Revolutionary Contagion

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Stanford GSB Research Paper 4084
First Version: May 2016;
This Version: September 2023

Abstract

We compare political mobilization and support for democratic values during the French Revolution among the home bailliages and among individual members of French regiments sent with the Comte de Rochambeau to fight alongside American revolutionaries (1781-83), to others also assigned there who failed to arrive due to logistical failures and British blockade. We provide evidence for *revolutionary contagion*: bailliages with 10% more Rochambeau veterans were 6.13% more likely to submit grievances to the King that were *"Most Strongly Democratic"* in 1789. They mobilize political clubs earlier, are more likely to engage in revolt and as individuals were more likely to show loyalty to moderate democratic revolutionary reforms both within the army and the National Assembly. Other former soldiers mobilize too, but not for democratic principles. Similarly, exposure to Enlightenment ideas has limited effects absent American veterans. We interpret these results as reflecting the complementarity between exposure to democratic ideas and organizational skills of veterans in generating contagion between two of the world's great revolutions.

1 Introduction

The Storming of the Bastille on July 14, 1789, which sparked the French Revolution, is widely-recognized to be a key turning point in modern history. Less well-known is that for

*Address: *saumitra@stanford.edu; steven.wilkinson@yale.edu.* A previous version of this paper circulated as "*Marching on the Bastille*". We would like to thank Cedric Chambru for generously sharing his data. We appreciate valuable comments from him as well as Jon Bendor, Emeric Henry, Nancy Qian, Nathan Nunn, Gerard Roland, Nico Voigtlander and conference participants at the Toulouse TIGER Forum 2014, Harvard Conference on Politics and History 2015, APSA Philadelphia 2016, the Yale Leitner Conference on War and Political Change 2016, Sciences-Po Paris/ PSE 2016, UPenn 2017, U. Tokyo 2017, NYU-Abu Dhabi 2018, U. Amsterdam 2018, the Harvard-Northwestern Conference on Political Economy and Development 2019, the UCLA/ UCSD Culture and Development Conference 2022, the Ramon Areces 21st Figuerola Lecture 2022, the AALAC Conference 2023, and seminar participants at Columbia, George Mason, Carlos III, Columbia, Harvard, Kellogg, and across Stanford and Yale. We would like to particularly recognize Obeyaa Atta, Catherine Debenham, Solène Delecourt, Anna Dagorret, Jen Downing, Christlee Elmera, Evan Sing, Vivian Urness, Fadela Sadou, Naasey Arthur, Anna Kellar and Eliot Carlson for excellent research assistance.

much of that day, the thousand-strong crowd's assaults on the fortress had failed.[1] The crowd entered the outside courtyard but was fired upon by the Swiss guards, who were protected by thick walls and sturdy gates that separated the inner from the outer citadel. Protecting the gunpowder of Paris, the guards could lay down cannon-fire to deter the attacks. Lacking artillery themselves, the citizens' attempts to rush the fortress had ground to a halt by mid-afternoon (Doyle, 2002).

At that moment, two French army veterans, Pierre-Augustin Hulin and Jacob Élie, played key roles in changing the fortunes of the day. Hulin, once of the Champagne regiment, but now working in a laundry, intercepted two companies of the *Gardes Français* regiment, persuading them to bring their skills and support to the crowd.[2] There they met Élie, who, wearing his *sous-lieutenant*'s uniform, was re-organizing the attack. Hulin organized transport of two small trophy cannons on display at the *Invalides* military hospital, up the River Seine. Then Élie and a few volunteers, under fire, used a smokescreen to array them for a *"systematic assault"* on the inner citadel (Popkin, 2019, pg.139).

The attackers lacked gunpowder, so each shot was important. Fortunately, the troops that had joined Hulin included a few veteran cannoniers like Claude Marneur (Durieux, 1911). Only six cannon shots were ultimately fired by the besiegers, but the ploy worked. The Governor of the Bastille, believing that the cannons were well-serviced and could easily blow the defenses apart, opened the gates. The first through—and credited with the idea of seizing the Bastille in the first place— was Louis la Reynie, a veteran soldier turned priest. Though stabbed by a bayonet, La Reynie seized the keys of the fortress (Lenôtre, 1936). The French Revolution had begun.

However Élie, La Reynie and Marneur were not new to Revolution. Less than a decade earlier, all three had fought alongside American revolutionaries in their battle for freedom from Britain.[3] Élie had been promoted from the ranks, becoming one of the very few non-noble commissioned officers. Aged 34 in 1779, Élie had travelled to America as part of the Comte d'Estaing's rapid deployment force (Durieux, 1911). There he fought in the unsuccessful siege of Savannah during the summer of 1779.

A year later, in July 1780, a second force commanded by the Comte de Rochambeau

[1]Sources differ on the crowd size (see below). Durieux (1911) includes 999 individuals, but is not exhaustive of other sources. Some *mouchards*– suspected royal informants– were removed from the later lists.

[2]According to Durieux (1911, pg.105), based upon eyewitness testimony, Hulin exhorted the soldiers: "*My friends, are you citizens? Yes, you are. Let us march on the Bastille [Marchons á la Bastille]. They slaughter the townspeople and your comrades. They and others are your brothers. Will you suffer that they be victims of the cruelest treachery?*" (own translation).

[3]The other key leader of the *Vainqueurs de la Bastille*, Hulin, left the Champagne Regiment just before the American expeditions. He did however grow up in Geneva (Durieux, 1911). A canton just outside the borders of the Kingdom of France, Geneva boasted of republican institutions dating to at least 1541.

landed at Newport, Rhode Island. The next Spring, his force began a long march south alongside American revolutionary troops, towards Virginia. There, Claude Marneur and his companions in the Auxonne artillery regiment would prove crucial to the decisive victory at Yorktown in September 1781.[4]

Also at Yorktown were French soldiers in direct American service who would play prominent roles in the French Revolution. Some were famous nobles like Lafayette, the *"Hero of Two Worlds"* (Duncan, 2021), but others were much less rich and well-known like La Reynie. La Reynie, the son of a tailor, had crossed the ocean to volunteer with the American forces. There he became an *aide de camp* to General Phillip Schuyler, later senator from New York and father-in-law of another soldier earning accolades on the field that day, Alexander Hamilton (Bodinier, 1982). La Reynie returned to France, as one who "*thought as a free man and wrote as he thought*" (Lenôtre, 1936, pg.6), preaching democratic ideas that later earned him prison time at the Bastille itself (Durieux, 1911, pg.118). This left him well-positioned with insider information when he made his return visit on July 14, 1789.[5]

Did Élie's, Marneur's and La Reynie's exposure to the American Revolution affect the central roles they played in the iconic initial clash of the French Revolution? Or were these incidental to the prevailing ideas, economic conditions or other characteristics of France at the time? More generally, did being assigned to fight alongside the American revolutionaries seeking to overthrow a government in which they lacked voice shape French veterans' ideas, political organization and participation once they came back home to France? Or would such political ideas and mobilization have spread just as much if they had been sent elsewhere to wage war?

In this paper, we examine the role played by the large-scale and quasi-random deployment of different French regiments to serve alongside the American revolutionaries in creating *revolutionary contagion*, which we measure using the subsequent support of those who served for democratic reforms and mobilization during the French Revolution. As we describe below, our main empirical results focus on a specific natural experiment. We exploit the fact that, in 1780-1781, the expeditionary force sent to America under the Comte de Rochambeau had been drawn from a larger number of troops assembled the previous year in preparation for an aborted invasion of Great Britain. As we describe below, of those troops assigned to Rochambeau's force, only 5,028 of the planned force of 7,683 men could be transported, owing to a shortage of transport ships. One brigade of infantry, comprising the Neustrie and Anhalt regiments, a battalion of artillery and 200-300 men of the Lauzun legion had

[4]For details of the engagements these forces fought in and their casualties see Dawson (1936).

[5]For his leadership role in the storming of the Bastille, La Reynie was put in charge of the fortress itself. However, he would subsequently be accused of stealing the chalices and vestments from the Bastille chapel (Durieux, 1911, pg.118-136).

to be left behind, with the plan being these troops would follow the main force as soon as transports could be arranged (Keim, 1907, pg.276-278). This second brigade, however, was ultimately unable to join the main force, even though Rochambeau expected it to arrive at any time. This was due to a shortage of transport ships and later, the blockade of the port of Brest by a fleet of 32 British warships (Keim, 1907, pg.337). As we show, the deployment pattern of these units, due chiefly to accidents of logistics and exogenous enemy action, had little to do with the characteristics of the home locations of the men involved.

In this paper, we compare the extent of pro-democratic expression and the extent of political mobilization during the French Revolution, both among individual soldiers who served in the American Revolution, and in their places of birth (aggregated into the basic jurisdictions or *bailliages* of pre-Revolutionary France).[6] We first compare bailliages with more veterans that happened to serve in the American revolution, and Rochambeau's force in particular, to the birth locations of soldiers in the Neustrie and Anhalt regiments that happened to be left behind, and the soldiers of other French regiments that happened to serve in combat roles elsewhere between 1781 and 1783. We draw on novel hand-collected data on individual soldiers from the French *Archives de la Defense* to first show that, consistent with both primary and secondary historical accounts about the arbitrary nature of the ultimate deployment of regiments to America, the regiments were not different in measurable dimensions such as their order of precedence, year of founding or other forms of prestige. Further, using new data from 51,189 individual ledger entries, we also demonstrate that *individuals* in American regiments were not different when it comes to a useful direct measure of relative childhood affluence or poverty, their *heights*, when compared to those deployed in combat roles elsewhere, or other soldiers of the French army.

Further, compared to bailliages with similar numbers of Neustrie and Anhalt soldiers, levels of combat veterans deployed elsewhere, and other drivers of intensive army recruitment within the same province, bailliages that happened to have more Rochambeau veterans (henceforth Rochambeau bailliages) are similar on a range of key dimensions before 1789. These areas were as likely to exhibit a riot in each year from 1776-1788. They are not more likely to house a range of factors related to Revolutionary grievance or repression such as trade restrictions and taxation regimes, or the expansion of education or Enlightenment thinking (Mokyr, 2017). These include the incidence of high school teachers, secular or Catholic high schools, knowledge elite subscriptions to the *Encyclopedie*, or sales from the major Swiss book publisher-wholesaler, the *Sociéte Typographic de Neufchâtel* (STN), in-

[6]Pre-Revolutionary France was divided into *généralités* or provinces, many of which had unique laws and customs. These were further divided into the basic jurisdictional unit: the bailliage or 'bailiwick', each of which elected representatives to the Estates- General (see Figure A1). The more aggregate modern French department was born out of Revolutionary attempts to break down traditional local and provincial loyalties.

cluding banned and illegal books. Nor do these areas have more political clubs at the start of the Revolution.

However, despite these similarities, we show that Rochambeau bailliages diverge politically from others during the Revolution, and do so in a manner consistent with the transmission of democratic values by the soldiers who served in America. To measure support for democratic values, we exploit a remarkable set of documents, the *cahiers des doléances*: "notebooks of grievances", which were submitted by each Estate in each bailliage at the King's request, to express their chief concerns ahead of the summoning of the Estates-General in 1789. We rely on the coding by Beatrice Hyslop (1968) of the *cahiers* she considered to be the *'Most Strongly Democratic'* in the concerns that their inhabitants raised. We show that bailliages with 10% more Rochambeau veterans were 0.58 percentage points more likely to submit a Third Estate Cahier that was *"Most Strongly Democratic"* in 1789 (or an increase of 6.13% relative to the 9.45% share of bailliages coded as having such grievances across France).[7] In contrast, bailliages with more Neustrie or Anhalt soldiers or additional combat veterans deployed outside the Americas have no effect. Further, we find confirmatory evidence from the home bailliages of the other main force deployed to the Americas as well: the birthplaces with more veterans of the Comte d'Estaing's force also show similar (if slightly smaller) increases in the probability of a Strongly Democratic Cahier. These effects are strongest among the Third Estate, the common people from which the vast majority of the troops were raised, rather than the nobility or the clergy.

The effects are also reflected in the degree and pace of local political mobilization. We show that while Rochambeau bailliages did not have more political clubs that otherwise similar bailliages within the same province (*généralité*) in 1789, by 1790 bailliages with 10% more Rochambeau veterans were 2.19% more likely to have founded a political club (relative to 37.3% of bailliages), and 2.17% more likely to have founded a Jacobin club in 1790 (relative to 35.9%).[8] These differences persist for at least the first five years of the Revolution. In contrast, bailliages with Neustrie-Anhalt soldiers also start to raise more political clubs, but do so a year later than the Rochambeau veterans, and are less likely to support the early Jacobins.

We then examine local violent mobilization, including the incidence of agrarian rebellions and other riots in 1789. Though Rochambeau bailliages experience similar incidences of riots

[7] As we discuss below, Hyslop's sample encompasses 237 surviving cahiers: the effect is 1.23pp or an increase of 7.08% relative to the 17.3% share of democratic cahiers in Hyslop's sample. In the effect above we include a dummy for presence in Hyslop's sample.

[8] The *Society of the Friends of the Constitution* came to be known as the *Jacobin* club due to the monastic foundation where it had initially rented space. As we describe below, while initially a more moderate pro-reform movement, the Jacobin club became more extreme later in the Revolution.

in the years *before* the French Revolution, bailliages with 10% more Rochambeau veterans experienced a 0.503 pp higher probability of a revolt or a riot in 1789 (or 2.51% compared to a mean of 20.0% of bailliages experiencing such an event that year). We show the results are robust to controlling for factors related to army recruitment, urbanization and population density, as well as other factors that have been associated with the increase in revolutionary activity in France or in general, such as administrative capacity, trade taxation policy or the pre-Revolutionary spread of education and enlightenment ideas in the general population or among elites. These results are also not sensitive to functional form, including inverse hyperbolic sine transformations and allowing for arbitrary spatial correlation (Colella, Lalive, Sakalli and Thoenig, 2019).

However, bailliages with more Neustrie and Anhalt veterans also experience increases in the probability of violent unrest in 1789, and these increases are not significantly different from the effects of Rochambeau veterans.

Taken together, we argue that the organizational capacity developed among those mobilized for external wars proved important in subsequently also generating local political mobilization, and particularly so in times of economic distress, as reflected to agrarian revolts in French bailliages on the eve of the French Revolution (see also Jha and Wilkinson (2012).) What was crucially different in bailliages whose soldiers fought in the American Revolution was not mobilization *per se* but mobilization around *political ideas and contests about the future of the nation.* We show that bailliages that happened to have more Rochambeau or indeed d'Estaing veterans are much more likely to present more democratic cahiers and mobilize political clubs and Jacobin clubs first. In contrast, measures of prevailing Enlightenment presence and penetration in a bailliage, while no doubt important, do not appear to have marked and robust effects on these outcomes on their own. Instead, we argue, that organizational capacity and revolutionary ideas are *complements*: *revolutionary contagion* increases more when individuals gain *both* exogenous organizational capacity and exposure to revolutionary (and in this case specifically *democratic*) ideas.

In particular, we argue that French soldiers' participation in the American War of Independence had two main effects: first it exposed French soldiers to new ideas and examples of revolution and liberty that changed their beliefs and influenced their political mobilization in the revolutionary environment of 1789 and after; second, it gave them organizational skills and military capacity that they could apply in the crucial revolutionary environment of 1789-1793. It was the *combination* of these two complementary factors that led to increased revolutionary contagion.

To further support our interpretation that veterans' exposure to the American revolution changed their political attitudes in the French Revolution, beyond their organizational ca-

pacity, we turn to individual-level data on American veterans' participation in key contests during the French Revolution, where their individual allegiances can be clearly documented. These data include their votes and membership in factions in the Estates-General that became the National Assembly, and the loyalty to the Revolution of officers that had remained within the army itself. We hand-code the family backgrounds, combat experience and political allegiances of all 1,293 members of the Estates-General in 1789, as listed in Lemay (1991). We show that relative to combat veterans and others not assigned to American service, the American revolutionary veterans serving in the Estates-General were about 27-28 percentage points more likely to be moderate constitutionalists: initially supportive of constitutional reforms and the Jacobin group, but more likely to choose the moderate Feuillant party as the Jacobins became increasingly more radical from 1792 onwards. We also hand-code biographical data on 2,090 French royal army officers alive during the French revolution, their service in the American revolution, and the duration of their willingness to remain loyal to or to oppose the army of the revolutionary government in 1789-1792 (Pinasseau, 1957, Bodinier, 1982, 2009). We show that French general officers who had served in the American revolution were more likely to stay loyal to the French revolutionary army all the way up to the Battle of Valmy: which saved the nascent French republic from foreign invasion, and beyond.

To the best of our knowledge this is one of the first efforts to empirically measure the effect of exogenous military exposure in generating the *revolutionary contagion* of democratic values and mobilization that link two of the key revolutions in world history, and in engendering democratization more generally. In doing so, we contribute to a number of important literatures: on the role of structure versus individual agency in shaping history; on democratic waves and contagion; and on the effects of military exposure and combat experience in shaping politics.

For most key moments that have shaped world history, including the American and French revolutions, a longstanding debate exists between proponents of deep structural forces— economic, political etc.— in shaping events and outcomes (e.g. Barrington Moore, 1966, Skocpol, 1979), versus those who often emphasize the agency of individual actors (e.g Mahoney and Snyder, 1999).[9] A new body of empirical work is emerging consistent with the idea that individual leaders and central figures in hierarchical networks can not only affect organizational performance (e.g. Bertrand and Schoar, 2003, Jackson and Yariv, 2011, Bandiera, Prat, Hansen and Sadun, 2020), the effectiveness of public policy campaigns (Baner-

[9]For example, in *War and Peace*, Leo Tolstoy (1869) famously claimed that '*a king is history's slave*' (Book IX, chapter 1), interpreting Napoleon's actions, including his invasion of Russia as driven by a structural need for victory and expansion. In contrast, others have viewed Napoleon as making crucial and contingent *choices* that shaped history. See Roberts (2014).

jee, Chandrasekhar, Duflo and Jackson, 2019, Alatas, Chandrasekhar, Mobius, Olken and Paladines, 2021) but can even have macro-level political and economic consequences (e.g. Jones and Olken, 2005, Jha and Wilkinson, 2012, Dippel and Heblich, 2021, Bai, Jia and Yang, 2022, Cagé, Dagorret, Grosjean and Jha, 2023a).[10]

We shed further new light on these key debates by pointing to the presence of a common but less-recognised *structure to agency*. We argue that individuals, particularly non-elites, gain agency when they acquire local monopolies over a particular set of skills or credentials that allow them to coordinate others within novel hierarchical networks. And throughout human history, a common environment in which both of these traits emerge is in times of war and external threat. We argue that such wars not only create opportunities for individuals to gain credentials as heroes– those who have demonstrated their willingness to engage in extreme sacrifice for others (Cagé et al., 2023a)– but also often lead an otherwise unlikely set of non-elite individuals to learn how to fight and organize (Jha and Wilkinson, 2012). In wars of limited mobilization, such as India's mobilization in World War II (Jha and Wilkinson, 2012) or the France's mobilization in the American revolution (this paper), a relatively small set of veterans exogenously gain the skills and credentials to organize and coordinate others. This monopoly power leaves them specially placed, should they so *choose*, to fight for new causes when they return home. This can often lead to civil conflict when these groups choose to use these skills to protect their own interests or those of others like them (Jha and Wilkinson, 2012, Jha, 2023, Jha and Wilkinson, in progress). However, if they are exposed to and adopt democratic ideas, veterans can choose to fight for the rights and freedom of others as well. Thus the link between external war in spreading domestic freedom is highly contingent on the nature of the exposure to ideas that veterans receive and their willingness to act on these ideas.[11]

Our paper also links to an important body of work that looks at the national-level social, economic and political conditions for regime transitions (Barrington Moore, 1966, Skocpol, 1979, Acemoglu and Robinson, 2006). Other major studies sketch out ways in which international developments might lead to radical democratic transformations or use the

[10]Other important theoretical contributions point to the manner in which leaders can persuade and organize followers (Hermalin, 1998, Caillaud and Tirole, 2007), create reference behaviors that coordinate group action (Akerlof and Holden, 2016), affect expectations and social norms (Bursztyn, Egorov and Fiorin, 2017, Acemoglu and Jackson, 2015), among others (Cagé et al., 2023a).

[11]On the combination of ideas with capacities and political opportunity structures being decisive in explaining revolutionary change in other spheres, such as large-scale social movements, or innovative technological change see McAdam and Williams (1982), Tarrow (1998). For an 'O-Ring' theory of how essential components can sometimes all be jointly necessary for technological change and development, see Kremer (1993). Military organizations may be particularly prone to generating contingent outcomes due to their tight status hierarchies that give more discretion those at the top (Bendor and Shapiro, 2019) (on the importance of competence in status hierarchies more generally, see Bendor and Bullock (2021)).

presence of regional waves in democratization to measure the effects of democratic transition on growth(e.g Acemoglu, Naidu, Restrepo and Robinson, 2019).[12] However, the details of the specific mechanisms through which such revolutionary contagion is transmitted are less clear. We show that some of this transmission can be carried by *individuals*, assigned to participate in one democratic struggle and imbued with organizational skills, bringing these ideas home with them.

Our results also contribute to the literature on the effect of conflict on political and economic development. A growing body of existing work finds that conflict experiences can heighten collective action (e.g. Blattman, 2009, Jha and Wilkinson, 2012, Campante and Yanagizawa-Drott, 2015). However, politically, much of this work points to a link between violent combat exposure and increases in authoritarianism rather than pro- democratic change.[13] In contrast, this paper shows that wartime exposure can lead to the intersection of people with combat experience and ideas influencing events in a pro-democratic direction, with reference to one of history's most important instances of political transformation: the French Revolution.[14]

By doing so, this paper also contributes to the rich theoretical literature on the French Revolution and a much smaller set of empirical studies (e.g Sharp and Weisdorf, 2012, Waldinger, 2021) by systematically testing the effects of American veteran exposure alongside other potential drivers of local mobilization during the French Revolution, including weather shocks, economic crises, the spread of Enlightenment ideas and specific taxation regimes.[15]

[12]For example, Huntington (1991, 100-103) argues for the role of demonstration effects and 'snowballing' in explaining international waves of democratization.

[13]Savage and Caverley (2017), for example, link US international military training to an increased likelihood of coups. Fontana, Nannicini and Tabellini (2017) show that levels of violence during the German occupation in WWII predict increased Communist support in post-World War II Italy. Koenig (2015) likewise shows that areas of Germany with more post-WWI veterans were more likely to vote for Fascist parties in the inter-war period, in contrast with Italy, where higher casualties in WWI were also associated with support for Fascism (Acemoglu, De Feo, De Luca and Russo, 2020). Cagé et al. (2023a) find that the heroic network of veterans forged at Verdun were more likely to spread the autocratic values of their leader, Philippe Pétain, when he intervened in French politics in the inter-war period and later follow him into Nazi collaboration as well.

[14]While we argue that assignment to external wars provide a common environment where individuals can exogenously gain organizational skills and exposure to ideas, we do not contend that this the only way. For example, individuals can develop the skills to organize and the proclivity to do so around democratic ideas in the absence of violent conflict as well, including around non-violent disobedience (Bhavnani and Jha, 2012). In important related work, Dippel and Heblich (2021) compare political pro-freedom outcomes, including Civil war volunteer levels, in American towns where exiled German leaders of the 1848 revolutions settled to otherwise similar towns. Bai, Jia and Wang (2023) examine the effect among Chinese military cadets of differential exposure to new ideas (Communist ideology) and show that ideological exposure explains much more about subsequent political action in the Chinese revolution than military training and experience alone.

[15]Building on an earlier (May 2019) version of this work, a recent working paper by Ottinger and Rosenberger (2023) use a similar identification strategy of quasi-random regimental deployment as we have done in a series of work (e.g. Jha and Wilkinson (2012), Jha and Wilkinson (2022) and Cagé et al. (2023a)) and as

Lastly, and centrally for this paper, we provide new and causal empirical evidence that can adjudicate on a long-running debate over the role of French military experience in the American Revolution in subsequent mobilization in France.[16]

2 Relevant Historical Background: the Global War of 1778-83

The struggle between Britain and France for hegemony led to grave losses for French arms in the years leading up to the American Revolution: along with the loss of Canada, as many as 200,000 French soldiers had been killed or wounded and 80,000 captured in battlefields around the world in the 7 Years War (1756-63) (Clodfelter, 2008, pg.85). The coming of the American revolution, and in particular, the American military victory against British troops at the Battle of Saratoga in October 1777 lent strength to French advocates of supporting the Americans, alongside fears that the British might compromise before France could take advantage of Britain's distractions in the colonies to restore a global balance of power in its favor (Scott, 1998, pg.4). On February 6, 1778, Louis XVI signed a treaty to enter the war alongside the American rebels.

For France, unlike for the Americans, the conflict was truly global in scope. The French fought the British not just in North America, but also in India, where the *bailli de Suffren* scored important victories, in Africa, where the French would recover Senegal in 1779 and

we do here. Using a more restricted aggregate sample with fewer regiments, they examine the effect of French service in America. They do this at the more aggregate post-Revolution department level (see Figure A1), and in some cases in the smaller arrondisement level (introduced in 1800), rather than using individual data geo-located to the pre-Revolution bailliage units, as we do here (see also e.g. Jha and Wilkinson (2022)) which may account for some differences in results. They also examine the home departments of the roughly 400 troops that landed with Admiral De Grasse and fought at Yorktown, and find that they do not mobilize more in 1789.

[16]As we describe below, a potential relationship between French military service in the Americas and Revolution had long been discussed among historians, with the mechanism largely believed to be through officers (Stephens, 1886). Forrest McDonald (1951), made the first attempt, however, to systematically demonstrate the effect of Rochambeau's veterans in explaining the French Revolution, by comparing maps of veteran locations together with maps–drawing on the work of Georges Lefebvre (1947)– of the locations of the main peasant rebellions that preceded the Revolution. McDonald's argument, though, has since been viewed skeptically by many historians of the Revolution. Jacques Godechot (1956) argued for instance that McDonald had failed to control for the size and population of the different provinces, their levels of poverty, or geographic variation in the oppressive nature of feudalism. The leading historian of Rochambeau's expeditionary force, Samuel Scott (1998, pg.117-34), further argued that many of Rochambeau's soldiers had retired from the army before the Revolution, and that their numbers where too small to have had broad influence. Gilbert Bodinier (1982) also points to the fact while there were a disproportionate number of American officers who showed liberal behavior in the Assembly, twice as many 'American' officers emigrated as served in the revolutionary army. We develop relevant control group comparisons that allow us test these factors directly.

the West Indies. Importantly the conflict encompassed Europe too, where the French high command envisaged a cross-channel attack on the British Isles themselves (Scott, 1998, pg.5). France would ultimately suffer more than 10,000 battle deaths globally during the conflict, more than the 7,000 suffered by the nascent American republic, and rivaling the approximately 15,000 suffered by Britain and her allies (Clodfelter, 2008, p.134-135).

2.1 Exogenous Assignment of French Regiments to America

Thus, throughout the period 1778-80, French regiments were being dispatched to a number of different fronts around the world, even while a major invasion force was being assembled in Brittany and Normandy for the attack on the British Isles. The invasion of Britain was called off in the fall of 1779, due to delays among France's Spanish allies, but the assembled troops— totalling around 32,000 (about a third of the line army)— provided a pool from which a subset of regiments could then be assigned for service alongside the colonists in America. The Comte de Rochambeau, already in command of the vanguard of the invasion force for Britain, was initially allotted a force of 4,000 men but persuaded the king to allow him closer to 7,500 men. His planned army would include the troops of each of six line infantry regiments: the Neustrie, Bourbonnais, Soissonnais, Anhalt, Saintonge and the Royal Deux Ponts, as well as Lauzun's Legion (a mixed unit containing hussar cavalry, cannoneers and infantry), and two battalions of the Auxonne artillery regiment.[17]

A total of 7,683 troops were gathered at Brest by April 1780 for transport to the Americas with Rochambeau. However only 36 ship transports were available, partly due to poor winds and partly to transports' diversion for other purposes. Headquarters at Versailles instructed that in the interests of efficiency as many units as possible be embarked immediately, with the others to be sent as soon as more ships became available. In the event, only 5,028 could be embarked, and a brigade of infantry including the entire Neustrie and Anhalt regiments, one third of the artillery and one third of the Lauzun Legion had to be left behind (de Lauzun, 1787, pg.190), (Keim, 1907, pg.274-278).[18]

[17]The official authorized strength of each line regiment in the pre-revolutionary army was 1150, but most had actives below that number - around 1100 in 1788 (Scott, 1978). Due to a lack of transports, Rochambeau was compelled to select 85-90% of the authorized strength from each of the assigned regiments.

[18]The historian Samuel Scott agrees with the contemporary accounts of the commanders Lauzun, Deux-Ponts and Rochambeau that we draw upon here, writing:

> *Insufficient transports, however, necessitated leaving behind the Regiments of Neustrie and Anhalt, along with three hundred of the nine hundred men of Lauzun's Legion and about one hundred artillerymen from the Auxonne battalion. These twenty-five hundred soldiers were intended to form a 'second division' that would follow the main force to America . . . in fact, these units would never leave France* (Scott, 1998, pg.7).

Importantly, there is no evidence that Rochambeau selected the regiments that remained in Brest for any reason related to their origin, organization or fighting capacity.[19] The intent was always to bring those troops over to join the rest of the force as quickly as practicable, and after reaching Rhode Island, Rochambeau "*had promised the Americans the second division of his Army and was awaiting it with extreme impatience.*"(de Lauzun, 1787, pg.193).[20] The Comte de Deux-Ponts describes how Rochambeau made a variety of preparations to fund food, supplies and lodging for the troops, which were expected daily (de Deux-Ponts, 1868). However, a quickly imposed 32-ship British naval blockade of Brest would prevent the rest of the force, under Count de Viomenil, from leaving Brest to join Rochambeau's force (Keim, 1907, pg.337).)

2.2 Evidence for the representativeness of the American veterans

Contemporary accounts, the modern secondary historical literature and the logic of combat deployment all suggest that the assignment of soldiers to service in America was involuntary, and due to exogenous factors related to logistical accidents and the British blockade, but unrelated to the politics, economic circumstances or home characteristics of the individuals within the regiments who served.[21] Indeed, based upon analysis of a 10% sample of the service records of the pre-revolutionary French line army Scott (1998) finds Rochambeau's troops to be broadly representative of the French army as a whole in terms of such important variables as region, urban vs. rural, literacy, noble vs. non-noble officers, etc. (see also Scott (1978).) Scott (1998) summarizes the evidence (bold ours) as follows:

> *In all, the soldiers of Rochambeau's command constituted a fairly typical cross-section of the French regular army toward the end of the Old Regime.* ***None 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, where inhospitable climate had been*

[19]There is one caveat: both the Anhalt/ Salm-Salm and Royal Deux-Pont regiments were chosen as they were disproportionately raised in the region of Alsace-Lorraine and included more German speakers, the hope being that they would attract German-speaking defectors from the British units. One was put in each division. However, both regiments were expected to go to America.

[20]The only reinforcements that did arrive (in Boston in June 1781) were those that Admiral De Grasse sent from his substantial fleet that had been dispatched to the Caribbean, and only 400 of those 660 troops (drawn from seven different regiments) were well enough to be deployed. 50 of these troops were from the Neustrie regiment (Scott, 1998, Keim, 1907, pg.6,52).

[21]This quasi-random assignment of line regiments to combat roles is a general characteristic of many militaries and thus a useful approach for identification. See our previous work: Jha and Wilkinson (2012) on the Indian colonial army, Cagé et al. (2023a) and more recently, Seck (2023) on the 20th century French army, and Carozzi, Pinchbeck and Repetto (2023) on the British Army in WW1.

deadly to tens of thousands of their comrades, rather than of enthusiasm for the American cause.[22]

Consistent with this, the force refused volunteers as it was being assembled, and the soldiers did not even know their destination until they had been seven weeks at sea after leaving France (Merlant, 1920, pg.114-16). For example, the comte de Deux-Pont's memoirs make clear that the various regiments assigned to the campaign "*left their winter quarters where they had been stationed after the futile campaign of 1779, in perfect ignorance of the country whither they were going.*" Even a regimental commander, like Deux Ponts himself, only learned of the destination after six weeks at sea, on 3 June, when he and the senior officers in charge of the other regiments took advantage of calm weather to meet with Rochambeau on his flagship (de Deux-Ponts, 1868).[23]

To further empirically confirm the representativeness of Rochambeau's troops and American veterans more generally, we carry out two exercises. First, we compare the *prestige* of the units sent to those that were not. The French army at this time had a well-established order of precedence in terms of prestige, laid out in 1758 and again in 1780. This was based upon the seniority (age) of the unit, and determined which unit marched first in parades before the King. In Table A1, as we can see, American regiments were on average founded in the year 1647.42, while other line regiments assigned to combat in the global war of 1778-83 were founded on average in 1647.00 (we fail to reject these are the same with probability 0.98). We also do a non-parametric Wilcoxon rank-sum test to check if the entire *distribution* of the ranks of prestige of the units are different, and fail to reject that the distribution of American unit prestige is the same as those of other combat units with probability 0.81.

While the regiments assigned to American service might not be selected, perhaps the *soldiers* within the regiments were selected due to their relative poverty or their relative affluence? In a Marxian interpretation, relative poverty might drive subsequent support for revolution, as these soldiers are pushed below the threshold of subsistence first. Alternatively, relative affluence might drive soldiers to revolt due to increased aspirations (a la Tocqueville (1856)). To check this, we gather data on a valuable measure of relative individual childhood affluence or poverty: the *heights* of soldiers assigned to American service to others from their individual service records.[24]

[22]On the cheering, the original sources are the journals of the officers themselves. See Jean Jacques Fiechter "*L'Aventure americaine des officiers de Rochambeau vue a travers leurs journaux*", in Michele R Morris ed., *Images of America in Revolutionary France*(Washington DC: Georgetown University Press, 1990), pg 67-68.

[23]My Campaigns in America: A journal kept by Count William de Deux-Ponts 1780-1781, Translated from the French Manuscript, with an Introduction and Notes, by Samuel Abbott Green (Boston: J.K. Wiggin and W.M. Parsons Lunt 1868), p.75-79; Keim (1907: 281)

[24]We are aware of an important debate on the validity of using soldiers' heights to make inferences about the broader patterns of well-being in society in history. However, our focus here is different and, we believe,

We supplement our data on the Rochambeau veterans with a 10% random sample of all contemporary extant regiments in the 18th century French army, and ledgers within them. These yield a total of 23,454 individual soldier ledger entries, comparable to about a fifth sample of the regular French line army of the time. We combine these data with a further data set, based upon the collection of the famous contemporary natural philosopher, Georges-Louis Leclerc, Comte de Buffon, of 38,705 ledger entries in the 19th century, and analyzed by Komlos (2003). In total, removing likely duplicates, the heights comparison data contain 51,189 individual observations, comparable to about half the standard strength of the French line army. To the best of our knowledge, this is the largest dataset on individual French soldiers in the 18th century that exists today (see Data Appendix, which includes an example entry from the Bourbonnais regiment in Figure A2.).

As Table A3 shows, the average height of soldiers in the data is 1.70 meters [0.459].[25] However, controlling for the year of the ledger, and with and without quartics in age, there is no discernable difference between soldiers in regiments assigned to American service (Columns 1-4). Soldiers assigned to the Rochambeau regiments were an insignificant 4.24 [5.37] *millimeters* shorter (compared to individual soldiers of the same age entered in the same ledger year). We further fail to reject that the height distributions for Rochambeau soldiers are the same as those from Neustrie-Anhalt troops or troops assigned to combat elsewhere with 95% and 90% probability respectively. One might be concerned that the data is simply too noisy to detect a difference. However, we can test this with members of grenadier companies, who were meant to be taller, as they were meant to throw grenades over the fortress glacis during assaults. We find that grenadiers are on average 51.3 millimeters taller (the probability this difference is zero is <0.01). In sum, consistent with a lack of selection, individual height data confirms that the individual soldiers assigned to Rochambeau's regiments, or American service more generally, were very similar in this key metric to the rest of the French army.

2.3 Learning *Common Sense* Ideas about Democracy

Rochambeau's force arrived in Newport in July 1780. This force stayed at Newport for eleven months, before marching south to link up with American forces, and played an important part in the subsequent defeat of the British at the Battle of Yorktown in October 1781, the decisive battle of the war. Following this Rochambeau's troops quartered in Virginia for several months, before returning to New England from where they travelled back to France in late 1782.

uncontroversial: we contend that soldiers' heights are useful as an indicator of the childhood nutrition and relative poverty of the soldiers themselves.

[25] This is equivalent to 5'7".

As we describe below, in our main specifications, we will compare measures of democratic and revolutionary activity in home bailliages of birth with more soldiers serving in Rochambeau's force to those of the Neustrie and Anhalt regiments that should have gone but were exogenously prevented from doing so, as well as those regiments assigned to combat roles elsewhere in the global war of 1780-1783.

We will also exploit useful confirmatory evidence of revolutionary contagion from troops assigned to the other main French force that served alongside the American revolutionaries: about 4,000 troops under the command of Charles Hector, Comte d'Estaing. These troops served in New York, Rhode Island and Massachusetts as well as a major engagement throughout the summer of 1779 besieging and ultimately assaulting the British garrison at Savannah, Georgia.[26]

Though they did not self-select for service in America, what did the veterans learn while there? We argue that there were two main channels through which soldiers' experience in North America had an effect on their subsequent political behavior. First was through their exposure to the ideas of liberty and the revolution: through direct observation of the successful revolt of the colonists against the crown; through observation of American society; through regular interaction—particularly among the officers, who socialized with Americans and were regularly billeted with local families—with supporters of revolution and liberty; and through reading about and listening to debates over the revolution and alternative forms of government. The second main effect was that of military service on veterans' ability to organize themselves, through links veterans forged with each other, and through the development of their military skills. We outline these channels in more detail below.

One important channel through which colonists learned about revolution was through following American debates over the revolution and the need for democratic reform. One way this happened was through *La Gazette Françoise*, that Rochambeau's force published regularly during their stay in America[27] The Gazette's purpose was to translate articles from

[26]D'Estaing happened to be the governor of the major French port of Brest when war with Britain was declared, and so was among the first to set sail (Clammer, 2023). His force disembarked in July 1778 outside New York City. Unable to attack the British garrison there due to the deep draught of his 12 ships, d'Estaing instead engaged in operations around Newport, Rhode Island, putting in for repairs in Boston before departing in November 1778 for successful combat operations against the British in Grenada and Saint Vincent. He returned to North America in the early summer of 1779, besieging the 1200 British troops under the command of General Augustin Prevost in Savannah, Georgia. Prevost was called upon to surrender but instead asked for a temporary truce, in which he received 800 new reinforcements. With the end of the truce, d'Estaing and his American allies launched a massive direct attack. Despite being wounded twice himself, d'Estaing's force were unable to take the positions and they withdrew to the West Indies in the last week of October. Elements of d'Estaing's force would later join with Rochambeau at Yorktown. See Lawrence (1951) and Scott (1998).

[27]As was standard practice for French forces, Rochambeau's army brought a printing press, to enable the

the American press and accounts of the war, to inform the soldiers of the conduct of the revolution and the war, and the rightness of the American cause. It includes such elements as extracts from Paine's *Common Sense* (see Figure A3), an article by Publius (one of the Federalists) and lots of reprints on the conduct of the war and pen portraits of revolutionary leaders like Washington taken from the American press.(Poulin and Quintal, 2007) The Gazette quoted Thomas Paine talking about "*Uncontrouled [sic] power, in the hands of an incensed, imperious and rapacious conqueror, is an engine of dreadful execution; and woe be to that country over which it can be exercised.*" Though Paine's target was Britain, the broader message was clearly applicable to other contexts.

Another channel of ideological exposure was through direct contact with inspirational leading revolutionary figures, and with revolutionary debates. Dumas in his memoirs describes how when the soldiers saw the meeting between Washington and Lafayette , it was "*...a beautiful sight. We had been impatient to see the hero of Liberty. His dignified address, the simplicity of his manners and mild gravity, surpassed our expectation and won every heart* (de Deux-Ponts, 1868, pg.127). The Marquis de Chastellux in his memoirs tells us that during his time in Philadelphia, through which Rochambeau's force travelled, he listened to debates by students at University of Pennsylvania, whose speeches "*on the great cause of liberty*", which he judged the equal of those in the finest educational institutions elsewhere, showed him the worth of Thomas Paine's observation that the young generation were markedly different from the older in their allegiances to traditional order (Grieve, 1787, pg.250).[28]

A further way in which ideas were arguably reshaped was through direct observation of the enormous differences in American society and its social, economic and political hierarchies compared to their own country (McDonald, 1951). This was probably more true for officers, who in Newport and on their travels through the country were billeted in local inns and homes, but was likely not lost on the men as well.[29]

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force to print military forms and publications.

[28]The historian, H. Morse Stephens (1886) summarizes:

> *The most distinguished and accomplished young officers ... soon had their loyalty affected by their service in America during the War of Independence. After service side by side with the American colonists, who were fighting to overthrow the authority of a king, they lost respect for their own monarch, and brought home to France very advanced ideas as to the obedience they owed him. This feeling may be seen, not only in the behavior and attitude of Lafayette, but in that of Rochambeau, the Vicomte de Noailles, the Lameths, the Prince de Broglie, Custines, and all the officers who had served in America, except the Vicomte de Mirabeau.*

[29]American Campaigns (1972) has extensive detail, drawn from officers' original itineraries, showing the billeting and transportation arrangements for Rochambeau's force. Forrest McDonald (1951), writing from his Cold War vantage, describes how the French soldiers fighting alongside American revolutionaries:

> *had an opportunity to see-or, more accurately, they could not miss seeing-the practical realiza-*

3 Empirical Strategy

Our first empirical exercise is to compare political mobilization and democratic expression in the home *bailliages* of soldiers that were assigned to service in the American revolution to those that were assigned but failed to arrive (the Neustrie and Anhalt regiments) and those assigned to combat to other fronts during the global war of 1780-83. We use the *bailliage* as the appropriate unit of observation rather than the endogenously generated post-revolutionary *departéments*, whose boundaries were themselves the 1790 creation of the Revolution, designed to break with the provincial loyalties of the past (see Figure A1). As described above, the identification assumption is that, conditional on recruitment, the assignment to specific fronts of combat was unrelated to home bailliage characteristics that might also drive subsequent revolution. Thus our benchmark estimating equation is:

$$Y_{1789-93,i} = \beta \log Rochambeau_{1780-83,i} + \gamma \log NeustrieAnhalt_{1780-83,i} + \zeta Recruitment_i + X_i B + G_{FE} + \epsilon_i \quad (1)$$

where $Rochambeau_{1780-83,i}$ represents the number of Rochambeau's veterans with their birthplaces in the bailliage (plus 1), $NeustrieAnhalt_{1780-83,i}$ is the equivalent for the soldiers in those regiments, $Recruitment_i$ is a matrix of variables that drive recruitment in the pre-Revolutionary French army, including distance to the different frontiers of France, log. urban population, log population density, etc., and in some specifications we include X_i - a matrix of pre-revolutionary factors that have been associated with French state capacity and the propensity for revolutionary mobilization, including the tax and administrative regime (the *grosse fermes*(or the great tax farms), the level of the *gabelle* or salt tax) (Johnson and Koyama, 2014), log. distances to Paris, provincial capitals (Chambru, Henry and Marx, 2021), and the coast, terrain ruggedness (Nunn and Puga, 2012), quadratics in longitude, latitude and their interaction. We also include, in some specifications a battery of local exposure to educational opportunities and the Enlightenment. These include the incidence of high school teachers, secular or Catholic high schools, knowledge elite subscriptions to the

tion of the concept that had been missing in all the pre-Revolutionary jacqueries. Landing at Newport, Rhode Island, in July of 1780, and marching across southern Connecticut, through White Plains, New York, across the Hudson River and through Jersey to the Delaware River, and thence to the neighborhood around Philadelphia, they saw literally thousands of small, rich farms. They saw even the lowest of the American peasants—the small farmers—in possession of from 40 to 200 acres of well-cultivated land, and because of the increased demand for farm products occasioned by the need for supplying the armies, these farmers, at the exact moments the French saw them, were enjoying the greatest wave of prosperity they had ever experienced. In short, the French peasants saw the institution of absolutely free and unfettered private property at its glorious best.

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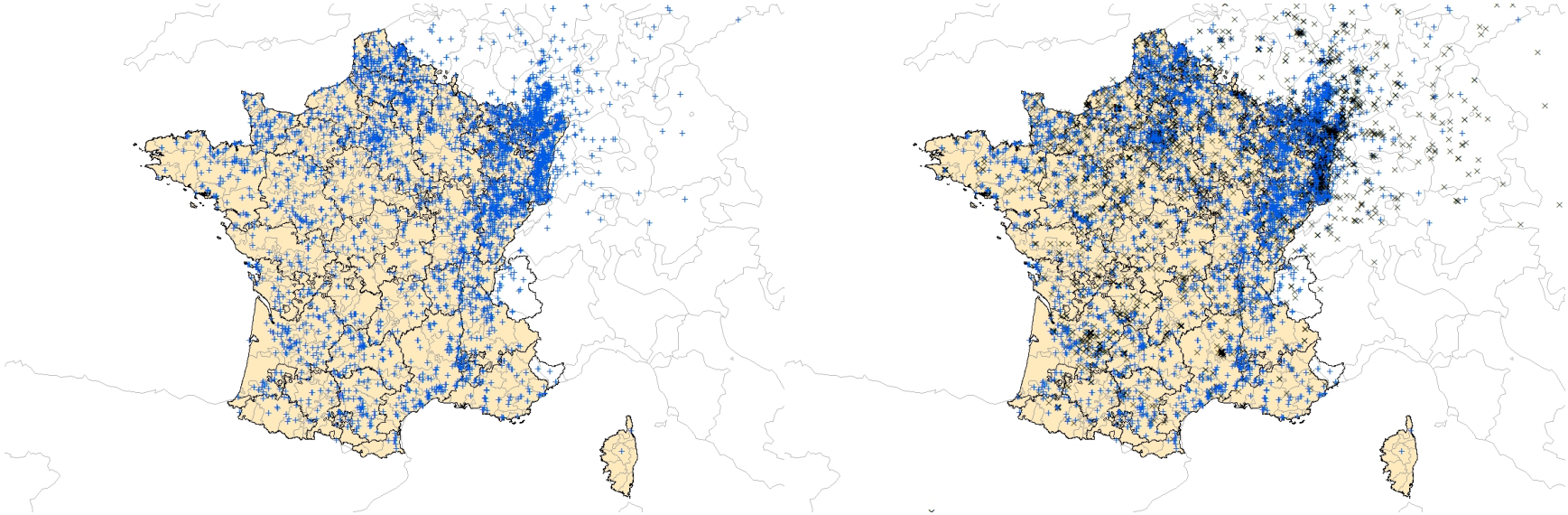
Encyclopedie (Squicciarini and Voigtländer, 2015), or the major Swiss publisher, the *Sociéte Typographic de Neufchâtel* (STN), including banned and illegal books (Darnton, 1995). In some specifications we also drop Paris (inside and outside the walls), and compare bailliages within each of 43 G_{FE}: pre-Revolutionary *généralités* (provinces and special jurisdictions-see also Figure A1). We allow ϵ_i to be arbitarily correlated within the *généralité*, but assume independence between them. We also show robustness to allowing for arbitrary spatial correlation (Colella et al., 2019) and replacing the logarithm specifications with the inverse hyperbolic sine transformation. Table A2 provides summary statistics.

Figure 1 shows the distribution of birthplaces of Rochambeau's veterans within the bailliages of 1789 France, as well as the distribution of Neustrie and Anhalt veterans. Notice first that both the 'treated' Rochambeau regiments and the 'control' Neustrie and Anhalt troops were drawn from across 1789 France, with substantial variation within bailliages (light grey boundaries) and *généralités* (dark boundaries). However, certain areas, particularly close to France's eastern frontiers with the Holy Roman Empire, which were the traditional disputed areas and where regiments tend to be disproportionately stationed, also tend to recruit more of both types of troops.

These patterns are also reflected in Table 1, which examines the determinants of the log. number of Rochambeau veterans in a bailliage. Controlling for quadratics in longitude, latitude and their interaction, bailliages with more Rochambeau veterans also tend to have more recruits of other kinds as well, including more Neustrie/Anhalt soldiers, soldiers from regiments send to other combat veterans, to be close to the frontiers of France, and have similar population densities overall but a greater urban population (Column 1)(as we will show, the results described below are not sensitive to nor indeed driven by urbanization). This is true with additional controls, (Column 2), and dropping Paris, both inside and outside its walls (Columns 3,5), and comparing bailliages within the same *généralité* (Columns 4-5).

Therefore we conduct two types of empirical comparison: one is to rely on the exogenous assignment of regiments to America: comparing bailliages within the same province with similar levels of army recruitment, but where one happened to have more Rochambeau veterans. The second is to report tests *comparing* the effects within those bailliages of having a greater share of Rochambeau veterans to having more troops from the Neustrie-Anhalt regiments that happened to be left behind, and to combat veterans deployed elsewhere.

It is, nevertheless, reassuring that, conditional on factors influencing army recruitment, and particularly within provinces (Columns 4-5), bailliages that recruited more Rochambeau veterans are largely similar with respect to a wide set of other factors that have been mooted as influencing support for the French revolution or the state's repressive capacity, such as the intensity of regressive taxes such as the *gabelle* salt-tax and tax farms (*grosse*



(a) Rochambeau (blue x) veterans

(b) Neustrie and Anhalt soldiers (black +)

Notes: Each blue diagonal cross represents the birthplace of an individual soldier who served in Rochambeau's force in the American Revolution. Each vertical black cross represents the birthplace of a soldier of the Neustrie or Anhalt regiments. Sources: see Data Appendix

Figure 1: **The Birthplaces of Rochambeau veterans and Neustrie and Anhalt troops**

Table 1: **Regression: Log. Rochambeau Veterans Born in a Bailliage**

	(1)	(2)	(3)	(4)	(5)
Log Neustrie + Anhalt Soldiers	0.342***	0.268***	0.260***	0.298***	0.290***
	(0.053)	(0.053)	(0.052)	(0.068)	(0.069)
Log. Non-American Combat Veterans	0.419***	0.347***	0.339***	0.300***	0.292***
	(0.065)	(0.065)	(0.064)	(0.078)	(0.078)
Log. Distance to Holy Rom. Emp. (m)	-0.113***	-0.107***	-0.104***	-0.056	-0.057
	(0.039)	(0.033)	(0.032)	(0.037)	(0.037)
Log. Distance to Spain (m)	-0.094	-0.087	-0.085	-0.044	-0.044
	(0.059)	(0.055)	(0.054)	(0.053)	(0.053)
Log. Distance to Switz/ Savoy (m)	-0.076*	-0.074*	-0.072*	0.015	0.015
	(0.043)	(0.040)	(0.039)	(0.038)	(0.038)
Log. Distance to Land Frontier	0.080*	0.079*	0.077*	0.025	0.025
	(0.045)	(0.042)	(0.041)	(0.040)	(0.040)
Log. Urban Population	0.055***	0.027**	0.025*	0.035**	0.034**
	(0.011)	(0.013)	(0.013)	(0.014)	(0.014)
Log. Population Density	0.104	0.094	0.092	0.029	0.035
	(0.077)	(0.070)	(0.069)	(0.079)	(0.078)
Grosse Fermes	-0.045	-0.045	-0.035		
	(0.220)	(0.197)	(0.196)		
Gabelle (livres per quintal)	0.001	0.002	0.003	0.001	0.001
	(0.005)	(0.004)	(0.004)	(0.006)	(0.006)
Log. Distance to Paris (m)	0.068	0.093*	0.160**	0.030	0.004
	(0.055)	(0.051)	(0.076)	(0.096)	(0.194)
Log. Distance to Provincial Capital (m)	-0.019	0.001	0.001	-0.028*	-0.028*
	(0.013)	(0.012)	(0.012)	(0.016)	(0.016)
Log. Distance to Coast (m)	-0.009	-0.002	-0.001	-0.008	-0.009
	(0.015)	(0.011)	(0.011)	(0.013)	(0.014)
Altitude SD	-0.000	-0.000	-0.000	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Log. High School Professors		0.139	0.150	0.003	0.013
		(0.091)	(0.090)	(0.093)	(0.093)
Log. Secular High Schools		0.170	0.167	0.251	0.251
		(0.149)	(0.149)	(0.158)	(0.158)
Log. Catholic High Schools		0.022	0.018	0.045	0.044
		(0.151)	(0.150)	(0.149)	(0.150)
Log. STN Books Sold		0.067	0.072	0.072	0.075
		(0.061)	(0.062)	(0.076)	(0.076)
Log. Banned Books Sold		-0.002	-0.002	-0.041	-0.042
		(0.090)	(0.092)	(0.114)	(0.113)
Log. Encyclopedie Subscriptions		0.042	0.042	0.040	0.041
		(0.033)	(0.033)	(0.036)	(0.036)
Hyslop Bailliage		0.095	0.095	0.118	0.112
		(0.080)	(0.079)	(0.096)	(0.096)
Generalite Fixed Effects	No	No	No	Yes	Yes
Dropping Paris Intra- and Extra-Muros	No	No	Yes	No	Yes
Observations	436	436	434	436	434
R-squared	0.627	0.650	0.643	0.709	0.702
Mean DV	1.771	1.771	1.757	1.771	1.757

An observation is a bailliage. The outcome is the logarithm of the number of veterans serving in Rochambeau's force. All regressions are OLS and include linear and quadratic controls for Easting and Northing and Easting x Northing. Columns 3 and 5 drop Paris intra-muros and extra-muros. Columns 4 and 5 include separate intercepts for each pre-Revolutionary generalite. Robust standard errors in parentheses, clustered at the pre-Revolutionary generalite level. *** p<0.01, ** p<0.05, * p<0.1

fermes) (Johnson and Koyama, 2014), and terrain ruggedness (Nunn and Puga, 2012).[30]

Further, and importantly, comparing within the same *généralité*, bailliages with more Rochambeau veterans are also similar along a swathe of other proxies for the expansion of education or Enlightenment thinking.[31] These include the incidence of high school teachers, secular or Catholic high schools, knowledge elite subscriptions to the *Encyclopedie*, or the major Swiss publisher, the *Sociéte Typographic de Neufchâtel* (STN), including banned and illegal books. Further, as we show below, they also do not show more unrest or have more political clubs *before* the Revolution begins.

4 Results

4.1 Effects on Democratic Values

Despite these pre-Revolution similarities, as Table 2 reveals, Rochambeau bailliages had diverged by 1789 in terms of their support for democratic ideas. To measure democratic values, as noted above, we exploit a remarkable set of documents, the *cahiers des doléances*: "*notebooks of grievances*", which were submitted by each estate in each bailliage at the King's request, to express their chief concerns ahead of the summoning of the Estates-General in 1789. As an outcome we use the indicator developed by the historian, Beatrice Hyslop (1968) of the 55 *cahiers* that she considered to be the *'Most Strongly Democratic'* in expressing the grievances of their inhabitants.[32]

As the table suggests, among the 239 bailliages with cahiers in the Hyslop sample, bailliages with 10% more Rochambeau veterans were 1.28 percentage points more likely to submit a Third Estate Cahier that was *"Most Strongly Democratic"* in 1789 (compared to a mean of 19.6% of bailliages doing so outside of Paris in Hyslop's sample- Column 5).[33] This effect is

[30]Note that the *grosse fermes*, as indeed many regional policy differences in pre-Revolutionary France, were assigned at the level of the *généralité* or higher. Since they do not vary within *généralités*, they are already controlled for when we add *généralité* fixed effects.

[31]As Mokyr and other have noted, the willingness to record, classify, debate and promote individual rights, as well as new techniques and institutional forms through local clubs, associations and societies was a key ingredient of the Enlightenment (Mokyr, 2005, 2017, Squicciarini and Voigtländer, 2015). Certainly many contemporaries made a clear link between pre-revolutionary philosophical ideas and associations and the revolution. In 1790-91, for instance, a variety of revolutionary figures including Marquis de Vallette argued that, without Voltaire, and his questioning of injustices and proposals for new institutional structures, there would have been no French Revolution (Rockwood, 1935, p.91) Furet also points to Rousseau's role in "*assembling the cultural materials that went into revolutionary consciousness and practice* (1981:31)."

[32]Hyslop coded cahiers as "Most Strongly Democratic" if they revealed strong and consistent support for three democratic principles: democracy in government (with respect to popular sovereignty and the elective principle), equality with regard to classes, and individual rather than community-level rights (Hyslop, 1968, pp.64-99).

[33]The coefficient on log. Rochambeau veterans is $\hat{\beta} = 0.129[0.041]$. A 10% change is $\hat{\beta} \times \ln(1.1) =$

Table 2: **Regression: "Most Strongly Democratic" Third Estate Cahiers**

	(1)	(2)	(3)	(4)	(5)
Log. Rochambeau Veterans	0.133***	0.131***	0.130***	0.128***	0.129***
	(0.035)	(0.036)	(0.036)	(0.042)	(0.041)
Log Neustrie + Anhalt Soldiers	-0.022	-0.018	-0.020	0.003	0.004
	(0.031)	(0.034)	(0.036)	(0.049)	(0.049)
Log. Non-American Combat Veterans	-0.042	-0.047	-0.051	-0.045	-0.044
	(0.045)	(0.047)	(0.046)	(0.053)	(0.054)
Log. Distance to Holy Rom. Emp. (m)	0.050***	0.043***	0.046***	0.030	0.031
	(0.013)	(0.013)	(0.012)	(0.021)	(0.022)
Log. Distance to Spain (m)	0.068***	0.062***	0.062***	0.062**	0.061**
	(0.018)	(0.016)	(0.016)	(0.025)	(0.025)
Log. Distance to Switz/ Savoy (m)	0.028**	0.022*	0.024**	0.015	0.015
	(0.012)	(0.012)	(0.012)	(0.020)	(0.020)
Log. Distance to Land Frontier	-0.046***	-0.040***	-0.041***	-0.022	-0.022
	(0.013)	(0.013)	(0.013)	(0.019)	(0.019)
Log. Urban Population	-0.002	0.005	0.004	0.001	0.002
	(0.008)	(0.011)	(0.011)	(0.014)	(0.013)
Log. Population Density	-0.017	-0.042	-0.052	-0.037	-0.044
	(0.030)	(0.041)	(0.041)	(0.053)	(0.054)
Grosse Fermes	0.049	0.055	0.080		
	(0.120)	(0.118)	(0.119)		
Gabelle (livres per quintal)	0.001	0.001	0.001	0.001	0.001
	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)
Log. Distance to Paris (m)	-0.056**	-0.063**	0.029	0.009	0.062
	(0.021)	(0.027)	(0.050)	(0.054)	(0.153)
Log. Distance to Provincial Capital (m)	-0.003	-0.001	-0.001	0.001	0.001
	(0.008)	(0.008)	(0.009)	(0.012)	(0.012)
Log. Distance to Coast (m)	-0.009	-0.009	-0.007	-0.009	-0.009
	(0.006)	(0.007)	(0.007)	(0.009)	(0.009)
Log. High School Professors		-0.036	-0.040	-0.027	-0.032
		(0.073)	(0.069)	(0.089)	(0.085)
Log. Secular High Schools		0.009	0.016	-0.015	-0.009
		(0.090)	(0.092)	(0.106)	(0.106)
Log. Catholic High Schools		-0.122	-0.118	-0.154	-0.151
		(0.108)	(0.106)	(0.121)	(0.118)
Log. STN Books Sold		0.110*	0.114*	0.108*	0.106
		(0.061)	(0.063)	(0.064)	(0.064)
Log. Banned Books Sold		-0.155*	-0.158*	-0.144	-0.143
		(0.084)	(0.087)	(0.088)	(0.087)
Log. Encyclopedie Subscriptions		0.031	0.033	0.040	0.041
		(0.024)	(0.024)	(0.027)	(0.028)
Generalite Fixed Effects	No	No	No	Yes	Yes
Dropping Paris Intra- and Extra-Muros	No	No	Yes	No	Yes
Observations	239	239	237	239	237
R-squared	0.206	0.247	0.228	0.395	0.372
Mean DV	0.180	0.180	0.173	0.180	0.173
p-value: Roch. = Neustrie/Anhalt	0.00281	0.00522	0.00692	0.0481	0.0474
p-value: Roch. = Other Combat Veteran	0.0189	0.0221	0.0207	0.0552	0.0511

An observation is a bailliage.The outcome is an indicator for a "*Most Strongly Democratic* " Third Estate Cahier in 1789, as classified by Beatrice Hyslop. All regressions include linear and quadratic controls for Easting and Northing and Easting x Northing. Columns 3 and 5 drop Paris intra-muros and extra-muros. Columns 4 and 5 include separate intercepts for each pre-Revolutionary generalite. Robust standard errors in parentheses, clustered at the pre-Revolutionary generalite level. *** p<0.01, ** p<0.05, * p<0.1

robust to comparing across and within provinces, and controlling for recruitment and other drivers of education and Enlightenment thinking. Importantly, urban population does not appear to drive support for the most democratic Third Estate Cahiers. Some Enlightment measures, particularly being a location with more Swiss (STN) book subscriptions (though fewer banned books) are positively correlated as well.[34]

Furthermore, as the Table shows, the effect of having more Rochambeau veterans is significantly different than the effects of having more Neustrie and Anhalt troops, which reveal no or, if anything, a negative relationship (the p-value of a two-sided test of equality ranges from 0.003 to 0.047 depending on specification). Similarly, bailliages home to additional combat veterans deployed outside the Americas, reveal, if anything, lower probabilities of submitting a 'Most Democratic' Third Estate cahier as well ($\hat{\beta} : -0.044[0.054]$).

Hyslop coded this variable for a set of surviving Third Estate cahiers, and Table 2 only includes these. For comparability and robustness, we include a dummy variable for presence in her dataset and show the effects for the full sample in Table 3(Panel A). The results are robust, indicating that a 10% increase in Rochambeau veterans raises the chances of a Third Estate bailliage across France submitting a Strongly Democratic Cahier of 0.58pp (or an 6.13% increase relative to the 9.45% share of democratic Third Estate cahiers among all bailliages outside Paris).[35] Once again, the Neustrie and Anhalt regiments and those deployed to combat roles elsewhere are significantly different and if anything tend to be *negative* in point estimate.

Further, if our mechanism is true, and it was exposure to service alongside American revolutionaries in North America that led to the contagion of democratic ideas, we should expect to see a similar effect among bailliages recruited into d'Estaing's force. As Panel B shows, the effect size of having more d'Estaing veterans are very similar in magnitude to the Rochambeau veterans (0.045 vs 0.061 (Column 5)). These results are also robust to pooling the two sets of American veterans together (Panel C).

Since the vast majority of Rochambeau's force belonged to the Third Estate, if there was revolutionary contagion, one would expect that it would be most reflected in the Third Estate Cahiers, rather than those of the nobility and the clergy. Yet, given the (mostly noble and relatively influential) officers who also went to America, there still might be spillovers into the sentiments of these groups as well. Table A4 provides the results of this comparison. Notice

$\hat{\beta} \times 0.095 = 0.129 \times 0.095 = 0.01225$ or 1.23pp.

[34]It is worth noting that a non-trivial share of the clandestine books banned in France were pornography (Darnton, 1995). On the other hand, Louis XVI himself was an avid collector and regular consultor of the volumes of the *Encyclopedie* (Popkin, 2019).

[35]This is based upon column 5: A 10% change is $\hat{\beta} \times \log(1.1) = \hat{\beta} \times 0.095 = 0.061 \times 0.095 = 0.0058$ or 0.58pp.

Table 3: **Cahiers "that were the most Strongly Democratic": Full Sample, D'Estaing and All American Veterans**

Full Bailliage Sample	(1)	(2)	(3)	(4)	(5)
Panel A: Rochambeau's Force					
Log. Rochambeau Veterans	0.067***	0.055***	0.052***	0.063***	0.061***
	(0.017)	(0.016)	(0.017)	(0.017)	(0.018)
Log Neustrie + Anhalt Soldiers	0.006	-0.007	-0.011	0.000	-0.003
	(0.018)	(0.019)	(0.020)	(0.025)	(0.025)
Log. Non-American Combat Veterans	-0.017	-0.025	-0.027	-0.014	-0.017
	(0.025)	(0.026)	(0.026)	(0.025)	(0.026)
R-squared	0.167	0.243	0.221	0.333	0.309
p-value: Roch. = Neustrie/Anhalt	0.00995	0.00688	0.00843	0.00744	0.00632
p-value: Roch. = Other Combat Veteran	0.0273	0.0402	0.0445	0.0547	0.0564
Panel B: d'Estaing's Force					
Log. d'Estaing Veterans	0.064***	0.046**	0.043**	0.047**	0.045*
	(0.021)	(0.018)	(0.018)	(0.023)	(0.023)
Log Neustrie + Anhalt Soldiers	0.009	-0.002	-0.005	0.005	0.002
	(0.017)	(0.019)	(0.020)	(0.026)	(0.027)
Log. Non-American Combat Veterans	-0.002	-0.010	-0.014	-0.000	-0.003
	(0.023)	(0.023)	(0.023)	(0.023)	(0.023)
R-squared	0.163	0.236	0.214	0.323	0.299
p-value: d'Est. = Neustrie/Anhalt	0.0279	0.0209	0.0242	0.166	0.160
p-value: d'Est = Other Combat Veteran	0.0614	0.0848	0.0860	0.183	0.176
Panel C: American Veterans (Combined d'Estaing and Rochambeau)					
Log. d'Estaing + Rochambeau Veterans	0.066***	0.050***	0.047***	0.056***	0.053***
	(0.016)	(0.014)	(0.014)	(0.016)	(0.016)
Log Neustrie + Anhalt Soldiers	0.004	-0.007	-0.010	-0.000	-0.004
	(0.017)	(0.019)	(0.019)	(0.026)	(0.026)
Log. Non-American Combat Veterans	-0.014	-0.020	-0.023	-0.010	-0.012
	(0.024)	(0.025)	(0.024)	(0.025)	(0.025)
R-squared	0.167	0.240	0.218	0.328	0.304
p-value: Am. Vets = Neustrie/Anhalt	0.00489	0.00397	0.00555	0.0148	0.0135
p-value: Am. Vets = Other Combat Veteran	0.0237	0.0462	0.0504	0.0688	0.0756
Mean DV	0.0986	0.0986	0.0945	0.0986	0.0945
Observations	436	436	434	436	434
Recruitment, Geog, Admin. Controls	Yes	Yes	Yes	Yes	Yes
Enlightenment & Education Controls	No	Yes	Yes	Yes	Yes
Generalite Fixed Effects	No	No	No	Yes	Yes
Dropping Paris Intra- and Extra-Muros	No	No	Yes	No	Yes

An observation is a bailliage. The outcome is an indicator for a "*Most Strongly Democratic*" Third Estate Cahier in 1789, as classified by Beatrice Hyslop. All regressions include the same sets of controls as the equivalent column in Table 2. All regressions include controls for recruitment, geography and administration that include: linear and quadratic controls for Easting and Northing and Easting x Northing and ruggedness (the SD of altitude); log. distance to the borders of the Holy Roman Empire, Spain, Switzerland and Savoy and any land frontier, log. urban population and population density, location in the grosse fermes, and gabelle tax levels; and log distance to Paris, the pre-revolutionary provincial capital and the coast. Column 2 includes enlightenment and education controls that include: Log. high school professors, secular and catholic high schools, STN books sold, banned STN books sold, Encyclopedie subscriptions and an indicator for presence in Hyslop's cahiers data. Columns 3 and 5 drop Paris intra-muros and extra-muros. Columns 4 and 5 include separate intercepts for each pre-Revolutionary generalite. Robust standard errors in parentheses, clustered at the pre-Revolutionary generalite level. *** p<0.01, ** p<0.05, * p<0.1

that there are very few cahiers of the nobility (2.5%) and clergy (1.7%) that show strong democratic leanings in general. However, despite this, there is some weak suggestive evidence that the cahiers of the nobility and even the clergy were more democratic in Rochambeau bailliages than in the home bailiages of the Neustrie-Anhalt troops.[36]

4.2 Effects on Local Political Mobilization: Club Memberships

The effects are also reflected in the degree of local political mobilization, as measured by the presence of political clubs. As Figure 2 shows the spread of political clubs across France. The share of bailliages that founded political clubs each year went from 3.9% in 1789 to 37.4% in 1790, 61.7% in 1791, slowing down to 31.2% in 1792 and 40.3% in 1791 before accelerating again to 80.7% in 1794.

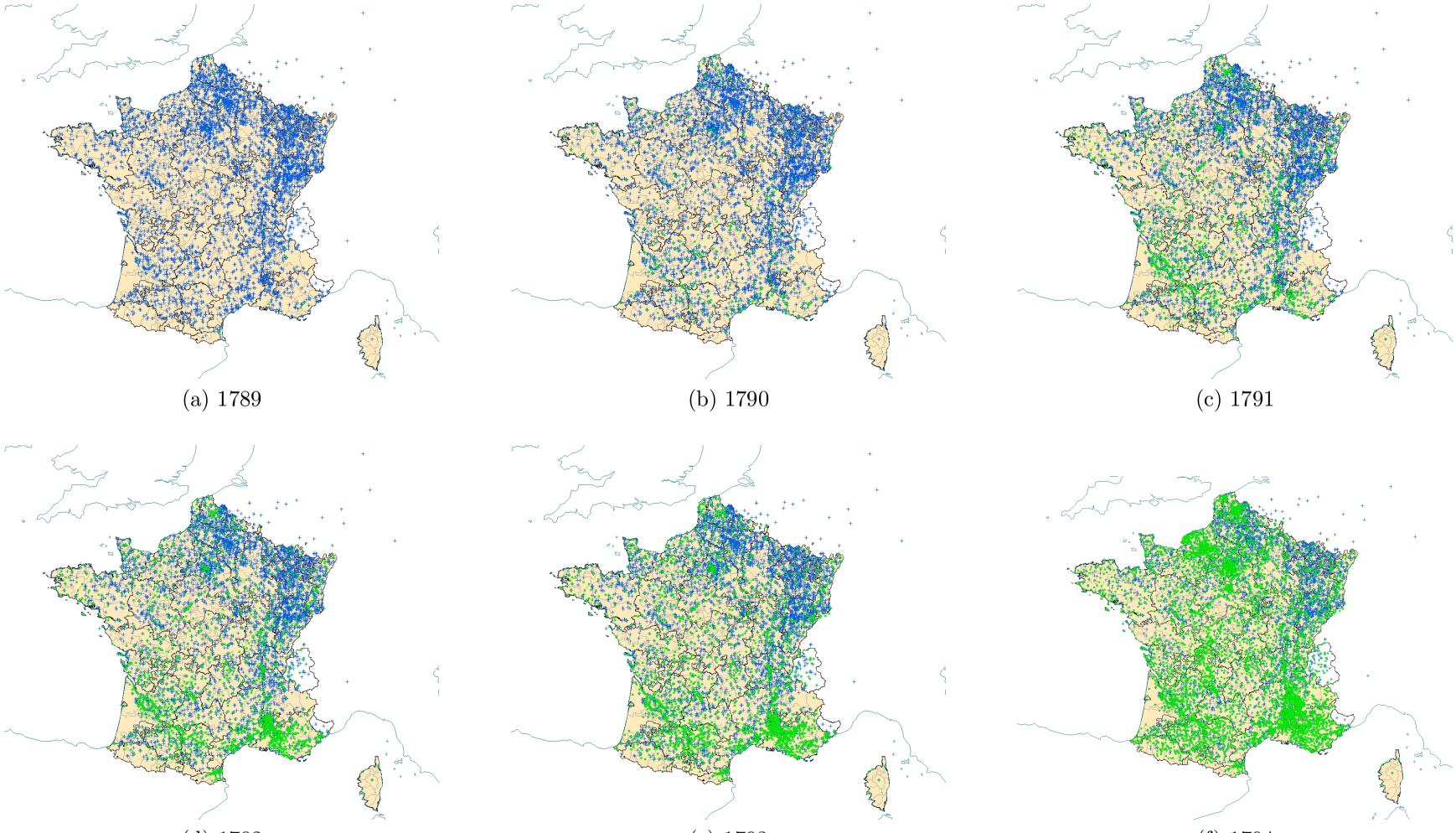
Table 4 shows that in the degree and pace of founding political clubs, bailliages with more Rochambeau veterans were also different. Though they had similar numbers of political clubs as otherwise similar bailliages within the same province (*généralité*) in 1789, by 1790 bailliages with 10% more Rochambeau veterans were 2.19% more likely to have founded a political club (relative to 37.3% of bailliages), and 2.17% more likely to have founded a Jacobin club in 1790 (relative to 35.9%). These difference advantages persist for at least the first 5 years of the Revolution. These are also true for d'Estaing's veterans and pooling veterans of the two American forces (Panel B). In contrast, bailliages with Neustrie-Anhalt soldiers also start to raise more political clubs, but do so a year later than the Rochambeau veterans, and are less likely to support the early Jacobins.

4.3 Effects on Violent Unrest and Revolts

We now turn to examine local violent mobilization. Figure 3 uses data from Nicolas (2002) and Chambru (2019), superimposing the incidence of riots in France in the three years leading up the revolution (1785-88,a) and riots in that first year (1789,b), and an expanded sample (c) of riots and revolts based upon these sources as well as Lefebvre (1947),Aulard (1909) and Herbert (1921).[37] Notice that riots in the years before the Revolution are unrelated with the log. number of Rochambeau veterans, a pattern confirmed in the coefficients of regressions year by year using the same specification as Table 3(Col 5) (Figure 4). However,

[36]Though there are modest effects on the home bailliage cahiers of the nobility, as we show below using *individual-level* data, those (mainly noble) officers who went to America do show more support for democratic values, even while other noble combat veterans do not.

[37]A riot is defined in the Chambru (2019) data as involving more than four individuals from beyond a single family deploying violence against property, person or authorities (see also Chambru and Maneuvrier-Hervieu (2022)). In the latter exercise, we combine these with sources following McDonald (1951), see Appendix.



(a) 1789 (b) 1790 (c) 1791

(d) 1792 (e) 1793 (f) 1794

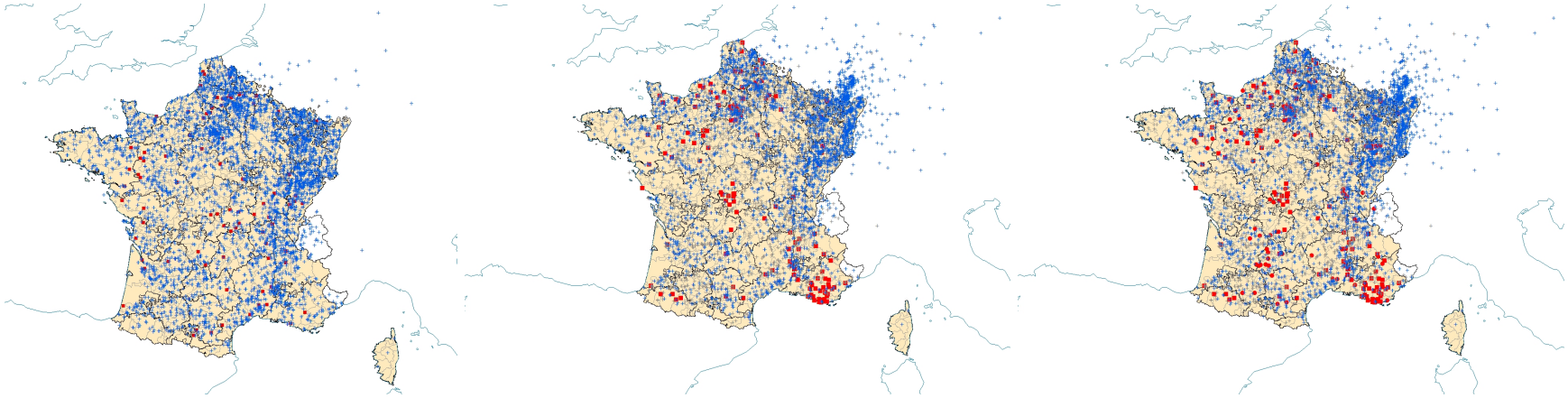
Notes: The blue crosses represent the birthplaces of individual Rochambeau veterans. The green boxes represent individual political clubs present in a location in that year. While no different in the number of political clubs in 1789, bailliages with more Rochambeau veterans diverged and formed new political clubs in the early years of the Revolution.

Figure 2: **Rochambeau Veterans and the Expansion of Political Clubs in France: 1789-1794**

Table 4: **Regression: Political Clubs and Jacobin Clubs in Bailliage Each Year**

	Political Club Founded in Bailliage in Year						Jacobin Club Founded in Bailliage in Year					
	1789	**1790**	**1791**	**1792**	**1793**	**1794**	**1789**	**1790**	**1791**	**1792**	**1793**	**1794**
Log. Rochambeau Veterans	0.013	0.086***	0.064**	0.080***	0.094***	0.096***	0.004	0.082***	0.074**	0.043*	0.020	0.056***
	(0.010)	(0.025)	(0.025)	(0.025)	(0.032)	(0.023)	(0.008)	(0.025)	(0.031)	(0.024)	(0.023)	(0.020)
Log Neustrie + Anhalt	-0.038**	0.027	0.075***	-0.011	0.014	0.002	-0.027*	0.024	0.032	-0.048**	-0.001	-0.004
	(0.015)	(0.031)	(0.028)	(0.033)	(0.036)	(0.018)	(0.015)	(0.030)	(0.036)	(0.022)	(0.025)	(0.029)
Log. Non-American Combat Veterans	0.018	0.002	0.014	0.023	0.098**	-0.008	0.015	0.007	-0.006	0.015	0.040	-0.014
	(0.026)	(0.035)	(0.043)	(0.047)	(0.039)	(0.037)	(0.026)	(0.032)	(0.046)	(0.026)	(0.029)	(0.033)
R-squared	0.339	0.480	0.401	0.370	0.458	0.418	0.318	0.482	0.389	0.243	0.263	0.245
p-value: Am. Vets = Neustrie/Anhalt	0.0231	0.209	0.787	0.0282	0.136	0.00809	0.130	0.215	0.486	0.0224	0.555	0.163
p-value: Am. Vets = Other Combat Veteran	0.843	0.0508	0.402	0.369	0.951	0.0477	0.663	0.0646	0.201	0.493	0.657	0.102
Log. American Vets (Rochambeau+d'Estaing)	0.005	0.093***	0.069**	0.105***	0.095***	0.124***	-0.003	0.091***	0.074**	0.063***	0.021	0.077***
	(0.010)	(0.026)	(0.030)	(0.027)	(0.031)	(0.024)	(0.008)	(0.026)	(0.034)	(0.022)	(0.021)	(0.020)
Log Neustrie + Anhalt	-0.036**	0.021	0.071**	-0.023	0.009	-0.012	-0.025	0.017	0.029	-0.056**	-0.002	-0.014
	(0.015)	(0.030)	(0.029)	(0.033)	(0.037)	(0.018)	(0.016)	(0.028)	(0.037)	(0.022)	(0.025)	(0.029)
Log. Non-American Combat Veterans	0.021	0.003	0.015	0.020	0.101***	-0.011	0.017	0.008	-0.003	0.012	0.040	-0.017
	(0.026)	(0.034)	(0.042)	(0.044)	(0.037)	(0.033)	(0.025)	(0.032)	(0.046)	(0.025)	(0.028)	(0.032)
R-squared	0.337	0.482	0.401	0.378	0.457	0.433	0.318	0.485	0.389	0.252	0.263	0.254
p-value: Am. Vets = Neustrie/Anhalt	0.0791	0.122	0.968	0.00408	0.129	0.000696	0.279	0.0971	0.481	0.00207	0.508	0.0433
p-value: Am. Vets = Other Combat Veteran	0.552	0.0367	0.353	0.148	0.907	0.00338	0.404	0.0453	0.225	0.197	0.640	0.0214
Recruitment, Geog, Admin. Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enlightenment & Education Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Generalite Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dropping Paris Intra- and Extra-Muros	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean DV	0.0369	0.373	0.615	0.311	0.403	0.806	0.0323	0.359	0.484	0.101	0.0922	0.134
Observations	434	434	434	434	434	434	434	434	434	434	434	434

An observation is a bailliage. The outcome is an indicator for the founding of political clubs (left) and Jacobin political clubs in the bailliage in each year. All regressions are estimated using OLS and include the full set of controls as Column 5 of Table 2, dropping Paris intra-muros and extra-muros, and include separate intercepts for each pre-Revolutionary generalite. Robust standard errors in parentheses, clustered at the pre-Revolutionary generalite level. *** p<0.01, ** p<0.05, * p<0.1



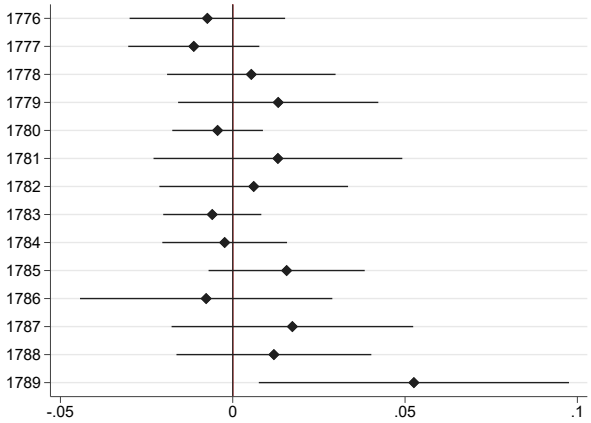
(a) Riots, 1785-1788 (b) Riots, 1789 (c) Riots and Revolts 1789

Notes: The blue crosses represent the birthplaces of individual Rochambeau veterans. The red boxes represent individual riots present in that year; red circles represent revolts. While no different in the incidence of pre-1789 riots, in 1789, bailliages with more Rochambeau veterans had more riots and revolts.

Figure 3: **Rochambeau Veterans, Riots and Revolts: 1780-1789**

this changes in 1789, the year the riots take on a revolutionary aspect, rather than being mostly about local concerns (see Chambru (2019) and Nicolas (2002)).

Figure 4: **Coefficients on the Probability of Riots: Log. Rochambeau Veterans**



Each year represents the coefficient (and 95% confidence interval) on log. Rochambeau veterans from a separate OLS regression on the probability a bailliage experienced a riot in that year. All regressions include the full set of controls from Table 2, Column 4, drop Paris, and include pre-Revolution *généralité* fixed effects. Standard errors are clustered at the *généralité* level. Observe that bailliages that had more Rochambeau veterans were *not* more likely to have a riot in any year prior to 1789.

Table 5 provides the detailed coefficients, using the same specifications as above, on the probability a bailliage experienced a riot in 1789. Though experiencing similar incidences of riots in the years before the revolution, bailliages with 10% more Rochambeau veterans experienced a 0.503 pp higher probability of a revolt or a riot in 1789 (or 2.84% compared to the 17.7% share of bailliages experiencing such an event outside Paris- Column 5.) However, bailliages with Neustrie and Anhalt soldiers and those with an non-American combat veterans, also experience slight (though insignificant) increases. Further these coefficients are not robustly significantly different from the effects of Rochambeau veterans.

Other factors that appear important for driving the probability of a riot in 1789 include population density. The supply of education also appears important for mobilization: bailliages with more Catholic high schools also are more likely to experience a riot in 1789 (the coefficient on secular schools is also positive but not significant). However, it is worth noting neither urbanization nor a battery of measures of Enlightenment exposure appear to have effects on the probability of a riot in 1789 on their own.

Table 5: **Regression: Riots, 1789**

	(1)	(2)	(3)	(4)	(5)
Log. Rochambeau Veterans	0.059***	0.050***	0.048***	0.055**	0.053**
	(0.017)	(0.018)	(0.018)	(0.022)	(0.022)
Log Neustrie + Anhalt Soldiers	0.025	0.016	0.013	0.021	0.017
	(0.023)	(0.024)	(0.025)	(0.027)	(0.027)
Log. Non-American Combat Veterans	-0.008	-0.017	-0.020	0.015	0.009
	(0.035)	(0.036)	(0.036)	(0.036)	(0.036)
Log. Distance to Holy Rom. Emp. (m)	-0.012	-0.013	-0.013	-0.000	-0.002
	(0.019)	(0.021)	(0.021)	(0.013)	(0.013)
Log. Distance to Spain (m)	0.030	0.025	0.026	0.040	0.040
	(0.023)	(0.025)	(0.025)	(0.030)	(0.030)
Log. Distance to Switz/ Savoy (m)	-0.003	-0.007	-0.007	0.012	0.011
	(0.018)	(0.020)	(0.020)	(0.019)	(0.019)
Log. Distance to Land Frontier	0.000	0.001	0.001	-0.000	-0.000
	(0.018)	(0.020)	(0.019)	(0.017)	(0.017)
Log. Urban Population	0.003	-0.003	-0.004	-0.002	-0.002
	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
Log. Population Density	0.058**	0.046*	0.052*	0.056*	0.065**
	(0.027)	(0.027)	(0.027)	(0.032)	(0.031)
Grosse Fermes	-0.044	-0.053	-0.054		
	(0.064)	(0.063)	(0.063)		
Gabelle (livres per quintal)	0.002*	0.002*	0.002	-0.003	-0.003
	(0.001)	(0.001)	(0.001)	(0.003)	(0.003)
Log. Distance to Paris (m)	-0.029	-0.036*	-0.040	-0.021	-0.101
	(0.020)	(0.021)	(0.050)	(0.049)	(0.113)
Log. Distance to Provincial Capital (m)	-0.004	0.001	0.001	0.000	0.001
	(0.010)	(0.010)	(0.010)	(0.013)	(0.013)
Log. Distance to Coast (m)	-0.016*	-0.015*	-0.015*	-0.007	-0.008
	(0.009)	(0.008)	(0.008)	(0.009)	(0.009)
Log. High School Professors		-0.020	-0.012	-0.020	-0.014
		(0.049)	(0.048)	(0.055)	(0.054)
Log. Secular High Schools		0.105	0.108	0.093	0.095
		(0.070)	(0.071)	(0.080)	(0.080)
Log. Catholic High Schools		0.170**	0.167**	0.194**	0.194**
		(0.078)	(0.078)	(0.087)	(0.087)
Log. STN Books Sold		-0.011	-0.010	-0.014	-0.011
		(0.046)	(0.045)	(0.045)	(0.045)
Log. Banned Books Sold		-0.008	-0.006	0.009	0.009
		(0.058)	(0.057)	(0.057)	(0.057)
Log. Encyclopedie Subscriptions		0.030	0.031	0.016	0.016
		(0.021)	(0.021)	(0.025)	(0.025)
Generalite Fixed Effects	No	No	No	Yes	Yes
Dropping Paris Intra- and Extra-Muros	No	No	Yes	No	Yes
Observations	436	436	434	436	434
R-squared	0.219	0.245	0.233	0.370	0.363
Mean DV	0.181	0.181	0.177	0.181	0.177
p-value: Roch. = Neustrie/Anhalt	0.313	0.316	0.302	0.404	0.392
p-value: Roch. = Other Combat Veteran	0.133	0.140	0.130	0.368	0.328

An observation is a bailliage. The outcome is an indicator for whether the bailliage experienced a riot in 1789. All regressions are OLS and include linear and quadratic controls for Easting and Northing and Easting x Northing, and an indicator for presence in Hyslop's dataset. Columns 3 and 5 drop Paris intra-muros and extra-muros. Columns 4 and 5 include separate intercepts for each pre-Revolutionary generalite. Robust standard errors in parentheses, clustered at the pre-Revolutionary generalite level. *** p<0.01, ** p<0.05, * p<0.1

4.4 Further Robustness

Table A5 performs the same exercise, expanding the set of riots to include revolts listed by Aulard (1909) and Lefebvre (1947), with similar results: the effect of 10% more Rochambeau veterans increases the probability of a riot or revolt by 2.51% compared to a mean of 20.0% of bailliages experiencing such an event that year. Bailliages with more Neustrie-Anhalt soldiers and combat veterans also mobilize, however, and the differences are not significant.[38]

Thusfar, we cluster our standard errors at the conservative *généralité* level (see Figure A1), Table A7 follows Colella et al. (2019) and presents the results for both most democratic Third Estate cahiers and Revolt and Riots in 1789 allowing for arbitrary spatial clustering with bandwidths ranging from 50km to 150km. The results are very consistent. Table A8 similarly shows the results on both democratic cahiers and on riots, using the inverse hyperbolic sine transformation instead of logarithms. The effects are again very similar in magnitude and significance.

Finally, Table A6 shows robustness of the main results to adding controls for a set of temperature shocks during the '*Winter of Discontent'*(see the Data Appendix and also Waldinger (2021) and Chambru (2019)). The shortages and huge price increases in the price of grain that afflicted France after the disastrous storms of July 1788, and the subsequent cold winter, have long been identified as an important cause of the Revolution (Labrousse, 1944, Doyle, 2002). However, the Rochambeau and American veteran effects are robust to controlling for these differences, which do not appear to have independent effects controlling for the other factors in our benchmark specification.

Interestingly, however, the interaction with the winter temperature shocks and Rochambeau veterans is strong and positive in predicting the probability of riot or revolt in 1789 but does not effect the probability of the presentation of democratic Third Estate Cahiers. This is consistent with the notion that the agrarian mobilization was indeed shaped by economic distress, but required local leadership to translate into collective action. In contrast, the spread of democratic values by Rochambeau veterans was not shaped by such temporary economic shocks.

5 Individual Analyses

The effects we have described so far point to a robust relationship between exposure to the American revolution among the soldiers and subsequent support for democratic values

[38]Here one Enlightenment measure does appear significant in some specifications with this measure: Encyclopedie subscriptions (Squicciarini and Voigtländer, 2015) also appear to raise the probability of a riot or revolt.

and mobilization in their home bailliages on their return. These have largely focused on the relatively non-elite (Third Estate), for which individual level data is challenging. We have however also provided an example that demonstrates the critical role and relevance of individual non-elite American veterans in one key instance: the siege of the Bastille, including individuals credited with instigating the initial assault and spreading democratic values (Louis la Reynie), organizing the successful attack (Jacob Elie) and using their specialized military skills to operate the much-needed artillery (Claude Marneur).[39] To shed further light on the mechanisms, we exploit two novel individual level datasets: data on individual soldiers, mainly officers, who stayed in the army, as well as data on the more elite American veterans elected to serve in the National Assembly. Each provides an incomplete picture on its own. However, together they provide a very consistent image of the political leanings of the soldiers who returned from fighting in the American revolution.

For the former exercise, we hand-code individual data based upon three sources in particular: a set of biographies of 1114 officers who served with the French army in the American Revolution, assembled from original service records by Bodinier (1982) and Bodinier (1983), a set of biographies of 1214 general officers in the royal army alive at that time, including those that were not sent to America (with surnames A-O), also compiled by Bodinier (2009). We cross-check these data with a separate source that provides biographies of 655 military emigres who abandoned the revolutionary army to fight as counter-revolutionaries, compiled by Pinasseau (1957). This provides 2,090 individual soldier observations. For the latter exercise, we hand-code all 1,293 members of the Estates-General in 1789, that later became the National Assembly, as well as their political allegiances, based upon the *dictionnaire* compiled by Lemay (1991) (see Data Appendix).

5.1 Loyalty to the Revolution among serving Army officers

American-returned soldiers were not just sympathetic to the Revolution, but also more likely to remain cohesive and effective in supporting the revolution compared to other groups in the military. For example, according to the leading historian of the French Army during the revolutionary period (Scott, 1998), the America- returned Bourbonnais regiment was the only one of eight garrisoned at Metz in 1790 that remained loyal to the revolution and '*has sworn to live and die with it*'. Scott notes that:

[39]Indeed Durieux (1911) documents at least four other American revolutionary war veterans were involved in the Siege of the Bastille, despite the crowd mostly being drawn from the nearby artisan neighbourhood of Saint Antoine (Ruback, Koon-Magnin and Faulkner, 2016). Not included in this number is a certain 'Fournier, le Americain', who Durieux (1911) also credits with seizing the light weapons (firearms) and ammunition from les Invalides and arming the crowd (pg.87).

Unlike most of the forces, however, the 'American' units maintained perfect order not only during the immediate crisis but also in the following weeks and months. The key to explaining this unusual conduct seems to have been the ties developed between officers and men during their participation in the American war. Although this cohesion eroded more quickly in the Deux Ponts Infantry, Rochambeau's old regiments generally remained among the best disciplined in the French Army until 1792.

Similarly, Lauzun's Hussars, another American-returned regiment, played a key role in preventing the French King from successfully fleeing the country in mid-1791. The Hussars had been ordered to assist the King's escape, but the regiment refused and instead supported the National Guards to stop the King at Varennes.

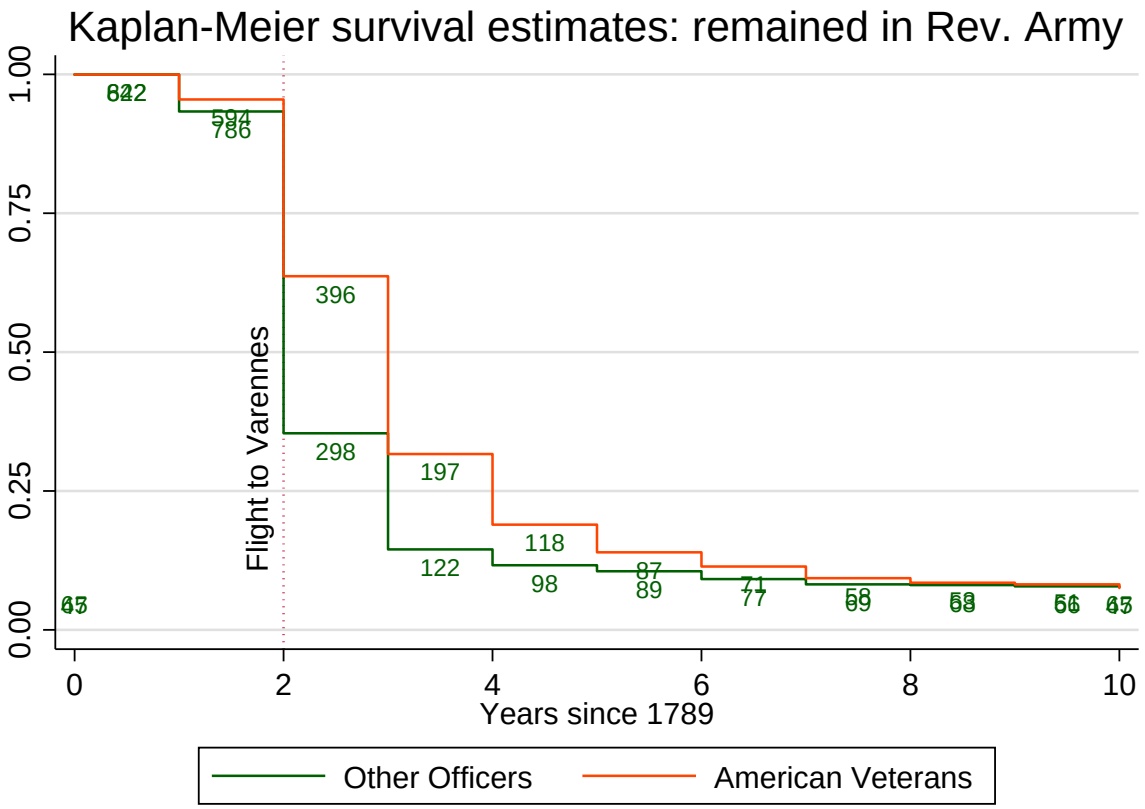
Are these examples representative? While no systematic data exists on support for the revolution among the army as a whole, we can make progress by examining the biographies of army officers.

Figure 5 depicts the yearly survival rate of loyalty to the revolutionary army, comparing American war veterans to general officers with surnames A-O, cross-checked with emigres. Note that while both sets of officers do decline in loyalty over time, American veterans remain loyal for longer, and particularly do so in the crucial two year period following the flight to Varennes in June 1791 by the King. This failed attempt to escape France led to his imprisonment and invasion by Austria, and culminated in key battles that saved the nascent French republic, particularly the battles of Valmy (September 1792) and Jemappes (November 1792).

Several of the senior officers who fought in the Americas –less than five percent of the officer corps at the time–played a very significant role in the Revolution. No fewer than five of the 20 Members of the Military Council of Revolution and three Marshals of France were American veterans, including Alexandre de Beauharnais (the Empress Josephine's first husband), who was also the President of the National Assembly in 1791 (Stephens, 1886). The vainqueurs of the Bastille, including Jacob Élie, would form the nucleus of an initial revolutionary force in Paris (Durieux, 1911), and by 1793 Jacob Élie had risen from sous-lieutenant to become a general in the revolutionary army as well.

Table 6 compares the propensity of American veterans to other officers to be loyal (+1), neutral (0) or actively opposed (-1) to the Revolution among those still alive in each of four key epochs. As the table reveals, controlling for quadratics in age and their noble status, officers that had served in the American revolution increased this simple index of loyalty by 0.964 [0.03] at the outset of the revolution, 0.859 [0.03] prior to the flight to Varennes, 0.579 [0.035] before the declaration of war with Austria and continued to increase the index

Figure 5: **Loyalty to the Revolution Among Army Officers**



Note: This is a Kaplan-Meier graph showing the propensity to remain loyal to the revolutionary French army of general officers of the former Royal army, separating American War veterans and others, with surnames A-O, as recorded in Bodinier 1982, 2009 and Pinasseau 1957. Note the King's failed attempt to flee France (ultimately being stopped at Varennes) was followed by his subsequent close imprisonment and trial and a mass exodus of former royal officers.

Table 6: **Regression: Loyalty to the Revolution among general Army Officers**

	(1) 1789 Outset	(2) Outset to 1791 Flight to Varennes	(3) Varennes to 1792 Decl. of War	(4) After 1792 Decl. of War	(5) 1789 Outset	(6) Outset to 1791 Flight to Varennes	(7) Varennes to 1792 Decl. of War	(8) After 1792 Decl. of War
American veteran	0.964***	0.859***	0.579***	0.501***				
	(0.032)	(0.030)	(0.035)	(0.042)				
Rochambeau veteran					0.636***	0.578***	0.413***	0.324***
					(0.140)	(0.120)	(0.086)	(0.071)
D'Estaing veteran					0.575***	0.551***	0.395***	0.313***
					(0.133)	(0.120)	(0.093)	(0.099)
American army volunteer					0.535***	0.522***	0.396***	0.423***
					(0.140)	(0.125)	(0.105)	(0.103)
Age in 1789 (yrs)	-0.022***	-0.006	0.015*	0.017***	-0.032**	-0.015	0.009	0.011
	(0.007)	(0.007)	(0.008)	(0.006)	(0.015)	(0.014)	(0.011)	(0.009)
Age-Squared	0.000***	0.000	-0.000	-0.000	0.000	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Noble Family Origin	0.035	-0.005	-0.194***	-0.241***	0.232***	0.169***	-0.082	-0.134**
	(0.026)	(0.034)	(0.037)	(0.049)	(0.067)	(0.061)	(0.055)	(0.059)
Mean DV	0.0804	0.0132	-0.115	-0.206	0.0804	0.0132	-0.115	-0.206
Observations	2,090	2,040	2,023	2,011	2,090	2,040	2,023	2,011
R-squared	0.397	0.257	0.085	0.077	0.297	0.184	0.053	0.050

An observation is a military officer alive in the relevant time period listed in each column. The outcome is a score defined as evidence for active support (+1), neutrality (0), or active opposition (-1) to the French Revolution in each time period listed in each column. American veteran is a dummy variable for any American revolutionary service. Rochambeau, D'Estaing veterans are dummy variables for service under either commander. American army volunteer includes soldiers in direct service to the American continental army or colonial militias. Noble family origin is a dummy for whether an individual's family has noble origins. Standard errors are clustered at the level of the military unit the soldier belonged to during the American revolution: *** p<0.01, ** p<0.05, * p<0.1

of support by 0.501 [0.042] after that declaration. Disaggregating the American veterans, it is interesting to note that officers that were assigned to service with Rochambeau and d'Estaing in America show similar propensities to remain loyal to the Revolution to those who volunteered for direct service with the American army in the early years of the Revolution. The point estimates suggest that this latter group only appears more likely to stay loyal after the declaration of war in 1792.

5.2 Pro-Constitutional Reform Attitudes within the National Assembly

Another individual measure of political attitudes can be gleaned from factional memberships within the National Assembly itself. We hand-coded 1,293 biographies of individual members that sat in the Estates-General that became the National Assembly, based upon the compilation by Lemay (1991). Of these, 26 were American war veterans, 104 were combat veterans more broadly and 284 had had army careers.

Despite their small numbers, American war veterans, beyond famous figures like Lafayette, appear to have played disproportionate roles in influencing the political situation early in the

revolution, largely as moderate constitutionalists. One useful example is Alexandre Lameth, the Deputy for Péronne.[40] He had served as a colonel in Rochambeau's force, becoming a member of the Order of the Cincinnati, and gaining the friendship of Jefferson. He became one of a *triumvirate* of key pro-reform leaders in the Assembly, and its president in September 1790 (see also Popkin (2019, pg.182)). However, he would later join the more moderate splinter of the Jacobins, the Feuillants. This club supported a constitutional monarchy and opposed the destitution of the King.[41]

Was Lameth typical of the other American veterans? To check this, we classify each individual by their factional affiliation (as described by Lemay (1991)), voting decisions as well as memberships in specific political clubs. These include the revolutionary Jacobin club as in the previous section, but also clubs that broke away from the Jacobins seeking more moderate alternatives in 1790 (the Club of 1789), and 1791 (the Feuillants).

As Table 7 reveals, compared to otherwise similar representatives from the same *généralité*, American war veterans were more likely to support the political preferences of the Third Estate more generally: being more liberal, they were more likely to sit on the '*left-wing*' of the presiding officer.[42] They were also more likely to support the new Constitution. Like Lameth, though initially Jacobin, other American war veterans were also 27 pp more likely to join the moderate Feuillant club. In contrast, combat veterans more generally tended to much more conservative, mimicking the nobility that had inherited landed seigneurial estates in their political preferences: they were more likely to oppose the new Constitution, less likely to be either Jacobin or Feuillant, and more likely to join the counter-revolutionaries as emigrants.

6 Discussion

The boats that brought Jacob Élie and other French soldiers in d'Estaing's force to America in 1779, also brought with them 700 members of a newly-raised militia from their Haitian colony, the *chasseurs-volontaires de Saint-Domingue*, that would distinguish itself at Savannah. Despite some misgivings of the planter elites, a majority–550– of these soldiers were Black (Clammer, 2023). These men returned to the French colony of Saint-Domingue embedded in a network of military veterans that provided mutual support and prestige (King,

[40] Péronne also submitted a joint Nobility-Third Estate cahier that was among the most highly democratic.

[41] Lameth also served as marechal de camp under Lafayette, but was accused of treason by protesting the attack on the Tuileries palace. He fled France in 1792.

[42] The designation "Right Wing" and "Left Wing" originate in the Estates-General for the physical position relative to the presiding officer's chair, and were understood to reflect liberal versus anti- revolutionary sentiment.

Table 7: **Political Attitudes among Veterans in the Estates-General**

	Anti-Revolution Indicators				Pro-Revolution Indicators			
	Right Wing	Against Abolition Nobility	Against New Constitution	Émigré/ Fled	Left Wing	Member Club of 1789	Member Jacobin Club	Member Feuillant Club
Year	1789	1789	1791	1791-	1789	1790	1789-	1791
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
American Rev. Veteran	-0.222**	-0.153	-0.202**	-0.070	0.230*	0.023	0.281**	0.274**
	(0.105)	(0.104)	(0.090)	(0.118)	(0.124)	(0.072)	(0.117)	(0.103)
Combat Veteran	0.066	0.065	0.110*	0.116**	-0.074	-0.017	-0.037	-0.138***
	(0.073)	(0.058)	(0.063)	(0.054)	(0.051)	(0.035)	(0.032)	(0.038)
Army Career	-0.042	0.014	0.024	0.117*	0.012	0.037	-0.016	0.068
	(0.048)	(0.040)	(0.050)	(0.068)	(0.046)	(0.027)	(0.042)	(0.046)
Landed Seigneurial Estate	0.073**	0.001	0.057	0.064**	-0.075***	-0.023	0.004	-0.008
	(0.028)	(0.020)	(0.036)	(0.028)	(0.027)	(0.014)	(0.027)	(0.031)
Held Royal Office	-0.009	-0.028	-0.031	-0.017	-0.022	0.006	-0.019	0.026
	(0.034)	(0.021)	(0.028)	(0.041)	(0.046)	(0.016)	(0.037)	(0.036)
Noble before 1400	0.019	0.069	0.057	0.077	0.156*	0.037	0.093	0.033
	(0.088)	(0.088)	(0.088)	(0.077)	(0.084)	(0.043)	(0.064)	(0.053)
Third Estate	-0.438***	-0.003	-0.343***	-0.379***	0.399***	0.027**	0.202***	0.298***
	(0.031)	(0.005)	(0.031)	(0.036)	(0.036)	(0.011)	(0.027)	(0.027)
Second Estate (Nobles)	-0.033	0.414***	-0.152**	-0.121*	0.010	0.041**	0.041	-0.001
	(0.055)	(0.051)	(0.057)	(0.070)	(0.066)	(0.019)	(0.045)	(0.040)
Generalite Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean DV	0.346	0.110	0.212	0.344	0.412	0.0317	0.157	0.249
P-value (American Vet= Combat Vet)	0.0399	0.0963	0.0246	0.169	0.0334	0.620	0.0198	0.000310
Observations	1,295	1,295	1,295	1,295	1,295	1,295	1,295	1,295
R-squared	0.284	0.402	0.209	0.223	0.239	0.082	0.118	0.167

An observation is an individual member of the Estates-General. All regressions are OLS, and include generalite of representation fixed effects as well as dummy for the different estates (the excluded category is the clergy). The designation "Right Wing" and "Left Wing" originate in the Estates-General for the physical position relative to the presiding officer's chair, and were understood to reflect pro- and anti- revolutionary sentiment. The Club of 1789 was founded in 1790. Its members were relatively moderate and created the club as they did not want to join the Club of Jacobins. They would later join the Club of Feuillants. The Club of Feuillants was founded in 1791 after some remaining members of the Club of Jacobins wanted a more moderate club. The members of the Club of Feuillants were in favor of a Constitutional Monarchy. They wanted to reinforce royal power so as to secure the gains of the Revolution. The p-values are from a test of equality between American Rev. War service and Combat service more generally. Standard errors are clustered at the generalite of representation level *** p<0.01, ** p<0.05, * p<0.1

2001, chp.11). Members of this military network are seen as playing a central role when the second revolution in the Americas would erupt in Haiti.[43]

On another boat in Marseille harbor in 1833, a young merchant seaman serving on the vessel, the *Clorinda*, encountered a group of thirteen passengers exiled from France to Constantinople for their beliefs. During their voyage across the Mediterranean, they gave lectures to the crew on the philosophy of Comte Henri de Saint-Simon, who had also returned to France after service in the Auxonne regiment at Yorktown to propound a conception of a republic based upon scientific principles.[44] When that seaman, a young Giuseppe Garibaldi, would die, almost fifty years later in 1882, after learning and then deploying his organizational abilities fighting for republican ideals in Brazil, Uruguay, Argentina, France and most famously Italy, one of the very few possessions he retained was a copy of Saint-Simon's book given to him on that voyage (Scirocco, 2007, pg.14).

Another soldier dispatched to serve in the American revolutionary war, the Venezuelan Francisco de Miranda, who according to his contemporary, the future historian David Ramsey, would develop a love of "*liberty with an ardor that would do honor to the freest State in the world*" would serve in the French revolutionary army too, before playing a central instigating role in the revolutions in Latin America as well (Robertson, 1929, p.38).[45]

In this paper, we argue that in key instances in world history, revolutionary ideas have spread not just through new ideas and new media, but also through a common set of conditions that predicts when non-elite individuals are more likely to have agency. External wars allow individuals the opportunity to gain organizational skills and the ability to coordinate hierarchical networks. The extent to which they have local monopolies over such skills in turn allows them the choice to act upon their ideas. Our evidence suggests that French veterans

[43]These included a young drummer-boy, Henri-Christophe, born into slavery, who had been picked up by d'Estaing as a spoil of war during his capture of Grenada on the other side of the Caribbean. Christophe would become Toussaint L'Ouverture's trusted lieutenant, organizing the resistance during the Haitian revolution, before becoming the first king of Haiti himself (Clammer, 2023). Summarizing the historiography, Clammer (2023, pg.36) writes that the veterans of Savannah:"*by their actions in the cause of liberty they are seen as precursors of those who fight in the Haitian Revolution and the list of those who are said to have served is a who's who of that later struggle.*"

[44]Saint-Simon is most famous for his view that religion "*should guide the community toward the great aim of improving as quickly as possible the conditions of the poorest class*".

[45]Robertson (1929)[pg33] summarizes the effects of Miranda's revolutionary exposure to America:

> *"in a scene where the cause of liberty was the object of all men's zeal and enthusiasm," it was only natural that a design to emancipate South America should have taken root in his mind.... It seems scarcely an exaggeration to say that during Miranda's service under the flag of blood and gold in the American Revolution his own inner life had been revolutionized.*

Miranda would recall in his own memoirs:"*In the year 1784, in the city of New York, I formed a project for the liberty and independence of the entire Spanish-American Continent ...* (Robertson, 1929, pg.44)" Miranda had frequent discussions with Alexander Hamilton, who supplied him with lists of American veteran officers. See also Chernow (2004, pg.566).

of the American War of Independence were deeply affected by their military experience and by the ideas and examples they encountered there. They then took these skills and ideas back to France, where they played an important role in pressing for democratic change (in the *cahiers*) and also in pressing for further reform and defending the Revolution in its first crucial first few years. Further, as the examples above suggest, revolutionary contagion was not limited to or specific to the French Revolution, but were carried with the veterans of the American Revolution to shape the constitutional arrangements and political futures of new nations on both sides of the Atlantic.

Put in broader context, we argue that the revolutionary contagion of the late 18th century, though critical for shaping the political development of many nations, was highly contingent on the confluence of democratic ideas and values adopted by those with organizational skill. In general, however, even though many militaries seek to select and encourage those with a strong sense of duty, it is asking a lot to expect that those who sacrifice for their country when others choose not to participate, will always put those others' interests ahead of their own. Instead, wars of limited mobilization are likely to generate distinct military sub-groups that are either relatively privileged (more likely in poor countries), or less so, in countries where the options in the economy are better. Instead of securing democracy, external wars may instead be more likely to encourage civil conflict, as sub-groups with strong but eroding organizational capacity seek to secure their own futures or propagate other ideologies in which they believe (Jha and Wilkinson, in progress).[46]

But the need to address the needs of militarized groups in post-conflict societies has also provided opportunities for foresighted technocratic reformers, like Matsukata Masayoshi or another American war veteran, Alexander Hamilton, to introduce new financial innovations that integrate veterans, helping them gain more credible stakes in a growing economy (Jha, 2012, 2013, Jha, Mitchener and Takashima, 2020). External wars can lead to violent, even revolutionary contagion, but also opportunities to reshape society to broaden freedom and provide incentives for peace.

[46]On the disproportionate role of military veterans in organizing the Storming of the US Capitol on January 6, 2021, see also Cage, Grosjean and Jha (2023b).

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SUPPLEMENTAL APPENDIX (FOR ONLINE PUBLICATION)
SAUMITRA JHA AND STEVEN WILKINSON

Data Appendix

For our first empirical exercise, we gather individual-level data on the birthplaces of French veterans of the American war of independence, of whom we are able to geolocate 8534 within the boundaries of 1789 French bailliages (see Figure 1). The primary source of these data is the Congressional Serial Set (1905), which gives a list of soldiers and their birthplaces. These data, as originally collected, as well as subsequent collections by internet hobbyists (like the fayette website) are however incomplete– for example, they exclude the entire rank and file of the Royal Deux-Ponts regiment– and tend to be biased towards larger and easy to geolocate places. Therefore we augment these data with hand-collected data from the original ledger books for the Royal Deux-Ponts, Bourbonnais, Neustrie and the Anhalt / Salm-Salm regiments from the *Service Historique de la Defense archives* in the Chateau de Vincennes, as well as georeferencing each location ourselves. As described below, we also took a 10% random sample of the ledgers of other regiments that engaged in combat in the global war of 1780-1783. These yield a total of 23,454 individual soldier ledger entries, comparable to about a fifth of the regular French line army of the time in total.

We are careful to use historical gazetteers (such as Cassinis' 18th century *Carte général de la France*), and contemporary sources to geolocate the *lieu de naissance* (birthplace) of each individual soldier to the most accurate coordinate level possible. For all analyses in which we use individual data matched to bailliages, we keep only those observations for which we have a match at the level of the *lieu de naissance*, rather than jurisdiction or higher levels of aggregation.

Matching Data to Units

Using these data we can create a variable that measures the number of veterans recruited from each type of regiment from each bailliage.

One challenge in creating datasets for this period is that different kinds of data are available for different units and boundaries, which do not overlap with each other. In particular the *ancién regime* bailliage administrative units were all reformed as a result of the Revolution, making it difficult to match the post-revolutionary outcome data to the pre-revolutionary boundaries. To address this, we create our own shapefile of 1789 bailliage boundaries based upon the original maps in Brette (1904). Using ArcGIS to spatially join location-level data allows us to generate bailliage-level estimates:the pre-revolutionary boundaries that were the key units for the outcomes and processes we wish to examine.

Demographic and Socio-Economic Indicators

Because the first French census was only carried out after the revolution, there are no socio-economic data currently available at the level of the bailliage prior to the Revolution. To measure urban population, we sum up the individual town data in 1789 collected by Scott (1968).[47]. To measure population density, we use the last pre-revolution HYDE estimates (Klein Goldewijk, Beusen, Doelman and Stehfest, 2017), averaging over the pixels within the bailliage, and dividing by the area.

[47]Samuel Scott *The French Revolution and the Line Army, 1787-1793*, U. Wisconsin dissertation, 1968, Appendix II, based upon the *Etats de Population* and *Statistique de la France*

Number of School professors in each secular and catholic school in 1789 comes from *Localites Pourvues d'un Etablissement d'Enseignement Secondaire en 1789 et 1812*

Individual Soldier Heights and Ledgers

Data on other theoretically relevant socio-economic variables such as the relative wealth and poverty of different bailliages are not, however, available. In their absence, we turn to what we regard as the most relevant comparison for us: the height of recruits to the French armed forces in the 18th century born in each bailliage. We supplement our comprehensive data on the Rochambeau veterans with a 10% random sample of all contemporary extant regiments in the 18th century French army, and ledgers within them. As noted above, these yield a total of 23,454 individual soldier ledger entries, comparable to about a fifth sample of the regular French line army of the time.

To check the comparability of soldiers heights (see Table A3 we supplement our data with a further data set, based upon the collection of the famous contemporary natural philosopher, Georges-Louis Leclerc, Comte de Buffon, of 38,705 ledger entries in the 19th century, and analyzed by Komlos (2003).[48] In total, removing likely duplicates, the heights comparison data contain 51,189 individual observations, comparable to about half the standing French line army. To the best of our knowledge, this is the largest dataset on individual French soldiers in the 18th century that exists today.

Officers

While no systematic data exists on support for the revolution among the army as a whole, we can make progress by examining the biographies of army officers. We hand-code individual data based upon three sources in particular: a set of biographies of 1114 officers who served with the French army in the American Revolution, assembled from original service records by Bodinier (1982) and Bodinier (1983), a set of biographies of 1214 general officers in the royal army alive at that time, including those that were not sent to America (with surnames A-O), also compiled by Bodinier (2009). We cross-check these data with a separate source biographies of 655 military emigres who abandoned the revolutionary army to fight as counter-revolutionaries, compiled by Pinasseau (1957). A research assistant coded each of the American Revolution officers and general officers (A-O) according to whether there was evidence in their biographies for active support for the Revolution (such as participation in the Revolutionary armed forces), active opposition (including defection/ emigration or counter- revolutionary activity) or neutrality / lack of such evidence.

Members of the Estates-General

Lemay (1991) provides biographies of each of the 1293 members of the Estates-General in 1789, that later became the National Assembly, as well as their political allegiances. We hand-code each of these entries and flag members of the Society of the Cincinnati and others with documented American Service. We also code members who had experienced any form of combat assignment in war-time or had army careers. The designation "Right Wing" and "Left Wing" originate in the Estates-General for the physical position relative to the presiding officer's chair, and were

[48] The sampling methods of the Comte de Buffon are unclear, and the coverage approaching the relevant period (even taking a generous start time of including ledgers after 1765 and before 1785) is scant: there are only 4195.)

understood to reflect pro- and anti- revolutionary sentiment. The Club of 1789 was founded in 1790. This was a small group whose members were relatively moderate and did not want to join the Club of Jacobins. Many would later join a larger group of moderates known as the *La société des Amis de la Constitution*, also known as the Club of Feuillants. The Club of Feuillants was founded in 1791 after some members of the Club of Jacobins expressed concerns about the increasingly extreme tone and sought to establish a more moderate club. The members of the Club of Feuillants were in favor of a Constitutional Monarchy. They wanted to reinforce royal power so as to secure the gains of the Revolution. We collected data on landed wealth, noble status and royal patronage as well, as these were key determinants of political support (see also Jha (2015)),

Variables measuring Democratic Values, Political Mobilization and Revolt

We collect a number of measures that track different kinds of revolutionary activity in 1789: 1) demands for political and economic reforms in the *Cahiers de Doléances*; 2) peasant radicalism and revolts; 3) the presence in a town or region of the Political Clubs which were founded to protect the gains of the Revolution and demand further political change.

Political Opinion as measured in the *Cahiers de Doléances* of 1789

The Cahiers de Doléances of 1789 were prepared by members of each of the estates (Nobles, Clergy, and Third Estate) in each region of France during 1789 to be presented to the Estates General. They represent one of the primary sources for measuring political opinion in France just prior to the revolution and have been extensively coded and analyzed by historians ever since Beatrice Hyslop's pioneering effort in Hyslop (1968);. Although the cahiers are by no means an unbiased view of French 'public opinion' of the time, especially for noble and clergy petitions which were more likely to be 'captured' by local cliques, they still represent one of the best sources of views about reform of the monarchy. This is especially true for petitions from the Third Estate. Tackett (1991), who has extensively studied their representativeness, argues that they "represent primarily the grievances of a relatively homogeneous group of urban, non-privileged notables. It is these cahiers, in my opinion, which present the best possibilities for a regional analysis of opinion in France in 1789."

Political Clubs (1789-90)

In late 1788 the long-time Ancien Regime ban on political clubs was lifted. Doyle describes how, as a result, these clubs grew in number from just a few dozen in February 1789 to 152 in August, after the fall of the Bastille, and more than 200 clubs by November 1789. These clubs played an important role in the Revolution. They defended the immediate gains of the Revolution against the old order, tried to enlist supporters to the cause by organizing events locally, and they pressed Paris for more radical changes (Doyle, 2002: 90, 142-143). We use data from the *Atlas de La Revolution Française* on the geographic distribution of these clubs by the end of each year after 1789 as an indicator of the intensity of Revolutionary activity in the two and a half years of the Revolution: source "Les Sociétés Politiques en France, 1789-an III, Statistique départementale," Source: *Atlas de la Revolution Francaise, Vol. 6* page 102-103

Peasant Riots in 1789

As already discussed, the historian Forrest McDonald (1951) created a dataset, based on the work of three historians of the French Revolution: Aulard, 1909; Lefebvre, 1947; Herbert, 1921), which tracked agrarian revolts that occurred in 1789. The original dataset is lost but we went back to these works, coded the events in each of them, then combine them to create a measure, Revolt, which tracks the reported events in each location in 1789. We then match these to each bailliage.

We further supplement these data with riot data collected by Chambru and Maneuvrier-Hervieu (2022), which also builds upon the work of Nicolas (2002). A riot is defined in their data as involving more than four individuals from beyond a single family deploying violence against property, person or authorities (Chambru, 2019).

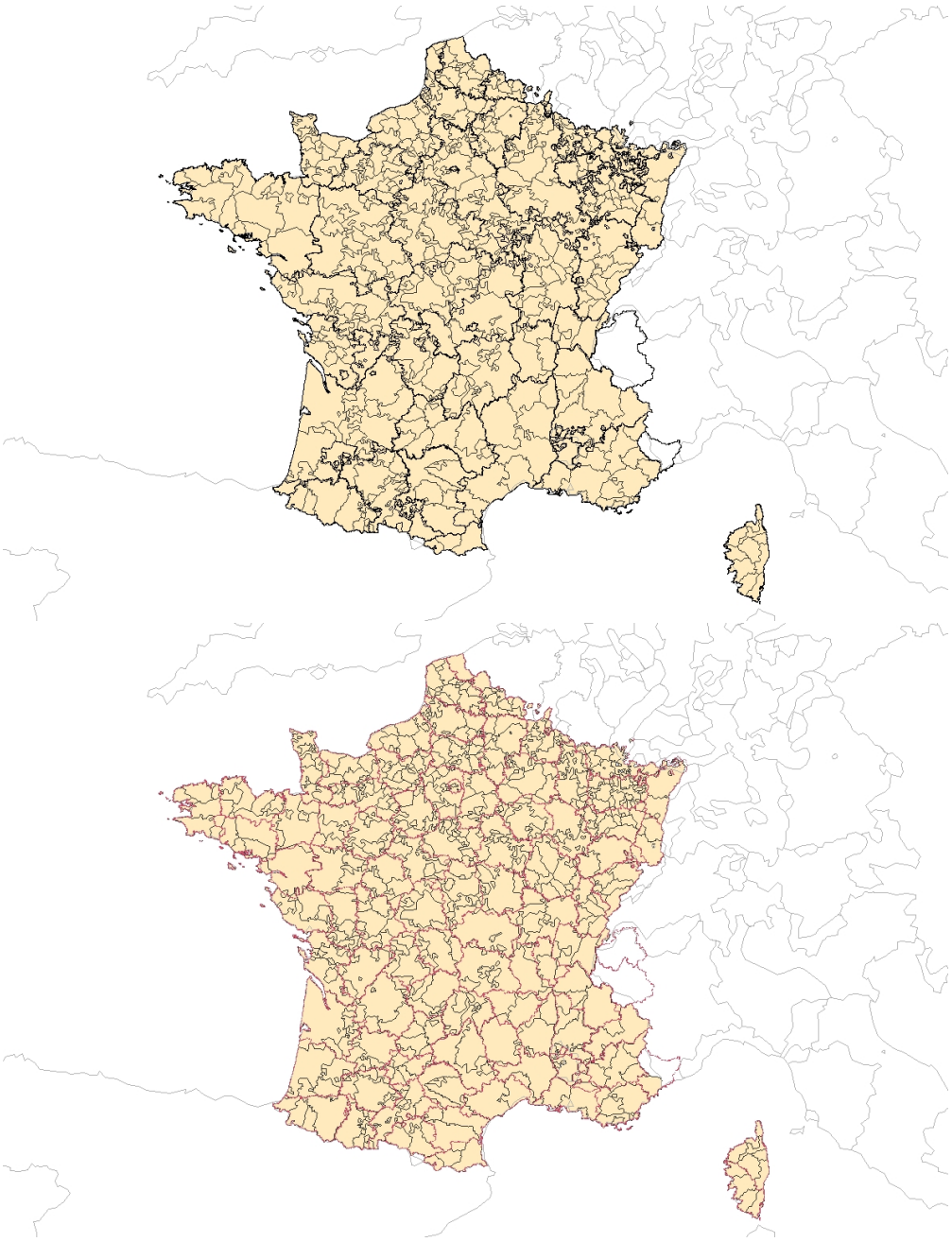
Weather Shocks

In an important 1991 paper in *Annales*, Weir and Sené argued that the weather crisis did have a major impact, but they argued against Labrousse's earlier view that it had this impact in part by causing a major industrial depression.[49] We calculate temperature deviations from the 5 year preceding averages in the winter and in the summer, based upon estimates in Luterbacher, Dietrich, Xoplaki, Grosjean and Wanner (2004), which we interpolate using kriging.See also Waldinger (2021).[50]

[49]Weir, David R. and Jean-Francois Sené, "Les crises économique et les origins de la Revolution Française," *Annales: Histoires, Sciences, Sociales* 46, 4, (Jul-Aug 1991), pp.917-947.

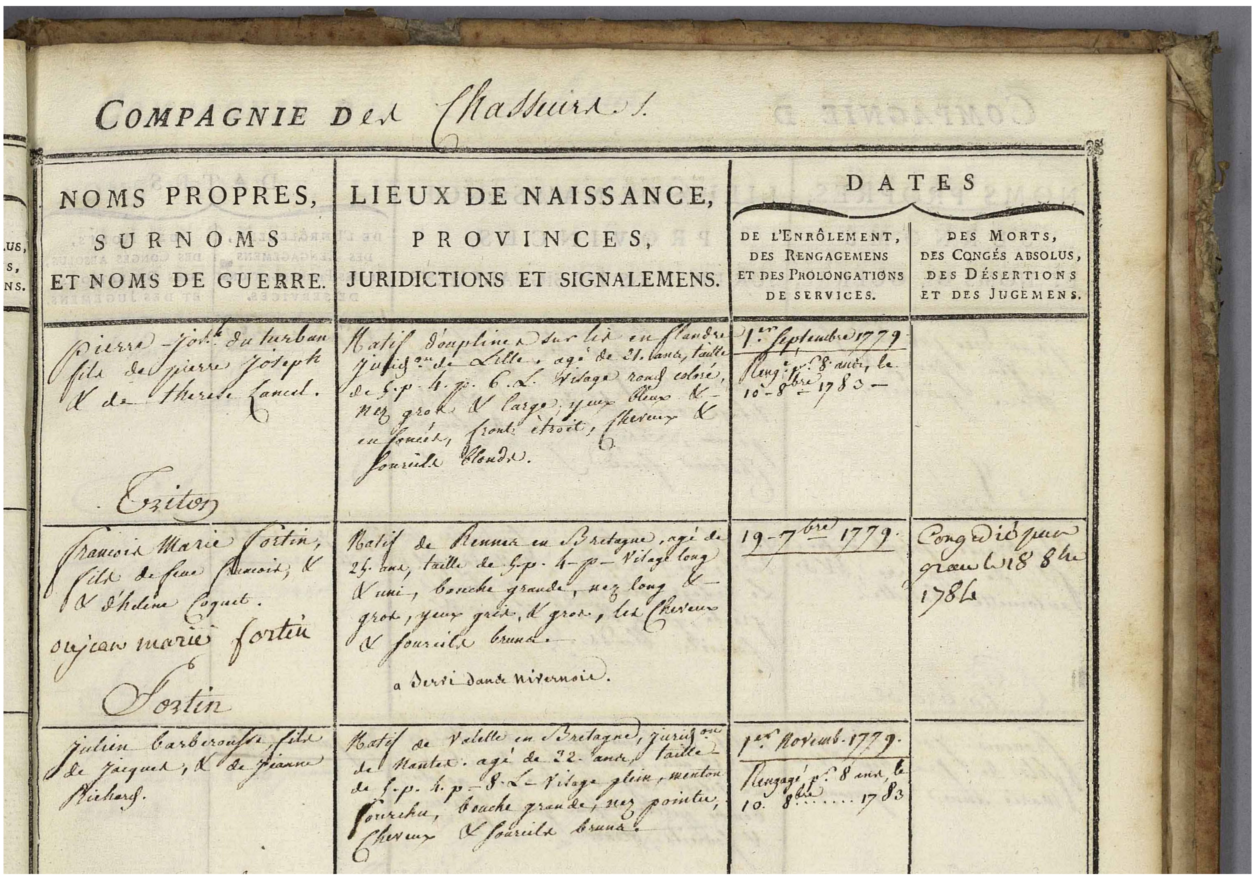
[50]Weir also provides data on wheat prices, but these are only available at the level of the *chef-lieu* of the *generalité*, and we include fixed effects at this level.

Figure A1: ***Bailliage* & *Généralité* Boundaries vs Departments**



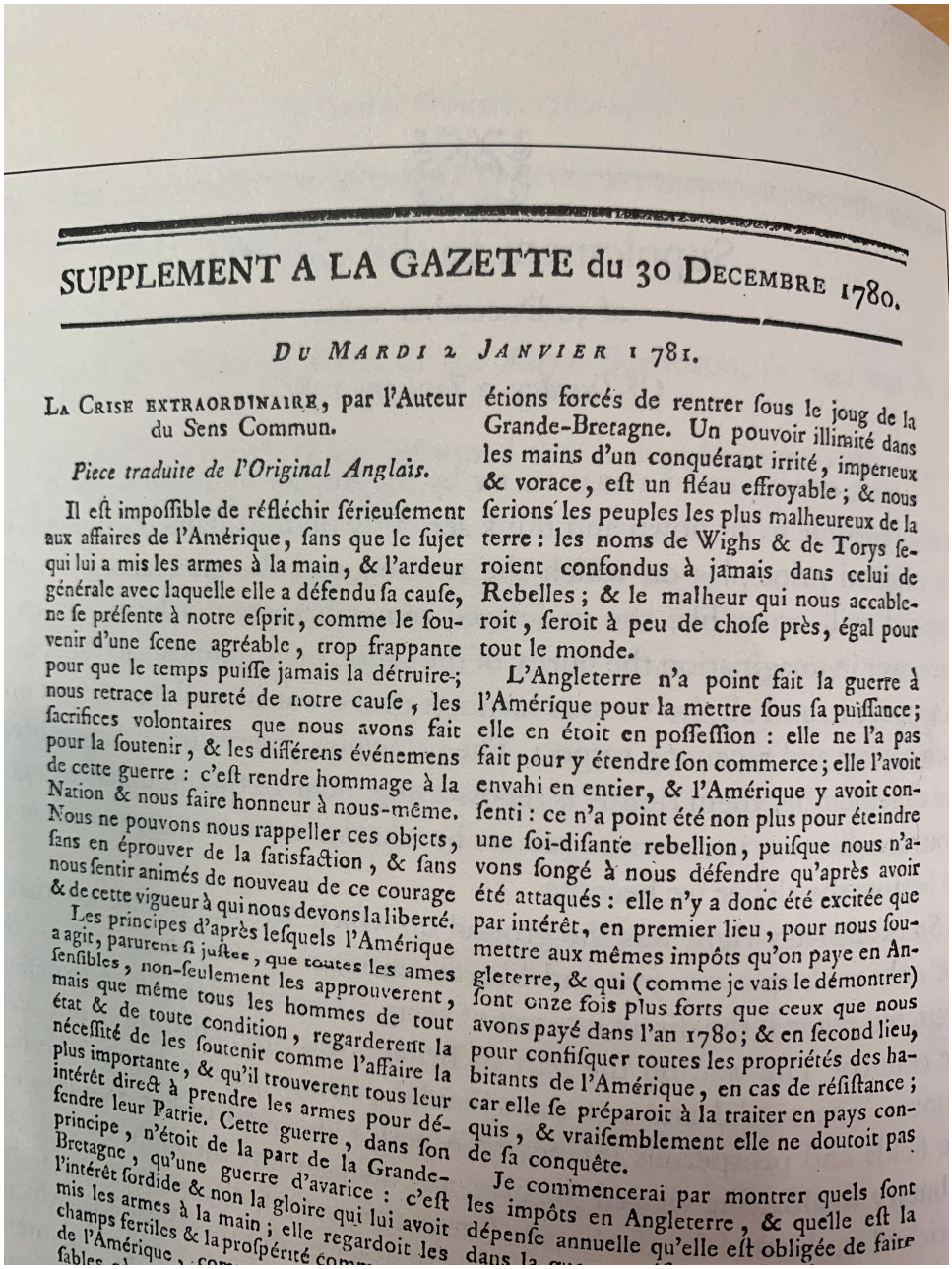
Pre-Revolutionary France was divided into *généralités* (Province and Alternative Jurisdictions- black boundaries), many of which had unique laws and customs. These were further divided into the basic jurisdictional unit: the *bailliage* or 'bailiwick'(grey boundaries). Members of the three estates (the Clergy, the Nobility and Commoners) from each bailliage prepared general *cahiers des doleances* and elected representatives to the Estates- General. The modern French department (1791- below: red boundaries) was born out of Revolutionary attempts to break down traditional local and provincial loyalties. We create a novel georeference of the pre-Revolutionary *généralité* and bailliages by rubber-sheeting and tracing from the original maps in Brette (1904) and *Atlas de la Revolution française.*

Figure A2: **Excerpt: Régiment d'infanterie du Bourbonnais ledger**



Source: Service Historique de la Defense, Chateau de Vincennes. Each ledger includes names, aliases, height, and a physical description of facial features (length of nose, eye color etc.: these were meant to serve as means of identification analogous to modern mugshots), as well as dates of enrollment, promotion, desertion, dismissal etc.

Figure A3: **Excerpt: The Crisis Extraordinary: by the Author of *Common Sense*** (Thomas Paine), translated and published in *La Gazette Françoise*, the newspaper of the French expeditionary force in America.



SUPPLEMENT A LA GAZETTE du 30 DECEMBRE 1780.

DU MARDI 2 JANVIER 1781.

LA CRISE EXTRAORDINAIRE, par l'Auteur du Sens Commun.

Piece traduite de l'Original Anglais.

Il eſt impoſſible de réfléchir ſérieuſement aux affaires de l'Amérique, ſans que le ſujet qui lui a mis les armes à la main, & l'ardeur générale avec laquelle elle a défendu ſa cauſe, ne ſe préſente à notre eſprit, comme le ſouvenir d'une ſcene agréable, trop frappante pour que le temps puiſſe jamais la détruire; nous retrace la pureté de notre cauſe, les ſacrifices volontaires que nous avons fait pour la ſoutenir, & les différens événemens de cette guerre : c'eſt rendre hommage à la Nation & nous faire honneur à nous-même. Nous ne pouvons nous rappeller ces objets, ſans en éprouver de la ſatisfaction, & ſans nous ſentir animés de nouveau de ce courage & de cette vigueur à qui nous devons la liberté.

Les principes d'après leſquels l'Amérique a agit, parurent ſi juſtes, que toutes les ames ſenſibles, non-ſeulement les approuverent, mais que même tous les hommes de tout état & de toute condition, regarderent la néceſſité de les ſoutenir comme l'affaire la plus importante, & qu'il trouverent tous leur intérêt direct à prendre les armes pour défendre leur Patrie. Cette guerre, dans ſon principe, n'étoit de la part de la Grande-Bretagne, qu'une guerre d'avarice : c'eſt l'intérêt ſordide & non la gloire qui lui avoit mis les armes à la main; elle regardoit les champs fertiles & la proſpérité com- de l'Amérique, ſes ſables

étions forcés de rentrer ſous le joug de la Grande-Bretagne. Un pouvoir illimité dans les mains d'un conquérant irrité, impérieux & vorace, eſt un fléau effroyable; & nous ſerions les peuples les plus malheureux de la terre : les noms de Wighs & de Torys ſeroient confondus à jamais dans celui de Rebelles; & le malheur qui nous accableroit, ſeroit à peu de choſe près, égal pour tout le monde.

L'Angleterre n'a point fait la guerre à l'Amérique pour la mettre ſous ſa puiſſance; elle en étoit en poſſeſſion : elle ne l'a pas fait pour y étendre ſon commerce; elle l'avoit envahi en entier, & l'Amérique y avoit conſenti : ce n'a point été non plus pour éteindre une ſoi-diſante rebellion, puiſque nous n'avons ſongé à nous défendre qu'après avoir été attaqués : elle n'y a donc été excitée que par intérêt, en premier lieu, pour nous ſoumettre aux mêmes impôts qu'on paye en Angleterre, & qui (comme je vais le démontrer) ſont onze fois plus forts que ceux que nous avons payé dans l'an 1780; & en ſecond lieu, pour confiſquer toutes les propriétés des habitants de l'Amérique, en cas de réſiſtance; car elle ſe préparoit à la traiter en pays conquis, & vraiſemblement elle ne doutoit pas de ſa conquête.

Je commencerai par montrer quels ſont les impôts en Angleterre, & quelle eſt la dépenſe annuelle qu'elle eſt obligée de faire dans la

Source: *La Gazette Françoise*, January 1781, translated and annotated by Poulin and Quintal (2007)

Table A1: **American vs Other Units in 1789: Tests of Precedence and Other Comparisons**

	Other Regiments 1789	Combat Other 1776-83	Combat in US 1776-83	Difference Means (US - Other)	Difference Means (US - Combat Other)	Wilcoxon Rank-Sum (US- Other)	Wilcoxon Rank-Sum (US-Combat Other)
	Mean [SD]	Mean [SD]	Mean [SD]	Prob(>|t|)	Prob(>|t|)	Prob(>|z|)	Prob(>|z|)
Year of Formation of Orig. Regiment	1656.06	1647.00	1647.42	0.478	0.980		
	[45.62]	[47.60]	[55.14]				
N	88	17	24				
Regiment Order of Precedence 1757	46.06	38.94	39.00	0.409	0.996	0.301	0.814
	[33.81]	[35.86]	[35.87]				
N	88	17	21				
Regiment Order of Precedence 1791	52.05	59.24	58.25	0.469	0.930	0.517	0.767
	[30.49]	[35.92]	[38.65]				
N	79	21	24				

Table A2: **Summary Statistics: Bailliage Data**

Variable	Obs	Mean	Std. Dev.	Min	Max
Log. Rochambeau Veterans	436	1.771	1.204	0.000	5.293
Log. D'Estaing Veterans	436	1.324	1.088	0.000	4.605
Log. Rochambeau + D'Estaing Veterans	436	2.287	1.302	0.000	5.991
Log Neustrie + Anhalt Soldiers	436	1.481	1.215	0.000	6.153
Log. Non-American Combat Veterans	436	0.807	0.874	0.000	3.912
Log. Distance to Holy Rom. Emp. (m)	436	9.967	4.422	0.000	13.257
Log. Distance to Spain (m)	436	12.645	2.313	0.000	13.679
Log. Distance to Switz/ Savoy (m)	436	12.104	2.164	0.000	13.606
Log. Distance to Land Frontier	436	9.230	4.767	0.000	13.182
Log. Distance to Coast (m)	436	9.787	4.406	0.000	12.925
Easting from Paris (m)	436	33101	217436	-513185	578519
Northing from Paris (m)	436	-165167	243450	-786634	229951
Altitude SD	436	94.747	127.693	0.825	755.995
Log. Urban Population	436	6.425	4.216	0.000	13.170
Log. Population Density	436	3.925	0.734	0.585	9.617
Grosse Fermes	436	0.466	0.499	0.000	1.000
Gabelle (livres per quintal)	436	33.125	24.369	0.000	62.000
Log. Distance to Paris (m)	436	12.282	1.035	0.000	13.764
Log. Distance to Provincial Capital (m)	436	9.511	3.001	0.000	12.200
Log. High School Professors	436	0.951	0.956	0.000	4.111
Log. Secular High Schools	436	0.355	0.452	0.000	2.398
Log. Catholic High Schools	436	0.149	0.317	0.000	1.609
Log. STN Books Sold	436	0.759	1.762	0.000	7.557
Log. Banned Books Sold	436	0.528	1.321	0.000	5.846
Log. Encyclopedie Subscriptions	436	0.757	1.554	0.000	6.986
Absent from Hyslop Sample	436	0.548	0.498	0.000	1.000

Table A3: **Regression: Individual Soldiers' Heights**

	(1)	(2)	(3)
Rochambeau Regt	1.855	2.186	4.241
	(6.053)	(5.919)	(5.369)
D'Estaing Regt	-2.779	-3.375	-0.528
	(6.739)	(6.777)	(6.073)
Neustrie / Anhalt Regt	7.000*	7.106*	4.617
	(3.978)	(3.960)	(4.675)
Regiment Deployed in Combat Role- 1780-83	7.257	7.341	3.129
	(5.649)	(5.617)	(4.686)
Grenadier			51.331***
			(2.987)
Age (yrs)	5.782***	32.016**	31.843**
	(0.418)	(12.506)	(12.223)
Age-Squared	-0.081***	-1.178*	-1.202**
	(0.006)	(0.587)	(0.574)
Age-Cubed		0.018	0.019*
		(0.012)	(0.011)
Age-Quartic		-0.000	-0.000
		(0.000)	(0.000)
Year of Enrollment/ Ledger FE	Yes	Yes	Yes
Mean DV (mm)	1701	1701	1701
p(F(Rochambeau = Neustrie/Anhalt))	0.404	0.414	0.952
p(F(Rochambeau= Deployed Elsewhere))	0.614	0.626	0.900
Observations	51,189	51,189	51,189
R-squared	0.174	0.183	0.258

An observation is an individual soldier-ledger entry. The outcome is soldier height (in mm). The estimation is by OLS. All regressions contain a separate fixed effect for the ledger year or year of enrollment, as well as a dummy variable for whether the age was inferred from birth-year listed in the ledger (relative to directly reported). *Grenadier* is a dummy variable indicating that a soldier served in a grenadier company or was listed as a grenadier in the ledger. Source: Hand-collected from the *Service Historique de la Defense-Vincennes* , supplemented by records from the Marquis de Buffon/Komlos 2003; Robust standard errors in parentheses, clustered at the regiment level. *** p<0.01, ** p<0.05, * p<0.1

Table A4: **Regression: Non-Third Estate Cahiers "Most Strongly Democratic"**

	(1)	(2)	(3)	(4)	(5)
``Strongly Democratic'' Nobility Cahier [0/1]					
Log. Rochambeau Veterans	0.022	0.019	0.018	0.003	0.000
	(0.014)	(0.014)	(0.015)	(0.011)	(0.009)
Log Neustrie + Anhalt Soldiers	-0.013	-0.015	-0.015	-0.016	-0.017
	(0.017)	(0.019)	(0.019)	(0.023)	(0.023)
Log. Non-American Combat Veterans	0.003	-0.000	-0.000	0.017	0.017
	(0.012)	(0.011)	(0.012)	(0.019)	(0.019)
R-squared	0.102	0.126	0.134	0.294	0.299
Mean DV	0.0251	0.0251	0.0253	0.0251	0.0253
p-value: Am. Vets = Neustrie/Anhalt	0.0884	0.0951	0.0811	0.253	0.327
p-value: Am. Vets = Other Combat Veteran	0.339	0.385	0.418	0.502	0.469
``Strongly Democratic'' Clergy Cahier [0/1]					
Log. Rochambeau Veterans	0.015*	0.011	0.011	0.001	0.000
	(0.009)	(0.007)	(0.007)	(0.005)	(0.004)
Log Neustrie + Anhalt Soldiers	-0.004	-0.006	-0.006	-0.001	-0.001
	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
Log. Non-American Combat Veterans	0.004	-0.000	-0.000	0.008	0.008
	(0.008)	(0.007)	(0.007)	(0.011)	(0.011)
R-squared	0.084	0.107	0.107	0.492	0.493
Mean DV	0.0167	0.0167	0.0169	0.0167	0.0169
p-value: Am. Vets = Neustrie/Anhalt	0.144	0.209	0.212	0.859	0.892
p-value: Am. Vets = Other Combat Veteran	0.212	0.294	0.289	0.598	0.564
Observations	239	239	237	239	237
Recruitment, Geog, Admin. Controls	Yes	Yes	Yes	Yes	Yes
Enlightenment & Education Controls	No	Yes	Yes	Yes	Yes
Generalite Fixed Effects	No	No	No	Yes	Yes
Dropping Paris Intra- and Extra-Muros	No	No	Yes	No	Yes

An observation is a bailliage. The outcome is an indicator for a "*Most Strongly Democratic*" Cahier in 1789, as classified by Beatrice Hyslop. All regressions include the same sets of controls as the equivalent column in Table 2. All regressions include controls for recruitment, geography and administration that include: linear and quadratic controls for Easting and Northing and Easting x Northing and ruggedness (the SD of altitude); log. distance to the borders of the Holy Roman Empire, Spain, Switzerland and Savoy and any land frontier, log. urban population and population density, location in the grosse fermes, and gabelle tax levels; and log distance to Paris, the pre-revolutionary provincial capital and the coast. Column 2 includes enlightenment and education controls that include: Log. high school professors, secular and catholic high schools, STN books sold, banned STN books sold, Encyclopedie subscriptions. Columns 3 and 5 drop Paris intra-muros and extra-muros. Columns 4 and 5 include separate intercepts for each pre-Revolutionary generalite. Robust standard errors in parentheses, clustered at the pre-Revolutionary generalite level. *** p<0.01, ** p<0.05, * p<0.1

Table A5: **Regression: Violent Unrest (Rebellion or Riot) in 1789**

	(1)	(2)	(3)	(4)	(5)
Log. Rochambeau Veterans	0.060***	0.044**	0.047**	0.052**	0.053**
	(0.017)	(0.018)	(0.019)	(0.023)	(0.023)
Log Neustrie + Anhalt Soldiers	0.054**	0.044	0.047	0.054*	0.056*
	(0.026)	(0.028)	(0.029)	(0.030)	(0.031)
Log. Non-American Combat Veterans	-0.002	-0.014	-0.012	0.004	0.004
	(0.029)	(0.026)	(0.027)	(0.023)	(0.023)
Log. Distance to Holy Rom. Emp. (m)	-0.002	-0.004	-0.005	0.017	0.016
	(0.023)	(0.021)	(0.021)	(0.013)	(0.013)
Log. Distance to Spain (m)	-0.000	0.002	0.001	-0.006	-0.005
	(0.029)	(0.029)	(0.028)	(0.029)	(0.028)
Log. Distance to Switz/ Savoy (m)	0.000	-0.002	-0.003	0.002	0.002
	(0.016)	(0.016)	(0.016)	(0.014)	(0.014)
Log. Distance to Land Frontier	-0.007	-0.005	-0.005	-0.013	-0.013
	(0.024)	(0.022)	(0.022)	(0.016)	(0.016)
Log. Urban Population	0.006*	0.002	0.002	0.002	0.003
	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)
Log. Population Density	0.070**	0.060*	0.063*	0.064	0.068*
	(0.032)	(0.032)	(0.033)	(0.038)	(0.038)
Grosse Fermes	-0.088	-0.086	-0.093		
	(0.068)	(0.076)	(0.076)		
Gabelle (livres per quintal)	0.002	0.002	0.002	-0.000	-0.000
	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)
Log. Distance to Paris (m)	0.001	0.005	-0.040	-0.032	-0.106
	(0.024)	(0.024)	(0.034)	(0.055)	(0.108)
Log. Distance to Provincial Capital (m)	0.001	0.009	0.010	0.007	0.008
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Log. Distance to Coast (m)	0.004	0.005	0.004	0.006	0.005
	(0.008)	(0.007)	(0.007)	(0.008)	(0.008)
Log. High School Professors		0.026	0.021	0.013	0.009
		(0.058)	(0.059)	(0.065)	(0.065)
Log. Secular High Schools		0.029	0.031	0.013	0.014
		(0.078)	(0.077)	(0.093)	(0.092)
Log. Catholic High Schools		-0.081	-0.080	-0.013	-0.012
		(0.104)	(0.104)	(0.112)	(0.111)
Log. STN Books Sold		0.003	0.000	0.002	0.001
		(0.050)	(0.051)	(0.048)	(0.049)
Log. Banned Books Sold		0.001	0.002	0.017	0.018
		(0.064)	(0.065)	(0.061)	(0.061)
Log. Encyclopedie Subscriptions		0.046**	0.046**	0.036*	0.035*
		(0.020)	(0.019)	(0.021)	(0.021)
Generalite Fixed Effects	No	No	No	Yes	Yes
Dropping Paris Intra- and Extra-Muros	No	No	Yes	No	Yes
Observations	436	436	434	436	434
R-squared	0.206	0.230	0.228	0.347	0.345
Mean DV	0.202	0.202	0.200	0.202	0.200
p-value: Roch. = Neustrie/Anhalt	0.882	0.996	0.992	0.970	0.946
p-value: Roch. = Other Combat Veteran	0.0920	0.103	0.100	0.171	0.167

An observation is a bailliage. The outcome is an indicator for whether the bailliage experienced a riot or a revolt in 1789. All regressions are OLS and include linear and quadratic controls for Easting and Northing and Easting x Northing, and an indicator for presence in Hyslop's dataset. Columns 3 and 5 drop Paris intra-muros and extra-muros. Columns 4 and 5 include separate intercepts for each pre-Revolutionary generalite. Robust standard errors in parentheses, clustered at the pre-Revolutionary generalite level. *** p<0.01, ** p<0.05, * p<0.1

Table A6: **Interactions with Temperature Shocks in 1789**

	Rebellion or Riot 1789				"*Most Democratic*" Third Estate Cahier			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log. Rochambeau Veterans	0.050**	0.050**			0.061***	0.061***		
	(0.024)	(0.023)			(0.016)	(0.016)		
Log. Rochambeau + D'Estaing Veterans			0.046*	0.047*			0.053***	0.053***
			(0.027)	(0.025)			(0.015)	(0.015)
Log Neustrie + Anhalt Soldiers	0.054	0.053	0.053	0.051	0.004	0.004	0.004	0.004
	(0.034)	(0.034)	(0.035)	(0.035)	(0.028)	(0.029)	(0.029)	(0.030)
Log. Non-American Combat Veterans	-0.001	-0.002	0.002	-0.000	-0.031	-0.031	-0.028	-0.027
	(0.024)	(0.025)	(0.023)	(0.024)	(0.026)	(0.025)	(0.025)	(0.025)
Wheat suitability	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Average Winter Temperature 1750-85	0.087	0.079	0.079	0.073	-0.044	-0.045	-0.054	-0.053
	(0.098)	(0.100)	(0.099)	(0.100)	(0.052)	(0.053)	(0.052)	(0.054)
Average Summer Temperature 1750-85	-0.030	-0.018	-0.021	-0.007	0.081	0.081	0.090	0.088
	(0.094)	(0.095)	(0.093)	(0.096)	(0.055)	(0.057)	(0.057)	(0.059)
Winter 1788 Temperature Shock	0.282	0.170	0.246	0.092	0.137	0.132	0.093	0.116
	(0.361)	(0.341)	(0.369)	(0.357)	(0.263)	(0.274)	(0.253)	(0.261)
Summer 1788 Temperature Shock	-1.108	-1.134	-1.095	-1.058	-0.762	-0.763	-0.750	-0.756
	(0.809)	(0.831)	(0.827)	(0.853)	(0.813)	(0.810)	(0.815)	(0.819)
Winter Shock x Log. Rochambeau Vets		0.148**				0.007		
		(0.065)				(0.069)		
Winter Shock x Log. Roch + D'Estaing Vets				0.146**				-0.022
				(0.066)				(0.065)
Recruitment, Geog, Admin. Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enlightenment & Education Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dropping Paris Intra- and Extra-Muros	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Generalite Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	401	401	401	401	401	401	401	401
R-squared	0.351	0.359	0.349	0.358	0.345	0.345	0.340	0.340
Mean DV	0.214	0.214	0.214	0.214	0.105	0.105	0.105	0.105
P-value (Am. Vets = Neustrie/Anhalt)	0.946	0.955	0.894	0.951	0.0292	0.0297	0.0690	0.0848
P-value (Am. Vets = Deployed Elsewhere)	0.130	0.133	0.172	0.150	0.0173	0.0176	0.0237	0.0205

An observation is a bailliage. The sample is subsetted to the convex hull of bailliages to allow for interpolation. All regressions are OLS and include the same controls as in Column 5 of Table 2, and drop Paris intra-muros and extra-muros. The interaction terms are demeaned. Recruitment, geography and administration controls include: linear and quadratic controls for Easting and Northing and Easting x Northing and ruggedness (the SD of altitude); log. distance to the borders of the Holy Roman Empire, Spain, Switzerland and Savoy and any land frontier, log. urban population and population density, location in the grosse fermes, and gabelle tax levels; and log distance to Paris, the pre-revolutionary provincial capital and the coast. Enlightenment and education controls include: Log. high school professors, secular and catholic high schools, STN books sold, banned STN books sold, Encyclopedie subscriptions and, for the full sample, an indicator for presence in Hyslop's cahiers data. Average temperatures and shocks are interpolated using kriging. "Temperature Shocks" are defined as more extreme deviations from the 5 year mean, a positive shock in winter represents a colder temperature than expected. Robust standard errors in parentheses, clustered at the pre-Revolutionary generalite level. *** p<0.01, ** p<0.05, * p<0.1

Table A7: **Robustness: Arbitrary Spatial Correlation**

	(1)	(2)	(3)	(4)
Colella et al. Cut-Off Distance	50km	100km	150km	150km
Panel A:" Strongly Democratic" Third Estate Cahier				
Log. Rochambeau Veterans	0.056***	0.056***	0.056***	0.054***
	(0.018)	(0.017)	(0.018)	(0.018)
Log. Neustrie + Anhalt Soldiers	0.002	0.002	0.002	-0.001
	(0.020)	(0.022)	(0.023)	(0.026)
Log. Non-American Combat Veterans	-0.014	-0.014	-0.014	-0.016
	(0.022)	(0.023)	(0.022)	(0.022)
Observations	436	436	436	434
R-squared	0.305	0.305	0.305	0.280
Mean DV	0.0982	0.0982	0.0982	0.0940
p-value: Am. Vets = Neustrie/Anhalt	0.0464	0.0404	0.0401	0.0394
p-value: Am. Vets = Other Combat Veteran	0.0459	0.0582	0.0560	0.0544
Panel B: Rebellion or Riot 1789				
Log. Rochambeau Veterans	0.053**	0.053***	0.053***	0.054***
	(0.022)	(0.018)	(0.019)	(0.019)
Log. Neustrie + Anhalt Soldiers	0.054**	0.054**	0.054**	0.057**
	(0.026)	(0.026)	(0.022)	(0.024)
Log. Non-American Combat Veterans	0.005	0.005	0.005	0.005
	(0.029)	(0.026)	(0.020)	(0.022)
Generalite Fixed Effects	Yes	Yes	Yes	Yes
Dropping Paris Intra- and Extra-Muros	No	No	No	Yes
Observations	436	436	436	434
R-squared	0.341	0.341	0.341	0.340
Mean DV	0.203	0.203	0.203	0.202
p-value: Am. Vets = Neustrie/Anhalt	0.979	0.976	0.973	0.928
p-value: Am. Vets = Other Combat Veteran	0.202	0.139	0.133	0.135

An observation is a bailliage. The outcome in Panel A is an indicator for a "Most Strongly Democratic" Third Estate Cahier in 1789, as classified by Beatrice Hyslop. The outcome in Panel B is an indicator for a rebellion or riot occurring the bailliage. All regressions are OLS and include the same sets of controls as the equivalent column in Table 2. All regressions include controls for recruitment, geography and administration that include: linear and quadratic controls for Easting and Northing and Easting x Northing and ruggedness (the SD of altitude); log. distance to the borders of the Holy Roman Empire, Spain, Switzerland and Savoy and any land frontier, log. urban population and population density, location in the grosse fermes, and gabelle tax levels; and log distance to Paris, the pre-revolutionary provincial capital and the coast. Column 2 includes enlightenment and education controls that include: Log. high school professors, secular and catholic high schools, STN books sold, banned STN books sold, Encyclopedie subscriptions and an indicator for presence in Hyslop's cahiers data. Columns 3 and 5 drop Paris intra-muros and extra-muros. Columns 4 and 5 include separate intercepts for each pre-Revolutionary generalite. Standard errors in parentheses, calculated using the Colella et al. approach robust to arbitrary spatial correlation within the cutoff distances mentioned. *** p<0.01, ** p<0.05, * p<0.1

Table A8: **Robustness: Inverse Hyperbolic Sine**

	(1)	(2)	(3)	(4)	(5)
Panel A:" Strongly Democratic" Third Estate Cahier					
Rochambeau Veterans (Inv. Hyp. Sine)	0.056***	0.046***	0.043***	0.051***	0.050***
	(0.014)	(0.013)	(0.014)	(0.014)	(0.015)
Neustrie/ Anhalt Soldiers (Inv. Hyp. Sine)	0.005	-0.003	-0.005	0.003	0.001
	(0.014)	(0.016)	(0.016)	(0.021)	(0.021)
Non-American Combat Veterans (Inv. Hyp. Sine)	-0.012	-0.020	-0.022	-0.011	-0.013
	(0.020)	(0.021)	(0.021)	(0.020)	(0.020)
Observations	436	436	434	436	434
R-squared	0.167	0.233	0.210	0.327	0.303
Mean DV	0.0986	0.0986	0.0945	0.0986	0.0945
p-value: Am. Vets = Neustrie/Anhalt	0.00769	0.00891	0.0112	0.00799	0.00704
p-value: Am. Vets = Other Combat Veteran	0.0294	0.0386	0.0435	0.0528	0.0560
Panel B: Rebellion or Riot 1789					
Rochambeau Veterans (Inv. Hyp. Sine)	0.049***	0.038***	0.040***	0.044**	0.045**
	(0.014)	(0.014)	(0.014)	(0.017)	(0.017)
Neustrie/ Anhalt Soldiers (Inv. Hyp. Sine)	0.047**	0.039	0.040*	0.045*	0.047*
	(0.021)	(0.023)	(0.023)	(0.025)	(0.025)
Non-American Combat Veterans (Inv. Hyp. Sine)	0.000	-0.008	-0.007	0.006	0.006
	(0.023)	(0.022)	(0.023)	(0.020)	(0.020)
Observations	436	436	434	436	434
R-squared	0.207	0.231	0.228	0.347	0.344
Mean DV	0.202	0.202	0.200	0.202	0.200
p-value: Am. Vets = Neustrie/Anhalt	0.968	0.975	0.992	0.964	0.946
p-value: Am. Vets = Other Combat Veteran	0.102	0.117	0.114	0.189	0.184
Generalite Fixed Effects	Yes	Yes	Yes	Yes	Yes
Dropping Paris Intra- and Extra-Muros	No	No	No	No	Yes

An observation is a bailliage. The outcome in Panel A is an indicator for a rebellion or riot occurring the bailliage. The outcome in Panel B is an indicator for a "*Most Strongly Democratic*" Third Estate Cahier in 1789, as classified by Beatrice Hyslop. All regressions are OLS and include the same sets of controls as the equivalent column in Table 2. All regressions include controls for recruitment, geography and administration that include: linear and quadratic controls for Easting and Northing and Easting x Northing and ruggedness (the SD of altitude); log. distance to the borders of the Holy Roman Empire, Spain, Switzerland and Savoy and any land frontier, log. urban population and population density, location in the grosse fermes, and gabelle tax levels; and log distance to Paris, the pre-revolutionary provincial capital and the coast. Column 2 includes enlightenment and education controls that include: Log. high school professors, secular and catholic high schools, STN books sold, banned STN books sold, Encyclopedie subscriptions and an indicator for presence in Hyslop's cahiers data. Columns 3 and 5 drop Paris intra-muros and extra-muros. Columns 4 and 5 include separate intercepts for each pre-Revolutionary generalite. Robust standard errors in parentheses, clustered at the pre-Revolutionary generalite level. *** p<0.01, ** p<0.05, * p<0.1