

# The American Origin of the French Revolution\*

Sebastian Ottinger<sup>†</sup>

(CERGE-EI and IZA)

Lukas Rosenberger<sup>‡</sup>

(Northwestern University)

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France sent five thousand men to fight alongside George Washington's army in the American Revolutionary War. We show that the French combatants' exposure to the United States of America increased support for the French Revolution a decade later. French regions (départements) from which more American combatants originated had more revolts against feudal institutions, revolutionary societies, volunteers for the revolutionary army, and emigrants from the Old Regime's elite. To establish causality, we exploit two historical coincidences: i) originally, a French army of seven and a half thousand was ready to board ships, but one-third did not sail to America because of logistical problems; ii) among the regiments who fought in America against the British, some regiments were stationed for one year in New England before the main battle, and in Virginia afterwards, while others were stationed in the Caribbean colonies. We find that only the combatants who were exposed to the United States affected the French Revolution after their return.

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<sup>†</sup>Email: [sebastian.ottinger@cerge-ei.cz](mailto:sebastian.ottinger@cerge-ei.cz) Website: [sebastianottinger.com](http://sebastianottinger.com)

<sup>‡</sup>Email: [lukas.rosenberger@northwestern.edu](mailto:lukas.rosenberger@northwestern.edu) Website: [lukasrosenberger.github.io/](http://lukasrosenberger.github.io/)

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

— Victor Hugo

## 1. Introduction

Institutions, “the rules of the game in a society” (North, 1990, 3), are considered a fundamental cause of why some nations achieve economic prosperity while others fail to do so (Acemoglu, Johnson, and Robinson, 2005). National institutions—political ones such as democracy and economic ones such as feudalism—can be highly persistent with deep roots in the past (Acemoglu, Johnson, and Robinson, 2001). Yet, at critical junctures, these institutions can change very quickly (Roland, 2004). Popular discontent, political crisis, and economic shocks, such as drought and bad harvests, can increase the threat of revolution and trigger institutional change (Aidt and Franck, 2015). Since democracy has been shown to deliver economic growth (Acemoglu, Naidu, Restrepo, and Robinson, 2019), we typically take it for granted that people have a better institutional setting in mind when they revolt, drawing on their own and neighboring nations’ experience (Buera, Monge-Naranjo, and Primiceri, 2011). Recent empirical evidence supports the idea that these triggers may result in better institutions (Brückner and Ciccone, 2011). Yet, there is no iron law of history that institutions always change for the better. In fact, revolts frequently result in transitions to autocracy (Buchheim and Ulbricht, 2020). Thus, what determines popular support for institutional reforms towards more democratic institutions when revolutionary triggers arrive?

We consider the setting of the French Revolution to make progress on this question. The French Revolution led to the end of the monarchy and the feudal “Ancien Régime” in France and established the first full (though short-lived) democracy in 1792 (Furet, 1981; Israel, 2014). While descending after a series of coups into terror, military dictatorship, and restoration of monarchy, the reforms of the French Revolution in 1789–1792 reduced social and economic inequality lastingly and created the institutional bedrock that all subsequent regimes relied on for governance (Woloch, 1994). Moreover, it changed the institutional landscape across Europe and inspired institutional change for generations, reverberating into the twentieth century. As a result, it is widely considered to be among the most significant institutional changes in history (e. g. Skocpol, 1979). Acemoglu and Robinson (2012, 130) describe it as the “critical juncture that led the institutions of Western Europe to converge with those of England,” since it “generated 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). But why was there in France in 1789 widespread support for reforms toward more inclusive institutions?

In this paper, we argue that individual exposure to better institutions mattered. One disputed argument on the origin of the French Revolution in historiography highlights the importance of French veterans who fought in America less than a decade before the French Revolution (McDonald, 1951; Scott, 1998). During the American Revolutionary War, the United States established its independence from the British Empire and established democracy on its shores. The French regime, eager to support their enemy’s enemy, deployed several French infantry regiments under General Rochambeau to the United States.

We show that French veterans who fought in the American War for Independence under General Rochambeau (“American Combatants” henceforth) increased support for the abolition of the old feudal regime and institutional change for the better during the French Revolution. General Rochambeau and his regiments left the French port of Brest in 1780. They were stationed in Rhode Island for one year before marching to Virginia, joining forces with General Washington’s army. The American Combatants participated in the decisive battle of the War of Independence, the Siege of Yorktown, and marched back to New England, from where they sailed back to France. During the two and a half years spent in America, the combatants had ample opportunities to experience a different society, which was characterized by more liberal political institutions, a more equal land distribution, and the absence of what was perceived as arbitrary feudal privileges.

We collect individual-level data on the regional origins of the American Combatants from historical sources and show that American Combatants are a sizable and highly significant predictor of anti-feudal conflict across French regions (départements) throughout the Revolution. Weather shocks in 1788 led to widespread unrest across France, culminating in revolts in 1789. In some places, the anger of locals was directed against feudal institutions and the landowning elites associated with them. We show that regions where more American Combatants hailed from experienced significantly more anti-feudal protests during the French Revolution. This correlation is not only statistically highly significant but economically large as well. Controlling for several determinants of military recruitment—among those the number of all recruits from a region, the number of infantry and cavalry garrisons, and its total population—we find that a one standard deviation increase in the logarithm of the number of Rochambeau combatants hailing from a region increases the logarithm of the anti-feudal protests in that region by 0.48 standard deviations. American Combatants explain about 11% of the residual variance in anti-feudal revolts. We find no such effect on conflicts unrelated to feudal institutions and no effect on conflict before 1789.

Similarly, we document sizable and significant conditional correlations of American Com-

batants with several further key proxies for local support of the French Revolution and the political and economic changes associated with it. First, we show that a one standard deviation in the logarithm of the number of Rochambeau combatants increases the logarithm of the number of local political societies founded in 1789 and 1790 by 0.34 standard deviations. The establishment of local political societies in France was instrumental in political participation and in implementing the new policies at the local level. Second, we find that significantly more battalions of volunteers for the revolutionary army were formed between 1791 and 1792 (*before* mass conscription) in regions where more American Combatants hailed from (standardized  $\beta$  of 0.46). This indicates increased local support for defending the gains of the French Revolution against the counter-revolutionary backlash from both monarchists within France and other monarchies across Europe. Lastly, we document that significantly more landowning elites left these regions after the Revolution (standardized  $\beta$  of 0.41), reflecting greater local agitation for the French Revolution.

There are two core concerns with a causal interpretation of these conditional correlations. First, democratically-minded individuals might have selectively signed up for Rochambeau's regiment. *A priori*, this concern is directly addressed by our historical setting. Regiments were staffed well before France entered the war. More importantly, the army that sailed to America under General Rochambeau was not initially assembled for this purpose, and the plan of a special expedition to the United States was kept secret. Thus, soldiers could have hardly self-selected into these regiments, anticipating participating in a conflict on American soil. Indeed, the future combatants only learned their final destination until *after* they set sail. A second concern is unobserved regional factors—such as economic hardship—which might have resulted in both more American Combatants from particular regions and higher support for the French Revolution a decade later in those regions.

To address this second concern, we draw on a natural experiment of history to argue that these conditional correlations reflect the causal effects of American Combatants. At the core of this natural experiment are the infantrymen from the *Neustrie* regiment. This regiment was intended to participate in the special expedition to the United States. Thus, its soldiers and the regiment itself were arguably subject to similar selection concerns. However, due to an unforeseen shortage of ships, this regiment was left behind at the French port city of Brest. The plan was for this second division to follow the American Combatants as soon as possible. Yet, due to logistical shortcomings and, later, a naval blockade, the king canceled the plan to send this second division to American soil.

The not sailed combatants of the *Neustrie* regiment, who were ready to be deployed to the United States but did not sail, serve as a placebo that enables us to mute any selection concerns associated with the American Combatants who actually set foot on American soil.

We digitize individual-level data from primary sources to get information on the regional origins of the combatants of the Neustrie regiment. We find no significant or sizable positive association between the number of not sailed placebo combatants and any of our proxies of support for the French Revolution across French regions. If anything, the regions with more placebo combatants have fewer early political societies and old elite emigrants.

We also use this placebo regiment to assess whether results based on Rochambeau's American combatants could result from spurious correlations with regional characteristics relating to geography, politics, and human capital. In principle, one may be concerned that some omitted regional characteristic that is systematically differently associated with American combatants and not-sailed placebo combatants would increase both the likelihood of sending combatants to America and support for the French Revolution. We find that three out of about 20 variables relating to geography, politics, and human capital are significantly differently associated with American combatants and the not sailed placebo combatants. We show that the effect of Rochambeau's soldiers on our proxies for support of the French Revolution remains positive and significant when explicitly controlling for these three variables. This exercise, combined with the historical context, assures us that the baseline correlations between American Combatants and the proxies for the French Revolution truly reflect the causal effects of combatants' deployment to the United States, but not the selection of soldiers into the American campaign or confounders at the region level.

Why did the French troops' deployment to the United States result in regional differences in support for the Revolution in France? Our preferred interpretation is that Rochambeau's combatants were exposed to the existing economic and emerging political institutions in the United States and New England in particular. The American Combatants were in direct exchange with locals during the special expedition. They directly experienced the absence of a feudal system in the American colonies, especially as they marched from New England to Virginia and back, spending two and a half years on the American continent. However, several alternative interpretations of what they experienced while in the United States are conceivable. For instance, they were fighting (and winning) against the British monarchy and deployed to a foreign country. Another potential interpretation is that Rochambeau's combatants might have gathered combat experience during the conflict, which enabled them to contribute to revolutionary action six years after their return.

We draw on another historical coincidence to show that prolonged exposure to the United States and in particular New England drives our result, rather than alternative mechanisms like fighting (and winning) against the British monarchy, experiencing any other country, or gaining combat experience. While Rochambeau's soldiers participated in one major battle, the Siege of Yorktown (Virginia), they also lived in the United States for more than two

years. A second army led by Admiral de Grasse participated in the same battle, fighting the same enemy in the same foreign country, but spent only two months on U.S. soil in Virginia. This army was otherwise stationed in the slave-holding Caribbean colonies and thus not exposed to the United States to the same degree. We collect information on these combatants' origins to distinguish between the importance of exposure to the United States versus combat experience. We find no evidence for any of our outcomes that regions from which a higher number of de Grasse's combatants hailed had more support for the revolution.

How did the American Combatants bring the Revolution "home?" We provide two pieces of suggestive evidence to answer this question. First, we distinguish between the officers and soldiers among the American Combatants and compare their effects on our outcomes indicating support for the French Revolution. Both groups drive our results, yet each group contributed according to their abilities. Soldiers have a sizable bearing on anti-feudal revolts and the later emigration of landowning elites. This suggests that soldiers, often hailing from rural areas, sparked revolts in their origins, ultimately leading to the emigration of the former landowning elites. Officers, in contrast, drive our results concerning the early foundation of political societies and local volunteering for the voluntary army. This suggests that they likely employed their organizational talent locally.

Then, we document heterogeneity along several dimensions to inquire whether pre-determined factors rendered regions more susceptible to American Combatants' effect on the French Revolution. First, the effects are significantly larger in regions where the local nobility was powerful and weaker in the regions that were traditional strongholds of the king. Second, regions with more pronounced temperature and precipitation shocks just before the French Revolution and more American Combatants experienced more anti-feudal conflict. Yet, we find no such heterogeneity for early political societies. Considering the different effects for officers and soldiers, this is consistent with the idea that those shocks activated peasant combatants but not the mostly literate officers. Third, we show that our baseline effects are not varying with the local stock of upper-tail human capital (proxied for with the subscriber density to the *Encyclopedie*, Squicciarini and Vogtländer 2015). This suggests that what drives our results is not the access to abstract, philosophical ideas about political and economic institutions, but rather the communication of ideas embedded in the experience of a society practicing such institutions. Last, we show that American Combatants matter less in places with more alternative means to access ideas, proxied by markets and fairs and by post houses, consistent with an interpretation that the transfer of ideas across the Atlantic mattered more where such ideas were otherwise less accessible.

The paper proceeds as follows. In Section 2, we detail the paper's contribution to the literature. Section 3 describes the historical background, and section 4 the data sources

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 provide evidence in section 6 that this conditional correlation reflects the causal effect, drawing on a placebo regiment of soldiers that did not sail to the United States. Section 7 provides evidence that the mechanism behind this result is exposure to the United States, drawing on another placebo regiment that fought in the same battle but spent only little time in the United States, and none of it in New England. We provide some suggestive evidence on how the experience in the United States was transmitted in Section 8 before Section 9 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. The effects of institutional change are well documented in various settings (Acemoglu et al., 2005), including the French Revolution’s impact on neighboring states’ institutions (Acemoglu, Cantoni, Johnson, and Robinson, 2011). Yet, while there is some agreement on the factors that can trigger unrest and drive demand for institutional change (Brückner and Ciccone, 2011), to the best of our knowledge, there is no causal evidence on what ensures that those triggers will result in more inclusive institutions. The French Revolution is a prime example of such a critical juncture (Roland, 2004), and the historical setting enables us to provide causal evidence on one determinant: exposure to more inclusive institutions elsewhere by even a small set of individuals. As we show, ideals and ideas embodied in people can be decisive agents of institutional change.<sup>1</sup> This 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.<sup>2</sup> Our findings

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<sup>1</sup>We contribute further to the literature showing that ideas have consequences in other settings (e. g. Ash, Chen, and Naidu, 2022). Our contribution to this literature focuses on ideas about political and economic institutions and demonstrates the real-world consequences of ideas for one of the most important institutional changes in history.

<sup>2</sup>An alternative interpretation emphasizes the role of veterans in organizing collective political action rather than their exposure to different ideas and institutions. For instance, Jha and Wilkinson (2012) document that combat experience in WWII increased organizational skills among South Asian veterans, and a book project by Jha and Wilkinson (work in progress, presented at Northwestern on March 08, 2023) makes a similar argument for the context of the American combatants and the French Revolution. Our results do not support this interpretation because we generally find no effect for de Grasse combatants (not considered by Jha and Wilkinson), who fought the same battle of Yorktown and thus similarly acquired organizational skills, but were not exposed to United States institutions. At most for the outcome of national volunteers, which we find to be positively but insignificantly associated with the number of de Grasse combatants, our results are consistent with an explanation that highlights the interaction of organizational skills from military experience and exposure to New England. Furthermore, given our historical setting, it is highly implausible that another alternative interpretation analogous to Cagé, Dagorret, Grosjean, and Jha (2021) could explain our results, who show in

also relate to [Aidt and Franck \(2015\)](#), who document that local riots in England induced voters to elect pro-democratization politicians, thus instigating national institutional change. Our findings highlight how personal exposure to different institutions drives grassroots protest and popular support for institutional reforms. 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](#)). Moreover, personal exposure can help explain why a history of democratic institutions ensures their continued success ([Acemoglu, Ajzenman, Aksoy, Fiszbein, and Molina, 2021](#)).<sup>3</sup>

Our findings further inform nascent literature in economics studying the trans-Atlantic transfer of political ideas and ideals embodied in people.<sup>4</sup> 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 new settlements established local institutions in some places (New England, Pennsylvania) that surpassed the Old World’s 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 for a shorter while to Pennsylvania (Philadelphia).<sup>5</sup> Among more recent economic studies on the trans-Atlantic exchange of ideas and ideals embodied in people, [Giuliano and Tabellini \(2020\)](#) document how European immigration transplanted preferences for redistribution to the United States, [Dippel and Heblich \(2021\)](#) show how political leaders of the 1848 revolution in Germany who fled to the United States instigated local support for the Union during the Civil War, and [Beach and Hanlon \(2022\)](#) show how news coverage of a British trial about fertility restriction lead to declining fertility among culturally

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context of the French Vichy regime 1940–44 how a former general turned politician influenced political behavior of his former troops. We provide more details in section 7.2.

<sup>3</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.

<sup>4</sup>A related literature studies the effect of migration and the corresponding exposure to new ideas on the diffusion of political ideas (e. g. [Spilimbergo, 2009](#); [Barsbai, Rapoport, Steinmayr, and Trebesch, 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 and highlighting its importance for major institutional change.

<sup>5</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.



British households residing in the New World. Our findings highlight that the transatlantic transfer cuts both ways and influenced one of the major events in European history. Beyond our focus on national institutional change, a key difference between our finding and the complementary one of [Dippel and Hebllich \(2021\)](#) is that the agents of institutional change in our setting only become social leaders ([Acemoglu and Jackson, 2015](#)) after setting sail to the United States. In this sense, we study how those local leaders can emerge from (arguably random) exposure to more inclusive institutions.

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](#)).<sup>6</sup> Prior empirical and plausibly causal evidence emphasizes economic shocks, in particular the severe drought in 1788, as a cause of social unrest and revolt ([Waldinger, 2021](#)).<sup>7</sup> This paper focuses instead on the link between the American and French Revolutions, connecting the experience of American institutions by French soldiers to demand for institutional change back home.<sup>8</sup> Closest to our finding, [McDonald \(1951\)](#) first documented a spatial correlation across départements between the number of American combatants and agricultural revolts in 1789, arguing that peasant soldiers were affected by their American experience. Subsequent historical studies failed to confirm the importance of American combatants for revolutionary outcomes (e. g. [Scott, 1998](#)). Beyond vindicating McDonald's hypothesis by providing a causal interpretation for his correlations, we also provide novel evidence on other outcomes beyond revolts. Rather than relating to the demise of the old feudal order, outcomes like political societies and voluntary soldiers were critical for establishing and defending the new republic. Moreover, we show that not only soldiers who served in America but also the officer corps supported institutional change.

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<sup>6</sup>A nascent literature in economics analyzes the consequences of the French Revolution ([Acemoglu et al., 2011](#); [Franck and Michalopoulos, 2017](#); [Finley, Franck, and Johnson, 2021](#); [Chambro, Henry, and Marx, 2021](#)).

<sup>7</sup>[Chambro \(2019\)](#) documents a causal link between temperature shocks and social conflict in France before the French Revolution. Note that our heterogeneity results weakly support the notion that anti-feudal revolts were more common in departments experiencing economic shocks. However, we find no evidence that subsistence conflicts were systematically more common in 1789 in regions from which many American combatants hailed. This suggests that the combination of veterans' exposure to new ideas and the presence of the economic shock can help explain why revolts turned against the feudal system in 1789 only, resulting in the French Revolution, but not during earlier episodes of economic shocks.

<sup>8</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.

### 3. Historical Background

#### 3.1. 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. One of the key political events of the period was the Declaration of Independence on July 4, 1776, which provided the legal and moral justification for the American colonies’ right to secede from the “tyrannical” British Empire. Among the most important military events of the Revolutionary War was the Siege of Yorktown (September 28, 1781, to October 19, 1781), where George Washington’s Continental Army decisively defeated the British army under General Cornwallis.<sup>9</sup> Crucially, the Continental Army achieved this military victory at Yorktown only with substantial support from the French army.

The French involvement followed the logic that the enemy of your enemy is your friend. King Louis XVI harbored few democratic sentiments when supporting the rebelling American colonies against Britain. Instead, he chiefly sought revenge for losing colonies in North America and the Caribbean to Britain during the Seven Years’ War (1756–63). Starting in 1776, France covertly supported the cause of American independence with money and supplies, and by 1778 entered into an official Treaty of Alliance. After that, France also entered openly into the military conflict, such as the battle of Newport (August 1778), when a French fleet supported American forces in retaking Newport, Rhode Island, and the Siege of Savannah (September–October 1779), where American forces together with a French army of 500 raised in the colony of Saint-Domingue (today Haiti) unsuccessfully attempted to retake Savannah, Georgia.

At the end of 1779, the French king approved a military mission to deploy a French army to the United States, supporting General Washington’s Continental Army. This *Special Expedition* had not been planned long beforehand. Instead, the French command developed it as an alternate plan only after the original plan, an invasion of England together with Spain was canceled. For the invasion, more than twenty thousand French troops had been concentrated in Normandy and Brittany during the summer and autumn of 1779 before the plans were called off due to insufficient progress of preparations on the Spanish side (Scott, 1998). For the alternate plan of the Special Expedition, General Comte de Rochambeau chose from the concentration of fighting-ready troops an army of 7,500 comprising six infantry regiments, two artillery battalions, and one cavalry battalion. Ready to sail to America from the port

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<sup>9</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.

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 sailed half a year later. However, plans were thwarted again when a British naval blockade forced this second convoy to return to Europe, at which point the French king canceled the left-behind troops' mission.<sup>10</sup>

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, the troops were stationed in Rhode Island until June 1781, awaiting the arrival of the left-behind troops—which never arrived—and, after that, waiting out the winter instead of taking immediate military action. Starting June 1781, the army marched past New York, where they joined forces with Washington's army, and onto Virginia, where they fought and defeated General Cornwallis' British army at Yorktown. For this battle, the joint American–French army received a further reinforcement of 3000 French troops—three entire infantry regiments of the line. These additional troops were usually stationed in the French Caribbean colonies but were present in the area by coincidence (or providence). Admiral Comte de Grasse, who engaged the British navy at the Battle of the Chesapeake on September 5, 1781, took them as excess staffing for his fleet to North America. However, these additional troops disembarked just before the Siege of Yorktown began, participated in the siege works and fierce fighting against the British, and re-embarked shortly after the battle was won. 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 boarded ships home in December 1792 at Boston.

### **3.2. 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 combatants' only substantive combat experience during the Special Expedition. The majority of casualties, instead, resulted from disease, in particular, scurvy and “fever” (most likely malaria).<sup>11</sup> The great majority of French

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<sup>10</sup>Instead of sailing to America, the ships only reached the Spanish port of Cadiz. From there, the left-behind army—including two full-strength infantry regiments of the line—returned home to France.

<sup>11</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.

combatants—around 80% according to our estimates—returned home to France in 1783.<sup>12</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 ideals of liberty, equality, and tolerance. We consider these differences in turn. First, liberty primarily refers to political rights which ensured, for example, the freedom of the press and opinion and the freedom of association. In contrast to the U.S., France was an authoritarian monarchy that censored the press, imprisoned people for moral and political views, and strictly regulated all forms of associations by requiring royal letters patent. Second, equality primarily refers to economic and social equality rooted in a more equal distribution of land and property in America. In stark contrast, feudal rights of lordship (*seigneurie*) restricted economic freedom in France. Lastly, 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. What was certainly new to the French combatants, however, was the experience of a society where these ideals were acted out in practice (e. g. Scott, 1998, 122).<sup>13</sup> Rochambeau’s combatants spent more than a full year in New England, a region where slavery and large-scale landholdings were more-or-less absent (in contrast to, for example, Southern Virginia) and thus the “American ideals” particularly salient.

How did the French combatants come into contact with these different U.S. institutions? And is there individual-level evidence that this experience instilled in the veterans a greater taste for liberty and equality? We distinguish between officers and soldiers in our discussion for two reasons. First, officers and soldiers were potentially exposed differently to U.S. institutions due to military hierarchy and social status. Second, officers created abundant historical sources by writing letters and diaries, whereas soldiers were often not literate and

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<sup>12</sup>The estimate refers to the three French infantry regiments which 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).

<sup>13</sup> “This court aristocrat [Comte de Ségur] claimed he and other officers brought back to France ‘a lively passion for freedom and for independence.’ Yet, what seems to have impressed most of Rochambeau’s veterans, who had lived in the United States for about two and a half years, were not abstract political principles but more mundane practices, notably religious toleration and social equality rooted in widespread economic prosperity” (Scott, 1998, 122).

thus barely left accounts as sources for historians.

The officers in the French army were generally of noble status and came into contact with American citizens through many channels. For example, officers were regularly quartered in houses and thus lived under the same roof as American citizens.<sup>14</sup> Officers were also invited to “endless balls” and receptions where they mingled with locals (Scott, 1998). In addition, officers were not required, as common soldiers were, to receive permission for going into town in the evening. Some officers even 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. While not staying under the same roof as Americans—the army especially rented (and repaired) houses for quartering soldiers—the French soldiers still lived next door to American citizens (Scott, 1998; Jones, 2012). In such a situation, the separation of the French army from the locals could not be upheld by rules—except for visits to pubs, which remained forbidden unless in the company of an officer. General Rochambeau’s remark that “not a man had been left behind ‘except ten love-sick soldiers of Soissonnais who returned to see their sweethearts’ ” in Newport (Scott, 1998, 55) provides indirect, albeit compelling, evidence for the close contacts that existed between French soldiers and American locals.

Moreover, 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>15</sup> Many enlisted soldiers were probably illiterate, but at least some must have been literate (Wrong, 1976) and could thus read the army newspaper to others (often in groups). Thus, it does not seem unreasonable that the newspaper’s content reached beyond the ranks of noble officers and transpired to common

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<sup>14</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.

<sup>15</sup>Newspapers were not common in France on the eve of the revolution, but they were in North American 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).

soldiers.

The available individual-level historical evidence suggests that the American experience indeed changed some 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). Some officers who had served under Rochambeau in America shared those views. For example, count de Ségur (who only spent three months on American soil) claimed he and other officers brought back to France “a lively passion for freedom and for independence” (Scott, 1998, 122) (cf. footnote 13 for the full quote).

### 3.3. The French Revolution

Historiography highlights at least two processes or events that lead up to the revolution of 1789. The following overview of the French revolution up to 1792 follows classical historical accounts (Lefebvre, 1939; Doyle, 1999; Tackett, 2015). One economic trigger that may have contributed was the bad grain harvest of 1788. Depending on the account, this resulted from either droughts or hailstorms. In any case, since threshing was a major source of seasonal employment, unemployment rose through autumn and winter while the price of grain rose steadily. “Vagabonds” started to move across town and country, asking for work or bread. It is unclear how hard famine hit the populace; at any rate, widespread food riots broke out between the spring and summer of 1789, compounded by waves of “fear” and unrest (Lefebvre, 1932; Waldinger, 2021).

A second, political, trigger that could have enabled the revolution was the fiscal crisis of 1787, caused by the de-facto default of the royal government on its debt.<sup>16</sup> After the initial attempt failed to increase revenues by taxing the clergy and nobility, which previously were essentially tax-exempt, the *Estates General* were called—a legislative and consultative assembly composed of the three classes clergy, nobility, and third estate (it had not been convened since 1614). Despite much political maneuvering, the fiscal crisis could not be solved, creating a power vacuum that enabled the third estate to push for reforms. Deputies in the *Estates*

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<sup>16</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.

*General*, joined by a small group of liberal nobles—among whom some had served as officers under Rochambeau and thus previously experienced U.S. institutions, see below—decreed the abolition of feudalism on August 4 and declared the rights of man and the citizen. At the same time, citizens revolted throughout the country, attacking feudal institutions and, most famously, storming the Bastille on July 14 (Lefebvre, 1939; Markoff, 1996a).

The revolution of 1789 triggered three characteristic processes that we study as measures for support for revolutionary change across France. The first is the bottom-up establishment of political societies in cities and towns, among which the most famous was the Jacobin club of Paris. The second is the recruitment of voluntary soldiers for the revolutionary army, starting bottom-up after July 14 as the National Guards and later called for by the revolutionary government as the “National Volunteers.” The third is the emigration of the landowning elite. The elites’ flight to monarchical safe havens, located predominantly in the Austrian Netherlands, the German Rhineland, and Italy, accelerated after King Louis XVI unsuccessfully attempted to flee the country in August 1791, and signifies the local intensity of revolutionary agitation (and sometimes violence). All of these processes are rooted in the year 1789.<sup>17</sup>

### 3.4. The Role of American Combatants in the French Revolution

Historians have debated the hypothesis that the American combatants contributed to precipitating the French revolution. Yet, they mostly concluded that these soldiers played a minor role, if any at all. McDonald (1951) first pointed out a positive spatial correlation between the incidence of American combatants and anti-feudal revolts in 1789. He argued that peasants were particularly impressed by the absence of feudal institutions in the United States. Godechot (1956) criticized in reply that the positive correlation could be driven by unobserved region characteristics. For example, general economic hardship could have increased both army enlistment and the incidence of revolts. Note that our identification strategy addresses this and similar concerns. Scott (1979, 1998) studied the *Special Expedition* to America in detail but rejected McDonald’s argument—essentially, in our reading, based on the absence of evidence on the quantitative importance of the American combatants. This negative assessment has been accepted by many historians (e. g. Bertaud, Reichel, and Bertrand, 1989; Geggus, 2000).<sup>18</sup> Yet, a few historians have recognized that the general question of the causal influence of the American Revolution on the French Revolution remains open. For example, Israel (2017) documents ample historical evidence that the American Revolution and the ideals

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<sup>17</sup>We provide additional historical background on these processes, as well as the incidence and types of revolts, in the data section 4.2 and data appendix A.

<sup>18</sup>For early skepticism on this negative conclusion, see Godechot (1979).

propagated were very salient to French revolutionaries. Also, it has been 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). Our paper also broadens the perspective on the American combatants' role in the revolution by focusing on other measures of support for revolution and agitation against the Old Regime, which has not received attention from this literature.

Before moving on to the empirical argument, we briefly summarize individual-level anecdotal evidence on the direct involvement of American combatants in revolutionary events. Again, we discuss officers and soldiers separately because of (i) the different types of evidence available, and (ii) the different outcomes they appear to have contributed.

Studying the biographical information collected by Bodinier (1983), we find that officers elected deputy to the General Estates for the nobility were more likely to be affiliated with a small group of noble liberals if they were stationed in the United States under Gen. Rochambeau compared to those officers who had fought in the Siege of Yorktown but were not otherwise stationed in the U.S. Admittedly, the sample is quite small: Only seven officers under Rochambeau and three officers under de Grasse were elected deputies (see Table A.6 for an overview). Nevertheless, the emerging pattern is striking: Among Rochambeau's officer-deputies, five were liberals and either voted for the abolition of feudalism on the night of August 4th or sat together with the third estate, breaking the traditional order; one was a moderate; and only one was a royalist. Among de Grasse's officer-deputies, none was liberal, one moderate, and two were royalists and opposed to institutional change. Astonishingly, one of Rochambeau's officer-deputies was among the most liberal: the Count de Noailles became famous in history as the first noble to voluntarily renounce his feudal rights on the Night of August 4. Among de Grasse's royalist officer-deputies, in contrast, the Vicomte de Mirabeau sat on the "extreme right" (Bodinier, 1983, 406), opposed to the liberals sitting on the left.

The participation in revolutionary activities of soldiers who had experienced the United States under Rochambeau is much harder to document because of the absence of biographies. However, for the few outcomes for which individual-level evidence can be obtained through "lists of participants," there exists clear evidence for the involvement of American combatants. For example, at least one veteran soldier "risked his life" in the Storming of the Bastille and helped the Parisian crowds capture the "fortress-prison-armory" in his capacity as cannoneer (Scott, 1998, 137).<sup>19</sup> Also, several former soldiers under Rochambeau enlisted in the Parisian

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<sup>19</sup>The evidence exists because this was one of the key events of the Revolution, and lists of *Vainqueurs de la Bastille* were drawn up respectively. The finding is not completely to be expected since the modal conqueror of the Bastille was a carpenter living in the neighboring Paris faubourg. Notably, the non-Paris, non-carpenter conquerors also comprise two foreigners who had participated in the Geneva Revolution of 1782 (Godechot, 1970).



National Guards at a time when the decision represented a clear commitment to the cause of the Revolution (Scott, 1998, 137).

## 4. Data

We construct variables for the main treatment, alternative treatment, and placebo groups based on individual-level data on soldiers' origin (birthplace) from military records. In the baseline, the unit of analysis will be the French *département* or department, administrative regions created during the Revolution, because we observe some outcome variables measuring support for the Revolution only at this level. Other outcomes we also observe at finer levels of aggregation like the level of towns. We use this variation in additional analyses to establish robustness. The remainder of this section provides an overview of data sources and variable construction; Appendix A provides more details, including a list describing all variables employed along with their source (Table A.1) and summary statistics of the main variables (Table A.2).

### 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 are General Rochambeau's combatants, who were exposed to the United States before and after the Siege of Yorktown, and New England. In particular, we consider the French infantry regiments Bourbonnais, Saintogne, and Soissonnais.<sup>20</sup> The alternative treatment group are 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 Tourraine. 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.<sup>21</sup>

The individual-level data on soldiers rely on the original military records, handwritten regimental books preserved in the archive of the French Ministry of War. For the American combatants, historians already transcribed the list from the regimental books of 1776–1786

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<sup>20</sup>We do not use individual-level data for the German infantry regiment of Deux-Pont, a foreign legion. Neither do we use data for the cavalry (Lazun's legion) or the artillery (Auxonne regiment, 2nd battalion), since we do not have a good placebo for cavalry and artillery that was selected to participate but stayed behind.

<sup>21</sup>The second infantry regiment that stayed behind was the German infantry regiment of Anhalt/Salm-Salm, a foreign legion.

(Ministère des Affaires Étrangères, 1903; Dawson, 1936). Moreover, the list has been digitized by hobby genealogists and is available online.<sup>22</sup> For the not-sailed American combatants from the Neustrie regiment, the placebo group that was ready to sail but stayed behind, we transcribe the regimental book of 1776–1786 manually.

The regimental books provide us with a wealth of data on combatants for most regiments. The basic data is the first and last name, the date and place of birth, the date of first enlistment and of re-enlistment, and the rank. If applicable, the data also records events during or after the campaign: Date and place of deaths, date, and reason for discharge, desertion, and promotions.<sup>23</sup> The data are complete except for a few gaps: For the Agénois regiment under de Grasse, we only have data on the officers but not on the soldiers; for the Bourbonnais regiment under Rochambeau, we do not have events after 1783; and for several regiments, the place of birth is missing for several sub-lieutenants with noble last names.

Figure 1 provides a map of the department-level residual variation in the number of Rochambeau's combatants, conditional on a set of control variables described below. Appendix A.2.1 provides further details on the geo-localization rate of birthplaces, which is good but not perfect (there were no standardized spelling rules at the time for writing town names), and the ranks we use to classify combatants into officers and soldiers.

## 4.2. Support for the French Revolution

We collect data on four proxies measuring support for the French Revolution along different dimensions. The first measure is revolts contributing to the demise of institutions of the Old Regime. In particular, we study anti-feudal revolts during 1789–1792 attacking the feudal institution of lordship (*seigneurie*), including the lord's person, property, rights, or symbols.<sup>24</sup> Data on revolts comes from the *Historical Social Conflict Database* (Chambru and Maneuvrier-Hervieu, 2022). In total, we observe 530 anti-feudal revolts in this period, with the majority occurring in 1789 (see Figure A.1). Reported at the local level, we aggregate the data at the department-level. Figure 2 depicts the (residual) spatial variation of anti-feudal revolts across departments. In auxiliary analysis, we study conflicts by year, at a more disaggregated level,

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<sup>22</sup>See [www.francegenweb.org/lafayette](http://www.francegenweb.org/lafayette), last accessed 06/30/2022. We prefer to use the crowd-sourced data for two reasons: First, this data already amends the basic list of combatants (Ministère des Affaires Étrangères, 1903) with the corrected list of casualties (Dawson, 1936). Second, in this data source, most birthplaces are already geolocated. We spot-check the quality of the crowd-sourced digitization and assess its accuracy as entirely satisfactory.

<sup>23</sup>These events are recorded until 1786. After that date, a new regimental book was started. Neither Ministère des Affaires Étrangères (1903) nor we have matched soldiers to the next regimental books.

<sup>24</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).

and also consider different types of conflicts, i.e, subsistence riots.

The second measure is political societies. These enabled local political participation and supported the local implementation of new policies. Initially, the political societies were organized from the bottom up, with the most famous being the Jacobin society of Paris. Only after the establishment of democracy in 1792, the creation of political societies was bolstered by the government. We digitized data from [Boutier, Boutry, and Bonin \(1992\)](#) at the town level on the first year that a political society was founded. In the baseline analysis, we focus on the 300 early political societies founded between 1789 and 1790 to capture the bottom-up aspect and aggregate the data to the department level.

The third measure is volunteers for the revolutionary army, the so-called “National Volunteers”. The revolutionary army was created in 1791 when a military confrontation between revolutionaries and monarchists became likely. To defend the ideas of the French Revolution, more than 200 thousand individuals enlisted voluntarily during 1791 and 1792, before forced conscription (*levée en masse*) began in 1793. We digitized data on the number of battalions of “National Volunteers” raised in each département from [Bertaud et al. \(1989\)](#) by the end of 1792.

The fourth measure is emigration from the old elite, who were threatened by the more violent aspects of revolutionary activity. The French Revolution led to a sizable exodus of people threatened by it, particularly the landowning elites from the clergy, the nobility, and the bourgeoisie. More than half of about 130 thousand emigrants belonged to these three groups that made up the old elite. We digitized data on the number of emigrants by social status and département from [Greer \(1951\)](#), which is available for 63 départements.

Appendix A.2.2 provides further details.

### 4.3. Control Variables

We employ a set of baseline controls to hold constant factors that likely correlate with military recruitment and potentially also correlate with outcome measures of revolutionary activity. In particular, we control for (i) general military recruitment per department in terms of the total number of people enlisting in the military during the eighteenth century included in the [Komlos, Hau, and Bourguinat \(2003\)](#) sample; (ii) the number of infantry regiments and the number of cavalry battalions garrisoned in the department (affecting local recruitment, but also used as riot police); (iii) total population of the department (more population, more soldiers); and (iv) an indicator for Paris (département Paris) which may have had different revolutionary dynamics.

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 at the département level on (i) geography and climatic shocks, including the département’s (centroid-geodesic) distance to the nearest ocean and international border, average ruggedness, length of Roman roads, wheat suitability, and precipitation and temperature shocks in 1788 following [Waldinger \(2021\)](#); (ii) on Ancien Regime institutions, including the presence in departments 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 access to national means of communication (the letter post).

Appendix A.2.3 provides more details, documents the sources, and offers summary statistics.

## 5. Rochambeau’s Veterans and the French Revolution

This section documents conditional correlations as baseline empirical results. We show that départements from which more of Rochambeau’s combatants originated experienced more anti-feudal revolts in 1789–1793, had more early revolutionary societies in 1789 and 1790, more volunteer battalions for the revolutionary army in 1791–92, and saw more landowning elites emigrating to flee the Revolution.

### 5.1. Empirical Specification

We estimate several cross-sectional regressions at the département-level using the following empirical specification:

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

Our primary independent variable,  $\ln \text{Rochambeau}_i$ , is the logarithm of the number of combatants serving in Rochambeau’s army stationed in America during the War of Independence hailing from département  $i$  in France. In the baseline analysis, we aim to estimate an intention-to-treat effect by considering the number of combatants that were sent to America rather than the number of combatants that returned to France.<sup>25</sup> While we cannot observe where the

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<sup>25</sup>Most soldiers in Rochambeau’s special expedition returned to France, as there were scarcely desertions and few casualties during the campaign. The Siege of Yorktown saw casualties, but most deaths can be attributed to disease, particularly scurvy, which approximately one in seven soldiers suffered after the voyage to America (though most recovered). Our results are almost identical if we only consider soldiers that survived the conflict and returned home.

combatants returning to France went after their discharge from military service, it is entirely plausible in our historical setting that many would return to their region of origin (if not, this would bias our results towards zero).<sup>26</sup> 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 landowning elites fleeing the Revolution. All variables are transformed by taking the logarithm of the underlying variables (plus one in presence of zeros).<sup>27</sup> Our sample are the 79 départements of France proper in the borders of 1789.<sup>28</sup>

We include throughout a set of baseline controls that likely influence military recruitment, as historians voiced the concern that third factors may have affected both military recruitment and revolutionary outcomes: The total number of military recruits during the eighteenth century, the number of infantry regiments and of cavalry regiments garrisoned, the total population of each département (all in logs), and an indicator for Paris. Thus,  $\beta$  estimates the coefficient of combatants sent to the United States under Gen Rochambeau, rather than the coefficient of military recruitment per se. Indeed, our results would be even stronger if we did not include those controls (see Appendix Table A.3). We prefer this specification as a first step towards identification, noting that unconditional correlations are generally stronger (see Appendix Table A.3).

## 5.2. Results

Table 1 presents results. Each column corresponds to a different proxy of support for the French Revolution and includes all baseline control variables described in section 4.3. Column 1 shows the conditional correlation of Rochambeau’s soldiers with anti-feudal revolts across

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<sup>26</sup>In particular, we assume that veterans who retired or were otherwise discharged between 1783 and 1789 (about three-fifth of the combatants as estimated by Scott 1998) were more likely to go home to their regions of origin than to go anywhere else randomly. Indeed, this assumption is very plausible given the highly regional French culture with a wide variety of dialects, local customs, and cuisines before the French Revolution. As shown by Blanc and Kubo (2021), the nation-building program of the nineteenth century homogenized regional cultures into what is today known as “French.”

<sup>27</sup>Appendix A.3 documents that the distributions of both primary outcome and primary explanatory variables are highly skewed and are closer to normal distributions after the logarithmic transformation.

<sup>28</sup>In 1794, the first date for which we have consistent borders of départements, there were 88 départements in France. We then consider mainland France as of 1789, which excludes the island of Corsica and territories that were occupied after 1789: Vaucluse (Avignon, Papal state), Mont Blanc (Savoy, Italy), Mont Terrible (Belfort), and Alpes-Maritimes (Nice). Finally, we exclude the “German” départements in Alsace–Lorraine (Meurthe, Moselle, Bas-Rhin, Haute-Rhin)—“German” because they were heavily populated by a German-speaking minority—because we do not have data on the Rochambeau combatants from the Deux Pont regiment nor on the not-sailed would-be combatants from the Salm-Salm regiment. Both regiments were “foreign” legions and recruited heavily from Alsace–Lorraine. Deux Pont (Zweibrücken) is a city in Germany just across the border. Salm (Grafschaft Ober-Salm) was an independent principality located within the French territory and future department Bas-Rhin.

French départements. Départements from which more of Rochambeau's combatants hailed experienced significantly more anti-feudal revolts from 1789 to 1793. Figure 3 shows the underlying variation behind this estimate, confirming the linearity and highlighting that this association is not driven by a few départements only. 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. As is evident from columns 2 to 4, the associations between Rochambeau's soldiers and the other proxies of support for the French Revolution is highly statistically significant and similarly sizable. Moreover, the standardized betas reported in the table and the partial  $R^2$  of our primary independent variable demonstrate the importance of this association. The variation of Rochambeau's combatants across départements can explain between 7% (for political societies) and up to 14% (for volunteer battalions) of the residual variation in the outcomes, and standardized effect size ranges from 0.34 (for political societies) to 0.48 (for anti-feudal revolts).

Consider the following back-of-the-envelope calculation to get an intuition for these estimated coefficients. We focus on the outcome of volunteer battalions and draw on the results of an (unreported) regression in levels. Comparing a département at the 25th percentile regarding the number of Rochambeau soldiers hailing from there (13 soldiers) to one at the 75th percentile (49 soldiers) implies an increase in the number of regiments by 1.4. These battalions commonly consisted of about 500 soldiers, so each additional American combatant is associated with about 20 additional volunteers.

### 5.3. Additional Results on Timing and Spatial Disaggregation

We perform auxiliary analyses to document the robustness of the conditional correlations. Based on the outcome *revolts* for which we have sufficient temporal and spatial variation, we show that the association of Rochambeau combatants and revolutionary activity emerges in 1789, holds at finer spatial units of analysis, and is specific to revolts targeting feudal property rights instead of reflecting generalized violence.

In Appendix B.2.1, we inquire into the timing of Rochambeau's combatants' effect. In particular, we estimate a dynamic difference-in-difference model using the outcome *revolts*, for which we have sufficiently detailed temporal variation. We find that départements from which more of Rochambeau's combatants hailed only saw a differential increase in anti-feudal revolts in 1789. There is no evidence for such a spike either before they left for the United States, in any of the years between their return and 1789, or after 1789. Prima facie, this suggests that Rochambeau's combatants neither hailed from départements with inherently

more anti-feudal sentiments, nor that they brought a mere taste for violence from their military experience. Instead, only the co-occurrence of exogenous shocks activated those soldiers—perhaps the dire economic situation following the bad harvest of 1788 (Waldinger, 2021), or the political situation of spring and summer 1789 related to the General Estates (Markoff, 1996a).

Due to data availability, we conduct the baseline analysis at the level of historical regions, the 79 départements. To understand whether these conditional correlations hold at more disaggregated levels, we draw on modern administrative boundaries and leverage that for one outcomes—anti-feudal revolts— information on their exact location is available. In Appendix B.2.2, we first replicate the analysis presented in column 1 of Table 1 for modern départements. Then, we proceed to an analysis at the arrondissement level, of which there are more than three hundred. Our baseline association between Rochambeau’s soldiers and anti-feudal conflict is similarly robust at this more granular level of geographic units. Furthermore, it enables us to include (modern) département-level fixed effect. Even within (modern) départements, we uncover a highly significant and sizable association between Rochambeau’s combatants and anti-feudal conflict.

## **6. Identification: The Regiment That Never Sailed**

In this section, we argue that the previous section’s conditional correlations, which indicate more support for the French Revolution in départements from where more combatants under General Rochambeau originated, can be interpreted as causal effects of the combatants’ experience during the American War of Independence.

### **6.1. Concerns with a Causal Interpretation of the Correlations**

Two concerns with an ad hoc interpretation of the conditional correlations as causal effects of American combatants are conceivable. The first concerns 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 due to the regular enlistment period of eight years. Furthermore, switching regiments or signing up for selected ones was highly uncommon and difficult for soldiers. Most 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).

A second concern relates to the *selection of entire regiments* for the French campaign in the United States. For instance, regiments could have been selected based on the soldier’s underlying characteristics, such as the soldiers of particular regiments being inherently more brave, violent, egalitarian, or democratic. As we describe in the historical background, the regiments of Rochambeau’s special expedition were chosen from a larger army mobilized to the North-West of France during 1779 for an eventually aborted invasion of England. Thus, Rochambeau’s regiments were undoubtedly among the more fighting-ready French regiments. It is not at all clear that they were chosen based on underlying pro-revolutionary characteristics—an underlying pro-monarchical inclination seems equally possible. If, however, the regions from which the soldiers in Rochambeau’s army predominantly originated were indeed more pro-revolutionary due to underlying, potentially unobserved characteristics, the previously documented conditional correlations would be upward biased and could not be interpreted as causal effects.

## 6.2. Our Solution: A Placebo Regiment intended to sail

We use a historical coincidence related to the logistics of the French campaign to address these (and similar) concerns . 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 form an inherently suited placebo for the combatants in the three French infantry regiments that sailed with General Rochambeau to Rhode Island. First, the historical setting strongly suggests that any selection concern should operate similarly for the regiments that were chosen by General Rochambeau to participate in the special expedition, whether they sailed to America or stayed behind.<sup>29</sup>

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<sup>29</sup>It appears highly improbable in light of the historical setting that the left-behind regiments were different. In fact, Rochambeau waited in Rhode Island for their arrival for more than half a year and declined to take any



Furthermore, it is improbable given the historical setting that the treatment status changed after assignment: Soldiers could not change regiments after the decision was made which sailed and which had to stay behind. Finally, the regiments did not receive additional recruits from France during their deployment.<sup>30</sup> In sum, we expect that *if* the conditional correlations documented earlier merely reflect selection on unobserved characteristics, we should find similarly sizable and significant coefficients for not-sailed combatants from the Neustrie regiment.

Using the number of not-sailed combatants as a placebo, we can directly address concerns of selection on unobservable characteristics. As in any experiment, it is possible that randomization failed. The only way to test for this is to study observable characteristics. Figure 4 documents the correlation of a wide array of observables with the number of not-sailed combatants and of sailed Rochambeau combatants across départements. Consider the first row of panel 4a. It documents that, as one would expect, the general level of military recruitment in a department is significantly positively associated with the number of combatants under Rochambeau that sailed to America. However, the general level of military recruitment is also significantly positively associated with the number of not-sailed combatants who were supposed to join Rochambeau in America but did not. Critically for our empirical strategy, it does not appear to be the case that the number of soldiers in either army is differentially predicted by the general level of military recruitment. For the observable département characteristics in Figure 4 that appear unbalanced, we will provide additional robustness results (except in the case of the indicator for Paris, which is included as a control variable in all regressions).

### 6.3. 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 (plus one to account for zeros). We estimate several cross-sectional regressions at the département level using the following empirical specification:

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

Table 2 presents results. As before, we start by considering the outcome anti-feudal revolts

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premature military action without the support of the second part of his army.

<sup>30</sup>There was a “shipment” of additional officers from France after the siege of Yorktown, but these officers do not show up systematically in the data, which can be easily verified by the date they joined the regiment or were promoted. Moreover, in the only instance where an envoy of new officers in October 1781 is explicitly remarked in our data—the Bourbonnais regiment received seven student officers from the royal military academy—, the birth place of these officers is not recorded in the data sources (Ministère des Affaires Étrangères, 1903).

in. The coefficient, significance, partial  $R^2$ , and standardized beta coefficient of Rochambeau combatants are very similar to the baseline finding reported in table 1. Figure 5 provides visual evidence based on residualized scatter plots. In contrast to the Rochambeau soldiers, we find no significant or sizable association for the not sailed combatants from the placebo regiment. In fact, its partial  $R^2$  is zero, the coefficient is negative, and the F-test documents that the coefficients differ significantly (p-value = 0.008).

Columns 2 to 4 of Table 2 document that this is a general pattern, observable for all our proxies of support for the French Revolution. Three of four coefficients on the not sailed combatants are negative, for political societies and emigrants even significantly negative. For the one outcome where the placebo coefficient is positive (volunteer battalions), the partial  $R^2$  and standardized beta are far smaller than those of Rochambeau's combatants. In contrast, the coefficients on Rochambeau's combatants remain remarkably stable and highly significant. Moreover, partial  $R^2$  and standardized beta increase slightly, ranging now from 9 to 13% (partial  $R^2$ ) and from 0.4 to 0.52 (std. beta).

The results are robust to controlling for observable characteristics which are not balanced between Rochambeau combatants and not sailed combatants. Table A.5 shows that the relationship between Rochambeau combatants and support for the revolution remains robustly positive and significant across all outcomes, controlling for the precipitation shock in 1788, the number of bishops, or the male literacy rate. While these variables appear to explain some aspects of support for the revolution, they all are related to different revolutionary phenomena. No single confounding factor is either positively or significantly associated with all four measures of support for the revolution.

In sum, these results strongly suggest that the conditional correlations between Rochambeau's soldiers—who experienced the United States firsthand during the military expedition—and local support for the French Revolutions in the combatant's origins less than a decade later are causal effects.

## **7. Mechanism: Two Experiences in the Same Conflict**

Why did the participation in the American War of Independence induce French veterans to bring the Revolution “home”? In this section, we provide evidence that what ultimately mattered was the veterans' prolonged firsthand exposure to the United States and New England in particular.

## 7.1. Alternative Interpretations and another Placebo Regiment

Several interpretations of the results presented thus far are conceivable. For instance, it could be that participation in the American War of Independence merely provided battle-hardened veterans. Once Revolution was imminent, the returned veterans might have merely drawn on their combat experience to give their départements an advantage in inciting anti-feudal revolts. Note that our results partially speak against such an interpretation already since all regressions presented thus far include the total number of soldiers and indicators of garrisons in each département. Still, the possibility remains that certain features of actually participating in battles, particularly those in America, were crucial. Furthermore, the combatants were fighting (and winning) against the British monarchy, which might have increased their anti-monarchical sentiment.<sup>31</sup> Yet another interpretation is that exposure to *any* foreign country might have affected their values (Clingingsmith, Khwaja, and Kremer, 2009).

We again draw on a historical coincidence to provide a placebo set of soldiers to address all of these alternative interpretations. Specifically, while the combat experience of Rochambeau's combatants was limited to one particular, if decisive, battle—the Siege of Yorktown from September to October of 1791—they were not the only French combatants who participated in the battle against the British monarch in this foreign country. A second army of three infantry regiments fought in the very same battle. This army was based in the French Caribbean colonies. It provided additional staffing for the fleet of Admiral de Grasse that confronted the British navy successfully in the Battle of the Chesapeake—without those infantry regiments, however, which instead participated in the Siege of Yorktown under the command of General Rochambeau. These regiments stayed in the United States only for a very short period, arriving one month before the siege began and leaving shortly after it was won. Crucially, these combatants never experienced the institutions of New England themselves.<sup>32</sup>

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<sup>31</sup>This interpretation is not very plausible here 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's forces.” (In fact, Rochambeau loaned to Cornwallis.)

<sup>32</sup>De Grasse's troops disembarked at “James Island on September 2 and effected a junction with the Americans under Lafayette a few days later near Williamsburg.” (Scott, 1998, 60). The siege began on Sept 28 when Rochambeau's forces arrived.

## 7.2. 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. Figure 6 shows that, by and large, these combatants' origins are similarly selected as both Rochambeau's combatants and the not-sailed combatants of the regiment that did not arrive. In fact, for the département characteristics that previously appeared unbalanced, de Grasse combatants lie in the middle such that confidence intervals overlap with both Rochambeau and not sailed combatants. We estimate several cross-sectional regressions at the département level using the following empirical specification:

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

Table 3 presents results across all outcomes, and Figure 7 illustrates the results for the first outcome, anti-feudal revolts. As before, the table follows the structure of the earlier tables 1 and 2 but now also includes the log number of combatants who served under Admiral de Grasse. For all four outcomes considered, we fail to document a significant or sizable association between combatants gaining only combat experience in the United States against the British monarchy and support for the French revolution. The 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 less than one third of Rochambeau combatants. Partial  $R^2$  for de Grasse combatants is close to zero everywhere. In striking contrast, the coefficients and corresponding partial  $R^2$  for Rochambeau's combatants remain barely affected by the inclusion of de Grasse's combatants. The F-tests of the coefficients' equivalence continue to strongly reject that de Grasse's combatants had a comparable bearing as those under Rochambeau on anti-feudal revolts and elite emigrants, and weakly reject it for the other two outcomes, political societies (where coefficients on de Grasse combatants are not precisely estimated) and volunteer battalions (where de Grasse combatants have a mildly positive coefficient).

This finding strongly suggests that what mattered in bringing the Revolution home was not mere combat experience gained in this conflict, (successfully) fighting against a monarchy, or exposure to a foreign country more generally. Instead, it was the veterans' exposure to the United States, likely the particular and prolonged experience in New England, that affected Rochambeau's soldiers to instigate anti-feudal revolts, found local revolutionary societies, and induce others to volunteer for the Revolutionary Army to ensure that feudalism and monarchy were not to set foot again in France.

While the results do not rule out that organizational capabilities learned during the battle were helping the American combatants to contribute to the French Revolution (in analogy to, e. g., Jha and Wilkinson, 2012), they clearly show that it was the experience of different institutions in the United States that mattered for whether or not American combatants made use of their capabilities to support the revolution.<sup>33</sup>

Another alternative explanation, analogous to Cagé et al. (2021) in the context of the French Vichy regime 1940–44, holds that the American combatants might have primarily followed the guidance of their former general when supporting the revolution. This alternative mechanism can appear plausible if one considers that Rochambeau supported the abolition of feudal privileges.<sup>34</sup> However, several features of the historical setting make it highly implausible that a mechanism parallel to Cagé et al. (2021) can explain our results. First, General Rochambeau was not involved in politics during the revolution and never declared his political opinions publicly, unlike General Pétain, who became the political leader of the right and eventually the head of the Vichy regime. Second, even if General Rochambeau had become involved in politics, there existed no media in 1789–92 to communicate his opinions and attitudes to former soldiers. Third, two of our outcomes directly targeted landed aristocrats, a class to which General Rochambeau belonged (anti-feudal revolts and elite emigration as a proxy of local violence), and he hardly approved of these events.<sup>35</sup> Finally, this alternative explanation would already grant that the experience of different intuitions in the United States shifted Rochambeau’s attitudes towards liberty and equality since he was not a proponent of those American ideals before his deployment to New England.

The findings in this section provide corroborative evidence against a selection of soldiers into regiments or regiments into the American Revolutionary War. One might be tempted to assess that the not sailed regiment was left behind for reasons related to inherent characteristics of its leadership or of the soldiers it consisted of, which would render them less convinced and effective participants in this conflict. The same argument naturally does not hold for de Grasse’s regiments, rendering such a concern immaterial beyond its historical implausibility.

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<sup>33</sup>Section 8.1 corroborates that exposure to different institutions was the main mechanism. If organizational capabilities were larger for the officers who held leadership positions and thus gained leadership experience, and this was the main mechanism underlying the results, we would expect officers to have a stronger bearing on support for the French Revolution throughout. However, by distinguishing officers from soldiers, we show that both groups made distinct contributions to revolutionary outcomes.

<sup>34</sup>This could explain why soldiers from Rochambeau’s regiments who were still in the army by 1789 were less likely to desert during 1789–91, compared to soldiers of other regiments more frequently deserted to join the National Guards, which had a clear pro-revolution stance (Scott, 1998). While consistent with the idea that Rochambeau inspired confidence in the soldiers of the royal government’s will to improve institutions, it appears impossible to distinguish the soldiers’ confidence in the general from their confidence in their officers.

<sup>35</sup>In fact, during the ‘hot summer’ of 1789 General Rochambeau was tasked with policing the widespread riots and revolts with military force (Luce de Lancival, 1809, 349–62).

## 8. Transmission

Previously, we established that French veterans who were stationed in New England during their deployment to the United States in the American Revolutionary War fueled support for the French Revolution in their places of origin. In this section, we provide suggestive evidence of how this happened. We find that soldiers and officers drive different proxies of support for the Revolution, each according to their ability. Further, we document heterogeneity of our baseline results, suggesting that the American experience mattered more in places where the nobility was strong, access to information scarce, and harvest failures in the year before the Revolution were pronounced.

### 8.1. The Differential Effect of Soldiers and Officers

The study of the differential effects of soldiers compared to officers is guided by the historiography of the French Revolution. McDonald (1951) argued that peasants who had served as French soldiers in the American War were responsible for widespread agrarian revolts in 1789. Scott (1998) and Osman (2015), in contrast, focus on the ambiguous effects of the officers among the American Combatants.

To test these hypotheses empirically, we distinguish between soldiers (“rankers”) and officers (commissioned and non-commissioned). This distinction captures the combatants’ economic and social backgrounds. While we do not observe the occupational background of the combatants, we estimate that more than 30 percent of soldiers at the time were agricultural workers of some sort.<sup>36</sup> Officers generally had some landed property if they were from the countryside. More importantly, the distinction captures education and literacy status since being literate was a key requirement even for the non-commissioned officers (Wrong, 1976).<sup>37</sup>

As in our baseline estimation of equation 1, we compute variables of the log number of soldiers and officers (plus one to account for zeros) by department origin and include our

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<sup>36</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 in fact 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; *manouviers* and *journaliers*, agricultural workers. This estimate will be a lower bound if soldiers with military backgrounds were disproportionately from agricultural backgrounds in previous generations.

<sup>37</sup>Appendix A.2.1 provides additional justification for grouping together commissioned and non-commissioned officers.

baseline controls and use robust standard errors to estimate:<sup>38</sup>

$$y_i = \delta_1 \ln \text{Rochambeau officers}_i + \delta_2 \ln \text{Rochambeau soldiers}_i + \beta_2 \ln \text{NotSailed}_i + \beta_3 \ln \text{deGrasse}_i + \gamma X_i + \varepsilon_i \quad (4)$$

Table 4 presents the results of these estimations. By and large, we find that each group of combatants drives different outcomes according to their abilities. Consider soldiers first. As columns 1 and 4 indicate, soldiers drive a large part of the combatants' effect on anti-feudal revolts and the total effect on the emigration of the landowning elites. Officers, in contrast, had only a minor bearing on these outcomes (or even a negative one). Instead, as evident from columns 2 and 3, officers had a significantly positive effect on the establishment of political societies in 1789 and 1790 and the formation of National Volunteer battalions for the Revolutionary army (which was created in parallel to the regular army). The coefficients on soldiers are also positive but not significant, and smaller in magnitude. These results suggest that the experience imprinted onto the American Combatants by their exposure to the United States led them to further the Revolution in France in line with their abilities and setting. Soldiers, hailing from agricultural backgrounds and regions, were crucial for the destruction of the Old Regime—whereas officers, hailing from urban and educated backgrounds, were crucial for creating the new republic and making it succeed.

## 8.2. Heterogeneity

We focus on two main outcomes to understand which local factors mediated the effect of Rochambeau's combatants on support for the French Revolution: Anti-feudal revolts, relating to the abolition of old institutions, and early political societies, relating to the establishment of new institutions. Different than the baseline equation (1), we now estimate an enriched model that includes indicators for whether département characteristic  $C_i$  is above the nation-wide median  $\tilde{C}$  and an interaction term of this indicator with the main independent variable,  $\ln \text{Rochambeau}_i$ :

$$y_i = \eta_1 \ln \text{Rochambeau}_i + \eta_2 \ln \text{Rochambeau}_i \times \mathbb{1}(C_i > \tilde{C}) + \eta_3 \mathbb{1}(C_i > \tilde{C}) + \gamma X_i + \varepsilon_i \quad (5)$$

Table 5 presents results. We first consider differences in the strength of local aristocracy and feudal institutions. Column 1 shows that the effect of Rochambeau's soldiers is particularly pronounced in the 13 départements with *parlements* where the power of the nobility was

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<sup>38</sup>The department-level variation of the log number of officers and the log number of soldiers is sufficiently distinct to distinguish their effects empirically (bivariate  $\rho = 0.65$ ).

particularly strong. Conversely, column 2 shows that in départements with comparatively more royal tax offices, the effect of Rochambeau's soldiers tends to be weaker. (In these places, the royal administration had seized more power from the local nobility during the seventeenth-century *de Tocqueville* e. g. 1856.) The pattern holds for both outcomes, anti-feudal revolts and political societies, indicating that political action targeted the nobility who exercised feudal seigneurial rights or held other privileges, rather than rioting indiscriminately against anything related to nobility or monarchy. Indeed, historians assessed that in 1789 the people still held a favorable opinion of the king, whom they expected to be supportive of reform but constrained by opposition from the nobility (Lefebvre, 1939; Doyle, 1999; Markoff, 1996a).

We find no evidence that the prevalence of local enlightenment ideals mediates the effect of Rochambeau's combatants. In column 3, we consider subscribers (readers) of the enlightenment *Encyclopédie* (Squicciarini and Vogtländer, 2015) as the département characteristic for heterogeneity. For both outcomes, we find that the effect of Rochambeau's soldiers is not significantly different in départements below versus above the median of subscribers. While local access to enlightenment ideals appears to be positively associated with the foundation of early political society, enlightenment ideals did not strongly interact with the American experience of Rochambeau's combatants.

Columns 3 and 4 show that the bad harvest in 1788 resulting from temperature and precipitation shocks may have contributed to activating Rochambeau's combatants for anti-feudal revolts but not for founding political societies. This is consistent with results of the previous subsection which show that anti-feudal revolts are largely driven by normal soldiers, who often hailed from rural backgrounds. In contrast, the primarily urban elites from which the officers recruited were likely less directly affected by weather shocks.

Finally, in columns 6 and 7, we document that the effects of Rochambeau's combatants tend to be more pronounced in remote départements with worse access to ideas. 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 less in places with better access to ideas. This is consistent with the notion that ideas were transferred across the Atlantic and particularly decisive where such exposure was less common.

## 9. Conclusion

Why do people support the struggle for improved institutions once a revolution is triggered? This paper focuses on the French Revolution, arguably one of the most important institutional changes in history. We show that individual exposure to different institutions can shape the



nature of institutional change. French veterans deployed to the North American colonies during the American War of Independence are significantly and sizably associated with several proxies for local support for the French Revolution in their birthplaces less than a decade later. We draw on two historical coincidences to argue that neither selection of combatants or regiments nor alternative interpretations like combat experience, exposure to any foreign country, or fighting against a monarchy accounts for this. Instead, prolonged exposure to non-feudal economic institutions and political liberty likely turned the veterans into supporters of institutional change back in their origin once the opportunity arose.

These findings speak to the importance of individuals in driving institutional change. Crucially, it shows that even individuals who have not entered the history books can drive institutional change—and thus the course of history. Individual-level contact and exposure might underlie the empirical pattern that institutional change proceeds in regional waves (Acemoglu et al., 2019), resulting in regional clusters of good governance and economic development (Besley and Persson, 2014).

Despite being relevant to social science studies of revolutions more generally (e. g. Skocpol, 1979), the setting of the French Revolution of 1789 has several idiosyncratic features. For example, the events were hardly affected by the ubiquitous presence of media like newspapers and electronic communication technologies, in contrast to the great revolutions of the twentieth and twenty-first centuries. In pre-revolutionary France, newspapers were still in their infancy and did not reach beyond a small literate and urban elite. Moreover, the last years of the Old Regime saw relatively strict censorship of printed matter (Darnton, 2021). As a result, individuals' prolonged exposure to foreign institutions and ideas likely had a greater impact in our setting than it may have had in more recent episodes of institutional changes when alternative means were available through which knowledge and ideas could spread. Nevertheless, rather than rendering personal experience superfluous, these alternative means may primarily complicate identifying the impact of individuals' prolonged exposure to different ideas in present-day settings.

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# FIGURES

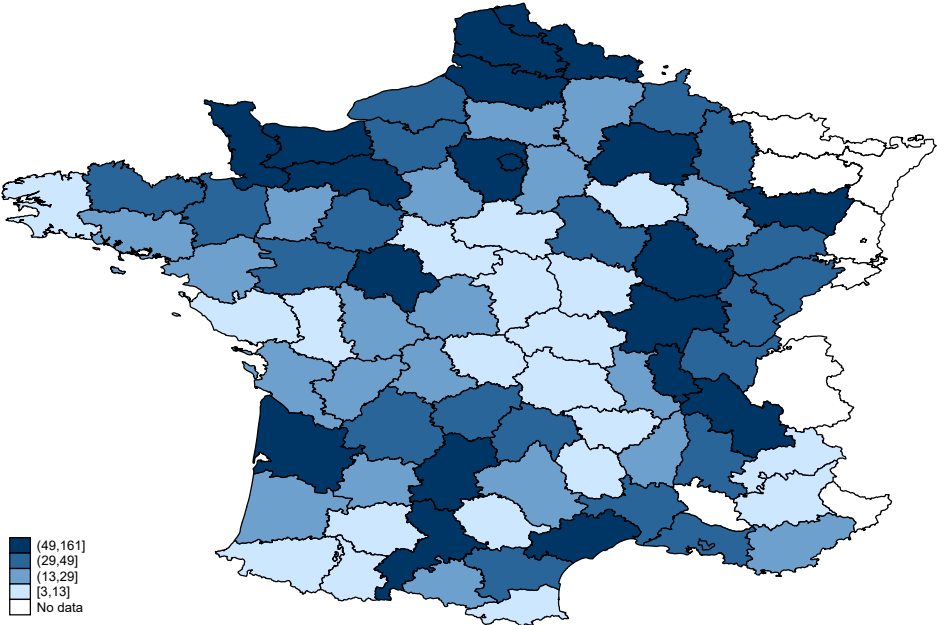


Figure 1: French Origins of Rochambeau's Combatants

*Note:* The map illustrates the spatial variation in the origin of Rochambeau's combatants across French départements, with darker blue colors indicating a higher number of Rochambeau's combatants hailing from a département.

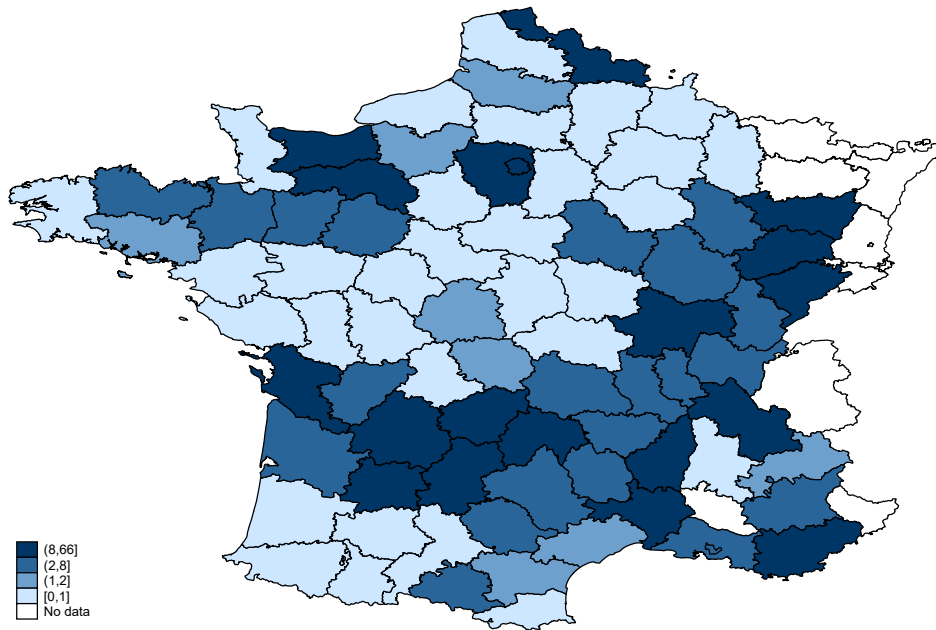


Figure 2: Anti-Feudal Revolts Across French Départements

*Note:* The map illustrates the spatial variation in anti-seigneurial revolts during 1789–1792, with darker blue colors indicating a higher incidence of anti-seigneurial revolts in the département.

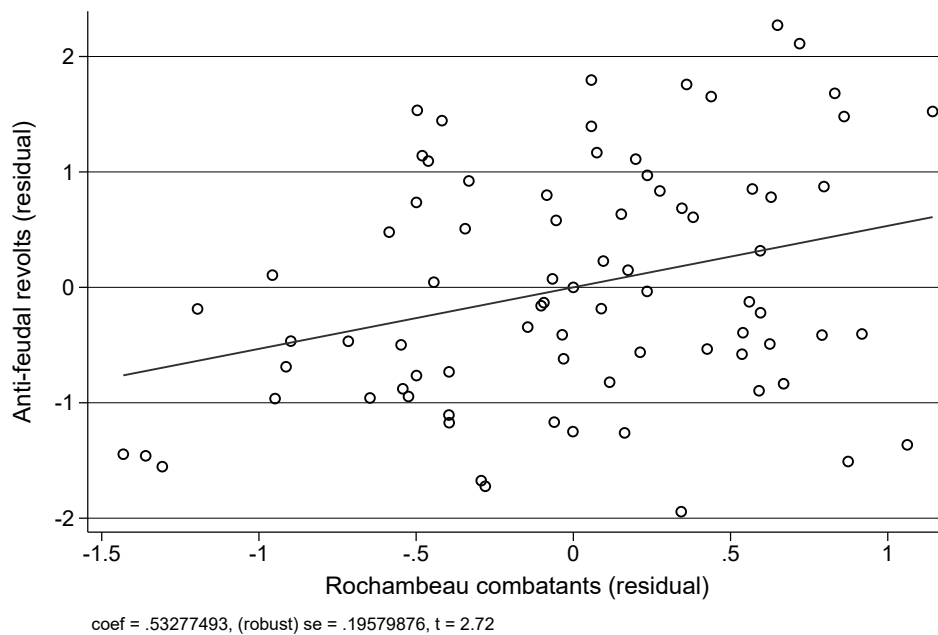


Figure 3: Rochambeau Soldiers and Revolutionary Revolts

*Note:* This figure documents a significant and sizeable conditional correlation between the number of Rochambeau’s soldiers from each département and anti-feudal revolts there during the French Revolution (Std.  $\beta = .48$ ). We condition on the set of baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris).

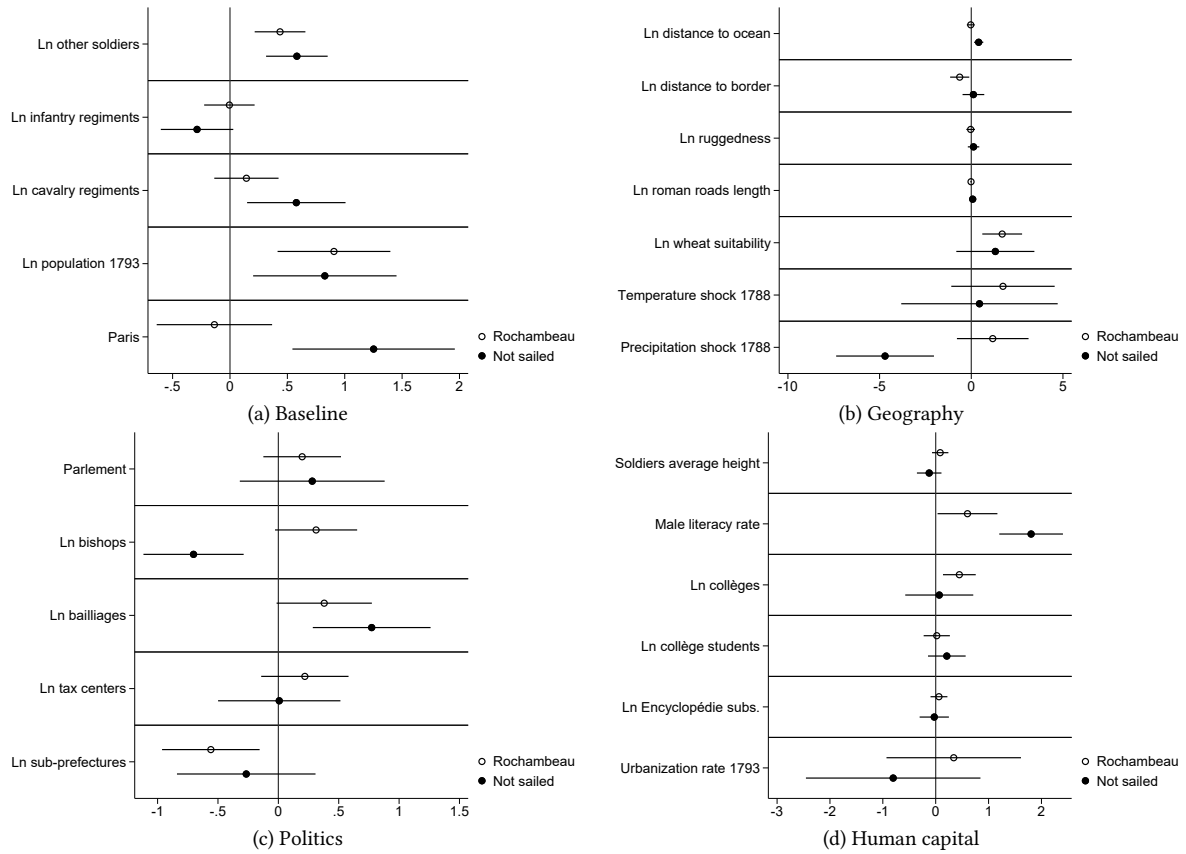


Figure 4: Balance of Treatment and Placebo

*Note:* This figure shows that Rochambeau’s combatants (treatment) and not sailed combatants (placebo) are similarly correlated with most observable département-level characteristics. We show coefficients of regressing the number of each of these soldiers hailing from a département on observable characteristics of these départements. Panels (a) to (d) document this for our baseline controls, geographic, political, and human capital characteristics.



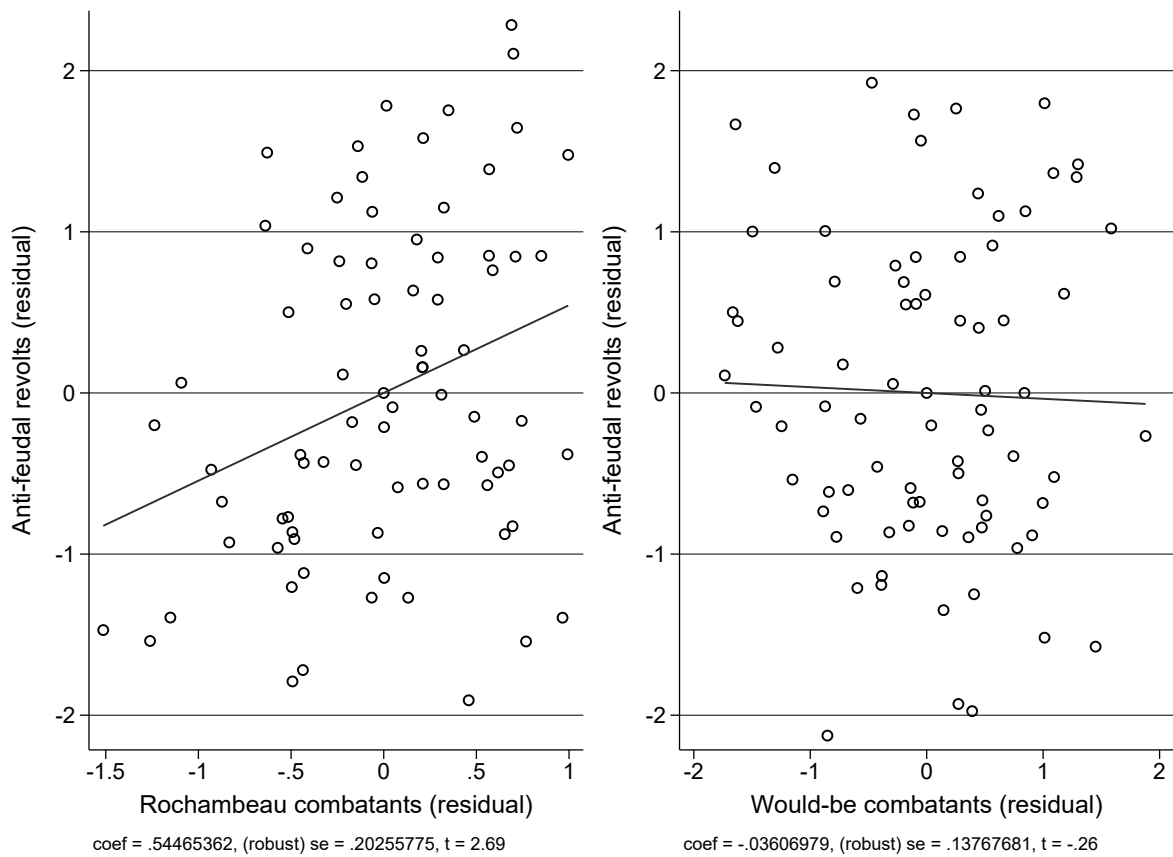


Figure 5: Not Sailed Combatants (Placebo) and Anti-Feudal Revolts

*Note:* This figure shows that only French soldiers that sailed to America, Rochambeau's regiments, are positively associated with anti-feudal revolts in their French origin départements (left panel). Those French soldiers intended to sail to America, but did not, on the other hand, are not associated with anti-feudal revolts in their French origin départements (right panel). Each of the scatter plots shows correlations across French départements, conditional on our baseline controls and the of number of soldiers from the respective other regiments.

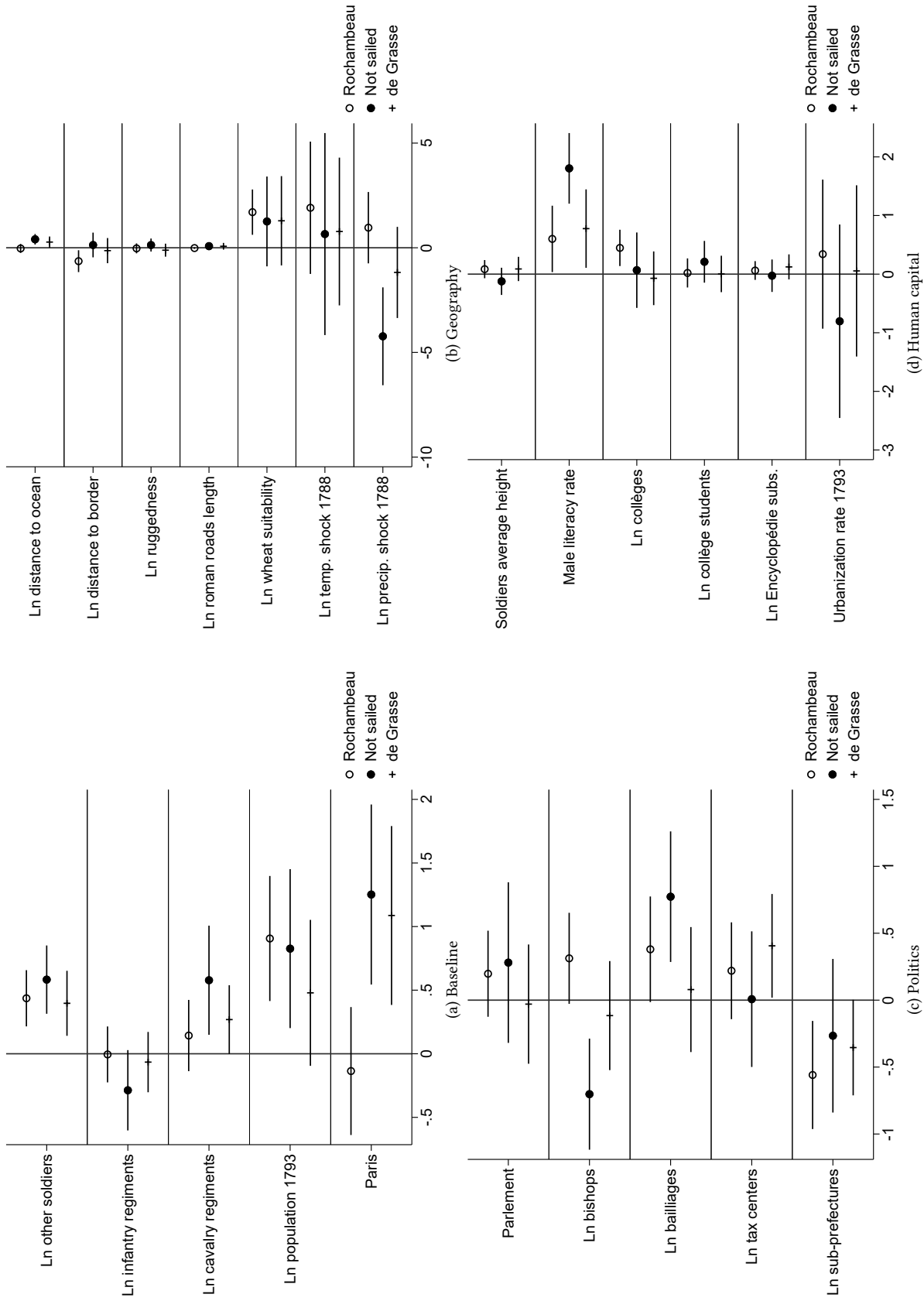


Figure 6: Balance of Treatment, Placebo, and Alternative Treatment

Note: This figure shows that Rochambeau's combatants (treatment), not sailed combatants (placebo), and combatants under Admiral de Grasse (alternative treatment) are similarly correlated with observable département-level characteristics. We show coefficients of regressing the number of each of these soldiers hailing from a département on several observable characteristics of these départements. Panels (a) to (d) document this for our baseline controls, geographic, political, and human capital characteristics.

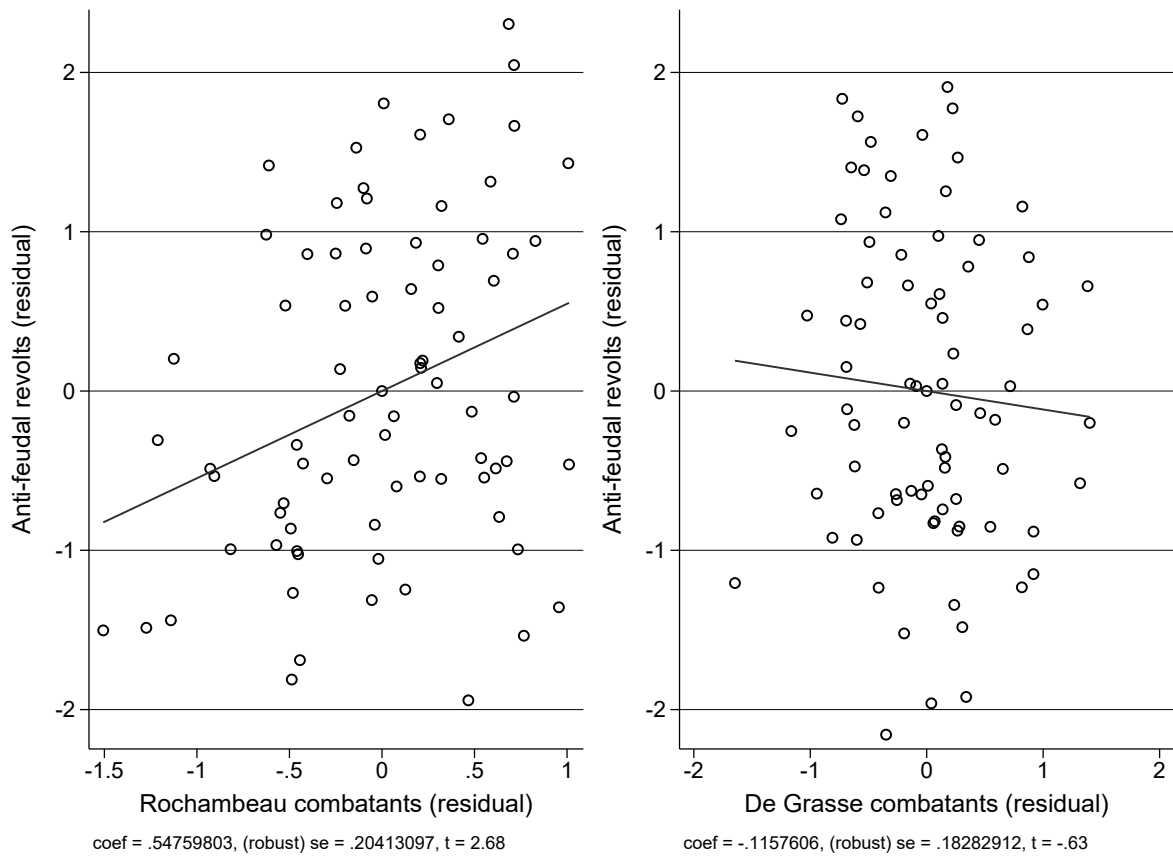


Figure 7: Two Experiences in the American Revolutionary War

*Note:* This figure shows that only French veterans that sailed to America and spend significant amounts of time there, Rochambeau's regiments, are positively associated with anti-feudal revolts in their French origin départements (left panel). French veterans who fought in the same decisive battle on American soil but did not spend significant amounts of time there are if anything negatively associated with anti-feudal revolts in their French origin départements (right panel). Each of the scatter plots shows correlations across French départements, conditional on our baseline controls and the of number of soldiers from the respective other two regiments.

# 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	0.567*** (0.191)	0.268** (0.119)	0.314*** (0.093)	0.287** (0.118)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	79	79	78	63
R <sup>2</sup>	0.16	0.29	0.46	0.28
Partial R <sup>2</sup> (Rochambeau)	0.11	0.07	0.14	0.08
Std. β (Rochambeau)	0.481	0.343	0.462	0.406

The table shows that support for the French Revolution was statistically and economically significantly larger in departments where more Rochambeau's combatants originated. All regressions are run at the département level 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). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 2: Soldiers 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	0.584*** (0.199)	0.313** (0.120)	0.298*** (0.092)	0.369*** (0.120)
Ln not sailed combatants	-0.058 (0.141)	-0.157* (0.082)	0.055 (0.058)	-0.233*** (0.086)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	79	79	78	63
R <sup>2</sup>	0.16	0.33	0.46	0.36
Partial R <sup>2</sup> (Rochambeau)	0.11	0.09	0.13	0.13
Partial R <sup>2</sup> (Notsailed)	0.00	0.05	0.01	0.11
Std. β (Rochambeau)	0.495	0.401	0.439	0.522
Std. β (Notsailed)	-0.067	-0.276	0.110	-0.450
<i>p</i> Rochambeau = Notsailed	0.019	0.002	0.036	0.000

The table shows that support for the French Revolution was statistically and economically significantly larger only in departments where more Rochambeau's combatants originated, who were deployed to the U.S., but not in departments 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, and an indicator for Paris). *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	0.588*** (0.200)	0.311** (0.121)	0.294*** (0.090)	0.369*** (0.121)
Ln not sailed combatants	-0.036 (0.150)	-0.166* (0.094)	0.032 (0.065)	-0.229** (0.095)
Ln de Grasse combatants	-0.092 (0.181)	0.041 (0.120)	0.091 (0.082)	-0.017 (0.118)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	79	79	78	63
R <sup>2</sup>	0.16	0.33	0.47	0.36
Partial R <sup>2</sup> (Rochambeau)	0.11	0.09	0.13	0.13
Partial R <sup>2</sup> (Notsailed)	0.00	0.05	0.00	0.10
Partial R <sup>2</sup> (de Grasse)	0.00	0.00	0.01	0.00
Std. β (Rochambeau)	0.499	0.399	0.433	0.521
Std. β (Notsailed)	-0.042	-0.294	0.065	-0.442
Std. β (de Grasse)	-0.074	0.049	0.127	-0.023
<i>p</i> Rochambeau = Notsailed	0.025	0.002	0.031	0.001
<i>p</i> Rochambeau = de Grasse	0.016	0.116	0.065	0.018

The table shows that support for the French Revolution was only statistically and economically significantly larger in departments where more Rochambeau's combatants originated, but neither in departments where more not-sailed placebo combatants originated nor in departments where more American combatants originated that participated in the Siege of Yorktown but were not stationed in the U.S. for a longer period. This indicates that the experience of the U.S. per se, rather than combat experience acquired during the military campaigns, exposure to any foreign country, or (successfully) fighting against a monarchy caused greater 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, and an indicator for Paris). *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 4: Both officers and soldiers contributed, but each to their abilities

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau officers	0.125 (0.235)	0.289** (0.142)	0.272*** (0.099)	-0.194 (0.130)
Ln Rochambeau soldiers	0.502* (0.254)	0.138 (0.154)	0.136 (0.091)	0.466*** (0.114)
Ln not sailed combatants	-0.028 (0.153)	-0.134 (0.090)	0.062 (0.063)	-0.267*** (0.095)
Ln de Grasse combatants	-0.100 (0.181)	0.041 (0.120)	0.091 (0.080)	-0.029 (0.115)
Baseline controls	✓	✓	✓	✓
<i>N</i> (Obs = département)	79	79	78	63
R <sup>2</sup>	0.16	0.36	0.50	0.39
Partial R <sup>2</sup> (Officers)	0.00	0.07	0.07	0.01
Partial R <sup>2</sup> (Soldiers)	0.06	0.01	0.05	0.09
Std. β (Officers)	0.082	0.286	0.310	-0.213
Std. β (Soldiers)	0.430	0.178	0.202	0.665
<i>p</i> Officers = Soldiers	0.393	0.578	0.386	0.002

The table shows that both soldiers and officers of Rochambeau's regiments increased support for French Revolution in their origins. Soldiers drive most of the effect for anti-feudal revolts and the subsequent emigration of land-owing elites, while officers contribute to the founding of revolutionary societies and enlisting volunteers for the Revolutionary Army back in their origins. All regressions include our baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris). *p* Officers = Soldiers reports the *p*-value of an F-test for the equality of coefficients on Rochambeau officers and Rochambeau soldiers. Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 5: Heterogeneity results

	Aristocracy		Enlightenment		Famine		Idea access	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
X =	Parlement	Royal tax	Subscribers	Temp. shock	Prec. shock	Markets/fairs	Post houses	
<i>Panel A</i>								
	Dep var: In anti-feudal revolts							
Ln Roch. combatants	0.575*** (0.204)	0.834*** (0.191)	0.678*** (0.235)	0.315 (0.268)	0.381 (0.229)	0.696*** (0.237)	0.651*** (0.228)	
Ln Roch. combatants × (X > median)	0.847*** (0.318)	-0.341 (0.278)	-0.136 (0.309)	0.558* (0.283)	0.053 (0.241)	-0.165 (0.293)	-0.077 (0.328)	
Indicator (X > median)	-3.298*** (1.159)	0.474 (0.892)	0.079 (0.991)	-1.755** (0.855)	0.647 (0.712)	0.594 (0.889)	-0.145 (1.049)	
Controls	✓	✓	✓	✓	✓	✓	✓	
N (Obs = département)	79	79	79	79	79	79	79	
R <sup>2</sup>	0.19	0.25	0.19	0.21	0.27	0.17	0.19	
<i>Panel B</i>								
	Dep var: In early political societies							
Ln Roch. combatants	0.298** (0.122)	0.311** (0.142)	0.291** (0.142)	0.340** (0.150)	0.195 (0.136)	0.518*** (0.150)	0.393*** (0.117)	
Ln Roch. combatants × (X > median)	0.308** (0.145)	-0.024 (0.162)	-0.029 (0.159)	-0.107 (0.195)	0.051 (0.176)	-0.292* (0.169)	-0.121 (0.167)	
Indicator (X > median)	-0.994* (0.519)	0.139 (0.516)	0.386 (0.521)	-0.004 (0.622)	0.252 (0.558)	1.156** (0.524)	-0.049 (0.562)	
Controls	✓	✓	✓	✓	✓	✓	✓	
N (Obs = département)	79	79	79	79	79	79	79	
R <sup>2</sup>	0.34	0.33	0.36	0.37	0.39	0.37	0.40	

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). Robust standard errors in parentheses. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.



# Online Appendix

## The American Origin of the French Revolution

Sebastian Ottinger  
(CERGE-EI and IZA)

Lukas Rosenberger  
(Northwestern)

We provide additional detail and results in three appendices. Appendix A provides summary statistics and historical background information about the variables employed in the paper. In Appendix B, we provide additional empirical results supporting our analysis in the paper. Finally, Appendix C provides individual-level evidence on the role of officers who participated in the American Revolutionary War during the French Revolution.

### 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. The construction of variables from newly digitized data is documented in the next subsection.

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	Chambru and Maneuvrier-Hervieu (2022)
Political societies	Voluntary associations of citizens formed during 1789–90 for political participation	see text
Elite emigrants	Emigrants from clergy, nobility, and upper-middle class	see text
National Volunteers	Battalions of voluntary soldiers formed 1791–92	see text
<i>Alternative outcomes</i>		
Subsistence revolts	Revolts over the availability or the price of food	Chambru and Maneuvrier-Hervieu (2022)

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*Independent variables*

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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
Never sailed combatants	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	Officers (commissioned and non-commissioned) of infantry regiments participating in <i>special expedition</i> under General Rochambeau	see text
Rochambeau soldiers	Soldiers (rankers and corporals) of infantry regiments participating in <i>special expedition</i> under General Rochambeau	see text

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*Baseline controls*

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Other soldiers	Soldiers enlisting for infantry during 1700–1789	Komlos et al. (2003)
Population 1793	Total inhabitants in 1793	see text
Urbanization rate	Share of population living in towns $\geq 5000$ in 1793	see text
Infantry garrison	Indicator for infantry regiment garrison	see text
Cavalry garrison	Indicator for cavalry battalion garrison	see text
Paris	Indicator for Paris/département Seine	see text

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*Geography*

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Distance to ocean	Distance (in km) of department centroid to nearest ocean	see text
Distance to border	Distance (in km) of department centroid to nearest 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 (2021)
Precipitation shock 1788	Precipitation deviation in 1788 from mean 1700–1800	Waldinger (2021)

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*Political economy*

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<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

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*Human capital*

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Average height of soldiers	Average height in cm of enlisted soldiers 1700–89	Komlos et al. (2003)
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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
Post houses	Number of post houses 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 Soissonnais from the sources described in the main text. We obtain 3641 individuals in total and identify the origin (birthplace) in a comprehensive dataset of all French communes and towns in 1793.<sup>1</sup> This data set includes approximately 35k communes, reports population data starting in 1793, and also includes latitude and longitude. We then aggregate numbers to the department level, using department boundaries circa 1794 from Chambru (2020). In total, we can link 3109 (85%) combatants to the department 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 infantry regiments Agenois (data on officers only), Gâtinais (Royal-Auvergne), and Touraine from the same sources. We obtain 2406 individuals in total and, using the same procedure, we link 2104 (87%) combatants to the department 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>

**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 hand-

<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>.

<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)

Table A.2: Summary statistics

	Obs	Mean	S.D.	Min	Max
Anti-feudal revolts	79	6.44	10.25	0.0	66.0
Early political societies	79	3.67	3.28	0.0	14.0
Volunteer battalions	78	5.50	4.46	1.0	34.0
Elite emigration	63	673.00	488.91	91.0	2889.0
Rochambeau combatants	79	35.75	31.21	3.0	161.0
Not sailed combatants	79	21.71	39.64	0.0	295.0
De Grasse combatants	79	24.81	25.32	1.0	195.0
Rochambeau officers	79	3.10	2.74	0.0	13.0
Rochambeau combatants	79	32.65	29.69	3.0	158.0
Soldiers in Komlos sample	79	274.24	340.17	8.0	1978.0
Infantry regiments	79	1.06	2.21	0.0	16.0
Cavalry regiments	79	0.53	1.06	0.0	6.0
Population 1793 (thousand)	79	316.83	122.94	101.7	721.6
Urbanization rate 1793	79	0.15	0.14	0.0	0.9
1: Paris	79	0.01	0.11	0.0	1.0
Distance to ocean (km)	79	159.27	106.78	10.4	411.5
Distance to intern. border (km)	79	181.44	100.69	24.4	403.9
Terrain Ruggedness Index	79	0.79	0.90	0.1	5.4
Roman roads length (thousand km)	79	321.47	135.20	0.0	783.6
Wheat suitability (caloric yield)	79	8422.62	715.37	4493.9	9459.7
Temperature shock 1788	79	1.06	0.05	1.0	1.3
Precipitation shock 1788	79	0.89	0.08	0.8	1.0
1: <i>Parlement</i>	79	0.14	0.35	0.0	1.0
Bishoprics	79	1.58	1.22	0.0	5.0
Bailliages	79	4.87	3.07	0.0	14.0
Tax centers	79	3.92	2.88	0.0	20.0
Sub-delegates	79	8.08	4.46	0.0	24.0
Soldiers average height	79	169.16	0.92	166.3	172.6
Male literacy rate	76	0.39	0.25	0.0	0.9
Collèges	79	6.61	3.73	2.0	21.0
Collège students	79	854.91	753.56	15.0	5000.0
Subscriber density	79	2.17	3.08	0.0	15.2
Fairs	79	201.10	143.59	6.0	731.0
Markets	79	36.76	14.71	2.0	80.0
Post houses	79	16.24	10.59	0.0	49.0

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

written 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 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 gelocation. 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 also collect and digitize data on ranks, which allows us to distinguish between officers and soldiers. We do not distinguish between commissioned officers and non-commissioned officers since officers of groups must have been literate, distinguishing them from the average soldier who did not need to be literate (Wrong, 1976). In total, we observe 120 commissioned officers and 160 non-commissioned officers among Rochambeau's combatants. Positions as commissioned officers were generally reserved for the nobility and were available for purchase (ranks colonel, mayor, captain, lieutenant, sub-lieutenant), except for a few so-called *officers of fortune* which were selected from rankers based on merit (ranks quarter-master treasurer, standard bearer, and lieutenants of the grenadier company). Positions as non-commissioned officers (primarily sergeants and corporals) were open to both commoners and nobility. Since there were many families of lower nobles who could not afford to buy into officer positions, we also observe a good number of nobles among the non-commissioned officers. Only the group of soldiers comprised essentially only commoners. We count as officers also those veterans who were promoted after the Special Expedition.

### A.2.2. Outcomes

**Revolts** Following Markoff (1996a), we distinguish between three types of revolts—anti-feudal, subsistence, and panics—which were the three most widespread forms of revolts during the period 1788–92, and collect data on the former two. 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. Subsistence revolts were revolts over the availability or the price of food. Food was scarce primarily because of the bad harvest of 1788 (see also Waldinger, 2021).

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<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.

The data on anti-feudal revolts and subsistence revolts comes from the Historical Social Conflict Database (Chambru and Maneuvrier-Hervieu 2022, database categories 5 and 1, respectively). For revolts of this type during the revolution 1789–1794, this database primarily relies on Ado (1996). Figure A.1 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”). Subsistence revolts started in 1788 and extended into 1793.

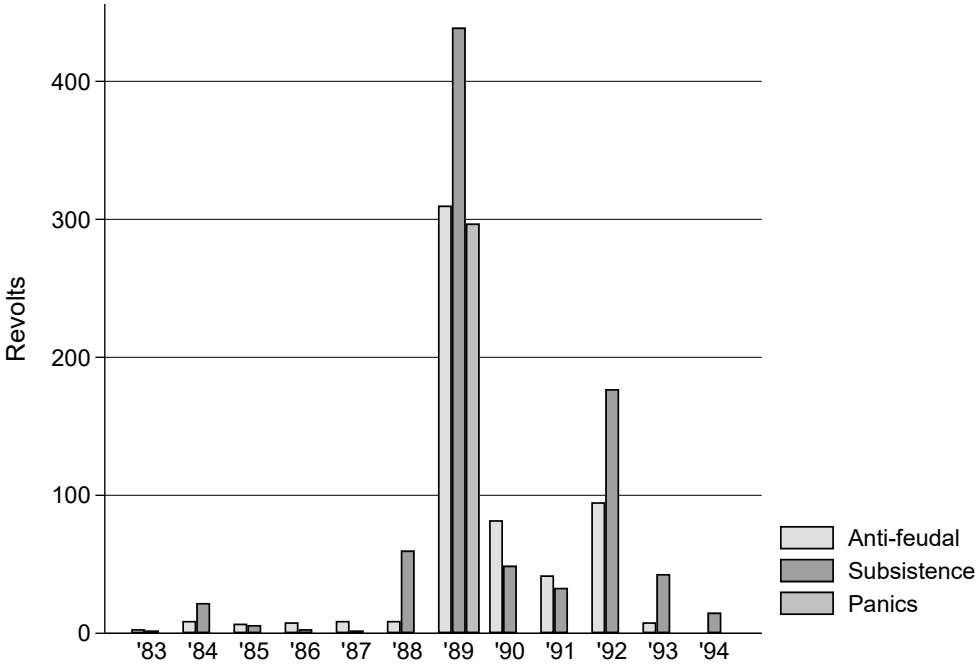


Figure A.1: Incidence of revolts 1783–1794 by type

**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, the creation of political societies was bolstered by the government—effectively, the Committee of Public Safety headed by Robespierre—because it became 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 departement and national archives and secondary sources for the Atlas of the French Revolution (Boutier et al., 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>5</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.2 documents the time pattern of how political societies first emerged bottom-up in towns in the early period and diffused top-down to towns and communes in the later period. In the first long year of the revolution 1789–90, citizens established at least one political society in 307 towns based on local initiative. 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.

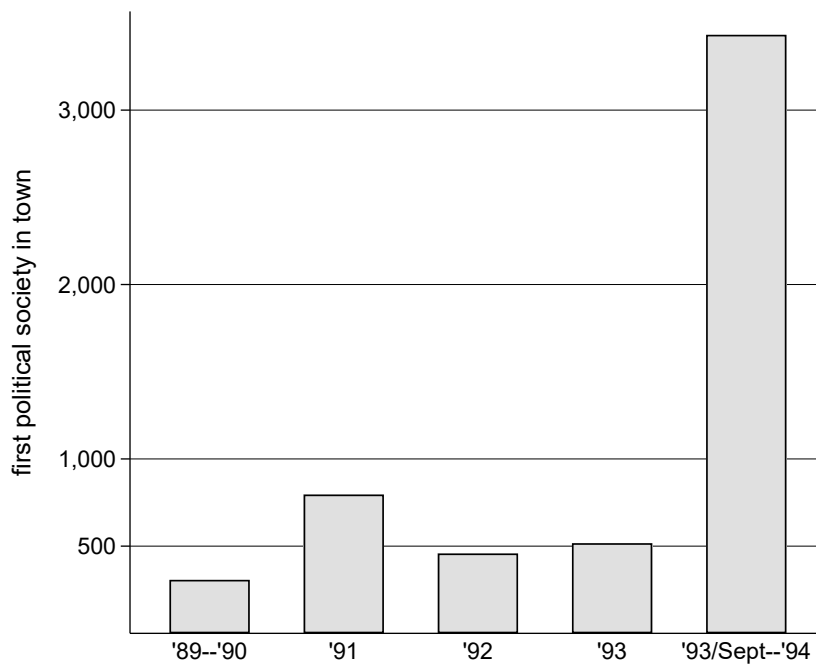


Figure A.2: First establishment of political societies in towns over time

**National Volunteers** The battalions of “National Volunteers” were first raised in 1791 with the goal of mobilizing 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

<sup>5</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.

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 three hundred thousand 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 département-level data from Bertaud et al. (1989) on the number of battalions in January 1793, just before conscription began with the mass levy.<sup>6</sup> This variable measures the degree to which French citizens were ready to voluntarily take up arms for defending the Revolution. By January 1793, 457 battalions of national volunteers existed. At a size of about 600 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).

**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 “Varennes” because 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). 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>7</sup> Independent of why they emigrated—seeking asylum or being refugees, in modern terms—, emigrants became known as *émigrés* and were politically persecuted during the terror (1793-4), and their (landed) property was expropriated.

We digitize département-level data from Greer (1951) on the total number of emigrants (79 departments in our sample) and the number of emigrants by socio-economic status (63 departments in our sample). We classify “elite emigrants” as those who belonged to the

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<sup>6</sup>The 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>7</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).



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, 130000 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.

### 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 38700 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 22000 soldiers, we identify the town of birth (57%), and for about 23100 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 and cavalry regiments garrisoned in a department. 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 every three years. We collected data on 107 garrisons for infantry regiments and 59 garrisons for cavalry regiments. Source: Bertaud et al. (1989, 12).

**Population, urbanization** Data on population in 1793 was obtained from the Cassini project.<sup>8</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

**Distance to the ocean, distance to the border** are calculated as the distance (in degree) of each departement’s centroid to the nearest international border or ocean.

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<sup>8</sup>*Des villages de Cassini aux communes d’aujourd’hui*, available online <http://cassini.ehess.fr/fr/html/index.htm>.

**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).

**Shock in 1788** Waldinger (2021) 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 (2021) 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>9</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,

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<sup>9</sup>The modern term *parliament*, which usually signifies a body of elected legislators, derives its name from the older French institution of *parlement*.

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.

**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 about 1789 (intensive margin) and on the number of towns with a fair or market about 1789 (extensive margin). The data was compiled as department-level aggregates by Margairaz (1988) from archival records of an official census. 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). Markets usually took place once a week, whereas fairs usually took place once a year—thus, bi-yearly spring and autumn fairs, for example, 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 in total over 16,000 fairs and about 340 towns with in total about 3,000 markets.

**Communication** We digitize data at the departement-level 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.3. Logarithmic specification

Our main analysis uses logarithms of variables (adding one for variables with zeros). Figures A.3 and A.4 compare the distributions of the primary outcome and treatment variables in levels and logarithms, respectively. As distributions of both primary outcome and treatment variables are approximately log-normal, the correct empirical specification is logarithmic.

The log-transform has the additional benefit of placing less weight on the tails and reducing the influence of a few outliers that are visible in Figures A.3 and A.4. The results for the levels specifications reflects the influence of outliers: Standardized coefficients on Rochambeau combatants tend to increase but turn marginally insignificant for some outcomes (revolts, battalions) because of larger standard errors. Whereas censoring outliers e. g. by dropping or winsorizing achieves qualitatively very similar results of the levels specification compared to the log-linear specification, we prefer to not censor any variables in the baseline.

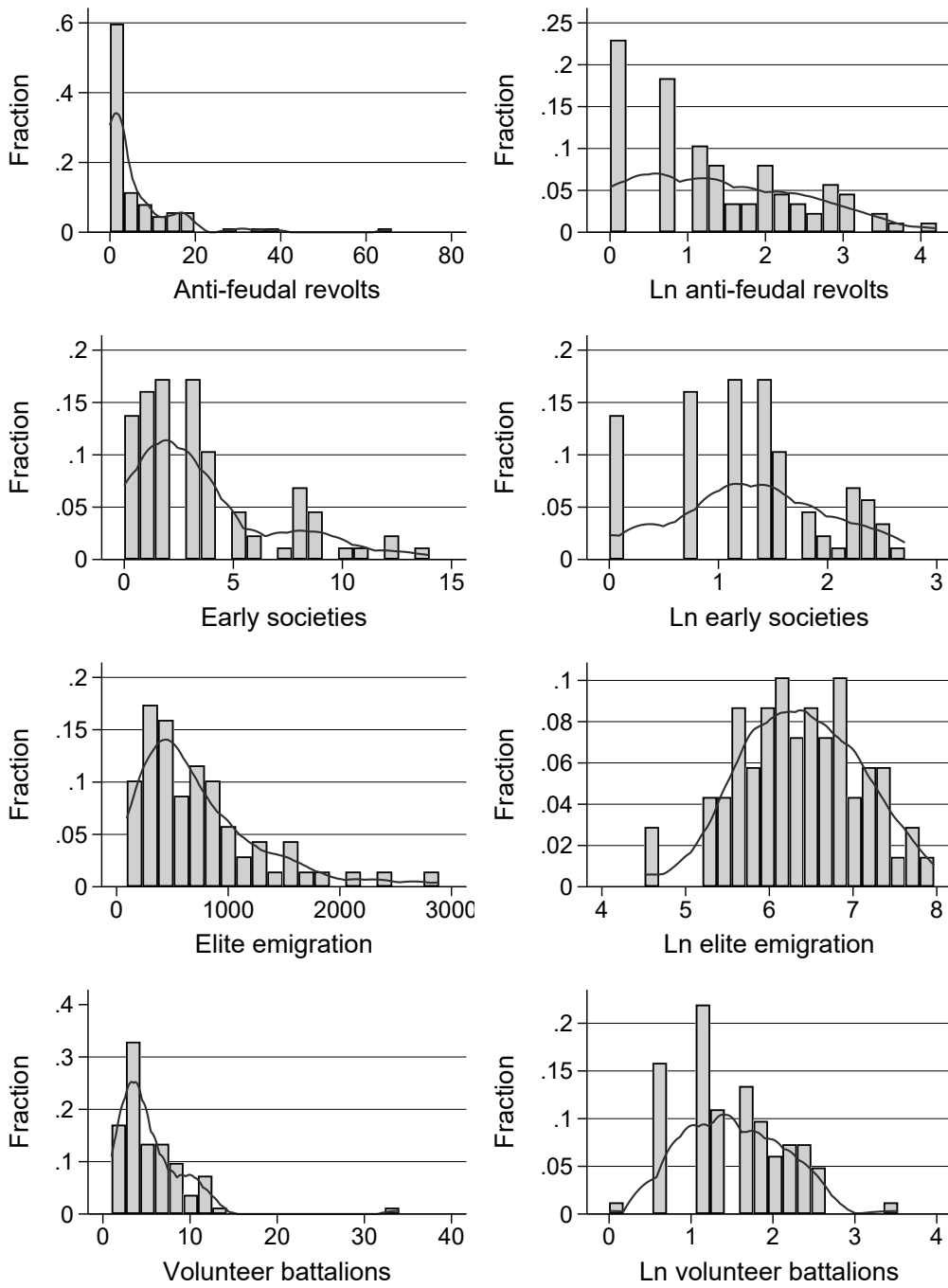


Figure A.3: Log-normal distribution of primary outcome variables

*Note:* Histograms with overlaid kernel density estimate (Epanechnikov kernel). The left column shows that distributions in levels are heavily skewed towards zero. The right column shows that the corresponding distributions in logarithms (levels plus one for variables with zeros) are approximately normal and place less weight on outliers.

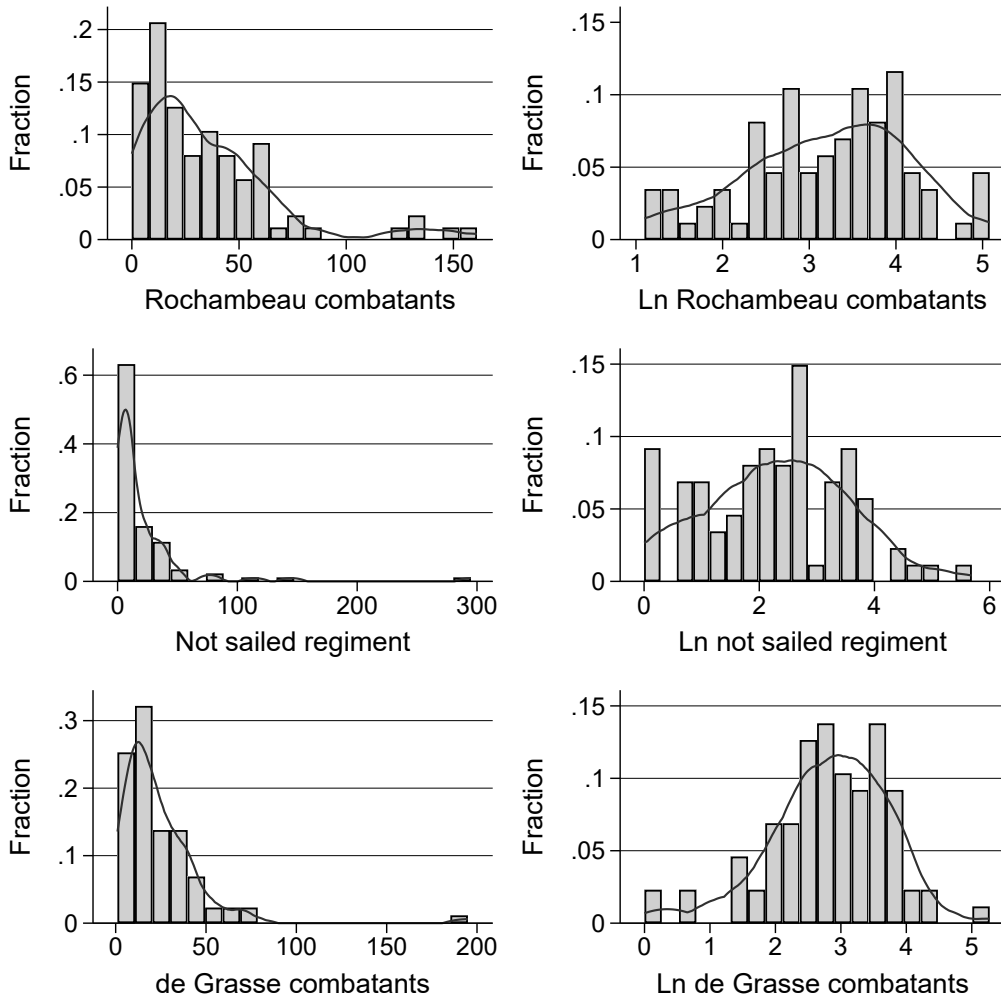


Figure A.4: Log-normal distribution of treatment and control variables

*Note:* Histograms with overlaid kernel density estimate (Epanechnikov kernel). The left column shows that distributions in levels are heavily skewed towards zero. The right column shows that the corresponding distributions in logarithms (levels plus one for variables with zeros) are approximately normal and place less weight on outliers.

## B. Additional Results

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

Table A.3 shows estimates of equation 1 for all outcomes. Columns 1, 3, 5, and 7 show the unconditional correlations between the main dependent and independent variables, all significantly different from zero and of comparable magnitude as the baseline estimates. Columns 2,4,6, and 8, in turn, show the coefficients and standard errors of all control variables used in the baseline estimation presented in table 1, where we suppressed these.

Table A.3: 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	0.366*** (0.124)	0.567*** (0.191)	0.319*** (0.081)	0.268** (0.119)	0.405*** (0.078)	0.314*** (0.093)	0.342*** (0.077)	0.287** (0.118)
Ln other soldiers		-0.065 (0.189)		-0.084 (0.094)		0.155** (0.077)		-0.046 (0.119)
Ln infantry regiments		-0.157 (0.219)		0.199* (0.108)		0.104 (0.106)		0.161 (0.147)
Ln cavalry regiments		-0.362 (0.285)		-0.171 (0.154)		-0.096 (0.115)		0.214 (0.153)
Ln population 1793		-0.126 (0.400)		0.529** (0.237)		-0.188 (0.213)		0.046 (0.316)
1: Paris		-1.583*** (0.497)		-1.306*** (0.240)		1.339*** (0.223)		0.760** (0.319)
Constant	0.219 (0.377)	1.698 (4.669)	0.277 (0.263)	-5.812** (2.715)	0.193 (0.263)	2.011 (2.535)	5.190*** (0.260)	4.868 (3.652)
N (Obs = département)	79	79	79	79	78	78	63	63
R <sup>2</sup>	0.10	0.16	0.17	0.29	0.36	0.46	0.23	0.28
Partial R <sup>2</sup> (Rochambeau)		0.11		0.07		0.14		0.08
Std. $\beta$ (Rochambeau)	0.310	0.481	0.409	0.343	0.596	0.462	0.484	0.406

Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

### B.2. Additional Analysis of Conflicts

In this section, we discuss and present results from two additional analyses of conflict across French departments.

### B.2.1. Dynamic Difference-in-difference Analysis and Other Types of Conflict

Here we present evidence on the timing of anti-feudal riots and other types of conflict. We show that (i) anti-feudal riots only increased in 1789 in départements from which more of Rochambeau's hailed, (ii) find no such effect for subsistence riots in any of the years, and (iii) that only Rochambeau's soldiers and neither of the placebo soldiers have such an effect on conflicts in 1789.

We first document that the effect underlying our cross-sectional estimate in Table 1 is entirely driven by a spike in anti-feudal protests in 1789, when the French Revolution started. We use the time variation in anti feudal protests and estimate regressions of the following type:

$$y_{i,t} = \sum_{\tau=1780}^{1795} \beta_{\tau} \ln \text{Rochambeau}_i \times 1(t = \tau) + \gamma \sum_{\tau=1780}^{1795} X_i \times 1(t = \tau) + \mu_t + \mu_i + \varepsilon_i \quad (\text{A.1})$$

In these regressions, we now interact our main independent variable of interest,  $\ln \text{Rochambeau}_i$  with year dummies for each of the years under consideration (1780 to 1795).<sup>10</sup> We similarly interact our baseline controls with year dummies, further include year ( $\mu_t$ ) and département ( $\mu_i$ ) fixed effects, and employ robust standard errors.

Figure A.5 presents estimates of the  $\beta_t$ 's for two outcome variables  $y_{i,t}$ : anti-feudal riots and subsistence riots. We find that anti-feudal riots only spike in the year 1789 and find no evidence of a comparable spike in subsistence riots in the same or any other year. This strongly suggests that Rochambeau's soldiers were not just (i) hailing from départements inherently prone to more violence per se, (ii) instigating conflict before the national political environment and bad harvests in 1788 made political change a possibility, and, lastly, (iii) Rochambeau's soldiers did not – even in the year of Revolution 1789 – increase all types of conflict, but only those anti-feudal riots directed against the economic system of feudalism.

Next, we document that only Rochambeau's soldiers were responsible for the spike in anti-feudal riots in 1789. We find no such effect for those soldiers from our two placebo regiments who did not spend considerable time in the Northeastern United States. To this end, we run regressions of the following type, where the outcome is – with the usual slight abuse of notation – the logarithm of one plus the number of anti-feudal riots in a département

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<sup>10</sup>For all of the remainder we focus on those years, but in unreported results, we find no evidence of any spike in the earlier or later years (the conflict data is available until 1800).



i and year t:

$$\ln \text{anti-feudal riots}_{i,t} = \sum_{\tau=1780}^{1795} \beta_{\tau} \ln \text{Regiment}_i \times 1(t = \tau) + \gamma \sum_{\tau=1780}^{1795} X_i \times 1(t = \tau) + \mu_t + \mu_i + \varepsilon_i \quad (\text{A.2})$$

We run this regression for each of the three types of soldiers separately, i.e., one for the number of soldiers of Rochambeau hailing from a département, and one each for the two placebo regiments of soldiers – those who did not sail and those under De Grasse, who only participated in the Siege of Yorktown, but were not exposed to the US for longer and particularly not to New England.

Figure A.6 presents estimates of the  $\beta_t$ 's for each of the three independent variables. The spike for Rochambeau's soldiers in 1789 (already documented above) is clearly visible. Notably, we do not find evidence for a sizable or statistically significant increase in anti-feudal riots due to either of the other two sets of soldiers.

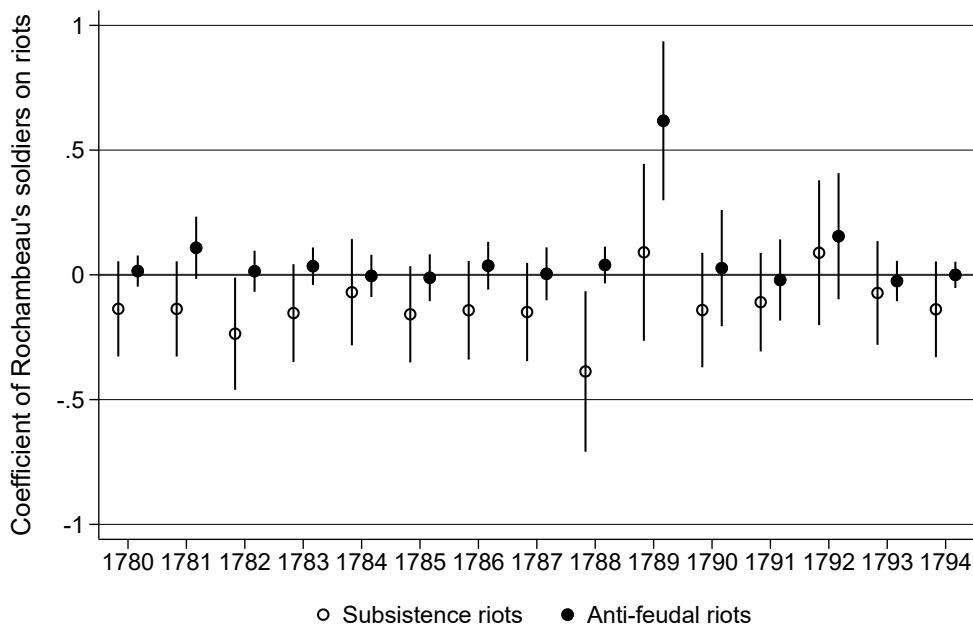


Figure A.5: Dynamic difference-in-difference estimates of Rochambeau's soldier on riots

*Note:* This figure shows that Rochambeau's soldiers only increased anti-feudal revolts in their origin departments, and only in 1789. We show estimates of the  $\beta_{\tau}$  coefficients from equation A.1 for two outcome variables, anti-feudal and subsistence revolts.

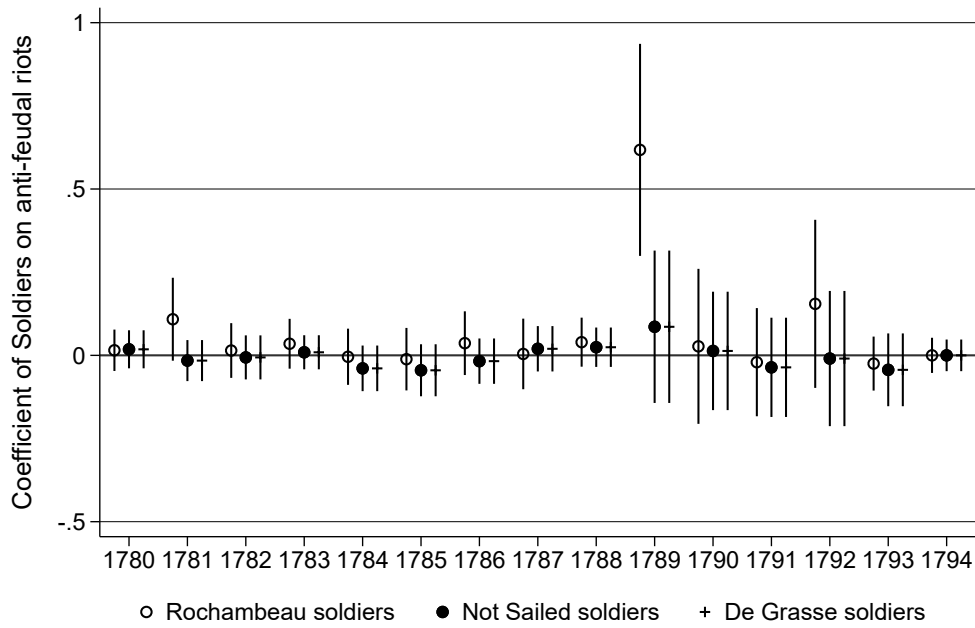


Figure A.6: Dynamic difference-in-difference estimates of soldiers on anti-feudal riots

*Note:* This figure shows that only Rochambeau’s soldiers increased anti-feudal revolts in their origin departments in 1789, and that no such spike is visible either the soldiers that never sailed or only participated in the Siege of Yorktown. We show estimates of the  $\beta_{\tau}$  coefficients from equation A.2 for three independent variables estimated separately.

### **B.2.2. Analysis of Conflict at Disaggregated (modern) Boundaries**

Our baseline results for conflict also hold at modern départements, and even within those. We show this drawing on the fact that we know the exact location of conflicts from our source and the exact locations of villages to which we matched soldiers. For this section, we aggregate these to the level of two *current day* administrative divisions of France – départements and arrondissements.<sup>11</sup>

We first re-run our main specification at the level of modern départements. Column 1 of table A.4 presents results. Note that the coefficients are very similar to the corresponding ones in column 1 of table 3, although here, we do not control for the presence of infantry or cavalry garrisons.

Columns 2 to 4 are at the arrondissement level instead. Arrondissements are the administrative level below départements; on average, each département consists of about three arrondissements. As is evident from column 2, Rochambeau's soldiers are sizably associated with anti-feudal protest even across the about 300 arrondissements of France – the standardized effect size is 0.35. Column 3 – which includes département fixed effects – shows that the majority of this effect operates within départements. Lastly, column 4, employing standard errors at the département, shows that allowing for arbitrary correlations among other unobservables within départements does not affect our inference much.

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<sup>11</sup>The data on modern administrative borders of France comes from the GADM database, and is available under [www.gadm.org](http://www.gadm.org).

Table A.4: Baseline analysis across and within modern départements

	Dep. variable: ln anti-feudal revolts			
	(1)	(2)	(3)	(4)
Ln Rochambeau combatants	0.519*** (0.194)	0.272*** (0.070)	0.195*** (0.072)	0.195** (0.095)
Ln De Grasse combatants	-0.238 (0.197)	-0.107* (0.060)	-0.077 (0.068)	-0.077 (0.078)
Ln not sailed combatants	-0.114 (0.133)	-0.046 (0.071)	-0.017 (0.057)	-0.017 (0.060)
Dep FE			✓	✓
Std. $\beta$ (Rochambeau)	0.44	0.35	0.25	0.25
R <sup>2</sup>	0.17	0.15	0.62	0.62
N	89	302	302	302

The table shows that the effect of Rochambeau's combatants on anti-seigneurial revolts also holds at the level of modern départements (column 1) and at the more disaggregated level of arrondissements (columns 2 through 4), with or without département fixed effects. All regressions include baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

### **B.3. Robustness of main results controlling for unbalanced variables**

Table A.5 shows that the effect of Rochambeau combatants on support for the revolution remains robustly positive and significant across all outcomes when controlling for unbalanced variables. While the unbalanced variables appear to explain some aspects of support for the revolution, no single one may explain all measures of support for the revolution. In particular, the precipitation shock in 1788 which contributed to harvest failures is positively and significantly associated with anti-feudal revolts and early political societies but not the establishment of volunteer battalions and the emigration of the old elite (Panel A). Similarly, the number of bishops (a proxy for church influence but also secondary education in Latin and philosophy) is positively and significantly associated with early political societies but not the other outcomes (Panel B). Likewise, the male literacy rate is positively and significantly associated with the formation of volunteer battalions but not the other outcomes (Panel C).

Table A.5: Controlling for unbalanced variables in main specification

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
<i>Panel A</i>				
Ln Rochambeau combatants	0.402** (0.198)	0.227* (0.116)	0.268*** (0.089)	0.371*** (0.124)
Ln precip. shock 1788	5.967*** (1.621)	2.832*** (1.026)	0.989 (0.793)	-0.046 (1.235)
<i>N</i> (Obs = département)	79	79	78	63
R <sup>2</sup>	0.31	0.40	0.47	0.36
<i>Panel B</i>				
Ln Rochambeau combatants	0.591*** (0.207)	0.215* (0.117)	0.253*** (0.095)	0.349** (0.136)
Ln bishops	-0.038 (0.250)	0.496*** (0.163)	0.211 (0.135)	0.070 (0.167)
<i>N</i> (Obs = département)	79	79	78	63
R <sup>2</sup>	0.16	0.41	0.48	0.37
<i>Panel C</i>				
Ln Rochambeau combatants	0.524** (0.211)	0.319*** (0.115)	0.205** (0.084)	0.457*** (0.114)
Male literacy rate	0.334 (0.624)	-0.536 (0.354)	0.999*** (0.264)	-0.497 (0.413)
<i>N</i> (Obs = département)	76	76	75	61
R <sup>2</sup>	0.13	0.34	0.56	0.43

The effect of Rochambeau combatants on support for the revolution is robust across all outcomes to controlling for unbalanced variables. All regressions include as controls the never 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). Robust standard errors in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## C. Individual-level evidence on Rochambeau's officers

Several officers later became involved in politics and were elected as deputies for the nobility to the Estates General. Table A.6 documents the officers' experience in America and their political affiliation. Five out of seven officers who served under General Rochambeau were Liberals in the General Estates, who voted for the abolition of feudalism, while none of the three who served under Admiral De Grasse were.

Table A.6: American combatant 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)

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