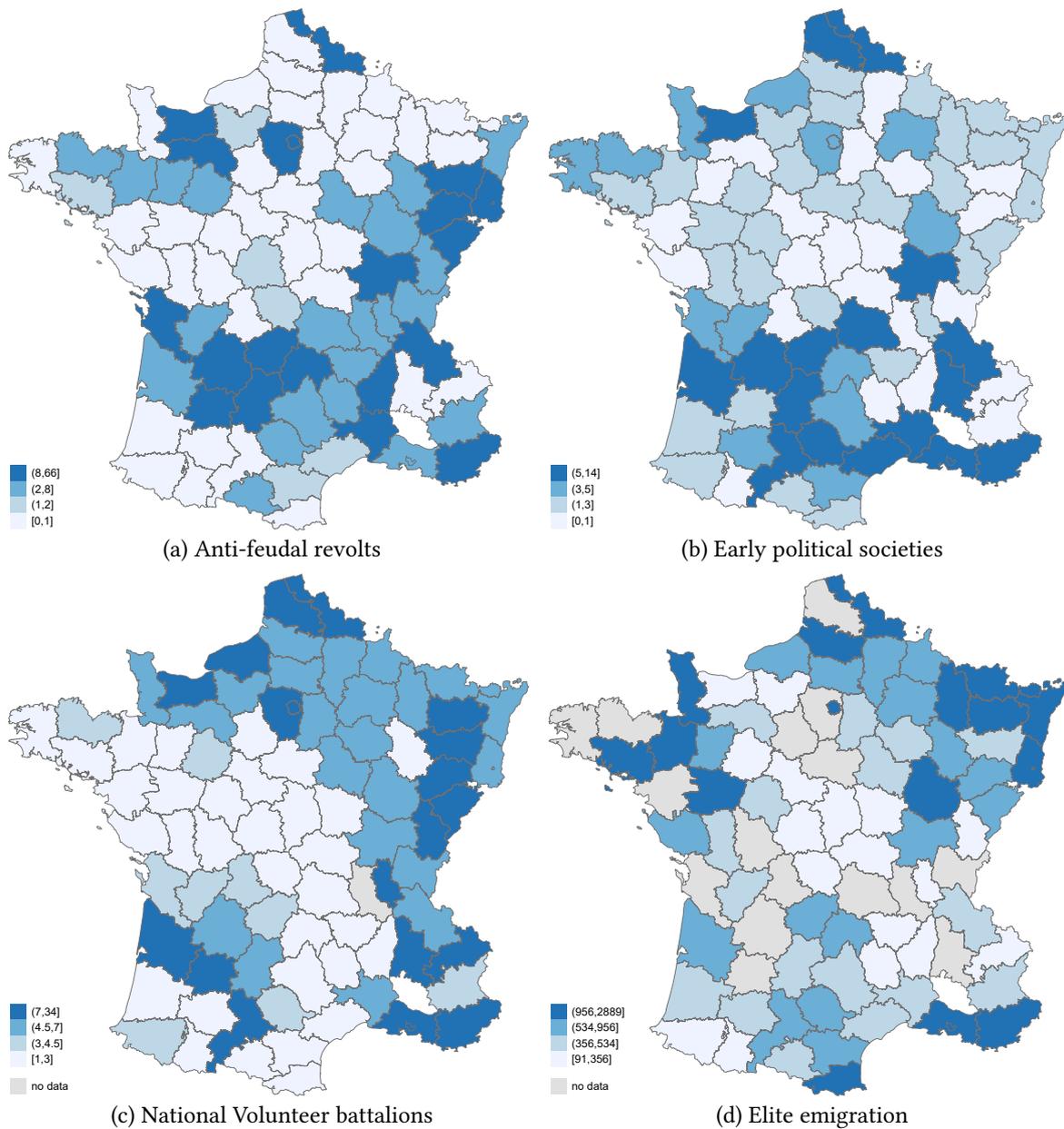


Figure A.1: Support for the Revolution across départements

*Note:* The maps depict the spatial variation in the four measures of support for the French Revolution across départements. For variable construction and sources, see text.

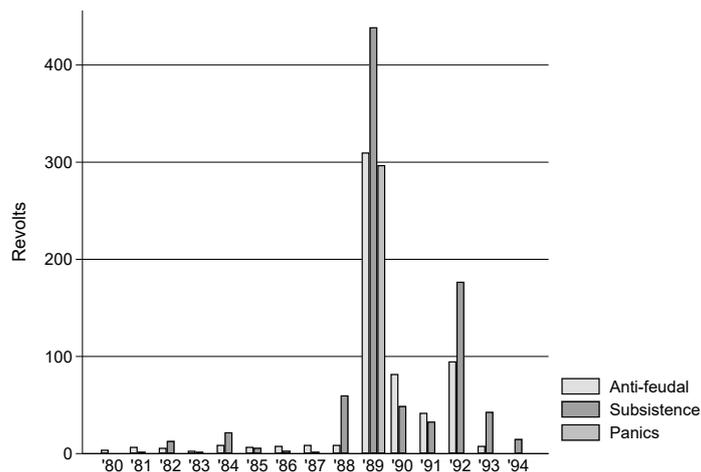


Figure A.2: Incidence of revolts 1783–1794 by type

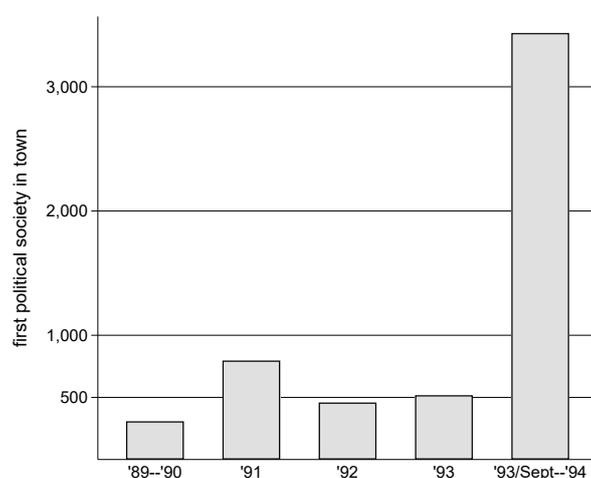


Figure A.3: First establishment of political societies in towns over time

societies were particularly important, as they provided blueprint and inspiration for the establishment of many more societies in the years 1791 and 1792. Until September 1793, citizens established at least one society in another 1771 towns. In the period of republican year II–III (September 21, 1793–1794), another 3432 towns and communes established a society under the direction of the Paris government and the Jacobin society.

**National Volunteers** The battalions of “National Volunteers” were first raised in 1791 to mobilize soldiers from the National Guards, which had formed bottom-up during the early stages of the revolution. The first National Guards formed in Paris on July 13th/14th 1789 in connection to the storm of the Bastille. The formation of battalions of National Volunteers was stipulated and regulated by a series of laws in 1791 and 1792. For example, a law of 1791 demanded that every département formed at least one battalion. The battalions were organized very similarly to the regular army, with the key difference being that the higher officer ranks were open to commoners and not reserved for nobles. Importantly, the

National Volunteer soldiers of 1791 and 1792 were not conscripted but enlisted voluntarily. Conscription into National Volunteer battalions only started on February 24 1793 when the National Convention decreed to conscript 300,000 men from all of France. This call to arms of French citizens for defending the homeland and the Revolution against its enemies—chiefly foreign powers and the aristocracy—became known in history as the mass levy (*levée en masse*).

We digitize municipality-level data on companies raised in 1791 from Dumont (1914) and département-level data on battalions established by the end of 1792 from Bertaud, Reichel, and Bertrand (1989).<sup>9</sup> This variable measures the degree to which French citizens were ready to voluntarily take up arms to defend the Revolution. By January 1793, before the beginning of forced conscription, 457 battalions of national volunteers existed. At a regular strength of 10 companies à 60 men per battalion, it is estimated that approximately 100,000 men enlisted in 1791 and another 180,000 in 1792 (Bertaud et al., 1989, 16-7). These are large numbers: It was about 1% of the total inhabitants of France, 200% of the regular French army (which continued to exist), and several times the combined armies of the monarchies that declared war on France (Austria, Prussia, and Great Britain).

**Emigrants** Emigrants were essentially composed of two groups of people: Members of the old regime’s elite who were opposed to the republic, and citizens who were fleeing from the war zone in border regions and in regions of civil war (Greer, 1951). We are primarily interested in emigration from the old regime’s elite. Members of the old elite started to leave the country as early as July 1789 after the storm of the Bastille (Boffa, 1989). The emigration of the old elite accelerated in the summer of 1791 after the failed flight of King Louis XVI, an episode known as “Varenes.”<sup>10</sup> The elite emigration peaked in 1792 as a result of the increasing revolutionary violence and due to the exiling of the non-constitutional clergy.<sup>11</sup> Independent of why they emigrated, emigrants became known as *émigrés* and were politically persecuted during the Terror. Most importantly, their property was expropriated by the government.

We digitize department-level data from Greer (1951) on the total number of emigrants (79 départements in our sample) and the number of emigrants by socio-economic status (63 départements in our sample). We classify “elite emigrants” as those who belonged to the clergy, the nobility, and the upper-middle class (bourgeoisie and professions). Accordingly, non-elite emigrants are from the lower-middle class, working class, and peasantry. Greer (1951) estimates that, in total, 130,000 people fled the country during 1789–1794. Of those, approximately 27% belonged to the clergy, 18% to the nobility, 12% to the upper-middle class, 7% to the lower-middle class, 15% to the working class, and 21% to the peasantry.

**Support for Violence** We collected data on three proxies measuring support for violence during the period of Terror. Voting for King’s death is the difference in the number of National

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<sup>9</sup>The second data is based on a table from the *Archives parlementaires*, 24 February 1793, p.145-6, reprinted by Bertaud et al. (1989, 73-4).

<sup>10</sup>Louis was stopped in Varennes, shortly before the Belgian border, and brought back to Paris where he was subsequently placed under house arrest (Ouzuf, 1989).

<sup>11</sup>The clergy was required in 1791 to take an oath on the new secular constitution. Those who refused to take the oath became known as *refractory clergy* (Tackett, 1986; Squicciarini, 2020; Blanc, 2022).

Convention deputies voting for or against the question whether the King must be punished by death in January 1793.<sup>12</sup> Death sentences is the total number of death sentences handed out during the period of “Terror” as compiled by Greer (1935). The number of political societies established during Year II (September 1793 to August 1794), a time when the establishment clearly signaled support for the regime, is from Boutier et al. (1992).

### A.2.3. Baseline controls

The set of baseline controls captures factors that potentially affect both military recruitment in general as well as revolutionary outcomes.

**Total recruits** The measure of general military recruitment in the French army is based on data transcribed from the regiment books by Komlos et al. (2003). The sample comprises about 38,700 soldiers registered in regiment books between 1716–1784, with a bias to the earlier period—three-quarters of soldiers are from the period before 1750. For about 22,000 soldiers, we identify the town of birth (57%), and for about 23,100 soldiers the department of birth (60%). Note that Komlos et al. (2003) have not corrected transcription errors or standardized the spelling, which also affected the geo-localization rate of our transcriptions.

**Garrisons** We control for the (log) number of infantry regiments and of cavalry battalions garrisoned in a region. The variables likely affected military recruitment since many regiments recruited soldiers locally. Moreover, the army was sometimes used internally as “riot police”. From about 1740–50 to 1788, regiments were rotated across garrisons about every three years. We collected data on 107 garrisons for infantry regiments and 59 garrisons for cavalry regiments from Bertaud et al. (1989, 12).

**Population, urbanization** Data on population in 1793 was obtained from the Cassini project.<sup>13</sup> This data set covers the universe French communes, over 35k in total. We calculate urbanization rates as a department’s share of population living in towns larger than five thousand inhabitants.

### A.2.4. Geography

**Maritime, border département** are indicators for whether a département is located at the Atlantic or Mediterranean seas and for whether a département is at the international border.

**Ruggedness** is calculated as the median of the Terrain Ruggedness Index in each department based on data from Nunn and Puga (2012).

**Roman roads length** is the total length (in meters) of roman roads within department borders and is based on data from McCormick, Huang, Zambotti, and Lavash (2013).

**Wheat suitability** is computed as the median within the department borders based on data on caloric yield of low-input, rain-fed wheat agriculture. Source: Galor and Özak (2015, 2016).

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<sup>12</sup>Liste des députés de la Convention nationale, par ordre de département, qui ont voté dans les trois appels nominaux sur le jugement de Louis Capet, leur opinion sur chaque question et leurs réflexions. Décret de la convention nationale, qui condamne Louis Capet à être puni de mort. Reprinted at the Imprimé de Paris, 1816.

<sup>13</sup>Des villages de Cassini aux communes d’aujourd’hui, available online <http://cassini.ehess.fr/fr/html/index.htm>.

**Shock in 1788** Waldinger (2023) argues that a weather shock caused drought in summer 1788 which led to widespread harvest failures, increase in food prices and local famine, and an increase in unemployment among agricultural workers. Note that other historians have stated that the harvest of summer 1788 was also negatively affected by hailstorms. This weather shock would have contributed to demands for political change as well as revolutionary violence. We follow Waldinger (2023) in measuring the regional impact of the harvest shock in 1788 using the temperature and precipitation shock. The shocks are the deviation of temperature and precipitation, respectively, in the growing season (spring and summer) of 1788 from their long-run mean during 1750–1800. The variables are computed based on data from Pauling, Luterbacher, Casty, and Wanner (2006) for precipitation and Luterbacher, Dietrich, Xoplaki, Grosjean, and Wanner (2004) for temperature.

### A.2.5. Political economy

We digitize all data on political economy variables at the department level from Nordman, Ozouf-Marignier, Gimeno, and Laclau (1989, 81). The variable descriptions are also based on this source.

**Parlement** *Parlements* were provincial appellate courts that played an important political role in the Kingdom of France.<sup>14</sup> All judges of the *parlements* were members of the nobility. Besides their role as courts, they also had to sign all royal laws before they could go into effect, including laws concerning taxation. By refusing to sign, they could substantially slow down and obfuscate the king’s ability to govern without consent. While they did not have veto power over royal laws—the king could summon them and then overturn their decision—, ignoring the *parlements* came at the risk of precipitating a larger political crisis. In total, there were 13 *parlements* across the country, but the Parlement of Paris was by far the most influential.

**Bishops** Bishops were the local heads of the church and were mostly recruited from the nobility. Bishop’s seats were also administrative and fiscal centers, as the church received income from the tithe. It is estimated that, on the eve of the Revolution, the church received more income from the tithe than the state raised through all taxes combined. Moreover, the church was completely exempt from royal taxation and only gave voluntary contributions to the secular government. Besides the spiritual services, the church was also supposed to provide poor relief and education. In total, we observe 136 old bishop’s seats.

**Bailliages** Bailliages were old feudal jurisdictions (corresponding to the English *bailiwick*) and concerned with all matters seigneurial. In some parts of the country, they were referred to as *sénechaussée*. Besides their importance for seigneurial matters, bailliages were also election districts for the *Estates General* and thus directly important for the early stages of the French Revolution: In the towns with seat of a bailliage, the *cahiers de doléance* were drawn up and the deputies elected that were subsequently sent to Versailles. In total, we observe 432 bailliages.

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<sup>14</sup>The modern term *parliament*, which usually signifies a body of elected legislators, derives its name from the older French institution of *parlement*.

**Tax centers** The French kingdom regularly used sub-contractors to collect its taxes by auctioning off the right to collect a certain tax in a certain region to so-called “general tax-farmers.” They, in turn, subcontracted local tax collectors, which could be individuals or institutions. Our measure “tax centers”—*recettes des finances* in French—is the total number of these royal tax sub-contractors per department. In total, we observe 344 tax centers.

**Sub-delegates** The main royal administrative divisions were the *généralités*. Created in 1625 and given full authority by Louis XIV (36 in total), they were headed by so-called intendants who exercised royal authority to uphold public order, working with sub-delegates. In total, we observe 702 seats of sub-delegates.

### A.2.6. Economy

**Markets and fairs** We digitize data at the department level on the number of markets and fairs and on the number of towns with a fair or market in about 1789. The data was compiled as department-level aggregates by Margairaz (1988) from archival records of an official census.<sup>15</sup> Markets usually took place once a week, whereas fairs usually took place once a year. (Bi-yearly spring and autumn fairs would count as two fairs.) Larger towns would host several markets and fairs and could have, for example, fairs every month and markets every day. In total, there were about 2,100 towns with over 16,000 fairs and about 340 towns with about 3,000 markets.

**Communication** We digitize department level data on the number of post houses in 1792 from Arbellot, Lepetit, and Bertrand (1987). The national system of posthouses, each run by a postmaster and equipped with horses, was originally developed by the state to quickly handle royal dispatches. By 1776, the system provided not only the regular service of letter post but also travel with the postal stagecoach. In total, we observe 1400 post houses in 1792, a number hardly different from that in 1789 at the end of the Ancien Regime Arbellot et al. (1987, 16).

### A.2.7. Geographic borders

For départements, we use the borders of 1794 from Chambru (2020). For arrondissements, we use the borders of 1806 from Skinner and Margadant (2018). (Arrondissements were created in 1800.)

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<sup>15</sup>This census was conducted by the Ministry of Commerce in year II (1793–4) and “reflects in density and structure the [trade] network at the end of the Ancien Régime” Margairaz (1988, 46).

## B. Additional Details on the Historical Background

Expanding on Section 3, we discuss in detail the relevant historical background for the paper. We trace the French campaign in the American Revolutionary War, discuss the French soldiers' exposure to the United States and its economic and political institutions, provide a brief historical sketch of the French Revolution a decade later, and finally discuss the role of the American combatants therein in light of the historical literature.

### B.1. The French Involvement in the American Revolutionary War

The American Revolutionary War (1775–1783) guaranteed the British North American colonies—since 1776, the United States of America—their independence from Britain. The two pivotal battles in which the American army defeated the British took place at Saratoga (1777) and Yorktown (1781). While Saratoga is often seen as a turning point, it was the decisive defeat of the British at Yorktown that forced Britain to the negotiating table.<sup>16</sup> Yet, when George Washington's Continental Army triumphed over the British at the Siege of Yorktown, the victory was only achieved with substantial military support by the French army.

The French involvement was scarcely motivated by political enthusiasm for republican governance. Instead, the French king Louis XVI supported the rebelling American colonies against Britain chiefly to seek revenge for losing colonies to Britain during the Seven Years' War. Supporting Americans first covertly with money and supplies, France entered openly into the military conflict in 1778. Among the first joint actions, a French fleet supported American forces in retaking Newport, Rhode Island (1778), and a joint American–French army unsuccessfully sieged the British at Savannah, Georgia (1779).<sup>17</sup> Late in 1779, the French king approved the deployment of a French army to American soil in support of Gen Washington's Continental Army, which became known as “Auxiliary Army” or “Special Expedition” (*expédition particulière*).

This *Special Expedition* was an alternative to a planned invasion of England. More than twenty thousand French troops had been concentrated in Normandy and Brittany during the summer and autumn of 1779 to, together with Spain, invade England. The invasion was canceled, however, due to insufficient progress of preparations on the side of the Spanish who were held up at Gibraltar. As an alternative military campaign to support the Americans, Gen Comte de Rochambeau was commissioned to assemble an army of 7,500 for the Special Expedition. Choosing from the fighting-ready troops, he picked six regiments of line infantry (of which two were German foreign legions), two artillery battalions, and one battalion light cavalry of foreign mercenaries. Ready to sail to America from the port of Brest, a shortage of cargo ships in March 1780 frustrated the preparations and forced Rochambeau to leave one-third of his army behind. The left-behind troops were intended to follow as soon as possible and finally set sail half a year later, but a British naval blockade forced this second

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<sup>16</sup>As emphasized by historians (e. g. Ferling, 2021), the northern theater of the war up to the battles of Saratoga (September and October 1777) may be particularly salient due to local commemoration and “historical lore.” Yet, the military campaigns in the South after Saratoga were central to deciding the Revolutionary War.

<sup>17</sup>The French forces consisted of one battalion of infantry raised in the French colony of Saint-Domingue and various smaller detachments from regular infantry regiments stationed in the Caribbean.

convoy to return to Europe. We use the left-behind troops as a placebo for identification.

Rochambeau's expeditionary army of five thousand men spent two and a half years in the United States of America. After arriving in Newport in July 1780, Rochambeau decided to wait for the arrival of the left-behind troops instead of taking immediate military action. During the winter, it became clear that the left-behind troops would never arrive. On campaign from June 1781, the army marched towards New York where they joined forces with Washington's army. Rather than besieging the British there as proposed by Gen Washington, the combined army marched onto Virginia, where they fought and defeated the British army under Gen Cornwallis at Yorktown. For this battle, the joint American–French army received significant reinforcement by a second French army, which was transported directly from the French Caribbean colonies. This second army stayed in the United States only for a very short period, arriving one month before the siege began and sailing back to the Caribbean shortly after it was won. (We use this second army as a placebo for the mechanism.) Rochambeau's army, in contrast, stayed in Virginia over the winter, marched back triumphantly to New England over the spring and summer of 1782, visiting Washington, Baltimore, and Philadelphia on the way, and finally boarding ships home from Boston (Scott, 1998).

## **B.2. The American Experience of the French Army**

What did the French combatants experience in America during the Special Expedition? Certainly, they gained combat experience during the Siege of Yorktown, which saw significant casualties on both sides. Yet, the siege was the only substantive combat that the combatants experienced during the Special Expedition. The majority of casualties, instead, resulted from disease, in particular, scurvy and “fever” (most likely malaria).<sup>18</sup> The great majority of French combatants—around 80% according to our estimates—returned home to France in 1783.<sup>19</sup>

Apart from the combat experience, the combatants also experienced different political and economic institutions. In particular, from the perspective of France, the United States of America embodied the ideals of liberty, equality, and tolerance (Echeverria, 1957). Liberty primarily referred to political rights including the freedom of the press and opinion and the freedom of association. In contrast to the U.S., France was perceived as an authoritarian monarchy that censored the press, imprisoned people for moral and political views, and strictly regulated all forms of associations. Equality primarily refers to economic and social equality rooted in a more equal distribution of land and property in America. In stark contrast, feudal

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<sup>18</sup>The incidence of scurvy was high when the troops arrived in Rhode Island, with one-seventh requiring hospitalization upon arrival and 270 men dying during the voyage and within the first six months after arrival (e.g. Scott, 1998, 109). “Fever” and malaria were particularly problematic when the troops were stationed in Virginia, Baltimore, and Philadelphia after Yorktown.

<sup>19</sup>The estimate refers to the three French infantry regiments that comprise our sample of “Rochambeau combatants,” see sections 4 and 5. Scott (1998) provides a very similar assessment including further data on the rest of Rochambeau's expeditionary army.

Aside from mortality, the rate of desertion was remarkably low (below 5% in total), and few men chose to remain in America for various other reasons (below 2% in total) (Scott, 1998, 103). Importantly, the desertion and discharge rate is even lower for this paper's “Rochambeau combatants” because the deserters and discharges were primarily from the Deux-Pont infantry regiment, which was a German foreign legion in the French army, and from the Lazun's Legion cavalry battalion (cf. Scott, 1998).

Table A.3: Deployment history of combatant regiments

Regiment	Combat.	fallen at Yorktown	to US	from US	returned to France	via	Garrison 1789 Jan 1 <sup>st</sup>
<i>Rochambeau combatants</i>							
Bourbonnais	1213	16	1780 Apr	1783 Mar	1783 Aug	(direct)	Metz
Saintonge	1255	13	1780 Apr	1782 Dec	1783 Jul	Antilles	Verdun
Soissonnais	1254	17	1780 Apr	1783 Mar	1783 Sep	(direct)	Montpellier
(Royal) Deux-Ponts	.	13	1780 Apr	1782 Dec	1783 Jul	Antilles	Huningue
<i>de Grasse combatants</i>							
Agenois	1137	18	1781 Aug	1781 Nov	1783 Sep	Martinique	Ile d'Oléron
Gatinais (Royal Auvergne)	1085	81	1781 Aug	1781 Nov	1783 Mar	Cap-Francais	Calais
Touraine	1306	33	1781 Aug	1781 Nov	1783 Mar	Antilles, Saint-Christophe	Perpignan

Sources: Combatants, see text. Fallen at Yorktown, Dawson (1936). Deployment and garrison history, Susane (1876). *Agenois* and *Gatinais* deployed to Caribbean in November 1775 (2<sup>nd</sup> battalion) and January 1777 (1<sup>st</sup> battalion), respectively. *Touraine* deployed to Caribbean in April 1780.

rights of lordship (*seigneurie*) restricted economic freedom in France. Tolerance primarily refers to the toleration of religious minorities, contrasting to the persecution of the Protestant Huguenot minority by the French monarchy.

These American ideals of liberty, equality, and tolerance were not entirely new to France. In fact, they had been embraced for years by the French enlightenment philosophers. For example, Thomas Paine's *Common Sense*—a key revolutionary tract in America—was arguably inspired by Diderot and Reynal's *Histoire philosophique des Deux Indes* (Israel, 2017). Yet this work by French philosophers was on the list of highly forbidden books and thus not widely available in France (Darnton, 1996).

What was certainly new to the French combatants was the experience of a society where these ideals were acted out in practice. As described by Scott (1998, 122), “what seems to have impressed most of Rochambeau's veterans... were not abstract political principles but more mundane practices, notably religious toleration and social equality rooted in widespread economic prosperity.” Note that even within the U.S., the Colony of Rhode Island in New England where the combatants stayed for one year was an outlier in terms of liberty and equality, and thus the “American ideals” particularly salient.

How did the French combatants come into contact with these different U.S. institutions? The answer to the question, we distinguish between officers and soldiers, chiefly due to military hierarchy and social status—French officers were often from the higher nobility and thus enjoyed more freedom in America.

French officers came into contact with American citizens through many channels. Officers were regularly quartered in houses and thus lived under the same roof as American citizens.<sup>20</sup> Officers were also invited to “endless balls” and receptions where they mingled with locals (Scott, 1998). Some officers also obtained permission to explore the countryside on their own. The intensity of the personal contact between French officers and American citizens can also be gauged from the amicable letters that were exchanged after the French departure (Jones, 2012).

The soldiers, lacking the social prestige and military status of officers, were less free to mingle with locals, yet they nevertheless had extended contact with locals. Originally, Rochambeau set up camp outside of the town of Newport, and military hierarchy required soldiers to obtain a written permit to leave the camp. However, all soldiers moved into town for the winter where they lived next door to American citizens (Scott, 1998; Jones, 2012). Soldiers did not normally write letters or diaries, and thus sources are scarce for them. Nevertheless, the contacts with American locals must have been close, as evidenced by General Rochambeau's remark that “not a man had been left behind [in Newport] ‘except ten love-sick soldiers of Soissonnais who returned to see their sweethearts’ ”(Scott, 1998, 55).

The French military also printed a French-language newspaper in the United States to keep informed about military events and local affairs. The great majority of articles were translated from American newspapers, which contained heavy doses of revolutionary propaganda and agitation against the British monarchy.<sup>21</sup> Many enlisted soldiers were probably illiterate, but

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<sup>20</sup>For example, see Stone (1884, 321–3) for a list of the quarters (incl. street and house owner) of French officers in Providence, Rhode Island, during the year 1780–81. Since the American citizens volunteered to offer quarters, the French officers stayed with some of the more vocal supporters of American independence.

<sup>21</sup>Newspapers were not common in France on the eve of the revolution, but they were in North American

at least some must have been literate (Wrong, 1976) and could thus read the army newspaper to others.

Anecdotal evidence confirms that the American experience changed individuals' attitudes toward liberty and equality. Most prominent and best studied among the American combatants is the Marquis de Lafayette—who was, it should be noted, *not* part of the Special Expeditionary force. Biographers of Lafayette argue that he signed up in Washington's army primarily seeking adventure and fame, rather than supporting the American cause, and was converted to a proponent of liberty through his experience in the United States (Gottschalk, 1950). After the war, Lafayette became the focus of an informal circle that intentionally propagated American ideals such as liberty and equality (Scott, 1998, 122). Officers who had served under Rochambeau in America also developed these views. For example, the court aristocrat Comte de Ségur claimed in a letter that he and other officers brought back to France “a lively passion for freedom and for independence” (Scott, 1998, 122). Such statements are absent for common soldiers due to the lack of written sources.

### B.3. The French Revolution

Historiography highlights at least two important triggers of the revolution of 1789.<sup>22</sup> One is the fiscal crisis of 1787, caused by the de facto default of the royal government on its debt.<sup>23</sup> Despite much political maneuvering, the fiscal crisis could not be solved as the tax-exempt nobility remained unwilling to pay taxes but the Third Estate was already taxed at maximum. This situation created a power vacuum that enabled the Third Estate to push for reforms, especially in the *Estates General*, the legislative and consultative assembly composed of all three classes. Eventually, deputies from the Third Estate, joined by a small group of clergy and liberal nobles—among whom some had served as officers under Rochambeau and thus previously experienced U.S. institutions—decreed the abolition of feudalism and declared the rights of man and the citizen.

Another trigger was the subsistence crisis that was caused by the harvest failures of 1788. Beyond increasing the price of bread, the failed harvest (due to droughts or hailstorms, depending on the account) also caused widespread unemployment, as threshing was a major source of seasonal employment. Eventually, “vagabonds” started to move across town and country, and food riots broke out between the spring and summer of 1789, compounded by waves of “fear” and unrest (Lefebvre, 1932; Waldinger, 2023).

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colonies/United States (Hyslop, 1960). The “Gazette Française” was printed with a printing press that Rochambeau's army brought on a ship. It has long been thought that only 7 volumes were printed between November 1780 and January 1781. However, a supplement to volume 93 was recently discovered in an archive, proving that it was printed at least until November 20, 1781, *after* Yorktown. The newspaper is the first service newspaper published abroad by an expeditionary force, and as such a predecessor of the U.S. “Stars and Stripes” newspaper printed by U.S. Armed Forces in France during the two world wars (Desmarais, 2021).

<sup>22</sup>The following overview of the French Revolution up to 1792 follows classical historical accounts (Lefebvre, 1939; Doyle, 1999; Tackett, 2015).

<sup>23</sup>It has been argued that the debts incurred to finance France's participation in the American Revolutionary War destroyed the government finances. An alternative view holds that the critical debt was incurred to finance the Seven Years' War twenty years earlier. Either way, the expenses for the *Special Expedition* were few compared to those for the French Royal Navy during the American Revolutionary War.

We study four outcomes related to revolutionary acts and processes, all of which are rooted in the year 1789. The anti-feudal revolts of 1789 effectively established the abolition of feudalism as a fact in the countryside before it was officially decreed, thereby influencing national politics (Lefebvre, 1939; Markoff, 1996a).<sup>24</sup> The formation of political societies, established spontaneously in cities and towns, was instrumental in political participation and implementing the new policies, the most famous being the Jacobin Club of Paris. Volunteers for the Revolutionary Army were pivotal in defending the revolution from the attack of foreign monarchies who strived to quell it. The emigration of the landowning elite signifies the local intensity of revolutionary agitation and enabled the young republic to reallocate wealth by expropriating the emigrées. Each of these revolutionary acts and processes shaped the course of the French Revolution. Together, they were instrumental in destroying the old institutions but also in building and defending the new institutions. We provide additional historical background together with the data documentation in Appendix A.

#### **B.4. The Role of American Combatants in the French Revolution**

Historians have previously debated whether American combatants contributed to precipitating the French Revolution. McDonald (1951) was the first to observe a positive spatial correlation between the incidence of American combatants and anti-feudal revolts in 1789, arguing that French soldiers with agricultural background were particularly impressed by greater peasant prosperity, a more equal distribution of land, and the absence of feudal institutions in the United States. Godechot (1956) criticized that the correlation could be driven by regional characteristics like general economic hardship that could have increased both army enlistment and the incidence of revolts. Our empirical strategy addresses these and similar concerns by (i) controlling for determinants of army enlistment and (ii) using a placebo design to hold constant the influence of unobserved region characteristics.

Studying the experience of the American combatants in more detail, the historian Scott (1979, 1998) concluded by rejecting MacDonald's hypothesis.<sup>25</sup> This is puzzling insofar as Scott himself provided convincing evidence on how the American experience shifted the combatants' views regarding liberty and equality, and moreover documented several instances on how individuals became revolutionaries, which we review in Section C.6.

One reason why Scott questioned the hypothesis is the observation of a significantly lower incidence of desertion among Rochambeau's regiments during their march on Paris in July 1789. However, rather than providing a "made-to-order test" which would prove that

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<sup>24</sup>A similar effect of local revolts has been shown empirically for England in the early 1830s (Aidt and Franck, 2015).

<sup>25</sup>Many general works on the French Revolution accepted his conclusion (e. g. Bertaud et al., 1989; Geggus, 2000). Other classic references on the origins of the French Revolution do not mention the topic at all (e. g. Doyle, 1999). This is surprising in light of the early skepticism on this negative conclusion (see Godechot, 1979). In fact, some historians recognized that rather than being implausible, it is just very difficult to causally establish with the historical method through which channels the ideas diffused from America to France (Campbell, 2013). More recently, Israel (2017) resuscitated the (more general) hypothesis that the American Revolution could have influenced the French Revolution decisively by documenting ample anecdotal evidence of how American revolutionary ideas were propagated to France and very salient to French revolutionaries. However, Israel (2017) does not consider the American combatants as a vector of transmission of these ideas.

veterans were against the revolution (Scott, 1998, 136), the observation is fully consistent with leadership effects. As the officers of Rochambeau’s regiments were supporting the revolution themselves, it is unclear what pro-revolutionary soldiers would have gained by deserting. In fact, our objection is not new—Godechot (1979) already cautioned that desertion in 1789 meant something very different from desertion in 1791 or 1792. We return to this argument in Section C.2.

Another reason why Scott questioned the hypothesis is that veterans from rural origins may not have returned to their native village but upon return moved to town (Scott, 1998, 137-8). Systematic evidence is absent, but the conjecture is generally plausible—after all, the experience of America made the combatants “cosmopolitans” (McDonald, 1951). However, as we argue, if combatants were still more likely to return to their broader native region, this concern would merely introduce measurement error at very disaggregated levels and spatial spillovers instead of breaking the link between origin and outcome. Indeed, it appears plausible in this specific historical setting given the highly regional cultures, featuring a wide variety of dialects and local customs before being homogenized over the nineteenth century into what today is known as “French” (Blanc and Kubo, 2026). Indeed, in line with combatants returning to their native regions, we document the existence of sizable local spillovers in Section C.4. This highlights that the concern can be addressed by aggregating the data to regions.

Finally, when Scott concludes that the American combatants were “too few” to have mattered as a group, he is essentially making quantitative statements based on (sparse) qualitative data. Yet the key limitation of Scott’s historical approach is that many of the *soldiers* are essentially lost to the historical record after the American campaign. Once returned home to France and discharged from the army, the veterans cease to be tracked by the regimental book, the only systematic source available for this period. This general issue is well-known to specialist historians Bois (1981). In our setting, outcomes such as anti-feudal revolts are particularly ill-suited for a historical case study because, except for the storming of the Bastille, no “list of participants” has ever been drawn up for them.

In using the empirical method to overcome these problems, our paper not just overturns Scott’s negative conclusion but also broadens the argument. Specifically, we show that across French regions, rather than being “too few” to matter, American combatants not only impacted anti-feudal revolts as originally conjectured by McDonald (1951) but also strongly increased support for revolution along several other margins. Moreover, we provide novel historical and individual-level evidence for the personal involvement of American combatants in the revolution, focusing on outcomes like membership in revolutionary societies (section C.6).

## C. Additional Evidence on Transmission

Beyond what is presented and already summarized in Section 6, here we detail additional evidence on how American combatants contributed to regional differences in support for the French Revolution. Specifically, we (i) show that soldiers drive most of the effects, but officers also explain some; (ii) document heterogeneity to understand the interaction with triggers—the political and the subsistence crises—and other means of idea access; (iii) show that results are entirely driven by soldiers who returned to France, particularly those discharged from the military before the French Revolution; (iv) trace how the revolution spilled over within and between départements; (v) argue that leadership effects have limited explanatory power; and (vi) discuss existing and present novel individual-level evidence on American combatants as revolutionaries.

### C.1. The Differential Effect of Soldiers and Officers

Distinguishing soldiers from officers allows disentangling the mechanisms further. The distinction is guided by historiography. McDonald (1951) argued that peasant veterans were responsible for widespread anti-feudal revolts in 1789, while Osman (2015) focused on the leadership role of French officers in building a citizen army, taking the American militia as a model. As noted in the historical background, soldiers and officers belonged to different social classes. Thus, they may have had different experiences in the United States and may have contributed to different outcomes in the French Revolution.

In line with the class distinctions, we consider as officers only *commissioned* officers. In the French army of the Ancien Regime, these positions were reserved for members of the nobility and available for purchase. Commoners could only enlist as soldiers and, apart from very limited exceptions, at best be promoted to lower-ranking *non-commissioned* officers (Wrong, 1976), which is why we group those with soldiers. Unfortunately, we do not observe the occupational background of American combatants. Extrapolating from occupation data for other soldiers, both agricultural and urban backgrounds were likely represented.<sup>26</sup>

Analogously to the baseline, we estimate département-level regressions

$$y_i = \delta_1 \ln \text{Rochambeau officers}_i + \delta_2 \ln \text{Rochambeau soldiers}_i + \beta_1 \ln \text{NotSailed}_i + \beta_2 \ln \text{de Grasse officers}_i + \beta_3 \ln \text{de Grasse soldiers}_i + \gamma X_i + \varepsilon_i \quad (\text{A.1})$$

where we include variables for the log number of soldiers and officers under Rochambeau and under de Grasse, the two armies who have fought at Yorktown.<sup>27</sup>

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<sup>26</sup>The dataset by Komlos et al. (2003) provides for about 8000 soldiers the occupation of either the soldier himself or his father. After subtracting soldiers' occupations that are military ranks, we find that 2140 in 6880 occupations (31%) are agrarian: *laboueurs*, i. e. peasants who own some property which they work themselves; gardeners; vintners; *manouvriers* and *journaliers*, agricultural workers. This estimate will be a lower bound if soldiers with military backgrounds were disproportionately from agricultural backgrounds in previous generations. However, we also observe a wide range (and a large number) of urban occupations like artisans, shopkeepers, merchants, and urban day workers.

<sup>27</sup>The department-level variation in these variables is sufficiently distinct to distinguish their effects empirically, with bivariate  $\rho < 0.55$ . Not-sailed combatants include only soldiers.

Table A.4 presents the results.<sup>28</sup> Most of the effect of Rochambeau combatants on anti-feudal revolts, political societies, and elite emigration is due to Rochambeau soldiers.

The magnitude of the coefficients is similar to before. For anti-feudal revolts and elite emigration, the point estimates are significantly different at  $p < 0.05$  from the negative point estimates of de Grasse soldiers, and for political societies, at  $p < 0.15$  from the imprecise zero point estimate of de Grasse soldiers. Rochambeau soldiers are also significantly positively associated with volunteer battalions, but here the point estimate is not statistically different from that of de Grasse soldiers. Turning to officers, both Rochambeau and de Grasse officers are positively but insignificantly associated with anti-feudal revolts and political societies. On National Volunteers, however, only Rochambeau officers had an impact, with a significant and sizable point estimate that is different at  $p = 0.15$  from the imprecise zero coefficient on de Grasse officers. Notably, the signs on elite emigrants are reversed, suggesting that Rochambeau officers may have induced less emigration than de Grasse officers, possibly by persuading others to stay faithful to the Revolution for longer.

The finding provides evidence against organizational skills as an alternative mechanism. The baseline results could in principle be explained by an interaction of organizational skills with the experience of different institutions. As officers had more of these skills due to their leadership role in the military, we would expect to find even larger results when zooming in on officers. However, as Table A.4 shows, the opposite is the case: soldiers drive most of the outcomes. Officers' leadership and recruiting skills may have enabled them to effectively mobilize volunteers, but these results are equally consistent with the notion that officers were effective because of their social prestige. For other outcomes, organizational skills do not appear necessary.

## C.2. Discussion of Leadership Effects

An alternative explanation holds that the American combatants may have primarily acted upon the guidance or request of their former military commander, analogously to recent studies (Bai, Jia, and Yang, 2022; Cagé, Dagorret, Grosjean, and Jha, 2023). This alternative explanation would already grant that the experience of different ideas and institutions in the United States shifted Rochambeau's attitudes toward liberty and equality. Like other officers and generals, he was *not* a proponent of those American ideals before his deployment to New England. Note that such a mechanism is implausible *a priori* for the outcome of anti-feudal revolts as they directly attacked the social class Rochambeau belonged. Yet for the other outcomes, such mechanism may have been present in principle.

However, as we argue in this section, leadership effects are unlikely the main transmission mechanism. Instead, considering anecdotal evidence and the specific historical circumstances, we conclude that in so far as officers and soldiers were acting in unison during the Revolution, it was not because of leadership effects but because their political attitudes were aligned—and this alignment resulted from their common experience of American revolutionary ideas and institutions.

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<sup>28</sup>The reported results are robust to estimating equation A.1 as Poisson regression, and to excluding non-commissioned officers from soldiers. (Results available upon request.)

Table A.4: Both officers and soldiers supported the Revolution

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau officers	0.228 (0.223)	0.124 (0.119)	0.246** (0.104)	-0.101 (0.156)
Ln Rochambeau soldiers	0.508** (0.214)	0.309** (0.119)	0.224** (0.088)	0.331*** (0.124)
Ln de Grasse officers	0.214 (0.224)	0.222 (0.135)	0.035 (0.103)	0.199 (0.151)
Ln de Grasse soldiers	-0.166 (0.193)	-0.000 (0.129)	0.131 (0.106)	-0.200 (0.173)
Ln not sailed combatants	0.014 (0.158)	-0.122 (0.083)	0.037 (0.065)	-0.125 (0.099)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	81	81	80	65
R <sup>2</sup>	0.21	0.40	0.52	0.42
Std. $\beta$ (Roch. Off.)	0.130	0.110	0.244	-0.094
Std. $\beta$ (Roch. Sold.)	0.415	0.394	0.319	0.442
Std. $\beta$ (Grasse Off.)	0.110	0.179	0.032	0.165
Std. $\beta$ (Grasse Sold.)	-0.122	-0.000	0.168	-0.235
<i>p</i> Roch. Off. = Grasse Off.	0.964	0.550	0.152	0.171
<i>p</i> Roch. Sold. = Grasse Sold.	0.033	0.126	0.537	0.027

The table shows that both officers and soldiers of Rochambeau's regiments increased support for the French Revolution in their origins. Officers increased the establishment of volunteer battalions and decreased the incidence of elite emigration, though the effects are not different in terms of statistical significance from that of de Grasse's officers. Soldiers drive most of the effect for anti-feudal revolts and the subsequent emigration of land-owning elites, and this effect is statistically significantly different from that of de Grasse's soldiers. Soldiers also contributed to the founding of local revolutionary societies and to enlisting volunteers for the revolutionary army.

Officers include commissioned officers (chiefly colonels, captains, and lieutenants), while soldiers include enlisted soldiers and non-commissioned officers (chiefly sergeants).  $p$   $X = Y$  reports the  $p$ -value of an F-test for the equality of coefficients on Rochambeau officers and de Grasse officers, and respectively, Rochambeau soldiers and de Grasse soldiers.

All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

To begin with, Rochambeau neither became a politician nor had media or personal network to rally supporters outside the army. Indeed, he supported the abolition of feudal privileges and the transformation of France into a constitutional monarchy, staying loyal to king and constitutional government up to his retirement in 1792. Yet, even if Rochambeau had become a politician, he would not have had media available for communicating his opinions widely to former officers and soldiers. Newspapers were still in their infancy in France, and the radio was not yet invented for another century.

Moreover, while General Rochambeau did approve of political change, he clearly disapproved of disobedience and violence as a means of achieving it. In fact, during the ‘hot summer’ of 1789, General Rochambeau was tasked with policing the widespread unrest with military force in Alsace (Luce de Lancival, 1809, 349–62). If the loyalty mechanism were present, it should work against us and predict *less* anti-feudal revolts. Consistent with this logic, including the Alsace in our sample reduces the point estimate of Rochambeau combatants on anti-feudal revolts (Table A.16).

Finally, focal episodes of (dis-)obedience suggest that soldiers’ loyalty to their officers and generals was conditional on the superiors supporting the revolution. During the military buildup around Paris in June–July 1789, soldiers from Rochambeau’s *Bourbonnais* and *Saintogne* regiments were disproportionately less likely to desert than soldiers from other regiments (Scott, 1998, 136). This is no surprise considering that *Saintogne*’s colonel<sup>29</sup> was one of a handful of liberal noble deputies who supported the Revolution in the General Estates. Unlike soldiers in other regiments, Rochambeau’s soldiers knew that their officers would not lead them to quell the revolution. If their officers had been counter-revolutionaries, however, the soldiers may have very well deserted in droves. This is strikingly demonstrated by an episode of mass desertion in 1791 by soldiers from Rochambeau’s *Soissonais* regiment on the mere rumor that their lieutenant-colonel—who did *not* serve under Rochambeau in America—would work for the counter-revolution (Susane, 1876, Vol 4, 15).<sup>30</sup>

### C.3. Discharged Soldiers drive the Baseline

Here, we provide two pieces of additional evidence strengthening our interpretation that combatants transmitted their experiences back in their homelands, be it by getting themselves involved in the revolution or by motivating others. Specifically, we show that results are *not* driven by the locations in which the combatant regiments were stationed on the eve of the revolution, and that instead results can be explained by combatants who, upon return to France, were *discharged* from the military.

To test for whether results are driven by the locations in which the combatant regiments were stationed on the eve of the revolution, we code an indicator variable for whether one

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<sup>29</sup>Serving in America under Rochambeau from January 1782, Prince de Broglie spent several months in some of the most liberal places in the U.S., including Philadelphia and New England.

<sup>30</sup>In a similarly noteworthy episode of disobedience, the soldiers of de Grasse’s Tourain regiment rebelled openly against the colonel Vicomte de Mirabeau—André Boniface, counter-revolutionary brother of the well-known revolutionary Honoré Gabriel, Marquis de Mirabeau—and several officers who showed a strongly counter-revolutionary attitude. The soldiers prevailed, and Vicomte de Mirabeau was forced to resign (Susane, 1876, Vol 3, 381-2).

of Rochambeau's regiments was stationed in the department in January 1789.<sup>31</sup> Table A.5 documents the results. The regiment indicator has a negative coefficient for the outcomes anti-feudal revolts and volunteer battalions is consistent with our argument about leadership effects (cf. Section C.2) that Rochambeau's regiments contributed to maintaining order, both in the population and within the military, because they were on the side of the revolution. Most important for our argument, however, is that the effect of Rochambeau combatants hardly changes when controlling for the presence of regiments in 1789. This shows that results are *not* driven by the locations in which the combatant regiments were stationed on the eve of the revolution.

Next, we explore using combatants who were discharged from military service after their return to France. This analysis comes with two challenges. First, we only know whether soldiers were discharged or retired for the *Soissonnais* regiment, which served under Rochambeau in New England. Second, we only observe whether soldiers were discharged by the end of the regimental book in 1786, leaving open the possibility that more soldiers were discharged in 1787 or 1788.

Despite these challenges, the results presented in Table A.6 indicate that the effect of returned combatants is driven by those who were discharged or retired before the revolution. In Panel A, we first present coefficients for returned combatants from Rochambeau's *Soissonnais* regiment as a reference. We do not expect coefficients to be exactly the same as the previous ones because restricting the sample to one of the three Rochambeau regiments (a) introduces attrition bias due to measurement error due to the smaller sample based on 1026 combatants with geo-localized birthplace and (b) also exposes our estimates to the influence of outliers due to the large regional differences in recruiting between regiments, which get otherwise evened out. Nevertheless, our baseline result continues to hold for two outcomes, anti-feudal revolts, and national volunteers. The coefficients of the other outcomes shrink more and become insignificant, but remain positive.

In Panel B, we now turn to the combatants who were discharged or retired from the *Soissonnais* regiment between the return to France in September 1783 and the end of the regimental book. Despite the even smaller group size, 270 discharged or retired combatants, the coefficients are very similar.<sup>32</sup> In fact, with the exception of the emigration outcome whose coefficient was already insignificant, all coefficients become larger and more significant when focusing on discharged combatants. This pattern is consistent with our interpretation that combatants who left the military and possibly returned to their origins are driving the support for the French Revolution across regions.

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<sup>31</sup>*Bourbonnais* was stationed in Metz (dept. Moselle), *Saintogne* in Verdun (dept. Meuse), and *Soissonnais* in Montpellier (dept. Hérault). The German foreign legion *Deux-Ponts* was stationed in Belfort, which is not part of the sample. During the Revolution, these regiments were deployed to different tasks in different regions. We cannot use this variation, however, as their deployments were likely endogenous to the objectives—as officers and soldiers were pro-revolution, these regiments were more reliable than others. The garrisons in Jan 1789, in contrast, were plausibly chosen independent of these motivations. At that time, the king and military command did not anticipate the potential need to police riots and revolts across the country with the military.

<sup>32</sup>Note that Scott 1998, who studied the active regiments through the revolution, estimates that three-fifth of all combatants left the army by 1789.

Table A.5: Effect on places where regiments were stationed in Jan 1789

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau combatants	0.584*** (0.202)	0.321*** (0.102)	0.336*** (0.081)	0.257** (0.114)
Rochambeau regiment stationed	-0.538 (0.388)	0.384 (0.285)	-0.555** (0.260)	0.302 (0.369)
Ln not sailed combatants	-0.024 (0.151)	-0.155* (0.087)	0.034 (0.059)	-0.173** (0.082)
Ln de Grasse combatants	-0.077 (0.179)	0.080 (0.114)	0.125 (0.090)	-0.053 (0.140)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	81	81	80	65
R <sup>2</sup>	0.20	0.38	0.52	0.40
Partial R <sup>2</sup> (Rochambeau)	0.11	0.10	0.18	0.07
Partial R <sup>2</sup> (Notsailed)	0.01	0	0.05	0.01
Partial R <sup>2</sup> (de Grasse)	0.00	0.05	0.00	0.06
Std. β (Rochambeau)	0.474	0.407	0.477	0.341
Std. β (Notsailed)	-0.094	0.105	-0.170	0.092
Std. β (de Grasse)	-0.027	-0.279	0.067	-0.322
<i>p</i> Rochambeau = Notsailed	0.031	0.000	0.006	0.005
<i>p</i> Rochambeau = de Grasse	0.019	0.118	0.073	0.070

This table controls for an indicator variable for whether one of Rochambeau's regiments was stationed in the department in January 1789. This was the case for three départements, *Meuse*, *Moselle*, and *Hérault*. All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A.6: Effect of discharged Rochambeau combatants

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
<i>Panel A</i>				
Ln Soissonnais combatants	0.441*** (0.149)	0.108 (0.083)	0.209*** (0.056)	0.058 (0.079)
Baseline controls	✓	✓	✓	✓
Placebo groups	✓	✓	✓	✓
<i>N</i> (Obs = département)	81	81	80	65
R <sup>2</sup>	0.22	0.31	0.49	0.35
Std. $\beta$ (Soissonnais)	0.421	0.161	0.349	0.088
<i>Panel B</i>				
Ln discharged Soissonnais combatants	0.433** (0.183)	0.188* (0.099)	0.236*** (0.071)	0.009 (0.091)
Baseline controls	✓	✓	✓	✓
Placebo groups	✓	✓	✓	✓
<i>N</i> (Obs = département)	81	81	80	65
R <sup>2</sup>	0.17	0.33	0.47	0.34
Std. $\beta$ (Soissonnais)	0.316	0.215	0.302	0.011

The *Soissonnais* regiment was one of three French infantry regiments that experienced New England under Rochambeau. For this regiment, we observe regular discharges and retirements with pension for the period from 1783 (after returning home to France from America) through 1786 (until the end of the regimental book). All specifications include the two placebo groups (not-sailed combatants and de Grasse combatants) and baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## C.4. Spatial Spillovers occur mostly *within* départements

We show that there are sizeable spillovers between more disaggregated spatial units in Table 5. Here, we further document in Table A.7 that a substantial part of the spillovers between arrondissements takes place within the départements. Thus, départements appear as the preferable unit of analysis for capturing the full effect of American combatants on the French Revolution.

Table A.7: Nature of spatial spillovers: Within and between départements

	Dep. var.: ln [support for revolution]					
	Anti-feudal revolts		Political Societies		Volunteer companies	
	(1)	(2)	(3)	(4)	(5)	(6)
Ln Rochambeau combatants	0.191 (0.065) <sup>***</sup> [0.067] <sup>***</sup>	0.162 (0.064) <sup>**</sup> [0.065] <sup>**</sup>	0.044 (0.033) [0.037]	0.045 (0.036) [0.039]	0.156 (0.056) <sup>***</sup> [0.054] <sup>***</sup>	0.146 (0.059) <sup>**</sup> [0.050] <sup>***</sup>
Ln Roch.—department	0.086 (0.059) [0.052]		0.131 (0.038) <sup>***</sup> [0.042] <sup>***</sup>		0.222 (0.058) <sup>***</sup> [0.082] <sup>***</sup>	
Ln Roch.—neighb within dept		0.018 (0.057) [0.050]		0.094 (0.037) <sup>**</sup> [0.042] <sup>**</sup>		0.221 (0.056) <sup>***</sup> [0.078] <sup>***</sup>
Ln Roch.—neighb outside dept		0.142 (0.050) <sup>***</sup> [0.043] <sup>***</sup>		0.018 (0.036) [0.039]		0.021 (0.058) [0.054]
Placebo controls	✓	✓	✓	✓	✓	✓
Baseline controls	✓	✓	✓	✓	✓	✓
<i>N</i> (Obs = arrondissement)	340	340	340	340	340	340
R <sup>2</sup>	0.14	0.16	0.26	0.25	0.30	0.31
Partial R <sup>2</sup> (Rochambeau)	0.036	0.025	0.005	0.005	0.026	0.021
Partial R <sup>2</sup> (Roch.—dept)	0.007		0.041		0.046	
Partial R <sup>2</sup> (Roch.—within)		0.000		0.023		0.048
Partial R <sup>2</sup> (Roch.—outside)		0.020		0.001		0.000
Std. β (Rochambeau)	0.246	0.209	0.087	0.090	0.187	0.175
Std. β (Roch.—dept)	0.105		0.247		0.253	
Std. β (Roch.—within)		0.021		0.176		0.249
Std. β (Roch.—outside)		0.213		0.042		0.029

The table shows that spatial spillovers between arrondissements are across départements for anti-feudal revolts and within départements for political societies and volunteer companies.

Regressions include the full set of placebo controls (log not-sailed and Saint-Simon combatants, in the rest of the department or in neighboring arrondissements within and outside the department), and the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris). Robust standard errors in parentheses. Spatially clustered standard errors (cutoff 200km, Bartlett kernel) in brackets. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## C.5. Heterogeneity

To understand which local factors mediated the effect of Rochambeau’s combatants on support for the French Revolution, we focus on anti-feudal revolts and early political societies and estimate an enriched model that includes indicators for whether département characteristic  $C_i$  is above the nationwide median  $\tilde{C}$  and an interaction of it with the main independent variable:

$$y_i = \eta_1 \ln \text{Rochambeau}_i + \eta_2 \ln \text{Rochambeau}_i \times \mathbb{1}(C_i > \tilde{C}) + \eta_3 \mathbb{1}(C_i > \tilde{C}) + \gamma X_i + \varepsilon_i \quad (\text{A.2})$$

Table A.8 columns 1 and 2 show that the effects depend on the relative power of aristocracy versus monarchy. Specifically, the effect of Rochambeau’s soldiers is particularly pronounced in the 13 départements with *parlements* where the power of the nobility was particularly strong (column 1). Conversely, the effect of Rochambeau’s soldiers tends to be weaker in départements with comparatively more royal tax offices (column 2).<sup>33</sup> This finding is consistent with the assessment by historians that revolutionary action targeted feudal rights and other privileges of the nobility but not the monarchy itself, holding a generally favorable opinion of the king whom they considered to be supportive of reform but constrained by opposition from the nobility (Lefebvre, 1939; Doyle, 1999; Markoff, 1996a).

Considering the triggers of the subsistence crisis in columns 3 and 4, the effects on anti-feudal revolts are weakly larger in regions with larger weather shocks. In contrast, there is no evidence of an interaction for the outcome of political societies. The finding is consistent with the subsistence crisis being one trigger of the revolution, but not the only one.

We find no evidence that the prevalence of local enlightenment ideals mediates the effect of Rochambeau’s combatants. In column 5, we consider subscribers (readers) of the *Encyclopédie* (Squicciarini and Vogtländer, 2015) as heterogeneity characteristic but the effect of Rochambeau’s soldiers is not significantly different in départements below versus above the median of subscribers. The finding is consistent with Scott’s (1997) assessment that what impressed the combatants was not abstract, philosophical ideas about political and economic institutions but rather the experience of a society practicing such institutions.

Finally, we document in columns 6 and 7 that the effects of Rochambeau’s combatants tend to be more pronounced in remote départements. Approximating access to ideas by the number of markets and fairs and by the number of post houses, we find that direct personal exposure to the United States tends to matter more in places with worse access to ideas. However, we should caution that the number of markets, fairs, and post houses could also reflect economic backwardness. Combatants from such regions may have been particularly impressed by witnessing the prosperity of a different society without feudal privileges.

## C.6. Individual-level Evidence

We draw on existing and present novel individual-level evidence to illustrate how the American experience made French soldiers and officers revolutionaries.

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<sup>33</sup>In these places, the royal administration had seized more power from the local nobility during the seventeenth-century (de Tocqueville, 1856).

Table A.8: Heterogeneity results

	Aristocracy		Subsistence Crisis		Enlightenment		Idea access/Economy	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
X =	Parlement	Royal tax	Temp. shock	Prec. shock	Subscribers	Markets/fairs	Post houses	
<i>Panel A</i>								
	Dep var: In anti-feudal revolts							
Ln Roch. combatants	0.563 <sup>***</sup> (0.202)	0.921 <sup>***</sup> (0.171)	0.750 <sup>***</sup> (0.228)	0.262 (0.238)	0.263 (0.223)	0.638 <sup>***</sup> (0.220)	0.713 <sup>***</sup> (0.223)	
Ln Roch. combatants × (X > median)	0.289 (0.621)	-0.551* (0.276)	-0.332 (0.304)	0.347 (0.260)	0.271 (0.266)	-0.116 (0.306)	-0.289 (0.333)	
Indicator (X > median)	-1.259 (2.228)	1.056 (0.841)	0.701 (0.925)	-0.251 (0.716)	-0.012 (0.774)	0.402 (0.868)	0.443 (0.979)	
Controls	✓	✓	✓	✓	✓	✓	✓	
N (Obs = département)	81	81	81	81	81	81	81	
R <sup>2</sup>	0.20	0.30	0.22	0.29	0.30	0.19	0.23	
<i>Panel B</i>								
	Dep var: In early political societies							
Ln Roch. combatants	0.316 <sup>***</sup> (0.108)	0.331 <sup>**</sup> (0.134)	0.309 <sup>**</sup> (0.135)	0.290 <sup>**</sup> (0.119)	0.211 <sup>**</sup> (0.106)	0.492 <sup>***</sup> (0.123)	0.391 <sup>***</sup> (0.108)	
Ln Roch. combatants × (X > median)	0.143 (0.210)	-0.020 (0.152)	-0.020 (0.163)	0.017 (0.157)	0.064 (0.168)	-0.265 (0.162)	-0.085 (0.142)	
Indicator (X > median)	-0.430 (0.721)	0.112 (0.462)	0.351 (0.520)	0.154 (0.483)	0.191 (0.529)	1.005 <sup>**</sup> (0.495)	-0.128 (0.461)	
Controls	✓	✓	✓	✓	✓	✓	✓	
N (Obs = département)	81	81	81	81	81	81	81	
R <sup>2</sup>	0.38	0.38	0.41	0.39	0.43	0.41	0.43	

The table documents heterogeneity of Rochambeau's soldiers with characteristics of their origin départements. Their effect is stronger where the aristocracy was strong (in places with parlements, and where the King was weak as measured by fewer royal tax centers) and where access to ideas was scarce. All regressions include as controls the not-sailed placebo regiment and baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

**Officers** Several officers from the American campaign became involved in politics during the Revolution and were elected as deputies for the nobility to the Estates General. Table A.9 documents the officers' experience in America and their political affiliation as liberals (in favor of Revolution) or royalists (against the Revolution). We find that five of seven officers–deputies who served under Rochambeau were liberals but only one a royalist. Likewise, the one officer–deputy who served under George Washington–Lafayette—was a liberal. These men were among a small group of deputies for the nobility who defected from their own group and broke the traditional order by sitting together with the Third Estate or voting for the abolition of feudalism on the night of August 4th.<sup>34</sup> In contrast, none of officers–deputies who served under de Grasse were liberals while two of three were royalists who fiercely opposed the revolution.<sup>35</sup>

While this evidence was known to historians (e. g. Tackett, 1986), we uncovered additional novel evidence that officers serving under Rochambeau became involved in the Revolution by joining the Jacobin Club of Paris (Table A.10). The *Société des Amis de la Constitution* of Paris, informally known as Jacobin Club of Paris, was a key organization in propelling and steering the French Revolution. We manually identified officers from the American campaign among the 1100 members listed in December 1790.<sup>36</sup> As Table A.10 shows, 10% of the 241 officers serving under Rochambeau (and thus experiencing U.S. and New England firsthand) became members of the Jacobin Club of Paris in Dec 1790. In contrast, only 4.8% of the 208 officers serving under de Grasse (and thus not experiencing New England firsthand) became members of this revolutionary society.

**Soldiers** The source situation on soldiers is generally poor, and only a few anecdotes on soldiers' acts of revolution are known. For example, one soldier who served under Rochambeau “risked his life” in the Storming of the Bastille and helped the Parisian crowds capture the “fortress-prison-armory” in his capacity as cannoner (Scott, 1998, 137).<sup>37</sup> Also, more than a dozen former soldiers under Rochambeau enlisted in the Parisian National Guards at a time when the decision represented a clear commitment to the cause of the Revolution (Scott, 1998, 137). In another striking episode already alluded to in Section C.2, a group of soldiers from *Soissonais* deserted upon rumors that their lieutenant colonel would collaborate with the counter-revolution. As it turned out, the 89 deserting soldiers formed the nucleus of an army of revolutionaries in the département Vaucluse (Susane, 1876, Vol 4, 15).

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<sup>34</sup>For example, Vicomte de Noailles, who served under Rochambeau as colonel-in-second in *Soissonais*, initiated the revolutionary Night of August 4 during which nobles voluntarily renounced their feudal rights.

<sup>35</sup>Vicomte de Mirabeau sat on the “extreme right” and, unlike his brother, was a famous counter-revolutionary (Bodinier, 1983, 406).

<sup>36</sup>Membership is based on the list printed in Paris, December 21, 1790, on behalf of the *Société des Amis de la Constitution*. (Scans are accessible via Google Books and HathiTrust.) According to our knowledge, this is the earliest extant and complete membership list. We linked officers primarily by surname, adjusting for spelling differences and retaining only unambiguous matches. In 1790, “passive citizens” below the wealth threshold were excluded from membership. This effectively excluded the vast majority of regular soldiers from membership.

<sup>37</sup>The participants were later commemorated as *Vainqueurs de la Bastille* but the retrospective lists are studded with mistakes, not least due to the absence of orthographic rules. The modal conqueror was a carpenter living in the neighboring Paris faubourg. The non-Paris, non-carpenter conquerors notably also comprise two foreigners who had participated in the Geneva Revolution of 1782 (Godechot, 1970).

Table A.9: Officers as deputies in the General Estates 1789

Name	Regiment	Newport	Yorktown	Liberal	Royalist
<i>Rochambeau's special expedition</i>					
Duc de Biron	Lazun (cavallery)	✓	✓	✓	
Duc de Castries	Saintogne	✓	✓		✓
Comte de Custine	Saintonge	✓	✓	✓	
Comte de Lameth	General staff	✓	✓	✓	
Thibault de Menonville	General staff	✓	✓	✓	
Comte de Montmorency	Bourbonnais	✓	✓		
Vicomte de Noailles	Soissonais	✓	✓	✓	
<i>de Grasse's army</i>					
Vicomte de Mirabeau	Touraine		✓		✓
Marquis de Rostaing	Gatinais		✓		
Marquis de Saint-Simon*	Touraine		✓		✓
<i>Others</i>					
Marquis de Lafayette	Washington	(✓)	✓	✓	

*Sample:* Officers who fought the Siege of Yorktown and were elected deputy to the General Estates in 1789. All officers belonged to the nobility and thus represented the second estate. *Political affiliation:* Liberal deputies voted for the abolition of feudalism in the night of August 4th or sat together with the third estate. Royalists were expressly in favor of monarchical institutions. Deputies classified as neither liberal nor royalist belonged to the group of moderates. *Sources:* Bodinier (1983); Tackett (1996).

\* Marquis de Saint-Simon refers to Claude-Anne de Rouvroy, not Claude Henri de Rouvroy the philosopher.

Beyond these scattered anecdotes, however, it appears that those who became revolutionaries are lost to history. Especially considering the veterans who returned home after being discharged or retired from service, it appears a Herculean challenge to document systematic individual-level evidence for their involvement in the revolution of 1789. The absence of “lists of participants” is especially salient for the outcome of anti-feudal revolts, which were among the first instances of revolutionary insurrection of common people across the country. Neither were these revolts in any systematic way policed nor would the participants voluntarily draw up such lists for fear of retribution.<sup>38</sup> Nevertheless, the sum of empirical evidence provided in this paper strongly implies that these veteran soldiers did have an important impact on the course of the French Revolution. Whereas the lack of historical sources inhibits the historical method, this paper’s empirical method is capable of uncovering their influence.

<sup>38</sup>If one views the Storming of the Bastille as an anti-feudal revolt, it was the exception to the rule. This single event was (and still is) commemorated by a holiday on July 14th, and by awarding medals of honor to the *Vainqueurs de la Bastille* (see also footnote 37).

Table A.10: Officers in the Paris Jacobin Club, 1790

Army	Officers	Jacobins	Share
Rochambeau	241	24	10.0%
de Grasse	208	10	4.8%

This table shows that officers who served under Rochambeau were twice as likely as officers who served under de Grasse to become members of the Paris Jacobin Club by 1790. Membership is based on the list of members of the *Société des Amis de la Constitution* (informally known as Jacobin Club) which was printed on behalf of the society in Paris, dated December 21, 1790. We linked officers primarily by surname, adjusting for spelling differences and retaining only unambiguous matches.

## D. Additional Results

### D.1. Unconditional Correlations and Coefficients on Controls

Table A.11: Full results for baseline regression

	Dep var: ln [support for revolution]							
	Anti-feudal revolts		Political societies		Volunteer battalions		Elite emigrants	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ln Rochambeau combatants	0.345** (0.133)	0.555*** (0.188)	0.344*** (0.079)	0.302*** (0.104)	0.437*** (0.072)	0.343*** (0.087)	0.359*** (0.081)	0.212* (0.111)
Ln other soldiers		0.003 (0.179)		-0.099 (0.089)		0.169** (0.075)		-0.036 (0.112)
Ln infantry regiments		-0.245 (0.201)		0.136 (0.100)		0.081 (0.099)		0.133 (0.134)
Ln cavalry regiments		-0.511* (0.267)		-0.212 (0.142)		-0.114 (0.113)		0.289* (0.146)
Ln population 1793		0.042 (0.390)		0.489** (0.233)		-0.198 (0.212)		-0.022 (0.335)
Urbanization rate 1793		-0.495 (0.931)		0.879 (0.568)		0.107 (0.660)		1.432* (0.843)
1: Paris		-1.541** (0.668)		-1.995*** (0.388)		1.175** (0.497)		-0.147 (0.659)
Constant	0.272 (0.379)	-0.547 (4.532)	0.245 (0.249)	-5.378** (2.667)	0.151 (0.233)	2.019 (2.517)	5.199*** (0.269)	5.736 (3.877)
<i>N</i> (Obs = département)	81	81	81	81	80	80	65	65
R <sup>2</sup>	0.08	0.19	0.19	0.34	0.39	0.48	0.23	0.35
Partial R <sup>2</sup> (Rochambeau)		0.11		0.10		0.18		0.05
Std. $\beta$ (Rochambeau)	0.281	0.451	0.436	0.383	0.621	0.488	0.476	0.281

The table shows that Rochambeau combatants exhibit a strong, positive association with different measures of support for the revolution at the département level both unconditionally (odd columns) and conditionally on the baseline controls (even columns). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## D.2. Intention to Treat Interpretation

Our baseline specification uses as explanatory variable the number of combatants who returned to France. Here, we document that results are very similar if we instead use the number of combatants who were *deployed* to the United States. This shows that our baseline results can be interpreted as intention-to-treat effects.

As we discussed in the data appendix and the historical background appendix, 85% of combatants returned to France by the summer of 1783. The chief reason why combatants would not return to France was disease mortality due to malaria, which combatants contracted in Virginia.<sup>39</sup> Based on this historical evidence, it is reasonable to conjecture that attrition—the difference between the number of combatants deployed to the United States and the number of combatants returning to France—was essentially random across the combatant’s French origins. In practice, these additional “shocks” will introduce a certain degree of classical measurement error when focusing on the deployed rather than the returning combatants. Thus, we would expect the point estimates on the deployed combatants to be somewhat smaller, while the standard errors should be less affected.<sup>40</sup> This is exactly what we find.

Table A.12 replicates the mechanism regression Table 3, but using the number of combatants under Rochambeau and de Grasse who were deployed to the United States. Comparing the results in Table A.12 to those in Table 3, we find that the point estimates are about 10% smaller, while the standard errors are hardly affected. This implies that when we use returned combatants in the baseline, we *do not give up* the intention-to-treat interpretation of our results.

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<sup>39</sup>Another disease many combatants suffered was scurvy, which resulted from poor nutrition during the sail to and from America, but mortality was lower. There were casualties from combat, in particular the Siege of Yorktown, but those were quantitatively less important. Desertion rates were very low throughout.

<sup>40</sup>Not accounting for attrition will increase the residual variance, which tends to increase standard errors, but it also increases the variability of the regressor, which tends to decrease standard errors.

Table A.12: Effects of Rochambeau and de Grasse deployed to America, rather than those returning to France

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln deployed Rochambeau combatants	0.521** (0.197)	0.300*** (0.108)	0.292*** (0.084)	0.308*** (0.108)
Ln not sailed combatants	-0.017 (0.153)	-0.146 (0.092)	0.029 (0.061)	-0.184** (0.081)
Ln deployed de Grasse combatants	-0.097 (0.170)	0.033 (0.114)	0.100 (0.083)	-0.035 (0.119)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	81	81	80	65
R <sup>2</sup>	0.18	0.36	0.48	0.41
Partial R <sup>2</sup> (Rochambeau)	0.09	0.10	0.10	0.13
Partial R <sup>2</sup> (Notsailed)	0.00	0.04	0.06	0.00
Partial R <sup>2</sup> (de Grasse)	0.00	0.00	0.00	0.02
Std. β (Rochambeau)	0.450	0.405	0.441	0.437
Std. β (Notsailed)	-0.020	-0.262	0.059	-0.343
Std. β (de Grasse)	-0.077	0.041	0.140	-0.046
<i>p</i> Rochambeau = Notsailed	0.053	0.002	0.019	0.001
<i>p</i> Rochambeau = de Grasse	0.020	0.082	0.078	0.031

The table shows that, when focusing on *deployed* Rochambeau and de Grasse combatants rather than *returning* combatants, our result are overall very similar but slightly less pronounced. This is consistent with the historical evidence that the main reason why combatants who were deployed to America would not return back to France was disease mortality, especially due to malaria which combatants contracted in Virginia. Regressions are at the level of départements and include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). *p* Rochambeau = ... reports the *p*-value of an F-test for the equality of coefficients on Rochambeau combatants and placebo combatants. Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

### D.3. Balance

This Section documents that our main results are robust to controlling for variables that are unbalanced.

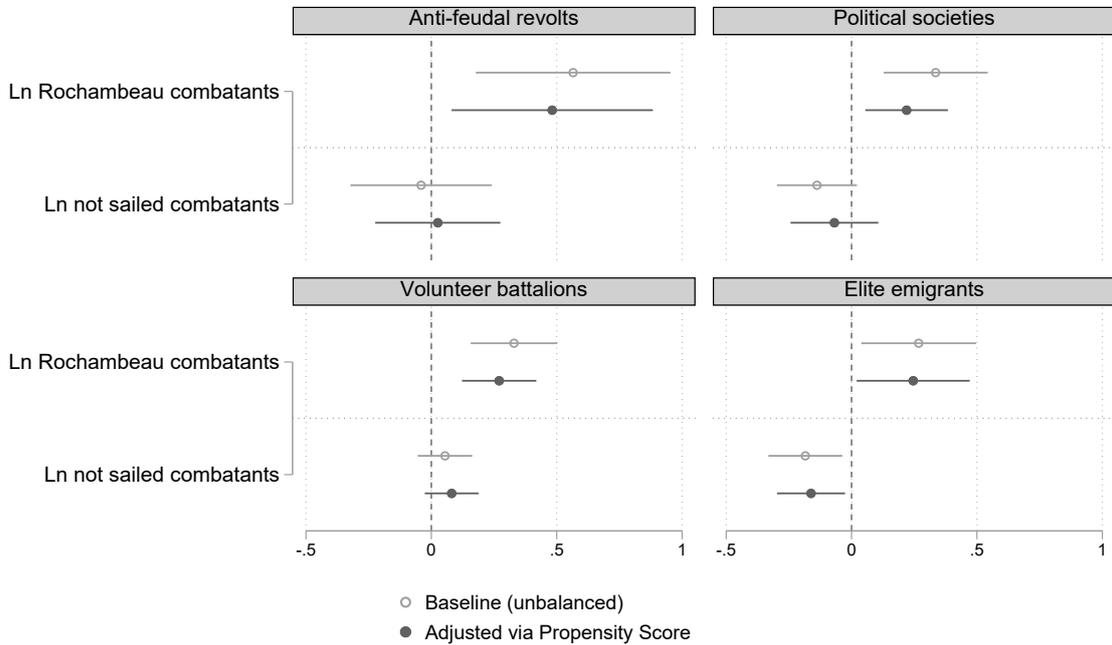


Figure A.4: Adjusting for unbalanced covariates via Propensity Score—Not-sailed placebo

*Note:* The figure documents the robustness to adjusting for covariate imbalance via the propensity score. Specifically, it compares the baseline coefficients from Table 2, which do not correct for unbalanced covariates, to the coefficients from regressions that adjust for imbalance in three covariates: Ruggedness, precipitation shock in 1788, and bishoprics. Following [Hirano and Imbens \(2004\)](#), we estimate the generalized propensity score under the assumption that the net treatment is normally distributed conditional on the covariates, which we confirm in the data (results not reported). We implement the propensity score adjustment by inverse probability weighting. Other methods, such as subclassifying on propensity score quantiles or controlling for a propensity score polynomial, deliver very similar results (not reported).

Table A.13: Controlling for unbalanced covariates—not-sailed combatants placebo

	Dep. variable: ln [support for revolution]															
	Anti-feudal revolts				Political societies				Volunteer battalions				Elite emigrants			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Ln Rochambeau combatants	0.390* (0.206)	0.361* (0.200)	0.571*** (0.202)	0.357* (0.209)	0.280*** (0.104)	0.247** (0.102)	0.250** (0.098)	0.190* (0.102)	0.220** (0.090)	0.300*** (0.084)	0.291*** (0.089)	0.219*** (0.085)	0.334*** (0.116)	0.281*** (0.121)	0.250* (0.131)	0.292** (0.135)
Ln ruggedness	0.432*** (0.140)			0.157 (0.172)	0.135 (0.084)			-0.067 (0.094)	0.273*** (0.083)			0.330*** (0.120)	-0.163 (0.106)			-0.222 (0.149)
Precip. shock 1788 (std.)		0.505*** (0.150)		0.435** (0.183)		0.218** (0.087)	0.226** (0.095)			0.072 (0.070)		-0.103 (0.096)		-0.028 (0.111)		0.072 (0.147)
Ln bishops			-0.031 (0.243)	-0.167 (0.236)			0.468*** (0.160)	0.442*** (0.159)		0.201 (0.126)		0.104 (0.111)		0.071 (0.176)		0.129 (0.173)
Not sailed placebo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Baseline controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N (Obs = département)	81	81	81	81	81	81	81	81	80	80	80	80	65	65	65	65
R <sup>2</sup>	0.26	0.31	0.19	0.32	0.39	0.43	0.44	0.49	0.57	0.50	0.50	0.59	0.42	0.39	0.39	0.42

The table documents the robustness of the main identification result (Table 2) for unbalanced covariates. All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

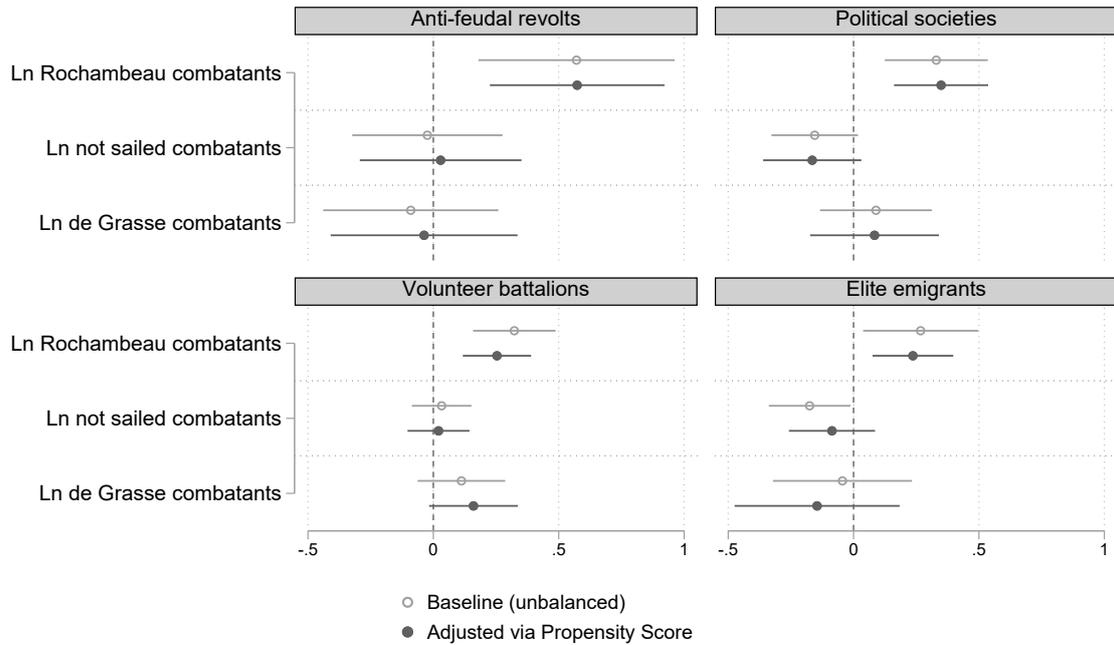


Figure A.5: Adjusting for unbalanced covariates via the Propensity Score—de Grasse Placebo

*Note:* The figure documents the robustness to adjusting for covariate imbalance via the propensity score. Specifically, it compares the baseline coefficients from Table 3, which do not correct for unbalanced covariates, to the coefficients from regressions that adjust for imbalance in five covariates: Border département, ruggedness, precipitation shock in 1788, collèges, and collège students. Following Hirano and Imbens (2004), we estimate the generalized propensity score under the assumption that the net treatment is normally distributed conditional on the covariates, which we confirm in the data (results not reported). As suggested by Imbens (2015), we drop one observation for which the estimated propensity score is close to 0 (*Haute Loire*). We implement the propensity score adjustment by inverse probability weighting. Other methods, such as subclassifying on propensity score quantiles or controlling for a propensity score polynomial, deliver very similar results (not reported).

Table A.14: Controlling for unbalanced covariates—de Grasse combatants placebo

	Dep. variable: ln [support for revolution]															
	Anti-feudal revolts				Political societies				Volunteer battalions				Elite emigrants			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Ln Rochambeau combatants	0.558*** (0.201)	0.544** (0.212)	0.549*** (0.203)	0.537** (0.214)	0.321*** (0.105)	0.283** (0.113)	0.291** (0.115)	0.274** (0.119)	0.277*** (0.082)	0.316*** (0.086)	0.318*** (0.089)	0.305*** (0.084)	0.270** (0.114)	0.230** (0.113)	0.247** (0.122)	0.226* (0.119)
1: Border dépt.	0.156 (0.430)		0.109 (0.416)	0.106 (0.176)				-0.002 (0.189)	0.526*** (0.155)			0.590*** (0.170)	-0.031 (0.222)			-0.144 (0.263)
Ln collèges		0.099 (0.251)		0.039 (0.262)		0.173 (0.128)		0.104 (0.146)		0.024 (0.109)				0.156 (0.152)		0.178 (0.201)
Ln college students			0.084 (0.157)	0.054 (0.174)			0.153 (0.122)	0.111 (0.135)			0.021 (0.078)	-0.013 (0.095)			0.065 (0.115)	0.028 (0.140)
De Grasse placebo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Not sailed placebo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Baseline controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N (Obs = département)	81	81	81	81	81	81	81	81	80	80	80	80	65	65	65	65
R <sup>2</sup>	0.19	0.19	0.19	0.19	0.38	0.39	0.39	0.40	0.57	0.50	0.50	0.58	0.39	0.40	0.40	0.41

The table documents the robustness of the main mechanism result (Table 3) for unbalanced covariates. All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

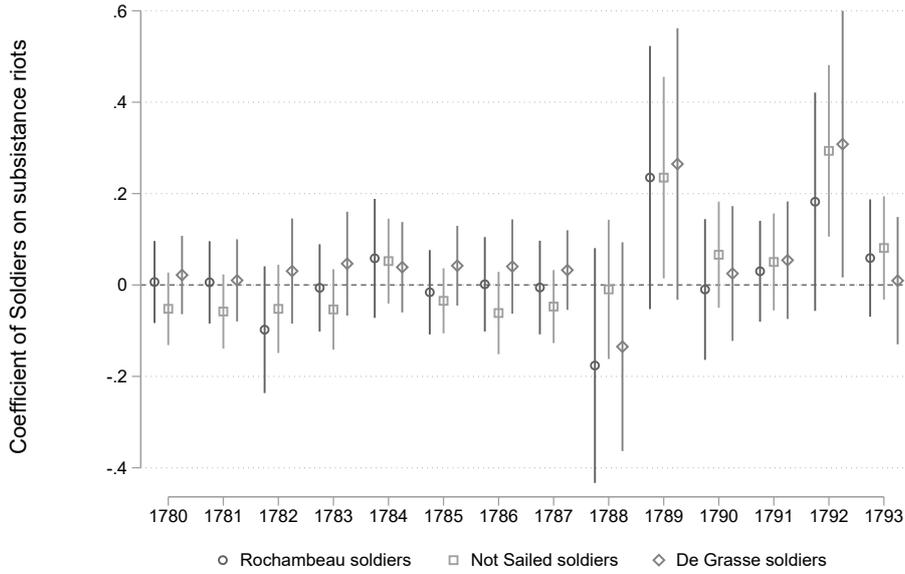


Figure A.6: Event-study estimates of soldier on food riots

*Note:* This figure shows neither regiment affected food riots during the Revolution. We show estimates of the  $\beta_\tau$  coefficients from equation A.3 with food riots as the outcome.

#### D.4. Event-Study Results with Placebo Regiments and Placebo Revolts

Considering the two outcome variables  $y_{i,t}$  anti-feudal revolts and food riots at the département (i)-year (t) level as in equation (4), we estimate separately for each of the three groups of combatants the following equation:

$$y_{i,t} = \sum_{\tau=1780}^{1794} \beta_\tau \ln \text{Regiment}_i \times \mathbb{1}(\tau) + \gamma \sum_{\tau=1780}^{1794} X_i \times \mathbb{1}(\tau) + \mu_t + \mu_i + \varepsilon_i \quad (\text{A.3})$$

We find that effects are specific both to the treatment group and the treatment outcome. Figure 7 in the main text shows that anti-feudal revolts only increased in départements from which more of Rochambeau combatants hailed, and only in the year of revolution 1789. In contrast, the placebo combatants do not affect anti-feudal revolts in 1789. Figure A.6 below shows that food riots increased generically in all départements with more combatants, both in 1789 and in 1792, whether they have experienced the U.S. or not.

## D.5. Robustness

This Section documents that our main results are robust to (i) excluding the homelands of regiments, (ii) using the extended sample including Alsace, (iii) using the inverse hyperbolic sine transformation instead of the log transformation, and (iv) estimating the model as Poisson instead of OLS.

Table A.16 shows that results are robust when extending the sample to départements in Alsace. The results are highly similar for the outcomes of political societies, national volunteers, and emigration to the baseline specification in the main text. The only exception is for the outcome of anti-feudal revolts, where the coefficient on Rochambeau combatants shrinks by about one quarter. This effect may be driven by the fact that Rochambeau himself was present in Alsace during the summer of 1789 and tasked with policing the riots, as discussed in Section C.2.

One common problem with the log transformation is how to deal with zeros. In the baseline specification, we calculated it as  $\ln(\text{variable}+1)$  for the cases where variables had zeros. This transformation may not be innocuous, and so we test robustness to using an alternative transformation, the inverse hyperbolic sine. As documented in Table A.17, our results are highly robust to using the inverse hyperbolic sine. Thus, we choose the log transform for the baseline specification because of the easier interpretation.

Another concern about both transformations is that they implicitly weight extensive and intensive margin effects, and that OLS results can be sensitive to these weights (Chen and Roth, 2024). We thus test an alternative estimation approach that is robust to this concern, pseudo-poisson maximum likelihood (PPML) estimation. Table A.18 shows that our results are also highly robust when using this alternative PPML estimator.

Table A.15: Excluding regiment's homelands

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau combatants	0.552*** (0.199)	0.288*** (0.106)	0.314*** (0.092)	0.239* (0.120)
Ln not sailed combatants	-0.012 (0.141)	-0.157* (0.085)	0.049 (0.057)	-0.198** (0.076)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	78	78	77	63
R <sup>2</sup>	0.20	0.37	0.48	0.40
Partial R <sup>2</sup> (Rochambeau)	0.10	0.09	0.14	0.06
Partial R <sup>2</sup> (Notsailed)	0.00	0.05	0.01	0.08
Std. β (Rochambeau)	0.451	0.371	0.444	0.316
Std. β (Notsailed)	-0.014	-0.288	0.098	-0.373
<i>p</i> Rochambeau = Notsailed	0.037	0.001	0.016	0.003

The effect of Rochambeau combatants on support for the revolution is not driven by the homelands of Rochambeau's regiments. Specifically, we exclude the départements Allier (*Bourbonnais*), Charente-Maritime (*Saintonge*), and Aisne (*Soissonais*).

All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A.16: Extended sample incl départements in Alsace

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau combatants	0.418* (0.219)	0.319*** (0.096)	0.268*** (0.083)	0.211* (0.110)
Ln not sailed combatants	-0.027 (0.152)	-0.156* (0.086)	0.032 (0.060)	-0.183** (0.083)
Ln de Grasse combatants	-0.133 (0.185)	0.084 (0.111)	0.099 (0.091)	-0.065 (0.138)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	83	83	82	67
R <sup>2</sup>	0.12	0.37	0.46	0.42
Partial R <sup>2</sup> (Rochambeau)	0.06	0.12	0.12	0.05
Partial R <sup>2</sup> (Notsailed)	0.00	0.05	0.00	0.06
Partial R <sup>2</sup> (de Grasse)	0.01	0.01	0.01	0.00
Std. β (Rochambeau)	0.342	0.413	0.387	0.274
Std. β (Notsailed)	-0.031	-0.280	0.064	-0.327
Std. β (de Grasse)	-0.096	0.096	0.126	-0.073
<i>p</i> Rochambeau = Notsailed	0.131	0.000	0.036	0.009
<i>p</i> Rochambeau = de Grasse	0.053	0.114	0.143	0.121

This table shows that the finding of a statistically and economically large impact of Rochambeau combatants on support for the French Revolution at the département level is robust to extending the sample to départements to départements in Alsace (Bas-Rhin and Haut-Rhin).

All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris/dept. Seine). *p* Rochambeau = ... reports the *p*-value of an F-test for the equality of coefficients on Rochambeau combatants and placebo combatants. Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A.17: Inverse hyperbolic sine transformation

	Dep. variable: Asinh [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Asinh Rochambeau combatants	0.648*** (0.210)	0.396*** (0.120)	0.287*** (0.072)	0.272** (0.113)
Asinh not sailed combatants	-0.051 (0.149)	-0.180* (0.093)	0.011 (0.052)	-0.181** (0.080)
Asinh de Grasse combatants	-0.059 (0.184)	0.103 (0.124)	0.101 (0.074)	-0.042 (0.122)
Baseline controls	✓	✓	✓	✓
$N$ (Obs = département)	81	81	80	65
$R^2$	0.19	0.37	0.50	0.38
Partial $R^2$ (Rochambeau)	0.11	0.12	0.16	0.09
Partial $R^2$ (Notsailed)	0.00	0.06	0.00	0.09
Partial $R^2$ (de Grasse)	0.00	0.01	0.02	0.00
Std. $\beta$ (Rochambeau)	0.464	0.428	0.452	0.387
Std. $\beta$ (Notsailed)	-0.055	-0.294	0.025	-0.388
Std. $\beta$ (de Grasse)	-0.041	0.106	0.153	-0.057
$p$ Rochambeau = Notsailed	0.013	0.000	0.004	0.004
$p$ Rochambeau = de Grasse	0.017	0.099	0.071	0.042

This table shows that the finding of a statistically and economically large impact of Rochambeau combatants on support for the French Revolution at the département level is robust to calculating measures as asinh(variable) instead of  $\ln(\text{variable} + 1)$ . All regressions include the baseline controls (asinh other soldiers, asinh infantry regiment garrisoned, asinh cavalry battalion garrisoned, asinh population in 1793, and an indicator for Paris/dept. Seine).  $p$  Rochambeau = ... reports the  $p$ -value of an F-test for the equality of coefficients on Rochambeau combatants and placebo combatants. Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A.18: Poisson regression

	Dep. variable: [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau combatants	0.890*** (0.285)	0.382*** (0.140)	0.303*** (0.089)	0.210** (0.107)
Ln not sailed combatants	0.078 (0.173)	-0.242** (0.113)	0.046 (0.066)	-0.214*** (0.076)
Ln de Grasse combatants	-0.406* (0.238)	0.103 (0.142)	0.090 (0.089)	0.013 (0.121)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	81	81	80	65
Pseudo R <sup>2</sup>	0.25	0.18	0.25	0.49
<i>p</i> Rochambeau = Notsailed	0.034	0.000	0.030	0.002
<i>p</i> Rochambeau = de Grasse	0.001	0.177	0.082	0.200

The table shows that the statistically and economically large impact of Rochambeau combatants on support for the French Revolution at the département level is robust to estimation as Poisson regression (implemented via Stata -ppmlhdf), using outcomes in levels. All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate, and an indicator for Paris/dept. Seine). *p* Rochambeau = ... reports the *p*-value of an F-test for the equality of coefficients on Rochambeau combatants and placebo combatants. Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

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