The American Origin of the French Revolution*

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We show that the French combatants' exposure to the United States increased support for the French Revolution a decade later. French regions 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 sail, but one-third did not; ii) among those deployed, only some regiments were stationed in New England. Only combatants exposed to New England affected the French Revolution after their return.

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"'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, and document similarly sizable and significant correlations across the more than 300 arrondissements, the (modern-day)

administrative division below départements.

Similarly, we document sizable and significant conditional correlations of American Combatants 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 across départements. 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 départements where more American Combatants hailed from (standardized β 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. For these two additional outcomes, we similarly document sizable and significant effects across the more than 300 modern arrondissements. Lastly, we document that significantly more landowning elites left these regions after the Revolution (standardized β 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 those alternative mechanisms. 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 four 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.

We further show that our results are driven by soldiers returning to France and those discharged from the military before the Revolution. We find similar results when excluding the departments where Rochambeau's regiments were stationed on the eve of the Revolution. This suggests that it was primarily the veterans of the Special Expedition who returned home that are driving our results, and not those still serving in the army and under Rochambeau.

Finally, we provide anecdotal and systematic evidence for officers that exposure to the United States and New England, in particular, turned those into advocates of more inclusive institutions during the French Revolution. We first show that officers from Rochambeau's army were more likely to be liberals when elected as deputies to the General Estates than officers serving under the Grasse. Second, twice as many of the officers serving under Rochambeau compared to those serving under De Grasse became members of the "Jacobin Club of Paris", a revolutionary organization propelling and steering the French Revolution. On the other hand, individual-level evidence of soldiers participating in the French Revolution is scant, and except for a few anecdotes, these ordinary soldiers' actions during the Revolution are lost to the historical record. Yet, our methods can uncover the aggregate effects of these individuals, nevertheless bringing their efforts out of the shadows of the historical method.

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 casual 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.[1] 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.

An alternative interpretation emphasizes the role of veterans in organizing collective political action rather than their exposure to different ideas and institutions.[2] For instance, Jha and Wilkinson (2012) document that combat experience in WWII increased organizational skills among South Asian veterans. As part of an ongoing book project, Jha and Wilkinson make a similar argument for the context of the American combatants and the French Revolution. While their analysis of the conditional correlation between Rochambeau's soldiers and some of the outcomes considered in our paper was presented in 2019, before our independent work on this, they did not consider either of the placebos employed in our paper. Our first public presentation in May 2022 and our subsequent working paper (Ottinger and Rosenberger, 2023, first circulated in February 2023) are, therefore, the first to consider both the soldiers who were intended to sail to the United States but did not, as well as those who fought in the same battle but were stationed in the Caribbean as placebos. In a working paper, Jha and Wilkinson (2023, first circulated in March 2023) now also exploit the first placebo – the soldiers who did not sail. They emphasize the role of organizational skills and their interaction with access to new ideas. Our results exploiting the second placebo group of soldiers who fought in the same battle but were stationed in the Caribbean before and after (not considered by Jha and Wilkinson) suggest that organizational skills on their own appear not to drive the outcomes considered in this setting.[3]

Our findings also relate to Aidt and Franck (2015), who document that local riots in

[1] 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.

[2] Given our historical setting, it is also implausible that another alternative interpretation analogous to Cagé, Dagorret, Grosjean, and Jha (2021) could explain our results. They show in the context of the French Vichy regime 1940–44 how a former general-turned-politician influenced the political behavior of his former troops. We provide more detail in section 7.2.

[3] 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.

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).[4]

Our findings further inform nascent literature in economics studying the trans-Atlantic transfer of political ideas and ideals embodied in people.[5] 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).[6] 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 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

[4]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.

[5]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.

[6]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.

complementary one of Dippel and Heblich (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).[7] 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).[8] 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.[9] 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.

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

[7] 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; Chambru, Henry, and Marx, 2021).

[8] Chambru (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.

[9] 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.

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.[10] 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 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

[10] 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.

point the French king canceled the left-behind troops' mission.[11]

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 1782 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).[12] The great majority of French combatants—around 80% according to our estimates—returned home to France in 1783.[13]

[11]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.

[12]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.

[13]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 dischargees were primarily from the Deux-Pont infantry regiment, which was a German foreign legion in the French army,

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).[14] 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 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.[15] Officers were also invited to "endless balls" and receptions where they mingled with locals (Scott, 1998). In addition,

and from the Lazun's Legion cavalry battalion (cf. Scott, 1998).

[14] "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).

[15] 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.

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.[16] 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 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

[16]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 Françoise" 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).

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 14 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.[17] 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 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

[17] 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.

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.[18]

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. Despite the fundamental problem that the absence of evidence does not imply evidence of the absence, it has generally been concluded that American combatants played no relevant role.

The first historian to observe a positive spatial correlation between the incidence of American combatants and anti-feudal revolts in 1789, McDonald (1951) argued that French soldiers with agricultural background were particularly impressed by greater peasant prosperity, a more equal distribution of land, and the absence of feudal institutions in the United States. Godechot (1956) criticized in reply that the positive correlation could be driven by region characteristics, citing besides others general economic hardship that could have increased both army enlistment and the incidence of revolts. Our empirical strategy addresses these and similar concerns by (i) controlling for determinants of army enlistment and (ii) using a placebo design to exclude the influence of unobserved region characteristics.

Studying the experience of the American combatants in more detail, Scott (1979, 1998) failed to establish systematic individual-level evidence on the combatants' involvement in anti-feudal revolts. Based on the absence of such evidence, and combined with an apriori judgment that the American combatants were "too few" to have mattered as a group, Scott rejected MacDonald's hypothesis.[19] Despite the apparent problems with this conclusion—making quantitative statements based on qualitative evidence and confusing the absence of evidence with evidence of absence—, many although not all) historians accepted Scott's

[18]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.

[19]Beyond the obvious problems with this conclusion, it is also puzzling in light of the convincing evidence he himself provided on how the American experience shifted the combatants' views regarding liberty and equality.

conclusion that American combatants were not relevant to the French Revolution.[20]

The key limitation of Scott's historical approach was that many of the *soldiers* are essentially lost to the historical record (in contrast to the noble *officers*). While the soldiers were serving in America, the regimental books provided a rich source both for the historical method and the empirical method (section 4 explains in detail what data we can observe in the regimental books). However, after being discharged from the army upon the return from America to France, it becomes virtually impossible to track the *soldier* veterans systematically because they neither wrote diaries or letters nor did they systematically leave traces in other historical sources (on the general problem this poses for historians, see Bois, 1981). Moreover, anti-feudal revolts are particularly ill-suited for a historical case study because, except for the storming of the Bastille, no "list of participants" has ever been drawn up for these revolts.

Our paper not only overturns Scott's (1979, 1998) negative conclusion but also broadens the argument by showing that the impact of American combatants went beyond anti-feudal revolts. In particular, we show empirically that, rather than being "too few to matter", the American combatants did have a quantitatively sizeable impact on anti-feudal revolts in 1789 and several other measures of support for revolution (in particular, section 5). Moreover, we provide novel historical and individual-level evidence for the personal involvement of American combatants in the revolution, focusing on outcomes like membership in revolutionary societies or enrollment in the revolutionary army (section 8.4).

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

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

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.[21] 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.[22]

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 (Ministère des Affaires Étrangères, 1903; Dawson, 1936). Moreover, the list has been digitized by hobby genealogists and is available online.[23] 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

[21] 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.

[22] The second infantry regiment that stayed behind was the German infantry regiment of Anhalt/Salm-Salm, a foreign legion.

[23] See 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.

promotions.[24] 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.[25] 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, 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,

[24] 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.

[25] 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).

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 Seine) 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 departement level on (i) geography and climatic shocks, including the departement'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:

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

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. 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.[26]

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. As we show in Appendix B.4, our results are almost identical if we only consider combatants that survived the conflict and returned back to France. There, we also provide evidence suggesting that the results are driven by combatants who were discharged or retired from military service after returning to France. While we cannot observe where the 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.[27]

[26] In presence of zeros, we calculate it as ln (variable + 1). In Appendix Table A.10, we show that using the inverse hyperbolic sine delivers very similar results. In general, the logarithmic specification is appropriate because, as we document in Section A.3, the distributions of both primary outcome and primary explanatory variables are highly skewed but become closer to normal distributions after the logarithmic transformation.

[27] In particular, we assume that veterans who retired or were otherwise discharged between 1783 and 1789 were more likely to go to their home regions than to go anywhere else randomly. The assumption is plausible in the specific context due to 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), it needed the nation-building

Our baseline sample is 81 départements of mainland France in the borders of 1789. We exclude four départements which were not yet part of France.[28] We also exclude two départements in the predominantly German-speaking Alsace (Bas-Rhin, Haute-Rhin) because we do not have good data on combatants from there.[29] In Appendix A.9, we document robustness to extending the sample to these excluded départements.

Throughout, we include 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 (département Seine). Thus, β 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).

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 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

program of the nineteenth century to homogenize regional cultures into what is today known as "French."

[28]These are the départements Vaucluse (Avignon, Papal state), Mont Blanc (Savoy, Italy), Mont Terrible (Belfort), and Alpes-Maritimes (Nice).

[29]Rochambeau chose two German "foreign" legions infantry regiments for the Special Expedition, which likely recruited heavily in Alsace. The Deux Pont regiment was part of the first army and participated in the full campaign. The Anhalt/Salm-Salm regiment was part of the second army and should have participated but never arrived in the U.S. 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.

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 departement 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 Revolts: Placebo Outcomes, Spatial Disaggregation, and Timing

Before we advance a causal interpretation in the next section, we perform auxiliary analyses for one of our outcomes that permits doing so: *anti-feudal revolts*. Exploiting temporal and spatial variation as well as placebo outcomes, we show that the association of Rochambeau combatants and revolutionary activity holds at finer spatial units of analysis, is specific to revolts targeting feudal property rights instead of reflecting generalized violence, and only emerges in 1789.

We start by considering placebo revolts. Column 1 of Table 2 replicates column 1 of Table 1, showing that Rochambeau's soldiers had a sizable association with anti-feudal revolts from 1789 to 1792. Columns 2 and 3 shows that we fail to document a similarly sizable or significant association between Rochambeau's soldiers and other types of revolts—subsistence revolts (from 1789 to 1792) or the "Great Fear panics" (of 1789). This suggests that the effect of Rochambeau's soldiers is exclusive to revolts targeting the feudal system and not resulting from generally increased violence due to the Rochambeau soldiers returning to or coming from more violent places in the first place.

Columns 4 and 5 of Table 2 document that our results relating to anti-feudal riots also hold at more granular levels of spatial disaggregation. The baseline analysis is conducted at the level of historical regions—the 79 départements—primarily for reasons of data availability. To understand whether these conditional correlations hold at more disaggregated levels, we draw on modern administrative boundaries and leverage that data on revolts is available with detailed information on their exact location. Similarly, we matched the soldiers to villages that can be geolocated precisely as well. Hence, we aggregate the conflicts and Rochambeau's soldiers to the level of two *current day* administrative divisions of France—départments and

arrondissements.[30] We first replicate the analysis for modern départements in column 4. Note the similarity of coefficients, standardized beta, and incremental R^2 to our baseline specification at historical départments, although here, we cannot control for the presence of infantry or cavalry garrisons. Then, we proceed to an analysis at the arrondissement level, of which there are over three hundred. Our baseline association between Rochambeau's soldiers and anti-feudal conflict is similarly robust at this more granular level of geographic units.

Appendix B.2 documents that there is a similarly sizable and significant association between Rochambeau's soldiers and both early political societies and volunteer battalions across the 300 (modern-day) arrondissements.

Next, we inquire into the timing of Rochambeau's combatants' effect. In particular, we estimate a dynamic difference-in-difference model using the outcomes of anti-feudal and subsistence revolts, for which we have sufficiently detailed temporal variation. We find that the effect underlying our cross-sectional estimate in Table 1 is entirely driven by a spike in anti-feudal revolts in 1789 when the French Revolution started.

Specifically, we use the time variation in anti-feudal and subsistence revolts to estimate the following empirical specification in a department–year panel:

$$y_{i,t} = \sum_{\tau=1780}^{1794} \beta_\tau \ln \text{Rochambeau}_i \times 1(t = \tau) + \gamma \sum_{\tau=1780}^{1794} X_i \times 1(t = \tau) + \mu_t + \mu_i + \varepsilon_i \tag{2}$$

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 1794).[31] We similarly interact our baseline controls with year dummies, further include year (μ_t) and département (μ_i) fixed effects, and employ robust standard errors.

Figure 4 presents estimates of the β_t's for two outcome variables $y_{i,t}$: anti-feudal revolts and subsistence revolts. We find that anti-feudal revolts only spike in the year 1789 and find no evidence of a comparable spike in subsistence revolts in the same or any other year. This strongly suggests that Rochambeau's soldiers were not just hailing from départements with inherently more anti-feudal sentiments or that they brought a mere taste for violence from their military experience, as already suggested by the placebo revolts employed earlier. Rochambeau's soldiers did not increase all types of conflict—even in the year of Revolution 1789—, but only those anti-feudal revolts directed against the economic system of feudalism.

[30] The data on modern administrative borders of France comes from the GADM database, and is available under www.gadm.org.

[31] 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).

This further suggests that Rochambeau's soldiers did not instigate conflict before the national political environment, and bad harvests in 1788 made political change possible. 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).

6. Identification: The Regiment That Never Sailed

In this section, we argue that the previous section' 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.[32] 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.[33] In sum, we expect that *if* the conditional correlations documented earlier merely reflect selection on unobserved characteristics, we should find

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

[33]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).

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 5 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 5a. 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 5 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:

$$y_i = \beta_1 \ln \text{Rochambeau}_i + \beta_2 \ln \text{NotSailed}_i + \gamma X + \varepsilon_i \tag{3}$$

Table 3 presents results. As before, we start by considering the outcome anti-feudal revolts 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 6 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 3 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.8 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.

Furthermore, Appendix B.3 shows that only Rochambeau's soldiers drive the spike in anti-feudal conflicts in 1789 in the event study, with no such effect present for the placebo soldiers from the not-sailed Neustrie regiment. Appendix B.2 documents that there is similarly no effect of the not-sailed Neustrie regiment soldiers on anti-feudal revolts, early political societies, or volunteer battalions across the 300 (modern-day) arrondissements.

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 why the American experience mattered 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 provided the combat experience and military networks necessary for inciting anti-feudal re-

volts. Furthermore, the combatants were fighting (and winning) against the British monarchy, which might have increased their anti-monarchical sentiment.[34] 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.[35]

7.2. Empirical Specification and Results

We further amend the empirical specification presented in equation (3) by including the log number of combatants from de Grasse's army hailing from each département. Figure 7 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:

$$y_i = \beta_1 \ln \text{Rochambeau}_i + \beta_2 \ln \text{NotSailed}_i + \beta_3 \ln \text{DeGrasse}_i + \gamma X + \varepsilon_i \tag{4}$$

[34] 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.)

[35] 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.

Table 4 presents results across all outcomes, and Figure 8 illustrates the results for the first outcome, anti-feudal revolts. As before, the table follows the structure of the earlier tables 1 and 3 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). [36]

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 thus far 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. The evidence in section 8.1 will corroborate the argument that exposure to different institutions was the main mechanism.[37]

[36] Appendix B.3 shows that only Rochambeau's soldiers drive the spike in anti-feudal conflicts in 1789 in the event study, with no such effect present for the placebo soldiers from De Grasse regiments or the not-sailed Neustrie regiment. Appendix B.2 documents that there is similarly no effect of the De Grasse soldiers on anti-feudal revolts, early political societies, or volunteer battalions across the 300 (modern-day) arrondissements.

[37] 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.

7.3. Ruling out Loyalty to Rochambeau as Alternative Mechanism

Another alternative explanation holds that the American combatants might have primarily followed the guidance of their former general when supporting the revolution out of loyalty, analogous to an argument by Cagé et al. (2021) in the context of the French Vichy regime 1940–44. At first sight, such a mechanism may seem possible because General Rochambeau was generally supportive of the French Revolution, at least up to 1792.[38] However, several features of our historical setting make it highly implausible that such a comparable mechanism could underlie our results.

First, unlike General Pétain, who became the political leader of the right and eventually the head of the Vichy regime, General Rochambeau was not involved in politics during the revolution. While supportive of the abolition of feudal privileges and the transformation of France into a constitutional monarchy, he never declared his political opinions publicly. Even if Rochambeau had become involved in politics, modern media would not have existed to communicate his opinions widely to former officers and soldiers. (In 1789, newspapers were still in their infancy in France.) This contrasts starkly with the more modern setting of Pétain, who could rely on not only newspapers but also the radio, through which he could easily rally the support of his followers.

Second, while General Rochambeau did approve of political change, he clearly disapproved of violence as a means of achieving it. As Markoff (1996a) showed, the often-times violent anti-feudal revolts during the spring and summer of 1789 established the abolition of feudalism as a fact in the countryside even before it was politically approved by the General Estates in Versailles. Targeting landed aristocrats, these revolts directly attacked the social class Rochambeau belonged to. In fact, during the 'hot summer' of 1789, General Rochambeau was tasked with policing the widespread riots and revolts with military force in Alsace (Luce de Lancival, 1809, 349–62). Thus, if the loyalty mechanism were present, it would work against us and predict *less* anti-feudal revolts.

Finally, episodes of (dis-)obedience suggest that the American combatant soldiers' loyalty to their officers and generals was conditional on the superiors supporting the revolution. In an episode of obedience, soldiers from Rochambeau's Bourbonnais and Saintogne regiments were disproportionally less likely to desert than soldiers from other regiments during the military buildup around Paris in June–July 1789 (Scott, 1998, 136). Considering that Saintogne's colonel, Prince de Broglie,[39] was one of a handful liberal nobles who supported the cause of revolution

[38]Note that this alternative explanation would already grant that the experience of different ideas and institutions 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.

[39]Serving in America under Rochambeau from January 1782, de Broglie was neither stationed in Newport

in the General Estates, it is no surprise that the troops showed loyalty. Different from soldiers of other regiments, the American combatants could be certain that their officers would not lead them to quell the revolution. The obedience exerted in 1789 contrasts with a memorable episode of disobedience in early 1791, during which soldiers from Rochambau's Soissonais regiment deserted *en masse* on the mere rumor that their lieutenant-colonel d'Espéyron[40] would want to return Avignon to the Pope and thus the counter-revolutionaries (Susane, 1876a, 15).[41]

In sum, the evidence underscores that in so far as officers and soldiers were acting unisono during the revolution, it was because their political attitudes were aligned—which resulted not to a small degree from their common experience of American revolutionary ideas and institutions.

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 four suggestive pieces of evidence of how this happened. We first find that soldiers and officers drive different proxies of support for the Revolution, each according to their ability. Second, 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. Third, we show that our results are entirely driven by soldiers who returned to France, particularly those who were discharged from the military before the French Revolution. Finally, we present individual-level evidence of how officers and soldiers became involved in the Revolution.

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

nor participated in the siege of Yorktown, but nevertheless spent several months in some of the most liberal places in the U.S., including Philadelphia and New England.

[40]Pierre d'Espéron was not part of Rochambeau's Special Expedition to America.

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

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.[42] 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).[43]

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 baseline controls and use robust standard errors to estimate:[44]

$$\begin{aligned} y_i = \delta_1 \ln \text{Rochambeau officers}_i + \delta_2 \ln \text{Rochambeau soldiers}_i \\ + \beta_2 \ln \text{NotSailed}_i + \beta_3 \ln \text{deGrasse}_i + \gamma X_i + \varepsilon_i \end{aligned} \tag{5}$$

Table 5 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

[42]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: *laboureurs*, 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 disproportionally from agricultural backgrounds in previous generations.

[43]Appendix A.2.1 provides additional justification for grouping together commissioned and non-commissioned officers.

[44]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 $\rho = 0.65$).

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, $\ln \text{Rochambeau}_i$:

$$y_i = \eta_1 \ln \text{Rochambeau}_i + \eta_2 \ln \text{Rochambeau}_i \times \mathbb{1}(C_i > \tilde{C}) + \eta_3 \mathbb{1}(C_i > \tilde{C}) + \gamma X_i + \varepsilon_i \quad (6)$$

Table 6 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 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 precipi-

tation 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.

8.3. Returning and Discharged Soldiers drive the Baseline

In our baseline specification, we considered the combatants of each army that were sent to the United States (or intended to be sent). This allowed a clean intention-to-treat interpretation of our result. In Appendix B.4, we document that our baseline effect is driven by Rochambeau combatants that returned to France and were discharged from the military before the Revolution. Table A.5 shows that our results are stronger when we only consider the combatants of Rochambeau that returned. Table A.6 documents—for one regiment for which we have information on which combatants were discharged or retired from the military until 1786—that it is combatants who were discharged from the military and likely returned back to their homelands driving the baseline result. Finally, Table A.7 shows that results are identical when we exclude the two departments where Rochambeau's regiments were stationed on the eve of the Revolution.

These additional exercises suggest that our results are not driven by the soldiers of Rochambeau's army still serving in the military when the Revolution started.

8.4. Individual-level Evidence

One final question is whether individual-level evidence exists that documents whether exposure to the U.S. and New England made French officers and soldiers revolutionaries. In this section, we first review rich anecdotal evidence illustrating how both French officers and soldiers who had experienced the U.S. supported the revolution. Then, we present novel individual-level evidence on officers' differential membership in the most important political society of the Revolution. Concluding this section, we discuss the problem that soldiers–

turned–revolutionaries remain lost to history due to the absence of historical sources, noting that the empirical method employed in this paper can nevertheless uncover their impact.

The first set of anecdotal evidence involves ten officers from the American campaign who became elected deputies to the General Estates for the nobility. As the deliberations and voting in the General Estates are well documented, it is easy to discern their political affiliation as liberal (in favor of revolution) or royalist (against the revolution). Table A.11 documents that officers–deputies were more likely to be affiliated with the liberals if they were stationed in the United States under Gen. Rochambeau for an extended period compared to those officers who had fought in the Siege of Yorktown but did not otherwise experience the U.S. 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.

The group of liberal Rochambeau's officer–deputies seems small, but it may have been decisive nonetheless. Only a small group of noble "defectors" joining the Third Estate were required to shift the political equilibrium in the General Estates towards the pro-revolution camp. What is more, one of Rochambeau's officer–deputies, the Vicomte de Noailles,[45] initiated the revolutionary Night of August 4 during which nobles voluntarily renounced their feudal rights.

The second set of anecdotal evidence comprises several "acts of revolution" by soldiers who experienced the U.S. under Rochambeau. It is known 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).[46] Also, more than a dozen former soldiers under Rochambeau enlisted in the Parisian National Guards at a time when the decision represented a clear commitment to the cause of the Revolution (Scott, 1998, 137). Another striking episode was already referred to earlier (see section 7.3) when soldiers from Soissonais deserted in disobedience based on rumors that their lieutenant colonel would collaborate with the counter-revolution. As it turned out, the 89 deserting soldiers formed the nucleus of an army of revolutionaries in the Vaucluse département, led by no other than

[45]Vicomte de Noailles served under Rochambeau as colonel-in-second in Soissonais during the Special Expedition.

[46] The evidence exists because, being a key event of the Revolution, its participants were later commemorated as heroes. Lists of the *Vainqueurs de la Bastille* were drawn up respectively but are studded with mistakes, not least to the absence of orthographic rules of spelling last names. The modal conqueror of the Bastille was a carpenter living in the neighboring Paris faubourg. The non-Paris, non-carpenter conquerors notably also comprise two foreigners who had participated in the Geneva Revolution of 1782 (Godechot, 1970).

Mathieu Jouve Jourdan, also known as "Jourdan head cutter" (Susane, 1876a, 15).

Beyond this anecdotal evidence, we uncovered more systematic, direct evidence that officers serving under Rochambeau became involved in the revolution by focusing on the *Société des Amis de la Constitution* of Paris—informally known as Jacobin Club of Paris. A key organization in propelling and steering the French Revolution, the Jacobin Club of Paris occupied a central position by both shaping politics and policy in the Constitutional Assembly in the capital while at the same time maintaining communication with the (by late 1790) hundreds of provincial Jacobin Clubs associated with the mother society. We manually identified officers serving under either Rochambeau or de Grasse among the 1100 members listed in December 1790.[47] As Table 7 shows, 10 percent of the 241 officers serving under Rochambeau (and thus experiencing U.S. and New England firsthand) became members of the Jacobin Club of Paris in Dec 1790. In contrast, only 4.8 percent of the 208 officers serving under de Grasse (and thus not experiencing New England firsthand) became members of this revolutionary society.

Concerning the soldiers, however, it appears that most who became revolutionaries are lost to history. In particular, for those who were discharged from service and returned to their homes in the provinces before 1789, it appears a Herculean challenge to document systematic, direct individual-level evidence for their involvement in the year of revolution 1789. The absence of "lists of participants" is especially salient for the outcome of anti-feudal revolts, which were among the first instances of revolutionary insurrection of common people across the country. Neither were these revolts in any systematical way policed nor would the participants voluntarily draw up such lists for fear of retribution.[48] Nevertheless, the sum of empirical evidence provided in this paper strongly implies that these veteran soldiers did have an important impact on the course of the French Revolution. Contrary to the historical method, which is inhibited by the lack of such historical sources, this paper's empirical method is capable of uncovering their influence.

[47] Membership is based on the list printed in Paris, December 21, 1790, on behalf of the *Société des Amis de la Constitution*. (Scans are accessible via Google Books, HathiTrust, and others.) According to our knowledge, this is the earliest extant and complete membership list. We linked officers primarily by surname, adjusting for spelling differences and retaining only unambiguous matches. Note that, in 1790, "passive citizens"—those below the wealth threshold, a group to which the vast majority of regular soldiers belonged—were excluded from membership.

[48] If one views the Storming of the Bastille as an anti-feudal revolt, it was the exception to the rule. This single event was (and still is) commemorated by a holiday on July 14th, and by awarding medals of honor to the *Vainqueurs de la Bastille* (see also footnote 46).

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 sizable 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

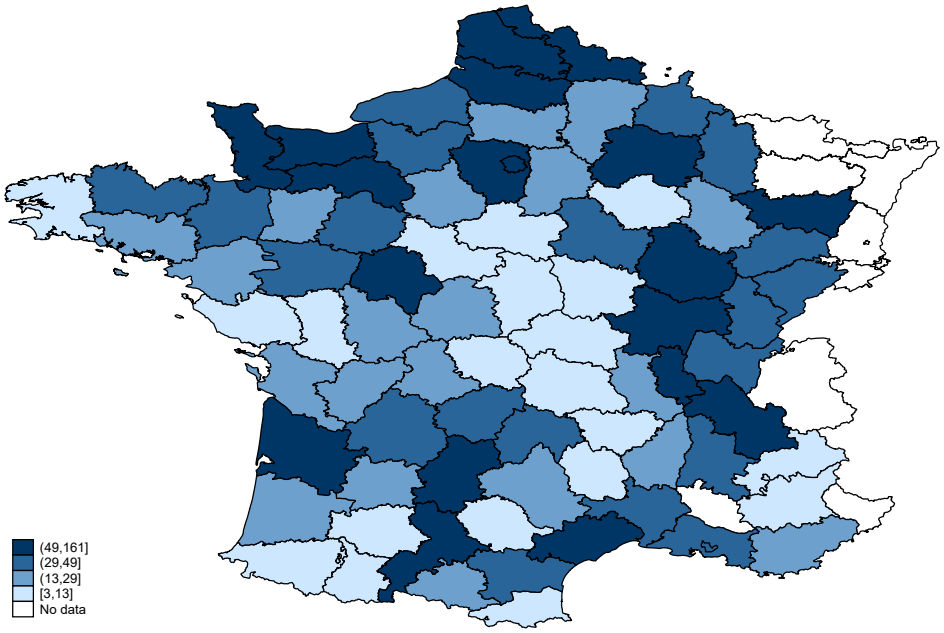

Figure 1: French Origins of Rochambeau's Combatants

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

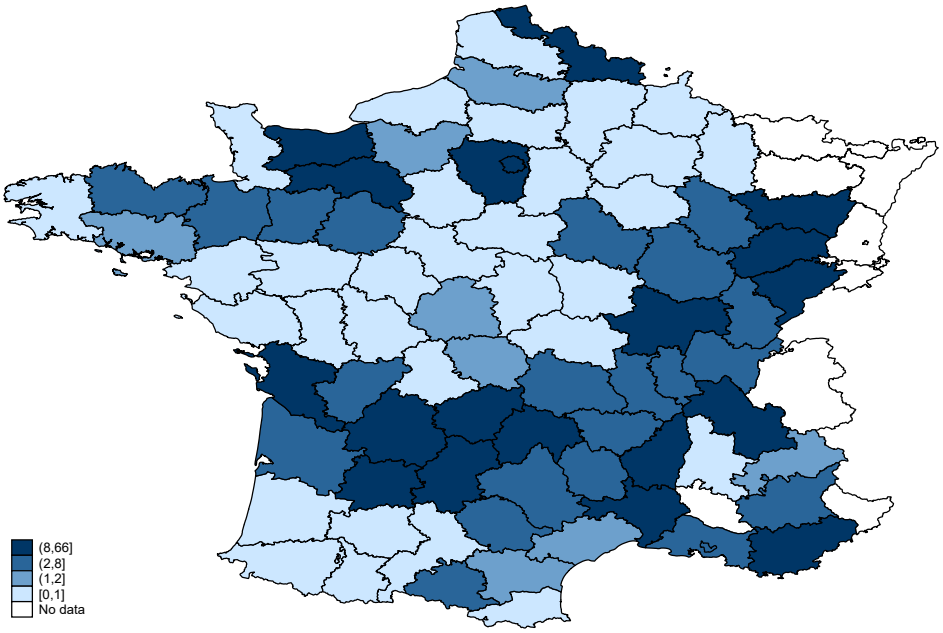

Figure 2: Anti-Feudal Revolts Across French Départments

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.

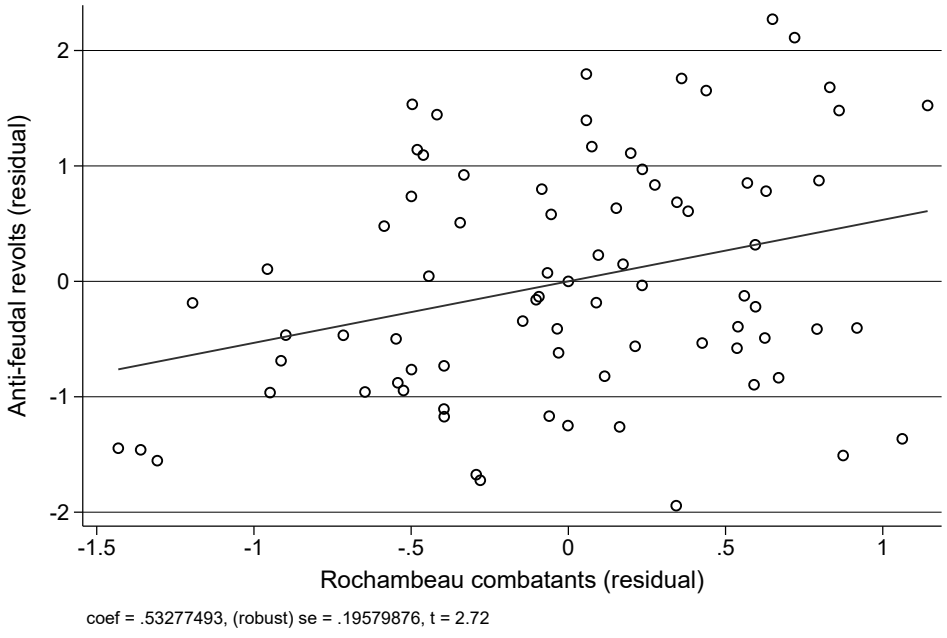

Figure 3: Rochambeau Soldiers and Revolutionary Revolts

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/dept. Seine).

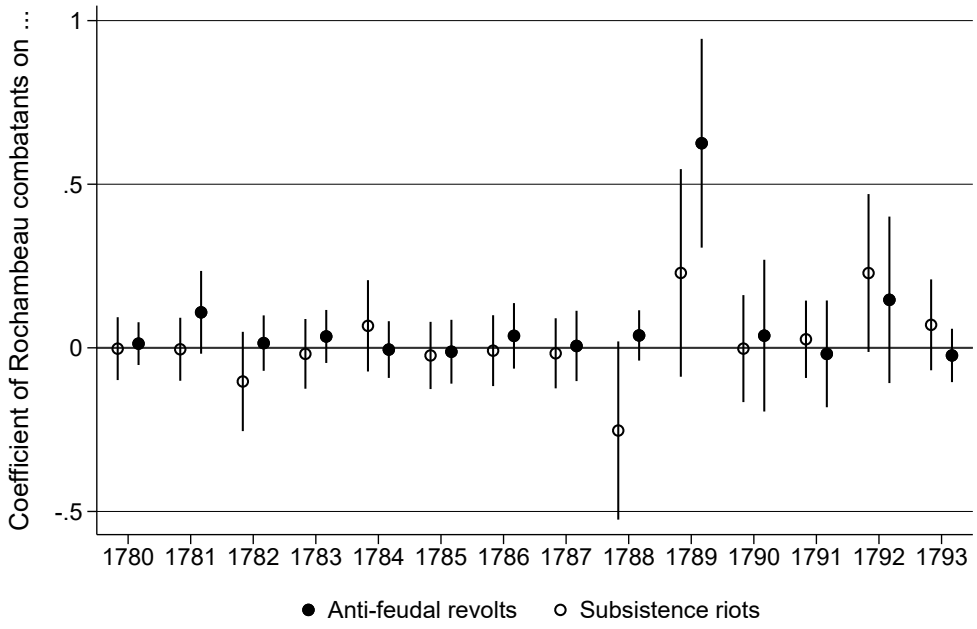

Figure 4: Event-study Estimates of Rochambeau's Soldier on Revolts

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 β_τ coefficients from equation 2 for two outcome variables, anti-feudal and subsistence revolts.

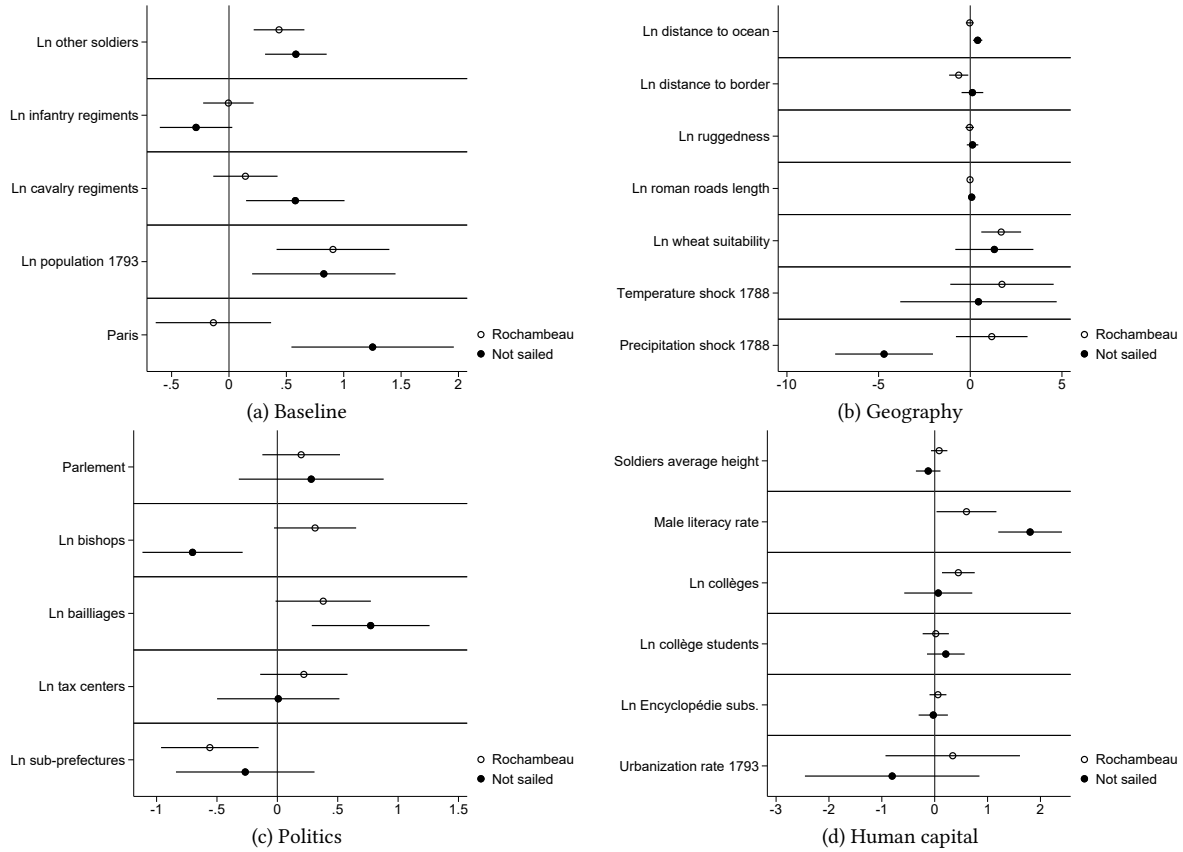

Figure 5: Balance of Treatment and Placebo

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

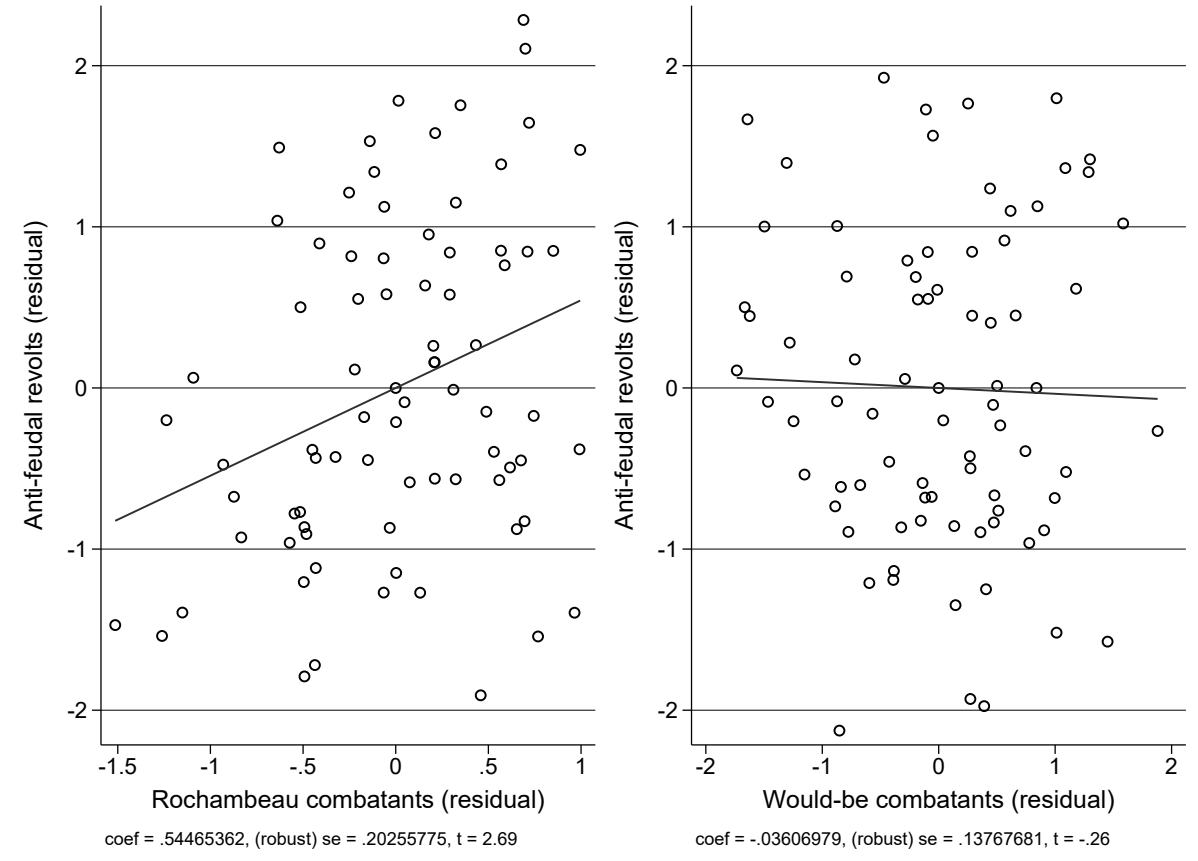

Figure 6: Not Sailed Combatants (Placebo) and Anti-Feudal Revolts

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 départments (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 départments (right panel). Each of the scatter plots shows correlations across French départments, conditional on our baseline controls and the of number of soldiers from the respective other regiments.

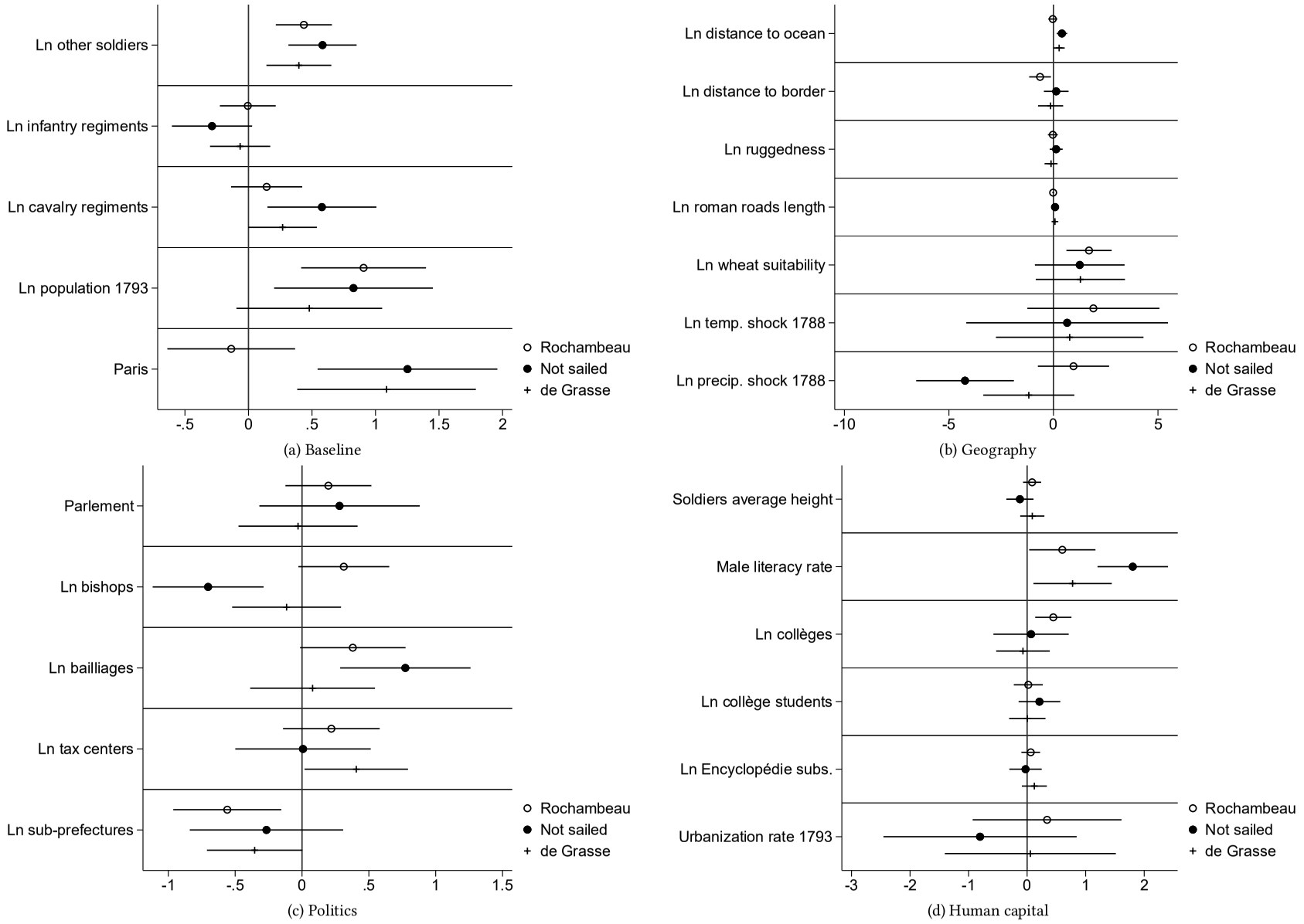

Figure 7: Balance of Treatment, Placebo, and Alternative Treatment

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 department-level characteristics. We show coefficients of regressing the number of each of these soldiers hailing from a department on several observable characteristics of these departments. Panels (a) to (d) document this for our baseline controls, geographic, political, and human capital characteristics.

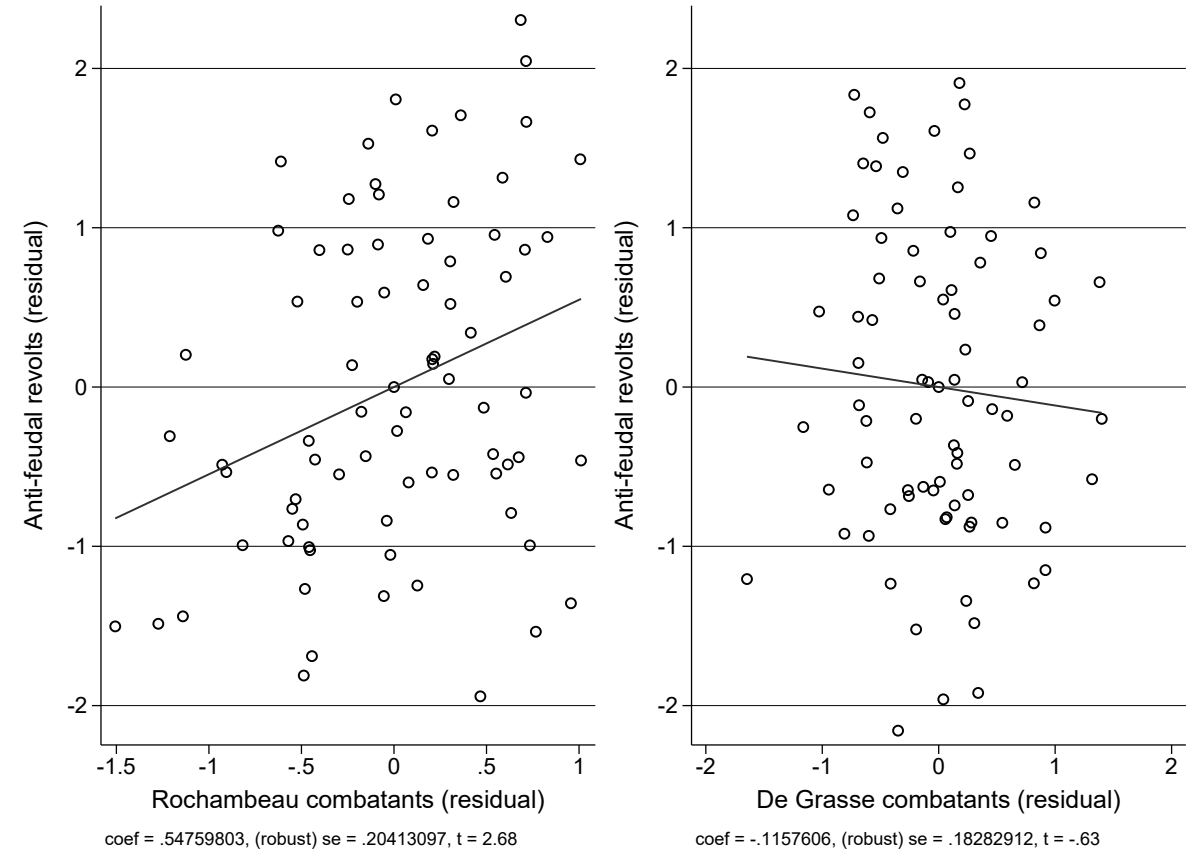

Figure 8: Two Experiences in the American Revolutionary War

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 départments (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 départments (right panel). Each of the scatter plots shows correlations across French départments, 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***	0.268**	0.314***	0.287**
	(0.191)	(0.119)	(0.093)	(0.118)
Baseline controls	✓	✓	✓	✓
N (Obs = département)	79	79	78	63
R^2	0.16	0.29	0.46	0.28
Partial R^2 (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/dept. Seine). Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2: Revolts: Placebo Outcomes and Spatial Disaggregation

	Dep. variable: ln [revolts]			
	Placebo outcomes		Finer spatial units	
	(1) Subsistence revolts	(2) Great Fear panics	(3) Anti-feudal revolts	(4) Anti-feudal revolts
Ln Rochambeau combatants	0.228	0.030	0.486**	0.259***
	(0.185)	(0.064)	(0.186)	(0.069)
Baseline controls	✓	✓	✓	✓
N (Obs = département)	79	72	89	302
R^2	0.15	0.15	0.18	0.13
Partial R^2 (Rochambeau)	0.02	0.00	0.08	0.06
Std. β (Rochambeau)	0.180	0.079	0.415	0.333

The table shows that the conditional correlation of Rochambeau's combatants is exclusive to revolts targeting the feudal system and holds across arrondissements. Theregressions are run at the level of historical départments (columns 1 and 2), modern départments (column 3), and modern arrondissements (column 4) and include the baseline controls at the corresponding level (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate in 1793, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Combatants that did not sail to America (placebo)

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau combatants	0.584***	0.313**	0.298***	0.369***
	(0.199)	(0.120)	(0.092)	(0.120)
Ln not sailed combatants	−0.058	−0.157*	0.055	−0.233***
	(0.141)	(0.082)	(0.058)	(0.086)
Baseline controls	✓	✓	✓	✓
N (Obs = département)	79	79	78	63
R^2	0.16	0.33	0.46	0.36
Partial R^2 (Rochambeau)	0.11	0.09	0.13	0.13
Partial R^2 (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
p 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/dept. Seine). p Rochambeau = Notsailed reports the *p*-value of an F-test for the equality of coefficients on Rochambeau combatants and not sailed combatants. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: 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***	0.311**	0.294***	0.369***
	(0.200)	(0.121)	(0.090)	(0.121)
Ln not sailed combatants	−0.036	−0.166*	0.032	−0.229**
	(0.150)	(0.094)	(0.065)	(0.095)
Ln de Grasse combatants	−0.092	0.041	0.091	−0.017
	(0.181)	(0.120)	(0.082)	(0.118)
Baseline controls	✓	✓	✓	✓
N (Obs = département)	79	79	78	63
R^2	0.16	0.33	0.47	0.36
Partial R^2 (Rochambeau)	0.11	0.09	0.13	0.13
Partial R^2 (Notsailed)	0.00	0.05	0.00	0.10
Partial R^2 (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
p Rochambeau = Notsailed	0.025	0.002	0.031	0.001
p 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/dept. Seine). p Rochambeau = …reports the *p*-value of an F-test for the equality of coefficients on Rochambeau combatants and placebo combatants. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: 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	0.289**	0.272***	−0.194
	(0.235)	(0.142)	(0.099)	(0.130)
Ln Rochambeau soldiers	0.502*	0.138	0.136	0.466***
	(0.254)	(0.154)	(0.091)	(0.114)
Ln not sailed combatants	−0.028	−0.134	0.062	−0.267***
	(0.153)	(0.090)	(0.063)	(0.095)
Ln de Grasse combatants	−0.100	0.041	0.091	−0.029
	(0.181)	(0.120)	(0.080)	(0.115)
Baseline controls	✓	✓	✓	✓
N (Obs = département)	79	79	78	63
R^2	0.16	0.36	0.50	0.39
Partial R^2 (Officers)	0.00	0.07	0.07	0.01
Partial R^2 (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
p 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/dept. Seine). 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 6: Heterogeneity results

	Aristocracy		Enlightenment	Famine		Idea access	
	(1) X = Parlement	(2) Royal tax	(3) Subscribers	(4) Temp. shock	(5) Prec. shock	(6) Markets/fairs	(7) Post houses
Panel A	Dep var: ln anti-feudal revolts						
Ln Roch. combatants	0.575***	0.834***	0.678***	0.315	0.381	0.696***	0.651***
	(0.204)	(0.191)	(0.235)	(0.268)	(0.229)	(0.237)	(0.228)
Ln Roch. combatants × (X > median)	0.847***	−0.341	−0.136	0.558*	0.053	−0.165	−0.077
	(0.318)	(0.278)	(0.309)	(0.283)	(0.241)	(0.293)	(0.328)
Indicator (X > median)	−3.298***	0.474	0.079	−1.755**	0.647	0.594	−0.145
	(1.159)	(0.892)	(0.991)	(0.855)	(0.712)	(0.889)	(1.049)
Controls	✓	✓	✓	✓	✓	✓	✓
N (Obs = département)	79	79	79	79	79	79	79
R^2	0.19	0.25	0.19	0.21	0.27	0.17	0.19
Panel B	Dep var: ln early political societies						
Ln Roch. combatants	0.298**	0.311**	0.291**	0.340**	0.195	0.518***	0.393***
	(0.122)	(0.142)	(0.142)	(0.150)	(0.136)	(0.150)	(0.117)
Ln Roch. combatants × (X > median)	0.308**	−0.024	−0.029	−0.107	0.051	−0.292*	−0.121
	(0.145)	(0.162)	(0.159)	(0.195)	(0.176)	(0.169)	(0.167)
Indicator (X > median)	−0.994*	0.139	0.386	−0.004	0.252	1.156**	−0.049
	(0.519)	(0.516)	(0.521)	(0.622)	(0.558)	(0.524)	(0.562)
Controls	✓	✓	✓	✓	✓	✓	✓
N (Obs = département)	79	79	79	79	79	79	79
R^2	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 départments. Their effect is stronger where the aristocracy was strong (in places with parlements, and where the King was weak as measured by fewer royal tax centers) and where access to ideas was scarce. All regressions include as controls the not sailed placebo regiment and baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 7: Officers in the Paris Jacobin Club, 1790

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

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

Online Appendix

The American Origin of the French Revolution

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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.

Contents

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
	Primary outcomes	
Anti-feudal revolts	Attacks on the feudal institution of lordship (*seigneurie*), 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
	Alternative outcomes	
Subsistence revolts	Revolts over the availability or the price of food	Chambru and Maneuvrier-Hervieu (2022)
	Independent variables	
Rochambeau combatants	Infantry officers & soldiers participating in *special expedition* under General Rochambeau: Stationed in U.S. during 1780–82, fighting in Siege of Yorktown	see text
Never sailed combatants	Officers & soldiers chosen for *special expedition* 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 *special expedition* under General Rochambeau	see text
Rochambeau soldiers	Soldiers (rankers and corporals) of infantry regiments participating in *special expedition* under General Rochambeau	see text
	Baseline controls	
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 $\geqslant$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
	Geography	

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)
	Political economy	
Parlement	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 (*recettes des finances*)	see text
Sub-delegates	Seats of administrators below the *intendant*: (mainly) public order jurisdictions	see text
	Human capital	
Average height of soldiers	Average height in cm of enlisted soldiers 1700–89	Komlos et al. (2003)
Male literacy rate	Share of men signing marriage certificates in 1786	Squicciarini and Vogtländer (2015)
Collèges	Public, endowed secondary schools	Rosenberger (2023)
Collège students	Students at public, endowed secondary schools	Rosenberger (2023)
Encyclopédie subs.	Subscribers to *Encyclopédie* by Diderot and d'Alembert	Squicciarini and Vogtländer (2015)
	Economy	
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

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
$\mathbb{1}$: 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
$\mathbb{1}$: *Parlement*	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).

of all French communes and towns in 1793.[1] 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.[2]

Never sailed combatats As a control group, we collect individual-level data from the infantry regiment *Neustrie* from the military archive.[3] In particular, we transcribe the handwritten entries for all the soldiers, their origin, and rank from the relevant pages 4 to 265, in total 2343 soldiers from the regiment book 1776 to 1786. We observe information on 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.[4]

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

[1]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.

[2]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.

[3]The regimental books are digitally accessible online at www.memoiredeshommes.sga.defense.gouv.fr

[4]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.

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).

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.

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

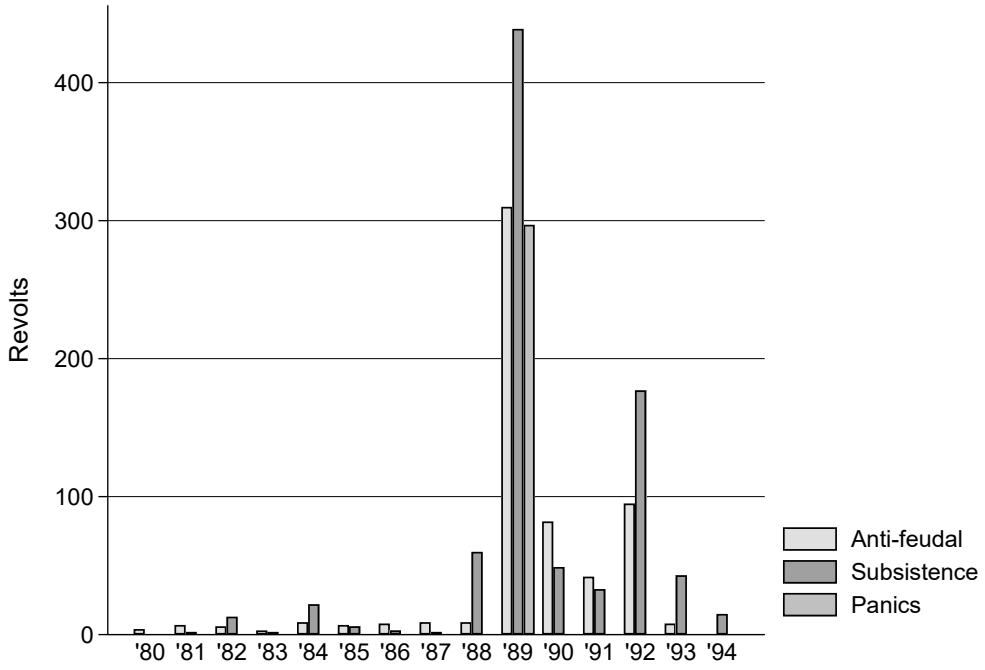

Figure A.1: Incidence of revolts 1783–1794 by type

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.[5] Data at the department level on the total number of political societies over 1789–1794 shows that 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.

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

[5]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. Bibiographie* (Boutier et al., 1992, 114). The book would also have provided a catalog of society registers and membership lists, which may have made it feasible for us to collect systematic data on the intensive margin—how many societies, how many members, per town and by year, etc.

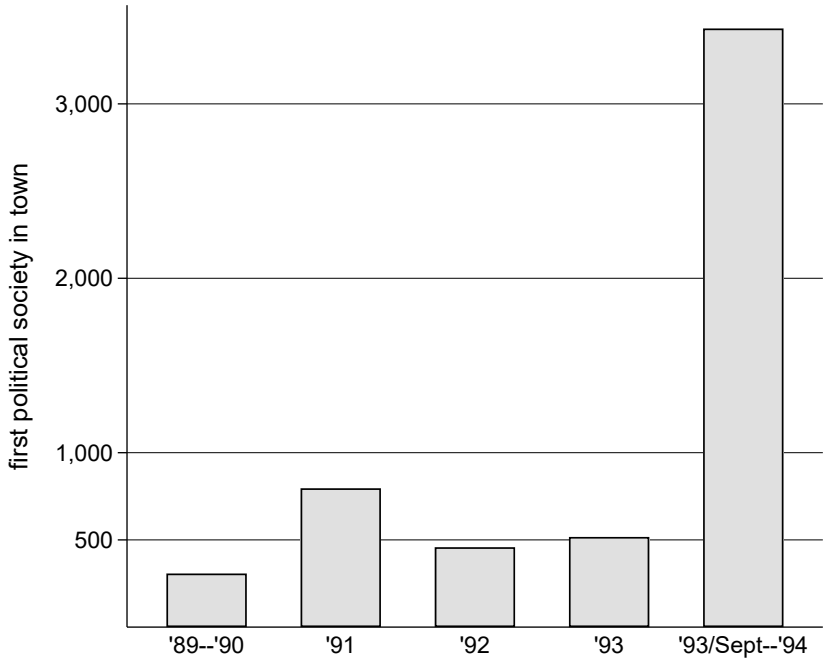

Figure A.2: First establishment of political societies in towns over time

Volunteers was stipulated and regulated by a series of laws in 1791 and 1792. For example, a law of 1791 demanded that every département formed at least one battalion. The battalions were organized very similarly to the regular army, with the key difference being that the higher officer ranks were open to commoners and not reserved for nobles. Importantly, the National Volunteer soldiers of 1791 and 1792 were not conscripted but enlisted voluntarily. Conscription into National Volunteer battalions only started on February 24 1793 when the National Convention decreed to conscript 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 departement-level data from Bertaud et al. (1989) on the number of battalions in January 1793, just before conscription began with the mass levy.[6] 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).

[6]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).

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.[7] Independent of why they emigrated—seeking asylum or being refugees, in modern terms—, emigrants became known as *émigrées* and were politically persecuted during the terror (1973-4), and their (landed) property was expropriated.

We digitize departement-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 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.

[7] 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).

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.[8] 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.

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

[8] *Des villages de Cassini aux communes d'aujourd'hui*, available online http://cassini.ehess.fr/fr/html/index.htm.

data from Pauling, Luterbacher, Casty, and Wanner (2006) for precipation 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.[9] All judges of the *parlements* were members of the nobility. Besides their role as courts, they also had to sign all royal laws before they could go into effect, including laws concerning taxation. By refusing to sign, they could substantially slow down and obfuscate the king's ability to govern without consent. While they did not have veto power over royal laws—the king could summon them and then overturn their decision—, ignoring the *parlements* came at the risk of precipitating a larger political crisis. In total, there were 13 *parlements* across the country, but the Parlement of Paris was by far the most influential.

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

Bailliages Bailliages were old feudal jurisdictions (corresponding to the English *bailiwick*) and concerned with all matters seigneurial. In some parts of the country, they were referred to as *sénechaussée*. Besides their importance for seigneural 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.

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

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

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

A.2.6. Economy

Markets and fairs We digitize data at the department level on the number of markets and fairs 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.[10] 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.

[10] In the baseline, we add one for variables with zeros. Using the inverse hyperbolic sine instead delivers highly similar results.

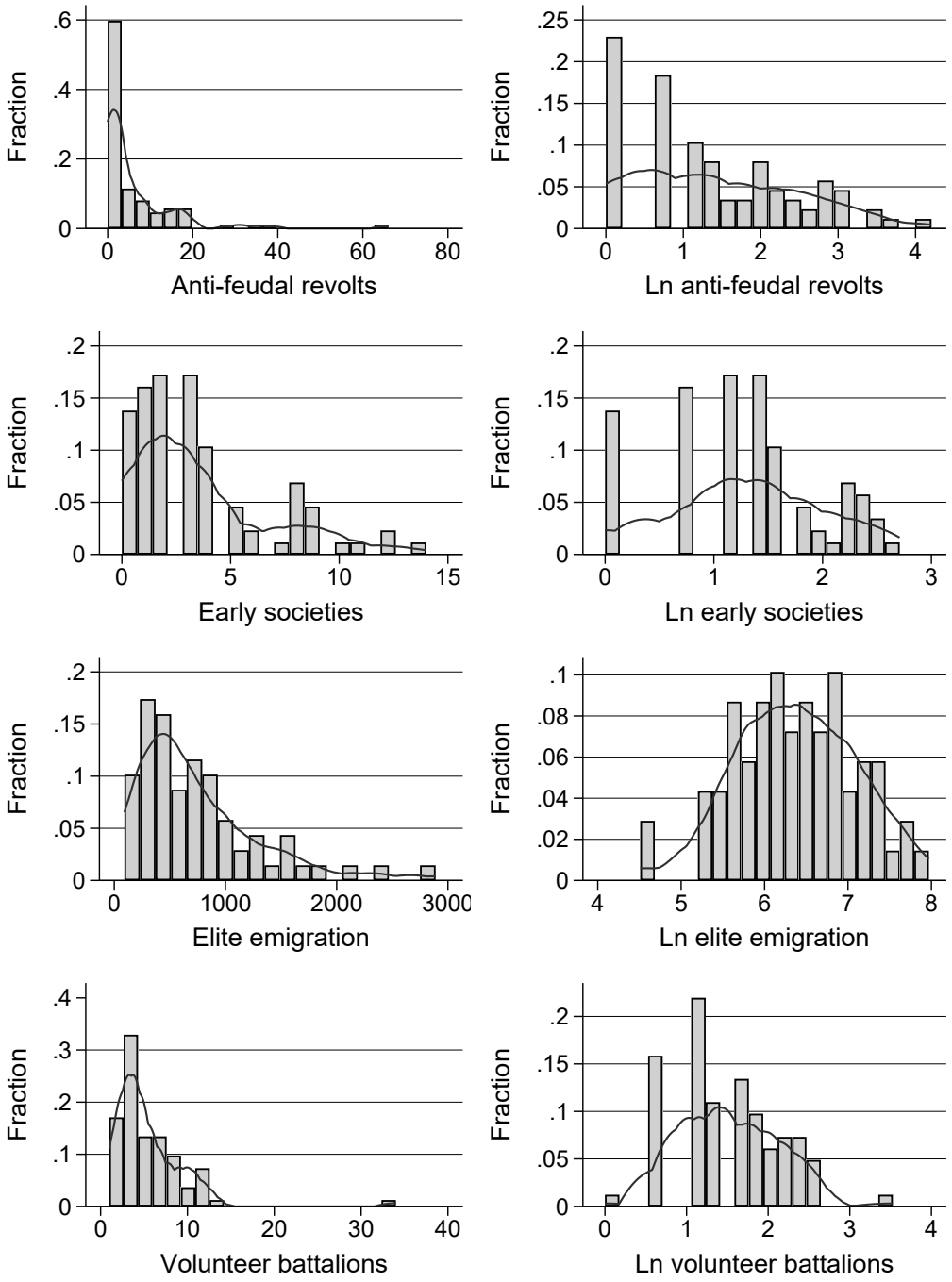

Figure A.3: Log-normal distribution of primary outcome variables

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.

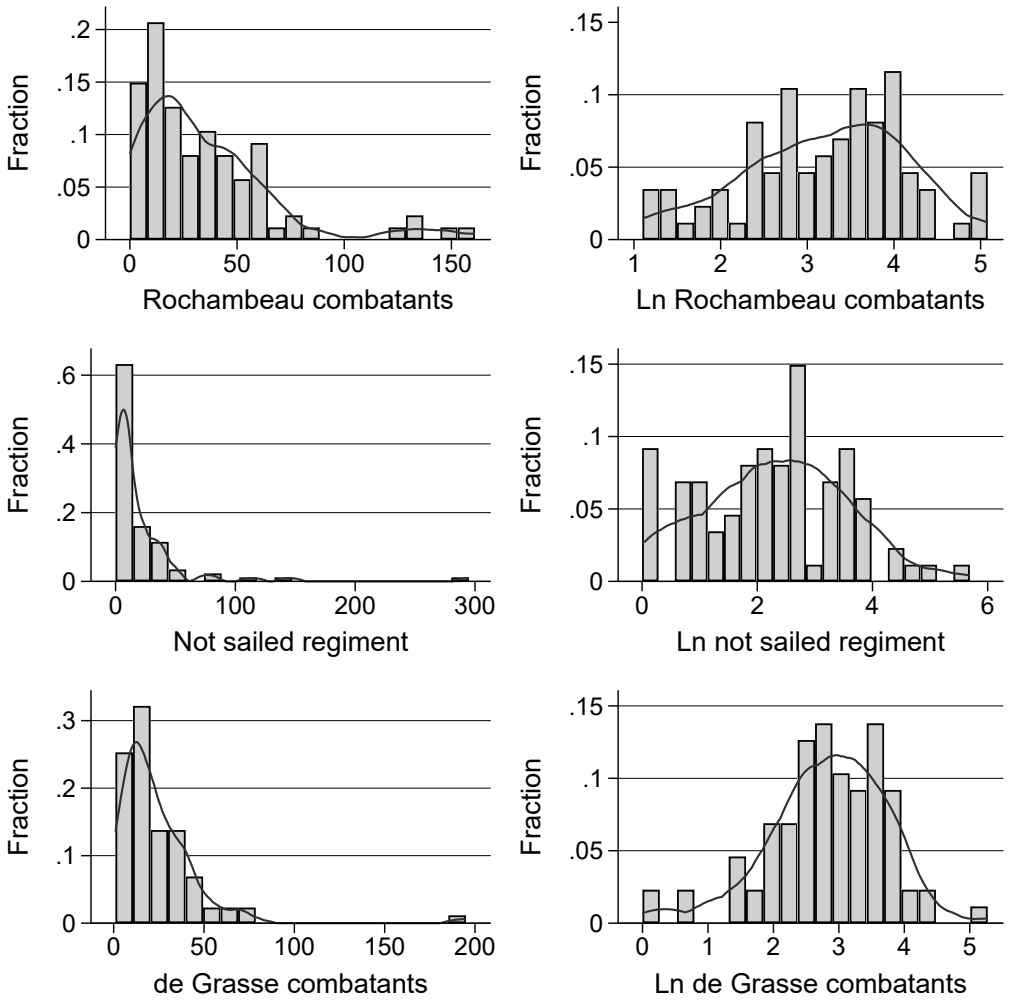

Figure A.4: Log-normal distribution of treatment and control variables

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

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

B.2. Analysis at Disaggregated Administrative Units

In section 5.3 we showed that the conditional correlation between Rochambeau's soldiers and anti-feudal revolts also holds across modern arrondissements. In this section, we show that results are (i) robust for other outcomes available at finer spatial units, and (ii) robust to controlling for soldiers from the two placebo regiments introduced later.

We first repeat the analysis of table 2, now including combatants from the two placebo regiments. Across both modern départements (column 1) and arrondissements (column 2), Rochambeau combatants increase anti-feudal revolts whereas the placebo regiments have neither positive nor significant effect on anti-feudal revolts. As the following columns show, the main results also hold for the establishment of early political societies (columns 3 and 4) and voluntary battalions for the Republican army (columns 5 and 6) at these more disaggregated spatial units.

The finding the effect of Rochambeau combatants is quantitatively weaker at the arrondissement level (columns 4 and 6) suggests the possibility of spatial spillovers from Rochambeau combatants within départements. (In that case, départements would be the correct unit of analysis.) Nevertheless, we can reject the null for the more disaggregated spatial units that their effect is different from the placebo regiments at conventional levels of significance. The only exception is with de Grasse's combatants in column 6, which appear to have a similarly significant and positive effect on voluntary battalions. As this outcome is later—mainly summer and autumn of 1791, while the main action for revolts is in 1789 and for political societies in 1790—it is possible that de Grasse's combatants became "infected" by Rochmbeau's combatants over time at this local level.

Table A.4: Analysis across (modern) départements and arrondissements

	Dep. var.: ln [support for revolution]					
	Anti-feudal revolts		Political societies		Volunteer battalions	
	(1)	(2)	(3)	(4)	(5)	(6)
Ln Rochambeau combatants	0.555***	0.285***	0.343***	0.120***	0.478**	0.203***
	(0.190)	(0.072)	(0.108)	(0.037)	(0.189)	(0.062)
Ln not sailed combatants	−0.099	−0.005	−0.168*	−0.071*	−0.091	−0.008
	(0.121)	(0.066)	(0.089)	(0.042)	(0.161)	(0.064)
Ln de Grasse combatants	−0.171	−0.103*	0.044	−0.024	0.035	0.095
	(0.180)	(0.059)	(0.102)	(0.038)	(0.202)	(0.065)
Baseline controls	✓	✓	✓	✓	✓	✓
N	89	302	89	302	89	302
R^2	0.20	0.14	0.42	0.25	0.35	0.27
Partial R^2 (Rochambeau)	0.10	0.07	0.11	0.03	0.07	0.04
Partial R^2 (Notsailed)	0.01	0.00	0.06	0.01	0.01	0.00
Partial R^2 (de Grasse)	0.01	0.01	0.00	0.00	0.00	0.01
Std. β (Rochambeau)	0.474	0.367	0.426	0.230	0.355	0.237
Std. β (Notsailed)	−0.112	−0.007	−0.276	−0.133	−0.089	−0.010
Std. β (de Grasse)	−0.127	−0.118	0.048	−0.040	0.022	0.098
p Rochambeau = Notsailed	0.007	0.009	0.001	0.001	0.038	0.027
p Rochambeau = de Grasse	0.012	0.000	0.053	0.016	0.153	0.285

Regressions in columns 1,3 and 5 are at the level of modern départements, those in columns 2, 4 and 6 are at the level of modern arrondissements. All include the baseline controls at the corresponding level (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, urbanization rate in 1793, and an indicator for the city of Paris) We treat the city of Paris as both arrondissement ("Paris") and département (Île-de-Paris). Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

B.3. Event-Study Results with Placebo Regiments and Placebo Revolts

Figure 4 in the main text, and the corresponding discussion in section 5.3 showed the effect underlying our cross-sectional estimate in Table 1 of Rochambeau's soldiers is entirely driven by a spike in anti-feudal protests in 1789, when the French Revolution started. Here we show that we observe no such spike for the not-sailed soldiers of the Neustrie regiment and the De Grasse regiments.

We estimate equations similar to equation 2 for two outcome variables $y_{i,t}$: anti-feudal riots and subsistence riots at the département (i)-year (t) level:

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

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 arrive in the U.S., 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.

The key finding is that the effects are specific both to the treatment group and the treatment outcome, and cannot be found for either the placebo group or placebo outcome. Figure A.5 shows that anti-feudal riots only increased in départements from which more of Rochambeau's hailed—and only in the year of revolution 1789. In contrast, the placebo soldiers do not affect anti-feudal riots in 1789. Figure A.6 shows that subsistence riots increased generically in départements with more soldiers, both in 1789 and in 1792. For this placebo outcome, départements with more Rochambeau combatants exhibit no difference in conflict to départements with more of either placebo combatants.

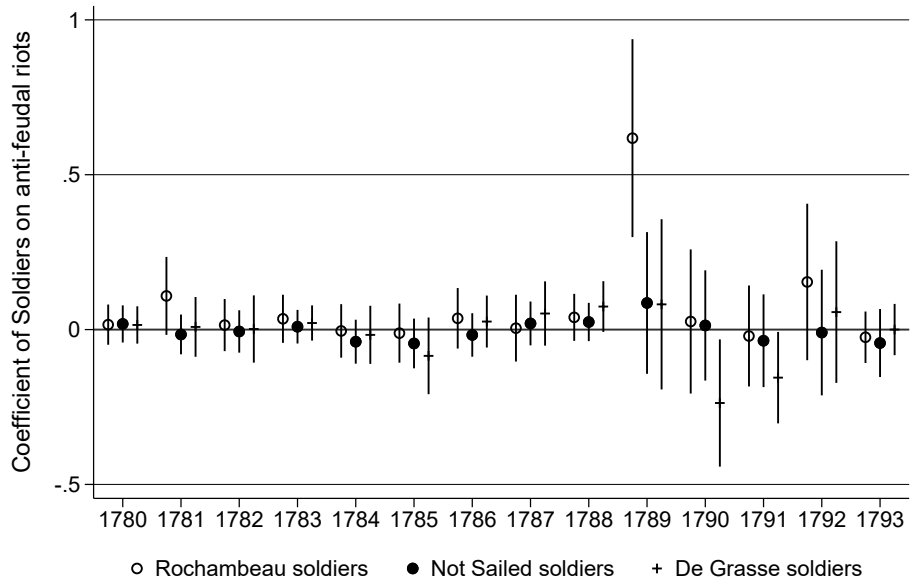

Figure A.5: Event-study estimates of soldiers on anti-feudal riots

Note: This figure shows that Rochambeau's soldiers only increased anti-feudal revolts in their origin departments, and only in 1789. We show estimates of the β_τ coefficients from equation A.1 with anti-feudal revolts as the outcome variable.

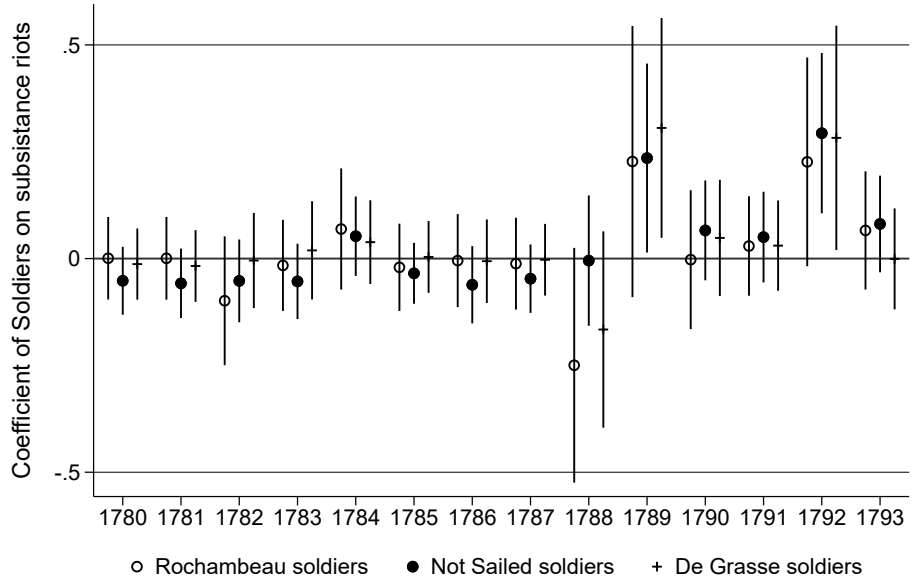

Figure A.6: Event-study estimates of soldier on subsistence riots

Note: This figure shows neither regiment affected subsistence revolts during the Revolution. We show estimates of the β_τ coefficients from equation A.1 with subsistence revolts as the outcome.

B.4. Results with Returned and Discharged Soldiers

Our baseline specification employs the number of soldiers that were deployed to the United States as our explanatory variable. Here we document that our results are, if anything, even more pronounced when using the number of *returning* soldiers instead. Focusing on one regiment for which we have the data, we show that, moreover, the results are very similar if we use combatants who were *discharged* from the military upon return from America. Finally, we document that the results are *not* driven by the locations in which the American combatant regiments were stationed on the eve of the revolution. In sum, the findings strongly indicate that combatants transmitted their experienced back to their homelands, either getting themselves involved in the revolution or motivating others to get involved.

Table A.5 uses the number of combatants serving under Rochambeau and De Grasse that *returned* from the United States, instead of combatants sent to the United States as in previous tables. Given the low desertion rates, the measure of *returned* combatants accounts chiefly for mortality during the campaign, with more combatants dying due to disease, particularly scurvy and malaria, than military action proper. All groups of combatants, Rochambeau, de Grasse, and Not sailed, returned back to France by the summer of 1783. As is evident from comparing the coefficients presented there with those of 4, the coefficients are nearly identical between both tables. We choose the number of sent soldiers as our baseline in the paper to allow for an intention-to-treat interpretation of the estimated coefficient.

Next, we explore using the number of soldiers discharged from military service after their deployment to the United States and before the French Revolution. This analysis comes with two challenges. First, we only know whether soldiers were discharged or retired for the Soissonnais regiment, which served under Rochambeau in New England. Second, we only observe whether soldiers were discharged until 1786, when the regimental book ended. This leaves the possibility that between 1786 and 1788 more soldiers were discharged before the Revolution.

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

Table A.5: Effects of Rochambeau and de Grasse returning to France

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln returned Rochambeau combatants	0.633***	0.321***	0.331***	0.286**
	(0.197)	(0.119)	(0.090)	(0.133)
Ln not sailed combatants	−0.006	−0.098	0.045	−0.141
	(0.132)	(0.091)	(0.055)	(0.088)
Ln returned de Grasse combatants	−0.135	0.043	0.097	−0.057
	(0.178)	(0.112)	(0.083)	(0.130)
Baseline controls	✓	✓	✓	✓
N (Obs = département)	79	79	78	63
R^2	0.19	0.32	0.49	0.31
Partial R^2 (Rochambeau)	0.13	0.09	0.08	0.16
Partial R^2 (Notsailed)	0.00	0.02	0.04	0.01
Partial R^2 (de Grasse)	0.01	0.00	0.00	0.02
Std. β (Rochambeau)	0.504	0.386	0.457	0.377
Std. β (Notsailed)	−0.007	−0.173	0.092	−0.267
Std. β (de Grasse)	−0.100	0.049	0.125	−0.070
p Rochambeau = Notsailed	0.012	0.007	0.012	0.017
p Rochambeau = de Grasse	0.007	0.113	0.054	0.048

The table shows that, when focusing on *returned* Rochambeau and de Grasse combatants rather than *sent* combatants, our result becomes slightly more pronounced that Rochambeau combatants' prolonged exposure to the U.S. and New England increased support for the French Revolution. Essentially, all surviving combatants (Rochambeau and de Grasse) returned back to France by summer 1783. Regressions are at the level of historic départements and include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). p Rochambeau = … reports the *p*-value of an F-test for the equality of coefficients on Rochambeau combatants and placebo combatants. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

revolts, and national volunteers. The coefficients of the other outcomes shrink more and become insignificant, but remain positive. In Panel B, we now turn to the combatants who were discharged or retired from the Soissonnais regiment between the return to France in September 1783 and the end of the regimental book in Dec 1786. Despite the even smaller group size—270 discharged or retired combatants[11]—, the coefficients are very similar. In fact, with the exception of the emigration outcome whose coefficient was already insignificant, all coefficients become larger and more significant when focusing on discharged combatants. This pattern is consistent with soldiers who left the military driving our results. Those combatants transmitted their experience of different institutions in the United States back to their origins, either by participating themselves in revolutionary actions or by instituting others to do so.

As a final piece of evidence that the discharged soldiers drive the result, we employ information on which départements Rochambeau's regiments were stationed in as of January 1789, on the eve of the Revolution. We drop three départements in our core sample in which Rochambeau's regiments were stationed, Meuse, Moselle, and Hérault, from our main analysis.[12] Table A.7 documents that the results are very similar quantitatively without these two départements. The coefficients are within 10% of the baseline values, and the standard errors are nearly the same. This further suggests that it was former soldiers who were exposed to the United States driving our baseline result, but not those soldiers still serving on the eve of the French Revolution.

[11]Note that Scott 1998, who studied the active regiments through the revolution, estimates that three-fifth of all combatants left the army by 1789.

[12]Of the three Rochambeau regiments we consider, the Bourbonnais regiment was stationed in Metz (dept. Moselle), the Saintogne regiment was stationed in Verdun (dept. Meuse), and the Soissonnais regiment was stationed in Montpellier (dept. Hérault). The German foreign legion Deux-Ponts was stationed in Belfort, which is not part of the core sample because it was only a fortress–garrison on the French–Swiss border that was only added to France during the Revolution as department Mont-Terrible.

Table A.6: Effect of discharged Rochambeau combatants

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Panel A				
Ln Soissonnais combatants	0.466***	0.106	0.231***	0.087
	(0.145)	(0.091)	(0.057)	(0.090)
Baseline controls	✓	✓	✓	✓
Placebo groups	✓	✓	✓	✓
N (Obs = département)	79	79	78	63
R^2	0.21	0.27	0.50	0.26
Std. β (Soissonnais)	0.448	0.154	0.386	0.135
Panel B				
Ln discharged Soissonnais combatants	0.424**	0.197*	0.235***	0.047
	(0.187)	(0.113)	(0.073)	(0.106)
Baseline controls	✓	✓	✓	✓
Placebo groups	✓	✓	✓	✓
N (Obs = département)	79	79	78	63
R^2	0.14	0.29	0.46	0.25
Std. β (Soissonnais)	0.309	0.217	0.297	0.055

The Soissonnais regiment was one of three French infantry regiments that experienced New England under Rochambeau. For this regiment, we observe regular discharges after the end of the subscription period (normally 8 years) and retirements with pension during the period 1783 (after returning home to France from America) through 1786 (end of the regimental book). All specifications include the two placebo groups (not sailed combatants and de Grasse combatants) and baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A.7: Effect on places where regiments were stationed in Jan 1789

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln returned Rochambeau combatants	0.663***	0.296**	0.356***	0.287**
	(0.204)	(0.119)	(0.089)	(0.135)
Ln not sailed combatants	−0.007	−0.092	0.039	−0.146
	(0.132)	(0.091)	(0.055)	(0.088)
Ln returned de Grasse combatants	−0.134	0.040	0.102	−0.061
	(0.181)	(0.114)	(0.084)	(0.130)
Baseline controls	✓	✓	✓	✓
N (Obs = département)	77	77	76	61
R^2	0.19	0.32	0.52	0.30
Partial R^2 (Rochambeau)	0.14	0.08	0.19	0.08
Partial R^2 (Notsailed)	0.00	0.02	0.01	0.05
Partial R^2 (de Grasse)	0.01	0.00	0.02	0.00
Std. β (Rochambeau)	0.525	0.359	0.488	0.379
Std. β (Notsailed)	−0.008	−0.165	0.079	−0.279
Std. β (de Grasse)	−0.099	0.045	0.131	−0.076
p Rochambeau = Notsailed	0.011	0.012	0.005	0.018
p Rochambeau = de Grasse	0.007	0.146	0.036	0.044

This table presents our baseline results without the départements in which the active regiments of Rochambeau's army were stationed by January 1789. All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

B.5. Robustness of main results: Unbalanced variables, extended sample, inverse hyperbolic sine

This section documents that our main results are robust to (i) controlling for variables that are unbalanced, (ii) using the extended sample that does not exclude certain départements, and (iii) using the inverse hyperbolic sine transformation instead of the log transformation.

Table A.8 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. The unbalanced variables appear to explain certain aspects of support for the revolution, yet no single one can explain all dimensions 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.9 shows that results are robust when extending the sample to départements that were not part of France 1789 and to départements in Alsace–Lorraine for which our main explanatory variable, Rochambeau combatants, is imprecisely measured. The results are highly similar for the outcomes of political societies, national volunteers, and emigration to the baseline specification in the main text. The only exception is for the outcome of anti-feudal revolts, where the coefficient on Rochambeau combatants shrinks by about one quarter. This reduction is solely driven by two outliers: (i) The département Vaucluse, which was part of the Papal State up to 1791. Here, we have relatively many combatants but few anti-feudal revolts, which is not too surprising since this territory had different feudal institutions. (ii) The département Haut-Rhin in Alsace. Here, there are relatively many anti-feudal revolts but few combatants in the three French infantry regiments of which our measure Rochambeau combatants consists. We are missing the data on the German foreign legion Deux-Ponts, which also was part of Rochambeau's Special Expedition and recruited much more heavily from the German-speaking French territories in Alsace.

Table A.10 shows that our results are highly robust to using the inverse hyperbolic sine transformation instead of the logarithmic transformation. One common problem with the log transformation is how to deal with zeros. In the baseline specification, we calculated it as ln (variable + 1) for the cases where variables had zeros, a transformation that is innocuous in general. As is apparent from Table A.10, however, our results are highly robust to using the

inverse hyperbolic sine. We choose the log transform for the baseline specification because of the easier interpretation.

Table A.8: 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
Panel A				
Ln Rochambeau combatants	0.402**	0.227*	0.268***	0.371***
	(0.198)	(0.116)	(0.089)	(0.124)
Ln precip. shock 1788	5.967***	2.832***	0.989	−0.046
	(1.621)	(1.026)	(0.793)	(1.235)
N (Obs = département)	79	79	78	63
R^2	0.31	0.40	0.47	0.36
Panel B				
Ln Rochambeau combatants	0.591***	0.215*	0.253***	0.349**
	(0.207)	(0.117)	(0.095)	(0.136)
Ln bishops	−0.038	0.496***	0.211	0.070
	(0.250)	(0.163)	(0.135)	(0.167)
N (Obs = département)	79	79	78	63
R^2	0.16	0.41	0.48	0.37
Panel C				
Ln Rochambeau combatants	0.524**	0.319***	0.205**	0.457***
	(0.211)	(0.115)	(0.084)	(0.114)
Male literacy rate	0.334	−0.536	0.999***	−0.497
	(0.624)	(0.354)	(0.264)	(0.413)
N (Obs = département)	76	76	75	61
R^2	0.13	0.34	0.56	0.43

The effect of Rochambeau combatants on support for the revolution is robust to controlling for unbalanced variables across all outcomes. All regressions include 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/dept. Seine). Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A.9: Extended sample incl départements not part of France 1789 and in Alsace

	Dep. variable: ln [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Ln Rochambeau combatants	0.398**	0.334***	0.279***	0.257**
	(0.198)	(0.110)	(0.085)	(0.112)
Ln not sailed combatants	0.021	−0.104	0.036	−0.140
	(0.136)	(0.091)	(0.056)	(0.084)
Ln de Grasse combatants	−0.133	0.012	0.083	−0.076
	(0.171)	(0.108)	(0.079)	(0.118)
Baseline controls	✓	✓	✓	✓
N (Obs = département)	86	86	82	69
R^2	0.09	0.31	0.46	0.37
Partial R^2 (Rochambeau)	0.06	0.11	0.12	0.07
Partial R^2 (Notsailed)	0.00	0.02	0.00	0.04
Partial R^2 (de Grasse)	0.01	0.00	0.01	0.01
Std. β (Rochambeau)	0.348	0.437	0.419	0.346
Std. β (Notsailed)	0.024	−0.180	0.073	−0.243
Std. β (de Grasse)	−0.111	0.014	0.116	−0.093
p Rochambeau = Notsailed	0.147	0.004	0.023	0.012
p Rochambeau = de Grasse	0.047	0.048	0.067	0.031

This table shows that the finding of a statistically and economically large impact of Rochambeau combatants on support for the French revolution at the département level is robust to extending the sample to départements which were not part of France 1789 (Vaucluse, Mont-Blanc, Aples-Maritimes, Mont-Terrible) and to départements in Alsace (Bas-Rhin and Haut-Rhin) for which our main explanatory variable, Rochambeau combatants, is imprecisely measured. All regressions include the baseline controls (log other soldiers, log infantry regiment garrisoned, log cavalry battalion garrisoned, log population in 1793, and an indicator for Paris/dept. Seine). p Rochambeau = … reports the p-value of an F-test for the equality of coefficients on Rochambeau combatants and placebo combatants. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A.10: Inverse hyperbolic sine transformation instead of logarithmic transformation

	Dep. variable: Asinh [support for revolution]			
	(1) Anti-feudal revolts	(2) Political societies	(3) Volunteer battalions	(4) Elite emigrants
Asinh Rochambeau combatants	0.711***	0.360**	0.289***	0.323***
	(0.239)	(0.157)	(0.085)	(0.120)
Asinh not sailed combatants	−0.032	−0.103	0.028	−0.129*
	(0.136)	(0.099)	(0.047)	(0.074)
Asinh de Grasse combatants	−0.125	0.027	0.085	−0.053
	(0.215)	(0.142)	(0.078)	(0.117)
Baseline controls	✓	✓	✓	✓
N (Obs = département)	79	79	78	63
R^2	0.17	0.31	0.48	0.33
Partial R^2 (Rochambeau)	0.11	0.08	0.13	0.10
Partial R^2 (Notsailed)	0.00	0.02	0.01	0.05
Partial R^2 (de Grasse)	0.00	0.00	0.01	0.00
Std. β (Rochambeau)	0.495	0.364	0.439	0.454
Std. β (Notsailed)	−0.036	−0.168	0.068	−0.284
Std. β (de Grasse)	−0.082	0.026	0.122	−0.070
p Rochambeau = Notsailed	0.011	0.015	0.010	0.004
p Rochambeau = de Grasse	0.015	0.134	0.061	0.015

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

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.11 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.11: American combatant officers as deputies in the General Estates 1789

Name	Regiment	Newport	Yorktown	Liberal	Royalist
Rochambeau's special expedition					
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	✓	✓	✓	
De Grasse's army					
Vicomte de Mirabeau	Touraine		✓		✓
Marquis de Rostaing	Gatinais		✓		
Marquis de Saint-Simon	Touraine		✓		✓
Others					
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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