"The Road to Rebellion: State-Building and Rural Uprisings in the Run-Up to the French Revolution"

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The Road to Rebellion: State-Building and Rural Uprisings in the Run-Up to the French Revolution[*]

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Abstract

How does the process of building state strength affect social order? We examine how improvements in state communication networks and increased state presence impact rural unrest by combining original and detailed parish-level data from pre-revolutionary France on the expansion of the horse-post network with rural rebellion in this period. Using a staggered difference-in-difference framework, we find that the introduction of a new horse-post relay is associated with more local rebellion. We argue that the main mechanism is increased state presence and visibility. New horse-post relays are strongly associated with more rebellion against high-profile state agents – the military, police, and courts – and public buildings that symbolized and hosted state power. We find no evidence that relays fostered broader rebellion against the nobility or Church, or that the effects stem from informational or infrastructural changes occurring contemporaneously. Our findings have implications for the scholarly understanding of the co-evolution of states and violence.

Keywords State-building, rebellion, social order, postal network, Western Europe

JEL codes N44, P41, R42

Words (including references and excluding tables, figures) 12,032

Scholars have long studied state capacity and state-building as pillars of economic and political development over the centuries. The state plays a central role in extracting revenue from society and enforcing rules (Levi, 1989; Tilly, 1990; Weber, 1968). This can foster markets, contracting and investment, and the provision of collective goods and services. States are also critical in establishing and maintaining social order (Huntington, 1968; Skocpol, 1979). By monopolizing the legitimate use of force and funneling resources into the military and policing, states can establish and enforce order, and forestall or minimize civil conflict, crime, and localized rebellion (Blattman and Miguel, 2010; Fearon and Laitin, 2003).[1]

Building a strong state is a long and complex process. It has taken most states centuries to achieve something close to a monopoly on the legitimate use of force, and many states around the world still face fundamental weaknesses (Centeno et al., 2017; Soifer, 2015). Efforts to extend control often come with social disruption and contention. This article investigates how the process of building state strength affects social order. We focus on the state's transportation and communication networks as one of the most concrete and common manifestations of state infrastructural capacity.

Our empirical focus is on eighteenth-century France in the lead-up to the French Revolution. As one of the world's earliest modern states, France is a canonical case of state-building and has greatly influenced state-building elsewhere in Europe and globally. The French Revolution has similarly played an outsize role in history and is one of the most studied political events of the past several centuries. There has been comparatively less examination of the thousands of localized uprisings scattered across the French countryside in the decades prior to the Revolution. While the French state expanded its coercive capacity in the eighteenth century, it still fell short of a monopoly on the use of force within its territory. Regional rebellions and protests simmered and at times were suppressed by state agents. These local uprisings would eventually culminate in a nationwide revolution.

We examine how the expansion of the state's communication networks affected rural uprisings by combining original data on the development of France's horse-post network during most of the eighteenth century with the most comprehensive data ever collected on rural rebellion in France during this period. The investments made by the monarchy in the eighteenth century nearly doubled the nationwide network of horse-post relays, establishing throughout the territory attended lodging quarters and a well-prepared set of fresh horses for messengers carrying information for the royal administration where there had previously been no support. The horse-post relay network became one of the primary means of consolidating

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[1]Of course, states can deploy that same capacity to perpetrate violence against civilians or armed groups (Straus, 2006).

the hierarchical French state's informational capacity throughout the territory as it sought to rule and implement policy consistently across space.

Using a staggered difference-in-difference framework centered on parishes, the smallest territorial unit in pre-Revolutionary France, we find that the introduction of a new horse-post relay in a parish is associated with more local rebellion in subsequent decades. We attribute this finding to the increased presence and visibility of the state and its agents, as new messengers dressed in royal garb flashed around the countryside on horseback and wealthy local notables forged an alliance with the state as postmasters at critical road junctions.

The increasingly present and recognizable state that was behind and facilitated by these new figures became a target of popular ire for its activities: heavy-handed efforts at forced conscription, stern public punishments, and inflexible enforcement of royal acts perceived as unfair. Accordingly, we find that new postal nodes are strongly associated with rebellions against agents with coercive powers to maintain and enforce order: the military, the police, and the courts. They are also associated with attacks on state buildings, as well as rebellions against taxes – even though taxes did not change with the introduction of new horse posts. We also find a "gathering" effect on rebellion locally: new posts appear to have attracted some share of rebellions that otherwise might have occurred nearby. Together, these effects outweighed improvements in the ability of the state to discern and contain dissent.

Our empirical approach and additional data give us a unique opportunity to evaluate and challenge several alternative explanations, namely the erosion of traditional social hierarchies, information and collective action possibly spurred by the contemporaneous letter-post system, changes in coercive capacity and the recording of rebellions by police units charged with keeping order, and contemporaneous transit infrastructure. These latter three alternatives are often hard to dismiss in more commonly studied cases where communication and transportation networks are built together from scratch and can be widely used. In eighteenth-century France, however, horse-post relays were built atop existing transit routes and were used prominently by state agents. They were not accompanied by new police or letter post stations.

Our findings have implications for the scholarly understanding of the co-evolution of states and violence, as well as for the vast corpus of work on the origins of the French Revolution. While greater state capacity may ultimately support political stability and order, the process of state-building itself can be disruptive, even for decades at a time. This process likely fueled the accumulation of grievances and repertoires of resistance that ultimately contributed to the Revolution of 1789. The increasing presence of state agents per se appears to be an important part of this dynamic, separate from the weakening of the traditional nobility, the role of the Church, and tax burdens.

State-Building and Rebellion

The expansion of transportation and communication routes has been a core component of state-building throughout the world. Prior to industrialization, states and empires built paths, stone roads, postal routes, ports, and canals to reach remote populations, transmit information and correspondence, and deploy military forces (Bulliet, 1990; Rogowski et al., 2022). This is closely tied to what Mann (1984) termed state infrastructural power: the institutional capacity to exercise control and implement state policy within the territory it governs. This implicates both the state's material capabilities and its territoriality (Soifer, 2008).

Transportation and communication infrastructure remains a central focus of state-building in many countries today. Governments throughout Latin America, Southeast Asia, Africa, and even in industrialized countries continue to build and improve roads in remote rural areas, expand railway networks, construct telecommunications infrastructure, and establish military stations and outposts. Alongside these efforts, and in some cases facilitated by them, states typically seek to strengthen other dimensions of their capacity, such as administration, taxation, military strength, the provision of public goods, and the broader ability to project power into society (Centeno et al., 2017; Lindvall and Teorell, 2016; Müller-Crepon, Hunziker and Cederman, 2021).[2]

The balance of scholarship has long associated stronger state capacity with order and political stability. Stronger states can more effectively enforce rules, deter violence, and order the interactions of powerful social groups (Fearon and Laitin, 2003; Huntington, 1968; Slater, 2010).

Some scholarship also provides important foundations for understanding why this relationship does not always hold in the *process* of capacity building. One reason that improvements in infrastructure and communications may actually foster greater rebellion is that greater connectivity associated with transportation networks can facilitate collective action. For instance, Melander (2020) demonstrates that the roll-out of a national railway network in Sweden at the turn of the twentieth century facilitated the spread and growth of membership in social movements by reducing local travel costs. Relatedly, García-Jimeno, Iglesias and Yildirim (2022) show that railroads and telegraphs mediated information flows during the US Women's Temperance Crusade events in the 1870s, with greater connectivity fostering more protest and social interaction effects.

A related consequence of the expansion of transportation networks is improved market access. The creation or improvement of local transportation routes can reduce the transac-

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[2]On the interrelationships between various dimensions of state capacity, see Hanson and Sigman (2021).

tion costs that people face in selling their goods. Producers can access markets more easily and travel farther to sell their goods in larger markets. This increases access to large gatherings where information can flow freely and organization can take place, again reducing the transaction costs of collective action.[3] Accordingly, Geloso and Kufenko (2019) show that increasingly dense social and economic ties associated with the development of local markets facilitated rebellious activity in Lower Canada in the 1830s by reducing the coordination costs of disparate seditious groups.

Strengthening the state through improvements in infrastructure and communications can also trigger rebellion by disrupting existing social hierarchies and networks and threatening local elites. Particularly in rural areas, landowners and elites who socially and economically dominate peasants where the state is weak may also provide for them in times of pressing need, such as food shortages, medical emergencies, family deaths, and other major events. Tight-knit communities can serve similar functions. State-building can disrupt these relationships and yield rebellion in at least two ways. Local elites themselves may resist infrastructure and associated state expansion that threatens their authority and local dominance (De Juan, 2016; Garfias and Sellars, 2022). This can spark regional rebellions fomented by local elites. Alternatively, where the successful disruption of traditional social relations weakens the monopolistic grip of local elites and social networks, it can expose rural inhabitants to severe risks and enable everyday grievances to metastasize rather than being absorbed or addressed locally (McClintock, 1984; Scott, 1976). Those grievances could be targeted at declining elites or the state.

Increasing State Visibility and Presence

We focus on the increasing visibility and presence of the state as another underexplored mechanism by which state-building can fuel rebellion. Transportation and communication networks that connect a given locality more directly to centers of government authority increase the presence of the state in that locality. While this may make it easier to quell local disruptions, increased visibility and presence can also spur resistance to the material consequences and symbolic manifestations of state power. Individuals may organize in response, whether in reaction to what the state represents or to what it introduces, such as new or more consistent forms of coercion, conscription, and rules of justice.

Increases in state visibility and presence are perhaps particularly disruptive and threatening to daily life when they are also associated with nation-building. State agents expanding

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[3]On the other hand, the growth of markets associated with improved infrastructure should in turn also reduce the price volatility of agricultural incomes and commodities that can otherwise fuel rebellion during severe negative shocks (Dube and Vargas, 2013).

their presence into hinterland regions populated by communities with weak or absent ties to the state and that may be culturally distinct from the metropole can be perceived as a threat. Their transgressions can fuel grievances and spark rebellions. We explore these dynamics in pre-Revolutionary France.

State-building and Rural Unrest in Pre-Revolutionary France

France in the 1700s was an overwhelmingly rural country undergoing slow but dramatic change. The monarchy had been centralizing and expanding its power in the prior two centuries and this process continued to advance. The Paris region expanded its influence across the national territory and into far-flung colonial possessions. State expansion in continental France was a contentious process marked by ongoing conflict and grievances between lords, peasants, and the state. Lords and the state both battled for pride of place in local rural life, generating a shifting landscape of obligations and opportunities for peasants.

The Horse-Post Relay Network

The horse-post system was a pivotal element of state-building efforts during the 1700s. From its inception under Louis XI in the late 1470s, it consisted of a nationwide network of relay where horse-post messengers (*postillons*) could exchange their horses for fresh ones in order to facilitate the rapid transportation of the mail of the royal administration across the kingdom (Jamaux-Gohier, 2001; Marchand, 2006; Gazagnadou, 2013, pp. 109–16). Relays were placed at regular ten to fifteen kilometers intervals so that a horse could be changed after an hour or two of riding. Such a distance enabled postillons to ride at speed while minimizing the risk of injury to the horse, given the animal's physiological capabilities (Minetti, 2007).[4] The horse-post relay network was connected by a road system maintained by an administration independent of the horse post, the Bridges and Roads (*Ponts et Chaussées*) administration (Arbellot, 1973).

The horse-post relay network was one of the main instruments of the royal authority for the consolidation of its informational capacity throughout the territory, particularly in the provinces situated outside the royal domain (Marchand, 2006, pp. 183–221). A series of regulations enabled the horse post to achieve a higher speed of information transmission than alternative postal systems, such as the letter post or private messenger companies (Jamaux-Gohier, 2001, pp. 100–8).[5] First, horses belonging to the horse post held a monopoly on

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[4]The term "post" denoted both a relay itself and the distance between two relays. For instance, Furetière's (1690, p. 1636) dictionary defines a post as follows: "also refers to the space between two post houses. Each post is one and a half leagues or two leagues" (quoted in Bretagnolle and Verdier, 2006, p. 66).

[5]For instance, when the subdélégué of Rennes sent a letter to the subdélégué of Nantes at 7:15 p.m. on

galloping on the roads connecting relays and on travelling on these roads at night, which were better maintained and directly connected to administrative centers. In contrast, other horses were restricted to trotting on these roads during the daytime. Moreover, the horse post held a monopoly on the rental of horses for use on these roads. Those who did not travel with their own horses were obliged to rent them from the horse post and to be accompanied by a horse-post employee throughout their journey. The horse post also had priority in the procurement of hay for feeding horses as well as priority of passage when roads were congested. Postmasters (*maîtres de postes*) derived substantial profits from these privileges and were quick to report any violations to the royal authorities, who almost always sided with them (Jamaux-Gohier, 2001, pp. 101–4).

The establishment of horse-post relays provided the opportunity for the royal authority to form alliances with and co-opt local elites who came to serve as postmasters. Postmasters were typically recruited among the wealthy local notables, generally bourgeois farmers and in-keepers aspiring to a noble title (Jamaux-Gohier, 2001, pp. 189–94; Marchand, 2006, pp. 223–8). They held a postal certificate (*brevet de poste*) that made them the exclusive operator of a given relay. The certificate imposed several obligations on the postmaster, including the requirements to reside at the relay, to refrain from farming out its operations (*faire-valoir direct*), and to ensure its proper functioning, for instance by maintaining at least five or six healthy horses. Moreover, postmasters were expected to act as intelligence agents and police auxiliaries at the service of the central administration: they had to control passengers passing through the relay – for instance, by maintaining records of their names, occupations, and destinations from the late eighteenth century onwards – as well as inform authorities of noteworthy local political events.

In return, postmasters enjoyed privileges that went beyond the profits from the exclusive exploitation of the relay. These included a substantial exemption from all taxes, including the onerous *taille*, as well as exemptions from military obligations, from accommodating visiting soldiers, and from churchwarden responsibilities. As a result, postmasters were broadly loyal to the regime (Jamaux-Gohier, 2001, pp. 189–235; Marchand, 2006, pp. 200–46). Indeed, historical accounts suggest that most of them displayed portraits of the kings of France in their relays. Furthermore, they were frequently accused of being accomplices of the monarchy during the Revolution, and a significant number were imprisoned or executed during the 1790s.

Monday, December 31, 1764, the postillon of the horse post arrived in Nantes at 6 a.m. on Tuesday, after eleven hours of travel through eleven relays (Jamaux-Gohier, 2001, pp. 39–40). In contrast, according to the *Guide des lettres* (p. 61) published in 1763 (Cauvin, Lepetit and Reymond, 1987), a letter sent through the letter post would leave Rennes on Wednesday at 4 p.m. and arrive in Nantes on Thursday at 7 a.m., after fifteen hours of travel. In general, the horse post was almost 40 percent faster than the letter post.

In addition to its role in transmitting information on behalf of the royal state, the horse post embodied the symbolic presence of the monarchy throughout the territory. First, located at the entrance to towns or at crossroads in rural areas, horse-post relays were relatively large buildings and therefore highly visible in the rural landscape (see Panel (a) of Appendix Figure A1). Second, the postillons who galloped postal roads day and night – though typically young local laborers (Marchand, 2006, pp. 258–64) – wore a distinctive uniform consisting of a royal-blue vest with red facings and collar, an arm badge inscribed with the name of their relay, a round waxed leather hat, skin pants, and heavy black boots (Jamaux-Gohier, 2001, pp. 237–40; Marchand, 2006, pp. 262–4). Moreover, the horses they rode had a distinctively cut or knotted tail (Gazagnadou, 2013, pp. 102–3). This uniform made postillons easily recognizable in the public space, thereby enhancing the symbolic presence of the royal authority in the minds of the local population, even in remote locations far from administrative centers (see Panel (b) of Appendix Figure A1).

Data

The dataset we use for our analysis consists of a panel of nearly 35 thousand parishes in the territory of the Kingdom of France as of 1789 over seven decades – from the 1720s to the 1780s – corresponding to approximately 247 thousand parish-decade observations. Parishes were the smallest level of administration in Ancien Régime France, and no previous study of this period has conducted analysis at this level of granularity.[6] The Data Appendix provides more details on the sources of data used in this article.

The Horse-Post Relay Network

To document the development of the horse-post relay network during the eighteenth century, we construct an original historical GIS based on administrative sources. From the beginning of the eighteenth century, the General Superintendent of Posts had lists of horse-post relays printed and updated annually: the *Liste générale des postes de France*. The principal objective of these publications was to assist state messengers during their journeys. They provided information regarding the location of horse-post relays where messengers could eat, rest, and procure fresh horses, as well as the distances between each relay for a comprehensive set of itineraries. These books were organized by itinerary, with clear starting and ending points. Distances were expressed in posts—a measure of distance equivalent to

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[6]Parishes were the primary forms of municipal organization that gave way to *municipalités* in 1789–93 and later to *communes* (Gorry, 2008).
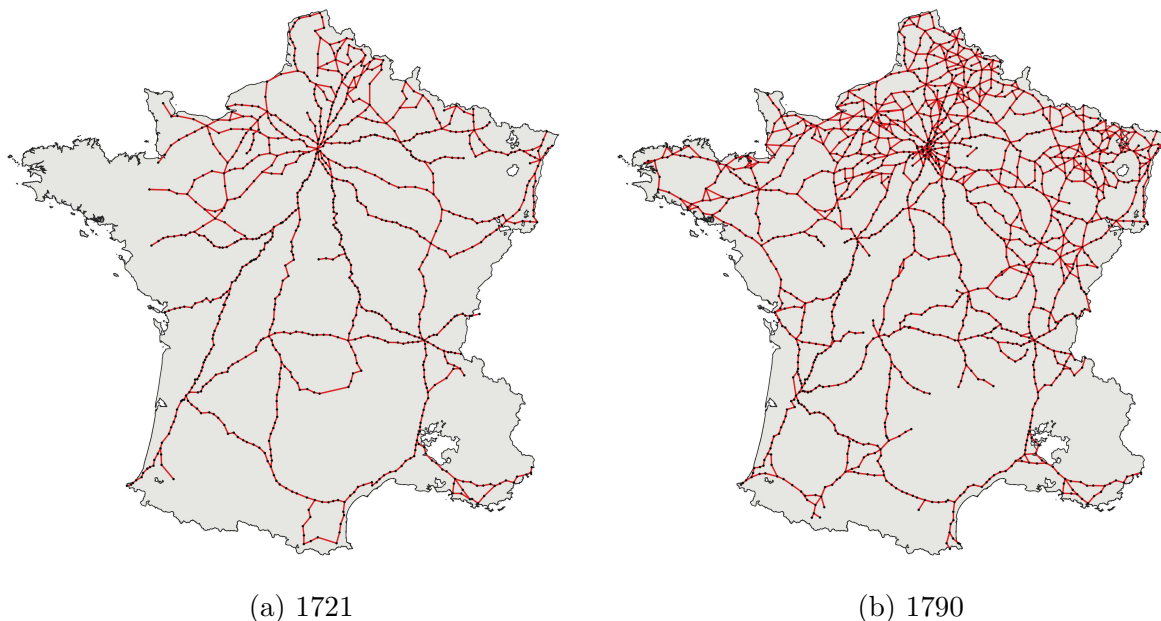
(a) 1721   (b) 1790
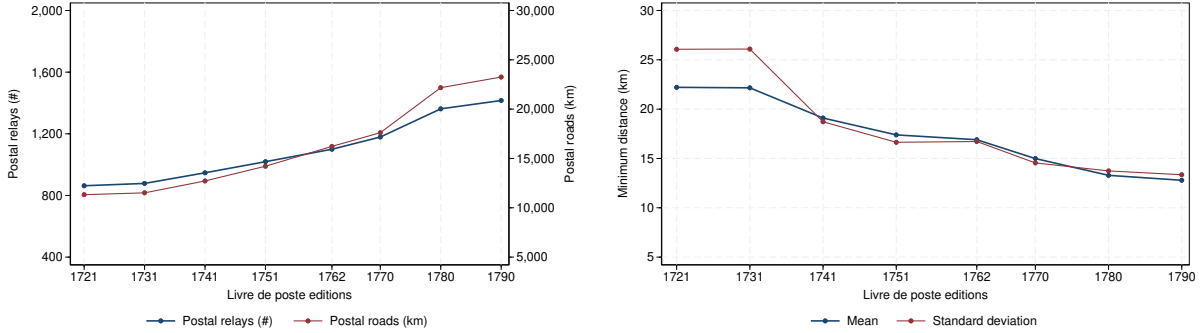
Figure 1. The Horse-Post Network (1721, 1790)

eight to nine kilometers (Bretagnolle and Verdier, 2006, p. 68–9).[7] To create a historical geographical mapping of the expansion of the French horse-post relay network throughout eighteenth-century France, we digitized one edition of the *Liste générale des postes de France* per decade from the 1720s through the 1790s.[8] We subsequently extracted all the segments between horse-post relays within each listed itinerary, along with their start and end points, and matched this set of locations to France's parishes. Finally, we drew straight lines between each node and combined segments to recreate the set of itineraries provided in the *Listes des postes de France.*

Figure 1 displays the distribution of the horse-post network at the beginning and end of our period of analysis. Relevant maps for the other six cross-sections are available in Appendix Figures A3 and A4. We also report the number of horse-post relays along with the length of associated postal roads between relays for each edition of the *Liste générale des postes de France* in our sample in Panel (a) of Figure 2. We report summary statistics related to the development of the horse-post network in Panel A of Table 1.

The spatial configuration of the horse-post network, as it was initially established in the sixteenth century, reflected significant political and military concerns vis-à-vis neighboring adversaries of the royal authority. Relays were initially established in Bordeaux to gather

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[7]As an example, Appendix Figure A2 displays an extract of the 1751 edition of the *Liste générale des postes* that depicts the distribution of 29 horse-post relays along the route from Lyon to Marseille.

[8]Annual editions of the *Liste générale des postes de France* were not systematically preserved. See the Data Appendix for more details.

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(a) Density of the Horse-Post Network   (b) Distance to the Nearest Horse-Post Relay

Figure 2. Evolution of the Horse-Post Network (1720–90)

information regarding the Kingdom of Spain, in Dijon to monitor the House of Burgundy, in Lyon to monitor the Duchy of Savoy, and in Arras and Amiens to monitor England, the Flemish Country, and the House of Habsburg (Gazagnadou, 2013, p. 112). These security concerns led to a center-periphery logic in the pattern of a star-shaped network centered on Paris with additional nodes along frontiers.

With its further development during the seventeenth and especially the eighteenth century, the horse post became a primary tool in the territorial management of the monarchy to assert its hierarchical control more evenly over the territory and project its power to the remotest parts of the kingdom (Marchand, 2006, pp. 184–91).[9] The network became more dense in the north than in the south following the permanent establishment of the royal court at Versailles in 1682 and the consolidation of the kingdom's territory (Bretagnolle and Verdier, 2005; Verdier and Bretagnolle, 2007). From the mid-eighteenth century onward, the network experienced the emergence and densification of secondary centers situated along major regional nodes, including Bordeaux, Lyon, Dijon, and Rennes (Verdier, 2009). By the end of the eighteenth century, the horse post constituted a national network structured around the political center in the north connected to secondary centers, thereby creating the conditions for the emergence of an integrated city system (Bretagnolle and Franc, 2017).

As illustrated in Panel (a) of Figure 2, the horse-post network initially expanded at a gradual pace from the outset of our analysis in the 1720s through the 1760s. It then underwent a significant acceleration toward the end of the century, essentially doubling

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[9]Beyond the confounds of the royal domain, in the peripheral *pays d'Etat*, this expansion often met with resistance from local elites and private interests. For instance, it was not until 1738 – after a first attempt in 1648 – that the horse post developed in Brittany. This delay was primarily attributable to the resistance of the Estates of Brittany who were concerned about the encroachment of the royal authority in their province. Local private messenger and horse-renting companies also resisted the development of the horse post as they feared that its competition would erode their profits (Jamaux-Gohier, 2001, pp. 11–28).

in length and density over this entire period. While the network comprised 863 relays for 11 thousand kilometers of roads in 1720, it reached 1,416 relays for 23 thousand kilometers of roads in 1790. As a result, the average distance between any parish and the closest horse-post relay decreased from 22 kilometers in 1720 to 13 kilometers in 1790, as shown in Panel (b) of Figure 2. These gains were distributed across all parishes, as the standard deviation of this distance also decreased from 26 to 13 kilometers. More broadly, the proportion of parishes with a nearby postal relay nearly doubled over the period, from 22 percent in 1720 to 39 percent in 1790 (Appendix Figure A5).

The development of the horse-post network was not entirely linear. In fact, part of the network was periodically reconfigured locally (Verdier and Bretagnolle, 2007; Verdier, 2009). While net gains represented 553 horse-post relays over the period, this was the result of the creation of 967 relays and the retirement of 414 of them (Appendix Figure A6). These re-configurations were generally driven by local practical considerations, such as the retirement of a postmaster or the development of nearby alternative itineraries.[10] A comparison of the spatial distribution of newly created horse-post relays and retired ones in each decade reveals that retired relays were on average 15 kilometers apart from the closest new relay.

While the initial configuration and expansion of the horse-post network were driven by strategic considerations at the national level, its development at the local level was frequently the result of practical considerations. The specific placement of horse-post relays was constrained by the need for regular ten-to-fifteen kilometer intervals between relays, the quality of the road network, and the physiological capabilities of horses to ride for an hour or two over uneven terrain (Minetti, 2007). As a result, most relays were not located in major urban centers but rather in smaller towns and villages along itineraries between administrative centers, on the banks of rivers, or at the foot of mountains.[11] Indeed, we show in Panel (a) of Appendix Figure A8 that while approximately one-third of relays were located in cities with more than two thousand inhabitants – generally administrative centers – 42 percent of relays were located in towns with less than one thousand inhabitants, and 18 percent in villages with less than five hundred inhabitants.[12] Horse-post relays established after 1720

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[10]For instance, the relay of Vivier in Brittany, established in 1749, was transferred 7 kilometers away to Dol in 1760 in order to travel to Pontorson through a safer route. Similarly, the transfer of the relays of Pont-Réan to Mordelles (13 kilometers), from the Plat d'Or to Plélan (16 kilometers), from Guer to Campénéac (17 kilometers), from Monteneuf to Ploërmel (17 kilometers), or from Malestroit to Roc-Saint-André (9 kilometers) in July 1763, enabled shortening the itinerary from Rennes to Lorient as shown in Panel (a) of Appendix Figure A7 (Jamaux-Gohier, 2001, p. 24).

[11]For instance, in Touraine, in addition to administrative centers such as the towns of Tours or Amboise, horse-post relays were located in villages near rivers to facilitate their crossing, such as Montbazon as shown in Panel (b) of Appendix Figure A7.

[12]Parishes that were administrative centers – which nearly all had a horse-post relay and accounted for a quarter of parishes with relays – had a median 1793 population of 4.6 thousand inhabitants and a mean of

followed the same spatial patterns, as shown in Panel (b) of Appendix Figure A8.

Table 1. Summary Statistics across Parish-Decades (1720–89)

A. Horse post network				
	Mean	S.d.	Min.	Max
Horse post present in parish	0.030	0.169	0	1
Horse post present in canton	0.276	0.447	0	1
Distance to closest horse post (km)	18.0	19.8	0	256
B. Number of rebellions				
	Mean	S.d.	Min.	Max
All rebellions	0.023	0.434	0	102
Weak rebellions (4–10)	0.008	0.148	0	22
Moderate rebellions (11–50)	0.010	0.231	0	53
Strong rebellions (> 50)	0.005	0.111	0	29
Rebellions against state authorities	0.004	0.203	0	54
Rebellions with attacks on state buildings	0.003	0.069	0	9
Rebellions against taxation	0.008	0.166	0	42
Rebellions against nobility	0.002	0.075	0	15
Rebellions against clergy	0.000	0.016	0	3

Notes. This table reports summary statistics for the variables used in the analysis. The unit of observation is a parish-decade from the 1720s to the 1780s. There are 247,009 parish-decade observations in the dataset. *S.d.* denotes *standard deviation*; *Min.*, minimum; *Max.*, maximum.

Rebellions

We gather information on rebellions throughout the eighteenth century based on archival material collected by Jean Nicolas (2002) and numerous collaborators. Based on meticulous research in a wide range of national and local archives throughout France, this survey contains information on 8,540 unique rebellious events that occurred between 1661 and 1789. It focuses on popular uprisings aimed directly at challenging authorities and on popular resistance to state and local initiatives, policies, and actions. The survey sets an inclusive threshold for rebellion, including any uprising that lasted only a few hours or involved at least four people, provided they were not family members. These restrictions thus cast a wide net, making the Nicolas survey an unprecedented thermometer of the rebellious fever sweeping France in the period leading up to the Revolution.

Figure 3 depicts trends in rebellious activity between 1720 and 1789, the period of our analysis. After a few spikes in rebellions in the mid-1670s and late 1690s – generally against
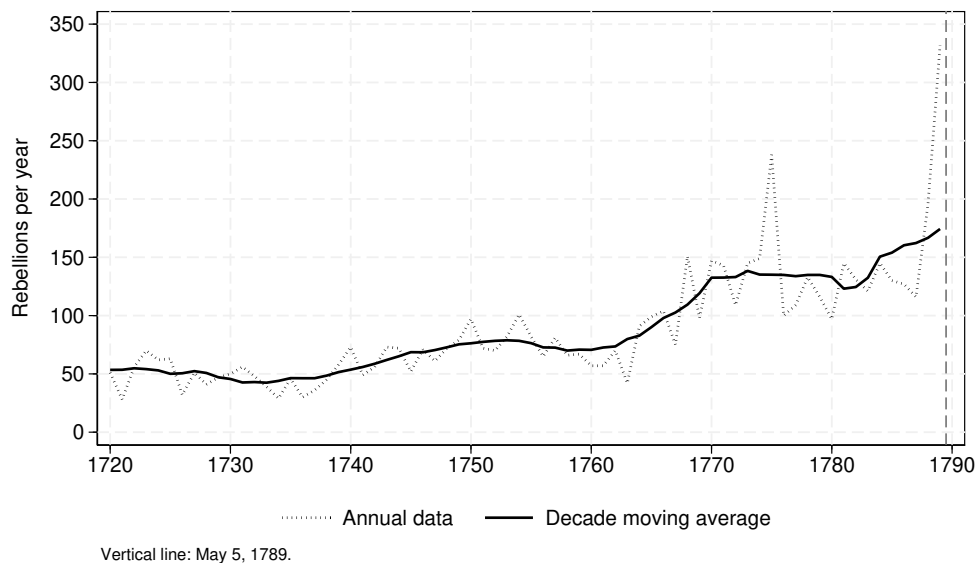
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8 thousand.

Figure 3. Annual Number of Rebellions (1720–1789)

the introduction of new taxes (Aubert, 2015) – and the last "peasant rage" of the *Tard-Avisés* in Quercy in 1707, an upward trend in rebellious activities can be observed from the 1740s together with a significant acceleration in the 1760s, with more than a hundred events per year from then on. This increase moved in tandem with increased state presence throughout the territory as well as increases in taxation.[13] Rebellious activities would only intensify until the explosion of the Revolution. The territorial spread of rebellions across approximately three thousand different locations is evident in Figure 4.

We digitized all forty thousand original coding sheets of Nicolas's (2002) survey to create a comprehensive database of the 5,737 rebellions that occurred in 3,071 locations within the boundaries of the kingdom between 1720 and 1789. In addition to the date and location of each rebellion, we also collect information on its motives, its size, the characteristics of its participants, and the types of violence perpetrated by and against the rebels. To measure rebellious activity, we create a variable that counts the number of rebellions that occurred in a given parish and decade as well as an indicator variable for whether there was at least one rebellion in a given parish-decade. Similarly, we assess the characteristics of rebellious activities. We report summary statistics in Panel B of Table 1.

Nearly half of all rebellions in this period were of moderate size, with between 11 and 50 participants. In contrast, 21 percent of them were relatively large, with more than

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[13]The administrative constituencies for taxation – generally, *élections* – were independent from the horse-post administration (Touzery, 2024). Moreover, they represented much higher levels of aggregation than those we rely on for identification, namely, parishes of the same canton.
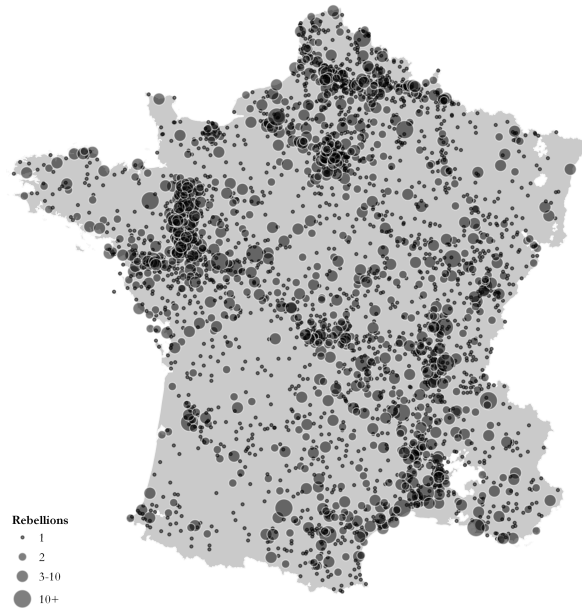
Figure 4. Spatial Distribution of Rebellions (1720–89)

50 participants. In addition, one-third of the rebellions were over taxation, nearly one-fifth were against state authorities, and 14 percent of the rebellions involved an attack on the building of a representative of the authorities. The nobility and seigneurial authorities were the target of another 10 percent of rebellions, while the clergy was the target of only 1 percent of them. These characteristics of rebellions, broken down by decade, are reported in Appendix Table A1.

While Nicolas's (2002) survey provides the most comprehensive account of rebellious activity in France prior to the French Revolution, its use requires attention to the potential gaps and reporting biases that can arise with any historical data. These include not only the archival recording of events, but also the possibility that the introduction of a horse-post relay may have increased the attention or capacity of state or local officials to record rebellions. We later assess the robustness of our results to these potential sources of bias. Details on the nature and sources of the original recording on rebellions along with a series of empirical tests casts doubt that this could drive our findings.

Administrative and territorial divisions

Important for our empirical strategy, each parish was embedded in a set of administrative and territorial divisions. The largest are *généralités*. Created from the fourteenth century for tax collection purposes, these broad territorial divisions served as the basis for the administration of the territory under the authority of *intendants* (Gorry, 2014). At the eve of the

Revolution, there were 35 généralités. *Subdélégations* were territorial divisions established in the mid-seventeenth century as subdivisions of généralités and were essential to the territorial reach of the royal authority. The prerogatives of *subdélégués* – the royal agents who administered subdélégations under the authority of the intendant of their généralité – increased during the eighteenth century and included the fiscal, military, economic, social, and sanitary administration of their territory (Nordman and Ozouf-Marignier, 1989, pp. 47–52). On the eve of the Revolution, there were nearly 700 subdélégations. *Cantons* were yet a smaller administrative division. Created in 1790 along with the administrative divisions of *départements* and *districts*, they had various electoral and judicial prerogatives (Nordman and Ozouf-Marignier, 1989, pp. 53–62). Next to municipalities, they constituted the most granular level of government at the time, with over 4,500 of them. Although they were formally established after the Revolution, the territorial scope of these administrative divisions reflected the historical local logic of daily exchange between parishes (Tanguy, Le Bihan and Lagadec, 2009). On average, each généralité contained 1,103 parishes, counted 900 thousand inhabitants (in 1793), and had a radius of 70 kilometers; each subdélégation contained 54 parishes, counted 44 thousand inhabitants, and had a radius of 15 kilometers; and each canton contained 8 parishes, counted 6 thousand inhabitants, and had a radius of 6 kilometers.

Other data

We supplement our parish-level data with several pieces of additional information, although data remains relatively sparse for this time period and our research design approach explicitly aims to account for this issue. First, we construct a parish-level measure of decade-average wheat prices based on data in Ridolfi (2019) to control for changing local economic conditions. An extensive literature indicates that subsistence crises and more general reactions to the price of staple foods were associated with rural collective action in eighteenth-century France (e.g., Markoff, 1985; Bouton, 1993; Chambru, 2019). The most important staple food was wheat, given the importance of bread consumption and the prevalence of wheat farming. In addition, we measure the size of each parish by its population in the 1793 census, the first census available in France. We also assess the connectivity of parishes to the network of paved roads according to Cassini's maps published in 1756–1790, we determine whether parishes were the seat of an administrative division, and we collect information on the type of *gabelle* (salt) taxation parishes were subject to. Finally, we construct a historical GIS of the letter-post system and the *maréchaussée* brigades, which we describe in more details below.

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Research Design

The wide variation in rebellion and the expansion of the horse-post network across France in the eighteenth century provides an opportunity to examine how state-building affected political stability on the eve of the French Revolution. Our primary estimand of interest is the causal effect of the establishment of a horse-post relay in a parish on rebellious activity in that parish over time. To this end, we employ a staggered difference-in-differences approach that compares changes in rebellion in parishes with and without a horse-post relay. This strategy accounts for fixed parish-level characteristics that could influence both the establishment of new horse-post relays and rebellion, such as a prior history of political activism, the ease of moving and organizing across territory, the nature of civil society, or the presence of natural resources. It requires the identifying assumption that parishes that received new relays and those that did not would have followed parallel trends in rebellion in the absence of these relays. While this assumption is untestable, we explore its plausibility using event-study regressions below.

The nature of our treatment is staggered, binary, and non-absorbing. Within our sample, 33,614 parishes (95.3 percent) are never treated in that they never receive a horse-post relay between 1720 and 1790; 608 (1.7 percent) are always treated in that they always have a horse-post relay; and 1,065 (3 percent) are "ever treated" parishes that change status over the period. Of the 1,065 ever treated parishes, 205 (19.3 percent) have a relay at the beginning of the period and drop out of treatment at some point, while 860 (80.7 percent) enter treatment at least once. Of these 860 parishes, 352 (33.1 percent) of them drop out of treatment at least once. Appendix Figure A9 shows the 43 unique treatment histories among parishes that switch treatment at least once during our period of analysis.

To account for the specificity of this empirical design, we follow de Chaisemartin and D'Haultfœuille (2024), which provides consistent and unbiased event-study estimators for staggered difference-in-differences models in which treatment effects might be heterogeneous across parishes and decades as well as dynamic over time. In contrast to Callaway and Sant'Anna (2021), Sun and Abraham (2021), or Borusyak, Jaravel and Spiess (2024), this approach accommodates staggered binary treatments that are non-absorbing. It estimates period-specific average treatment effects δ_ℓ of having been treated rather than untreated for ℓ periods by comparing switchers to not-yet switchers with the same period-one treatment.[14] We operationalize this approach at the parish-decade level by estimating the following re-

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[14]Aside from no anticipation of treatment and parallel trends, this approach assumes that past treatments before the starting period do not affect outcomes during the analysis period (de Chaisemartin and D'Haultfœuille, 2024, pp. 9–12). We discuss this assumption in the robustness section below.

gression equation:

$$(1) \quad \mathtt{rebellions}_{pda} = \alpha_p + \lambda_d + \sum_{\substack{\ell=-t \\ t\neq 0}}^{+T} \delta_\ell \times \mathbb{1}[\mathtt{horse\_post}_{pd} = 1] \times \mathbb{1}[d = \ell] + \mathtt{prices}_{pd} + \gamma_{da} + \varepsilon_{pda}$$

where $\mathtt{rebellions}_{pda}$ is the number of rebellions that occurred in parish p and decade d, where d is indexed from 1 to 7 for the decades 1720s to 1780s, and parish p is part of administrative division a. The indicator variable $\mathtt{horse\_post}_{pd}$ equals one if parish p had a horse-post relay in decade d, α_p denotes parish fixed effects, λ_d are decade fixed effects, $\mathtt{prices}_{pd}$ are average wheat prices in parish p and decade d, and γ_{da} are administrative division-by-decade fixed effects. This last term enables the coefficient δ_ℓ to be identified through the comparison of parishes belonging to the same administrative division over time, thus accounting for administration division-specific time trends. Throughout, we cluster standard errors at the parish level.

An important practical consideration is the number of leads t and lags T that should be used in the estimation. While de Chaisemartin and D'Haultfœuille's (2024) methodology allows up to three leads and six lags to be computed in our context, the preferred number of leads and lags should be chosen such that the estimation is based on a comparable sample of switchers. More specifically, we follow de Chaisemartin and D'Haultfœuille's (2024, pp. 39–40) rule of thumb that leads and lags should include at least half of parishes that switch at least once, which generally corresponds to two leads and three lags.

Main Results

Table 2 presents the main results on how a new horse-post relay impacts rebellion. We report average total effects of event-study estimates across various specifications, which represent the sum of accumulated period-specific treatments (de Chaisemartin and D'Haultfœuille, 2024, pp. 24–5).

Column (1) presents a model with no controls and no selection on the number of periods used in the estimation. The establishment of a horse-post relay in a parish is associated with more rebellions over time. The average total effect implies an increase in the number of rebellions of 0.054, which is about twice the average incidence of rebellion in a given parish-decade, as well as a quarter of the within standard deviation of rebellion. Column (2) reduces the number of periods used in the estimation to two leads and three lags. The coefficient decreases but remains of sizeable magnitude at 0.030 and significant at the one-percent level, roughly equal to the average incidence of rebellion and one-tenth of a within standard deviation. Columns (3)–(5) further include administrative division-by-decade fixed

Table 2. Average Total Effect of New Horse-Post Relays on Rebellions

Outcome:	Number of rebellions						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Horse-post relay	0.054***	0.030***	0.032**	0.042***	0.030***	0.029***	0.031***
	[0.011]	[0.010]	[0.013]	[0.009]	[0.004]	[0.010]	[0.004]
Wheat prices	No	No	No	No	No	Yes	Yes
7 decade × 32 généralité FE	No	No	Yes	No	No	No	No
7 decade × 658 subdélégation FE	No	No	No	Yes	No	No	No
7 decade × 4,578 canton FE	No	No	No	No	Yes	No	Yes
Observations	211,722	211,003	196,764	73,872	15,208	210,436	15,143
Switchers (overall)	3,174	2,455	2,455	2,245	1,840	2,455	1,840
Switchers (at least once)	1,065	1,065	1,065	986	820	1,065	820
Outcome mean	0.023	0.023	0.023	0.023	0.023	0.023	0.023
Outcome within s.d.	0.230	0.230	0.230	0.230	0.230	0.230	0.230
Periods $(-t;+T)$	$(-3;+6)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$

Notes: This table reports the average total effect of non-normalized event-study effects δ_ℓ estimated through Equation 1. All regressions include parish and decade fixed effects. *Switchers (overall)* represent the total number of parish-decade observations that switched treatment over the period, while *Switchers (at least once)* represent the number of parishes that switched at least once. *Outcome within s.d.* represent the standard deviation once decade and parish fixed effects are accounted for. *Periods $(-t;+T)$* represent the number of event-study effects and placebos estimated. Standard errors are clustered at the parish level and reported in brackets.
*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

effects to compare parishes over time within the same administrative division. The main results remain robust and very close to the baseline coefficient in Column (2), suggesting little heterogeneity in treatment effects across territories. Column (6) introduces wheat prices as a time-varying control. The baseline estimates are unchanged, which suggests that the introduction of horse-post relays was unrelated to changing local economic conditions that may have spurred rebellions. Column (7) includes both canton-by-decade fixed effects and wheat prices. The resulting coefficient is 0.031 and significant at the one-percent level, again essentially identical to the baseline in Column (2).

Figure 5 presents an event-study plot that encapsulates the results in Columns (1) and (2). This figure serves three purposes: first, to inspect the parallel-trends assumptions, second, to assess the dynamic nature of the treatment effect, and third, to show event-study effects without imposing restrictions on the number of periods used in the estimation. Estimates of event-study placebo leads exhibit no discernible differential trends between treated and untreated parishes, supporting the credibility of the parallel-trends assumption. In addition, we find substantial dynamic treatment effects. Rebellions increase within two decades of the establishment of a horse-post relay and subsequently grow further. Finally, the figure indicates that the third placebo lead and the fifth and sixth period estimates (and the fourth to a lesser degree) rely on a relatively small number of switchers, reinforcing the choice to emphasize estimates using two leads and three lags. An event-study plot relative to the

specification in Column (7) of Table 2, reported in Appendix Figure A10, does not change these conclusions.
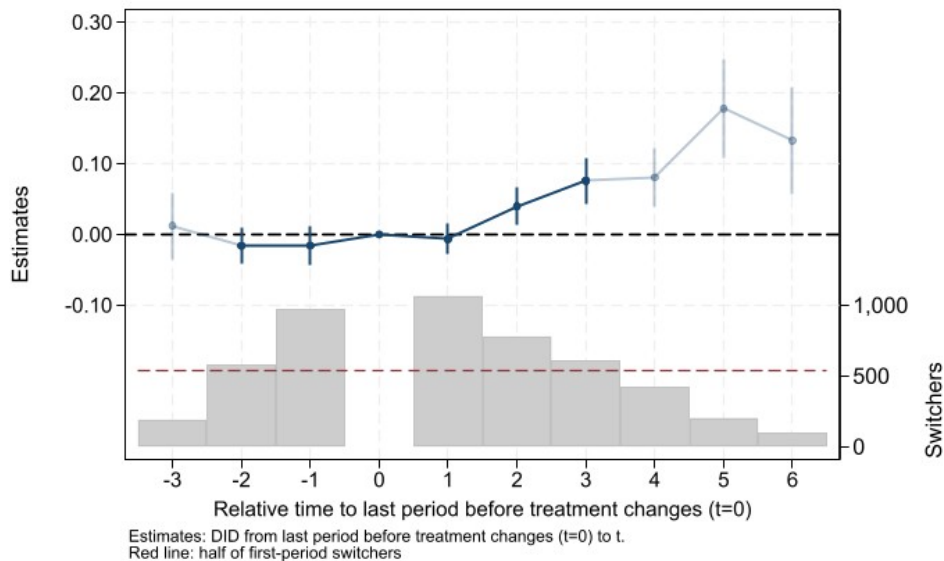

Figure 5. Event-Study Effects of New Horse-Post Relays on Rebellions

Notes. The top half of this figure reports event-study effects δ_ℓ estimated through Equation 1 along with 95 percent confidence intervals. The specifications correspond to Columns (1) and (2) in Table 2. Dark blue estimates correspond to restricting the estimation to two leads and three lags, while light blue estimates use the full three leads and six lags in the estimation. The bottom half of this figure reports the number of switchers used for identification of each event-study effect. The red dashed line denotes half of first-period switchers.

Robustness

Table 3 examines the robustness of the main results. These tests all build from the full specification in Column (7) of Table 2, which includes decade-by-canton fixed effects. Column (1) begins by showing that the main results are robust to using the full set of periods available for estimation. Then, to assess the credibility of the "initial conditions" assumption (see Footnote 14), Column (2) excludes the decade 1720 from the sample. The resulting estimate of 0.036 is close to the baseline and significant at the one-percent level, suggesting that this assumption is reasonable.[15]

Next, we estimate Equation 1 holding constant the sample of switchers used for identification, to assess whether changes in the underlying composition of the effective sample drive our results. The estimate in Column (3) of 0.037 suggests that they do not. Column (4) then

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[15]We further report estimates when running Equation 1 on shorter panels in Appendix Table A2. The estimates remain stable, suggesting limited decade-specific heterogeneity.

restricts the estimation to parishes that switch into treatment (i.e., parishes that receive a new horse-post relay), as opposed to using both switchers in and switchers out, (i.e., parishes that also lose a relay). The estimate declines slightly to 0.024 but is still significant at the one-percent level and in line with the baseline estimate.

In Column (5), we estimate Equation 1 with 1793 population weights to gauge the heterogeneity of treatment effects across parish sizes. We find an effect of 0.074, suggesting that larger parishes may be more responsive to receiving a new relay.[16] In the same vein, in Column (6) we include a set of rural status-by-decade fixed effects, with rural status coded as an indicator variable that equals one if the parish had less than two thousand inhabitants in 1793. We find an estimate of 0.024, again close to the baseline. In Column (7), we show that the effect we identify is not driven by small rebellions. This specification uses as an outcome the number of moderate to strong rebellions. Moderate rebellions are defined as rebellions that gathered at least ten individuals and strong rebellions are those that gathered at least fifty people. Again, results are in line with the baseline.[17]

Columns (8) and (9) explore the non-linear expansion dynamic of the horse-post network by contrasting the introduction of entirely new horse-post relays in an area with those that are the result of a local reconfiguration of the horse-post network.[18] We find that new relays are driving the results while those resulting from local reconfigurations do not affect rebellion—most likely because they do not have as strong an impact on reconfiguring state presence locally. Finally, Column (10) shows that results are consistent when the outcome is an indicator variable that equals one if there was at least one rebellion in a parish and decade.[19]

Robustness to Potential Reporting Biases in Rebellion

In addition to the robustness tests in Table 3, we also investigate whether archival gaps or recording biases in the rebellions data could drive our findings. For instance, information for some départements was derived solely from national archives, which are less comprehensive than départemental archives. That could lead to biases in the representativeness of rebellious events in the survey across départements. Our empirical strategy mitigates this potential source of bias by exploiting variation in rebellious activity within the reach of départemental archives through the use of canton-by-decade fixed effects.

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[16]We investigate the nature of this heterogeneity further in the Appendix, showing that differences in population, administrative status, and taxation levels do not account for our results.

[17]We report the average total treatment effects across all types of rebellions in Appendix Table A3.

[18]A typical example of such local reconfiguration is provided in Panel (a) of Appendix Figure A7. We define entirely new relays as those that are at least fifteen kilometers away from a retired relay in the same decade.

[19]We also show in Appendix Table A4 that the treatment effect is generally homogeneous across regions, where we divide Ancien Régime France into eight regions.

Table 3. Robustness Tests of Main Results

Outcome:	Number of rebellions									1[rebellions]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Horse-post relay	0.045*** [0.004]	0.036*** [0.006]	0.037*** [0.004]	0.024*** [0.004]	0.074*** [0.008]	0.024*** [0.003]	0.017*** [0.004]	0.038*** [0.005]	-0.004 [0.007]	0.022*** [0.003]
Observations	18,846	13,913	10,864	14,951	15,143	11,366	15,143	11,048	5,319	15,143
Switchers (overall)	2,339	1,707	1,320	1,748	1,840	1,544	1,840	1,334	562	1,840
Switchers (at least once)	820	778	440	779	820	689	820	612	233	820
Specification	All periods	No 1720	Same switchers	Switchers in	Pop. weights	Rural-decade FE	Moderate/ strong	New relays	Reconf. relays	Indicator
Outcome mean	0.023	0.025	0.023	0.023	0.242	0.023	0.015	0.023	0.023	0.016
Outcome within s.d.	0.230	0.237	0.230	0.230	0.731	0.230	0.189	0.230	0.230	0.114
Periods $(-t;+T)$	$(-3;+6)$	$(-1;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$

Notes: This table reports the average total effect of non-normalized event-study effects δ_ℓ estimated through Equation 1. All regressions include parish and decade fixed effects as well as wheat prices and decade-by-canton fixed effects. Column (2) removes parish-decades of the 1720s. Column (6) includes an additional set of decade-by-rural status fixed effects. Column (8) restricts horse-post relays to those that are at least 15 kilometers from a retired relay in the same decade, and Column (9), to those that are within 15 kilometers, where *Reconf.* stands for reconfigured relays. The outcome is the number of rebellions in Columns (1)–(9), and an indicator for the occurrence of at least one rebellion in Column (10). *Switchers (overall)* represent the total number of parish-decade observations that switched treatment over the period, while *Switchers (at least once)* represent the number of parishes that switched at least once. *Outcome within s.d.* represent the standard deviation once decade and parish fixed effects are accounted for. *Periods* $(-t;+T)$ represent the number of event-study effects and placebos estimated. Standard errors are clustered at the parish level and reported in brackets.
*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

Nevertheless, other selection biases may affect our results. For instance, the introduction of a horse-post may have increased the ability of the state to register rebellions through it because of the surveillance feature of the institution. However, Ancien Régime postal institutions were not principally tasked with registering unrest and do not form part of Nicolas's (2002) sources, as most of their archives were damaged in a flood in 1910 and partly lost during successive relocations and WWII (Krakovitch et al., 2000). Furthermore, spatial patterns presented below suggest no over-recording in the areas surrounding horse-post relays beyond the host parish itself. Alternatively, the introduction of a horse-post may have increased the recording of rebellions by other local actors. We assess this possibility by reproducing our analysis when keeping only rebellions recorded by state-level actors and stored in national archives, as opposed to local recording stored in départemental or local archives.[20] The results are robust, and are reported in Appendix Table A6. We further successively exclude rebellions that were recorded by the most frequent recording actors: the central government, the central financial administration, the maréchaussée brigades (the security forces that policed the countryside), local courts and justices, and provincial administrations. Results are again in line with the baseline, suggesting little selection bias arising from archival sources of Nicolas's (2002) survey.

Mechanism of Increasing Visibility and Presence of the State

What explains why parishes that receive new relays experience a subsequent uptick in rebellion? Several pieces of information suggest that the heightened visibility and presence of state agents introduced by the expanding horse-post network is a driving mechanism.[21]

Table 4 probes this mechanism in several ways. The first column narrows the dependent variable to rebellions against the military, police, and the courts. These agents are some of the most visible manifestations of state authority with the ability to maintain and enforce order, including through the use of punitive sanctions and force. Our data on rebellions capture a range of actions against these agents, such as revolts during prisoner transfers, in reaction to compulsory efforts at conscription, in response to court decisions, and against standing military and police forces.[22] In one example in 1781, a decade after the establishment of a new horse-post relay and amid growing state presence in a formerly isolated part of southwest France, the monarchy sought to conscript men in the town of Mirande in the département of

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[20]We report the distribution of rebellions in our sample across the type of sources used by Nicolas's (2002) survey in Appendix Table A5.

[21]Additional tests indicate that peasants and skilled workers – popular actors critically impacted by state expansion – played a central role in rebellions after the introduction of new postal relays.

[22]We do not find evidence of rebellions against postmasters themselves, casting some doubt on a pure opportunity account.

Gers. As the subdélégué (the monarch's local representative), military representatives, and notables gathered, peasants and farm workers armed with sticks and knives emerged from the forest yelling at the authorities, "They should all be killed!" Several arrests were made before a local notable defused the confrontation.[23]

Column (1) indicates a robust link between the establishment of new relays and rebellions against state authorities. The coefficient declines in magnitude, but remains considerable in size, particularly since rebellions against state authorities only comprised 18.1 percent of all rebellions. If the introduction of new horse-post relays raised the visibility of the state and grievances against it, then it should have channeled attacks not only against state authorities but also against physical symbols of that authority. Column (2), which examines rebellions involving attacks on public buildings belonging to authorities, shows that this indeed occurred.

Table 4. Mechanism Tests

Outcome:	Number of rebellions		
	(1)	(2)	(3)
Horse-post relay	0.007***	0.008***	0.006***
	[0.001]	[0.001]	[0.002]
Type of rebellion	State authorities	Targeting public buildings	Taxation
Observations	15,143	15,143	15,143
Switchers (overall)	1,840	1,840	1,840
Switchers (at least once)	820	820	820
Outcome mean	0.004	0.003	0.008
Outcome within s.d.	0.055	0.112	0.120
Periods $(-t; +T)$	$(-2; +3)$	$(-2; +3)$	$(-2; +3)$

Notes: This table reports the average total effect of non-normalized event-study effects δ_ℓ estimated through Equation 1. All regressions include parish and decade fixed effects as well as wheat prices and decade-by-canton fixed effects. The outcome is rebellions against state authorities in Column (1), against public buildings belonging to local authorities in Column (2), and against taxation in Column (3). *Switchers (overall)* represent the total number of parish-decade observations that switched treatment over the period, while *Switchers (at least once)* represent the number of parishes that switched at least once. *Outcome within s.d.* represent the standard deviation once decade and parish fixed effects are accounted for. *Periods $(-t; +T)$* represent the number of event-study effects and placebos estimated. Standard errors are clustered at the parish level and reported in brackets.
*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

Column (3) turns to rebellions against taxation. As the French state expanded, obliga-

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[23]For more details on this event and other illustrative examples of rebellions, see Appendix Table A7.

tions to the local nobility declined, but there were new and increasing taxes to the French state (Touzery, 2024). These were an object of popular anger. For instance, in an analysis of Revolution-era *cahiers de doléance*, Shapiro and Markoff (1998) find evidence that peasants harbored grievances over tax burdens driven by concerns of utility and fairness. While new horse-post relays did not introduce changes to local taxation, the greater presence of state agents could have crystallized ire against growing state tax obligations. Column (3) shows that this indeed translated into greater local rebellion.[24]

Beyond the tests of the visibility mechanism reported in Table 4, we also examine whether the establishment of horse-post relays impacted rebellious activity in nearby parishes. If relays raised state visibility beyond the parish where they were placed, they could have "gathered" rebellion from nearby as people coordinated locally to express grievances at the locales of this new state authority. To test this, we estimate three versions of Equation 1 where the treatment is defined as an indicator variable that equals one for the presence of a relay in neighboring parishes up to 5 kilometers away from the parish of a newly established post, 5–10 kilometers away, and 10–15 kilometers away.[25] Results in Figure 6 imply that the number of rebellions *decreased* by 0.008 up to 5 kilometers away from a new horse-post relay, and by 0.005 in parishes 5–10 kilometers away. We find no effect 10–15 kilometers away.

We interpret this as suggestive evidence that a portion of the main effect we identify may be the result of a local reconfiguration of rebellion from nearby parishes toward the parish in which a new horse-post relay was established. Given the small size of parishes and their proximity, it would be easy for people to coordinate their resistance within close locales and target it at state authority. It is worth noting that even accounting for this "gathering effect" of rebellion, the overall net effect of a new relay on rebellious activity remains positive.

Alternative Explanations

We explore four main alternative explanations that could drive a link between new horse-post relays and rebellions separate from the channel of increased visibility of state agents: the disruption of local social hierarchy, an increased ability of the populace to act collectively through an expanding information network that grew with the simultaneous development of the letter-post system, changes in underlying transit infrastructure through the road network, and shifts in the presence of the main public security police force, the maréchaussée

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[24]Consistent with this, we do not find higher rates of rebellion following new relays in parishes subject to higher salt taxes (see Appendix Table A9).

[25]Recall that we are comparing parishes over time within cantons, and the average radius of a canton is 6 kilometers.
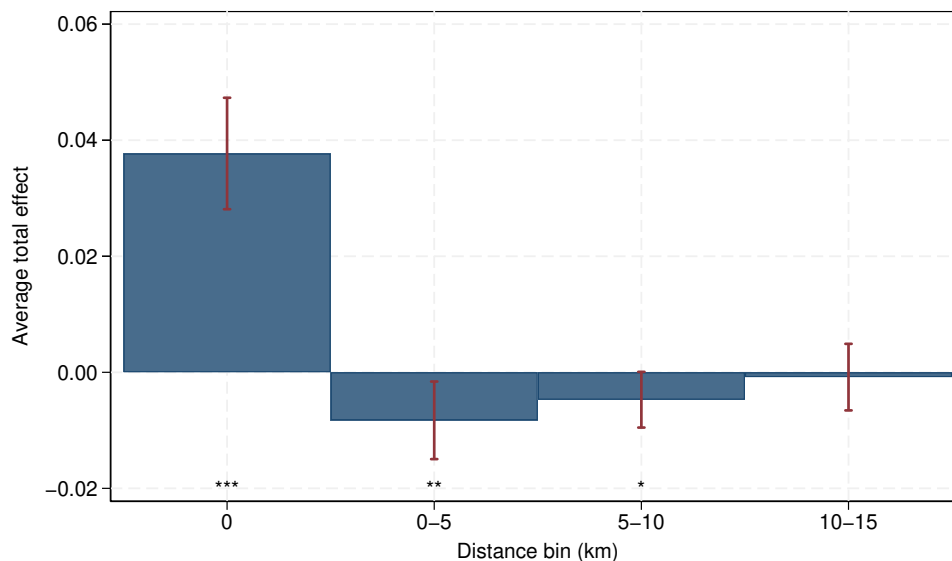
Figure 6. Average Total Effect of New Horse-Post Relays on Rebellions across Various Distances to Horse-Post Relays

Notes. This figure reports the average total effect of a new horse-post relay on rebellion when various treatment variables are input into Equation 1, along with 95-percent confidence intervals: a horse-post in a given parish and decade, up to 5 kilometers away from a new horse-post (excluding parishes with a relay), 5–10 kilometers away, and 10–15 kilometers away. All regressions include parish and decade fixed effects as well as wheat prices and decade-by-canton fixed effects. Standard errors are clustered at the parish level. *** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

brigades.[26]

Disruption of Local Social Hierarchy

Research in other contexts suggests that the weakening of traditional social hierarchies and networks can fray subsistence security and enable popular grievances to boil over. The expansion of state capacity can weaken the authority of traditional power brokers without entirely covering their functions through state-provided services. Meanwhile, those power brokers may continue to attempt to extract economic and social rents.

Several pieces of evidence cast doubt on this alternative. The introduction of new horse-post relays was more often done by forging alliances with a few local elites rather than weakening them (Jamaux-Gohier, 2001; Marchand, 2006). Furthermore, we find no impact of new relays on rebellions against the broader set of local elites: seigneurial authorities and the nobility (estimate: −0.001; *p*-value: 0.382). Likewise, we find no impact on rebellions

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[26]We also examined another alternative: potential jealousies between postmasters and nobles or fear by nobles that postmasters could threaten their power. But rebellions by nobles are no greater where there are new horse posts, nor is there more intervention in disturbances by nobles.

against the Church and the clergy (estimate: 0.0003; *p*-value: 0.638).

Information and Collective Action Through the Letter-Post System

Another potential alternative explanation is the role of the simultaneous development of the letter-post system, which may have increased rebellion by lowering the barriers to collective action among the populace through the spread of information. Similar dynamics around the expansion of information networks have been highlighted in the cases of late nineteenth- and early twentieth-century Sweden (Melander, 2020) and the United States (García-Jimeno, Iglesias and Yildirim, 2022).[27] The letter post operated as a private service for the collection, forwarding, and distribution of letters based on an infrastructure of post offices (Marchand, 2006, pp. 95–180). If the establishment of letter-post offices was correlated with the establishment of horse-post relays, and if the presence of these offices facilitated collective action, this could explain our findings. To carefully examine this alternative possibility, we collected information on the location of letter-post offices for the same years as our data on the horse-post network.[28]

Critically, the spatial configuration of letter-post offices followed a different logic than that of horse-post relays, as their establishment followed economic rather than strategic considerations (Cauvin, Lepetit and Reymond, 1987; Verdier and Chalonge, 2018). Letter-post offices were as numerous as horse-post relays and experienced roughly similar growth throughout the eighteenth century (Appendix Figure A11). As can be seen in Appendix Figure A12, by the early eighteenth century, these offices covered most of the territory. However, because they were not conceived as a network, their development was not constrained by the need to establish an office at regular intervals. As a result, letter-post offices were located in the most populous towns, in sharp contrast to horse-post relays (Appendix Figure A13). Their buildings were also much smaller, since they managed only the distribution of letters and did not provide a resting place or fresh horses for passing messengers. In addition, the letter-post administration was organized differently from that of the horse-post. From the late seventeenth century onward, it functioned through a farming system (*faire-valoir indirect*) whereby tenderers farmed out parts of their contract. As a result, almost all letter-post offices were run by a single individual. To transport the mail, the letter post employed

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[27]Although the horse-post network began with exclusive use by the state administration for official correspondence, by the eighteenth century, it also accepted private correspondence and the transportation of individual passengers. However, the rates for private use of this network were prohibitive in comparison with the letter-post and private messenger companies, so that it was essentially limited to wealthy individuals (Jamaux-Gohier, 2001, pp. 35–80).

[28]We rely on the *Ordre général des courriers* available in the annual editions of the *Almanach royal*, the contents of which we cross-validated with the *Cartes des bureaux de postes* of 1741 and with the 1754 and 1782 editions of the *Dictionnaires des postes.*

private couriers (*entrepreneurs de dépêches*) who rode their own horses, and mail coaches (*malles-poste*), which consisted in a two-wheeled cart driven by employees of the letter post, who did not wear a distinctive uniform until 1822.

To empirically assess the potential interfering role of the development of letter-post offices, we turn to de Chaisemartin and D'Haultfœuille's (2023) estimator, which accommodates staggered designs with binary and non-absorbing *multiple* treatments that may have heterogeneous and dynamic effects. Specifically, we expand Equation 1 by further including a set of event-study coefficients on an indicator variable that equals one if a letter-post office was present in a given parish and decade. The results reported in Panel (a) of Appendix Figure A14 are similar to baseline estimates. The average total effect of the horse post on rebellion, accounting for the concurrent development of the letter post, is 0.028 (*p*-value: 0.023), suggesting that the development of the letter post cannot explain our results.[29]

Transit Infrastructure and the Roads Network

An additional alternative rests with the underlying road system on which the horse-post relay network relied, although it was managed by the separate Bridges and Roads administration. If improvements to the road network ran in tandem with the establishment of new horse-post relays, it may be that the underlying transit infrastructure is driving the results, whether by advancing economic change, disrupting seigneurial or religious authority, or facilitating popular coordination. In the early eighteenth century, French roads were in a disastrous state (Arbellot, 1973, p. 766). This issue had been lamented since the Colbert administration in the late seventeenth century as an obstacle to the expansion of internal trade (Blond, 2013, p. 65). However, it was not until the 1730s, when the state of the roads had become critical, that the Controller General of Finance launched a major program of road repair and construction.[30] Under the leadership of Daniel-Charles Trudaine, this plan would result in the opening of nearly 26 thousand kilometers of roads by the 1780s, although only two-thirds of them were still in passable condition at the time (Arbellot, 1973, pp. 772–3).

The order of priority for the opening of new roads, however, was not directly linked to the presence of a horse-post relay: new roads followed a strict hierarchy and those linking relays

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[29]We also show in Panel (b) of Appendix Figure A14 event-study estimates of the treatment effect of letter-post offices on rebellion. We find a positive effect, but the pre-trends are such that one cannot have a causal interpretation of these results: letter-post offices developed in locations that were already experiencing upward trends in rebellion, consistent with the economically-oriented development logic of the letter post.

[30]The practical implementation of this program was ensured by the introduction of the *corvée des chemins*, a system of forced labor by which able-bodied men living within twenty kilometers of a road became liable for up to one month's work per year on road repair and construction (Conchon, 2016). Though the corvée was highly unpopular, only nine rebellions were directed against this labor institution in our data.

passed after those linking Paris to ports, provincial capitals, and the frontiers of the kingdom. While the maintenance of existing roads may have favored those where postal relays were located (Arbellot, 1973, p. 766), it was exceedingly rare that the creation of a postal relay was accompanied with a demand of road opening or maintenance to the Bridges and Roads administration, or that maintenance demands by postmasters would be met (Verdier, 2009, p. 13). Overall, existing accounts indicate that the horse post was not tied to the roads system and followed its own logic, and the actual routes taken by postillons between relays varied according to the season and conditions (Jamaux-Gohier, 2001, pp. 125–45).

A comprehensive empirical test of this alternative is nonetheless impossible because of the severe limitations of quantitative information on the opening and maintenance of roads at the local level for the eighteenth century.[31] Nevertheless, we show in Columns (4) and (8) of Appendix Table A9 that there is no heterogeneity in the treatment effect of horse-post relays when comparing parishes located at the same distance of a paved road according to Cassini's maps published in 1756–90, where we divide parishes along quartiles of distance: less than 500 meters, 0.5–1 kilometer, 1–3, and over 3 kilometers. This suggests that it is unlikely that our results are driven by connectivity to the roads network.

Policing by the Maréchaussée Brigades

Another potential alternative mechanism – somewhat related to the development of the road network – is the role of maréchaussée brigades, the only state-sponsored security forces that policed the countryside. These men-at-arms were part of the security apparatus of the royal authority and ensured public safety along the roads of the kingdom (Fressin, 2022). After their consolidation in 1720 by the Secretary of State for War, brigades of four to five men were stationed in barracks located in the heart of towns and urban areas (Fressin and Georges, 2022). Their spatial distribution was similar to that of letter-post offices: they covered the entire territory (Appendix Figure A12) and were generally located in the most populous towns (Appendix Figure A13).[32] Their development, however, was not as dynamic: the number of brigades stagnated at five hundred units in the first half of the eighteenth century, before growing to about eight hundred units in the 1750s and 1760s and remaining stable until the Revolution (Appendix Figure A11). While this security force embodied the symbolic presence of the state, it never mustered more than three thousand

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[31] This is in part due to the Bridge and Roads administration's reliance on local topographic maps rather than statistical tables (Lepetit, 1984, pp. 17–44; Blond, 2013).

[32] We collect information on the spatial distribution of maréchaussée brigades from Fressin's (2021) *Atlas historique de la gendarmerie.*

men and generally operated near towns and major roads.[33] Moreover, rebellions against the maréchaussée were limited, as only 78 cases are recorded in our data.

Maréchaussée brigades could potentially account for our results in two ways. First, if brigades systematically accompanied the establishment of new horse-post relays, then the effects we identify could be driven by the presence of the maréchaussée rather than that of the horse post. Second, if the presence of brigades made rebellious events more likely to be registered by these state actors, then the effects we identify could be driven by selection bias in the archival sources we use to measure rebellious activity. We address these concerns in a number of ways. First, we show that while parishes that received a horse-post relay were more likely to later host a brigade, pre-treatment relative trends are such that they were also more likely to have received a brigade *prior* to the establishment of a relay (Appendix Figure A15). In other words, while the spatial development of the two institutions was correlated, there is no causal relationship between them. Second, we expand Equation 1 and control for the potential incidence of maréchaussée brigades using de Chaisemartin and D'Haultfœuille's (2023) estimator for multiple treatments. The results reported in Panel (a) of Appendix Figure A16 are similar to baseline estimates. The average total effect of the horse post on rebellion, accounting for the concurrent development of the maréchaussée, is 0.033 (*p*-value: 0.010), suggesting that the development of the maréchaussée cannot explain our results.[34] Third, we examined the effects of horse-post relays on rebellion strictly among parishes that never hosted either a letter-post office or a maréchaussée brigade. Results in Appendix Table A8 suggest that these "uncontaminated" parishes still exhibit a positive causal relationship between the establishment of horse-post relays and rebellion. Finally, we tested the robustness of the findings to dropping rebellions recorded in the archives of the maréchaussée. The results, reported in Appendix Table A6, are similar.

Conclusion

States the world over seek to extend their authority and build their strength. France was one of the first states to systematically embark on that project through a wide range of infrastructural, communication, and extractive initiatives. Its main European competitors quickly followed suit, and eventually state-building spread globally.

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[33]Urban security was the responsibility of municipal authorities. More generally, policing in Ancien Régime France was characterized by its fragmentation, with each jurisdiction having its own police corps.

[34]We also show in Panel (b) of Appendix Figure A16 event-study estimates of the treatment effect of maréchaussée brigades on rebellion. We find a positive effect, but the pre-trends are such that one cannot have a causal interpretation of the results: maréchaussée brigades developed in locations that were already experiencing upward trend in rebellion, suggesting that they did not generate selection bias in the archival sources we use to measure rebellious activity.

State-building initiatives, however, can become a lightning rod for popular resistance and discontent even if the ultimate goals are social order and control. We find that improvements in communications through the expansion of France's horse-post relay network sparked episodic rebellions across the national territory in the decades prior to the French Revolution. We attribute this relationship to the greater visibility and presence of the state and its agents in these locales.

The dynamics we identify also could have plausibly had important consequences for the French Revolution at the end of our period of study. Further analysis indicates that while horse posts did not spread information among citizens or lower their collective action costs, locales that received horse-post relays and an uptick in subsequent rebellion were more likely to later have organized political societies that formed during the Revolution and served to coordinate revolutionary action and take control of local affairs as the French state collapsed.[35] Prior grievances introduced by horse posts appear to have been reborn once a subsequent shock provided the opportunity for people to mobilize. This suggests that building state strength also has long-term consequences for social order that, like the short-term effects, are not always what state planners would predict or desire.

The findings underscore the importance of conceptually separating the process of state-building from state strength per se. There are many channels through which state-building can potentially impact order and disorder, from state visibility to information diffusion, ease of communication, and popular coordination. Scholars might fruitfully examine these channels in other canonical cases of early state-building in order to enhance our understanding of historical state-making and its consequences as well as to inform ongoing state-building efforts in today's world.

References

Arbellot, Guy. 1973. "La grande mutation des routes de France au XVIIIe siècle." *Annales. Economies, sociétés, civilisations*, 28: 765–91.

Aubert, Gauthier. 2015. *Révoltes et répressions dans la France Moderne.* Paris: Armand Collin.

Blattman, Christopher, and Edward Miguel. 2010. "Civil War." *Journal of Economic literature*, 48(1): 3–57.

Blond, Stéphane. 2013. "The Trudaine Atlas: Government Road Mapping in Eighteenth-Century France." *Imago Mundi*, 65: 64–79.

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[35]The relationship between horse posts and later political societies holds both in an OLS and in a 2SLS framework with posts as an instrument for rebellion in predicting political societies, along with controls and canton fixed effects. The link holds both for all and Jacobin political societies. See Appendix Table A10.

Borusyak, Kirill, Xavier Jaravel, and Jann Spiess. 2024. "Revisiting Event-Study Designs: Robust and Efficient Estimation." *The Review of Economic Studies*, rdae007.

Bouton, Cynthia A. 1993. *The Flour War.* University Park: Penn State Press.

Bretagnolle, Anne, and Alain Franc. 2017. "Emergence of an Integrated City-System in France (XVIIth–XIXth Centuries)." *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, 50(1): 49–65.

Bretagnolle, Anne, and Nicolas Verdier. 2005. "Images d'un réseau en évolution: les routes de poste dans la France préindustrielle (XVIIe siècle–début XIXe siècle)." *M@ppemonde*, 79(3): 1–8.

Bretagnolle, Anne, and Nicolas Verdier. 2006. "La mesure postale, reflet des évolutions dans le rapport au temps et à la distance au siècle des Lumières." *Cahiers de métrologie*, 22-3: 63–74.

Bulliet, Richard W. 1990. *The Camel and the Wheel.* New York: Columbia University Press.

Callaway, Brantly, and Pedro H.C. Sant'Anna. 2021. "Difference-in-Differences with Multiple Time Periods." *Journal of Econometrics*, 225(2): 200–30.

Cauvin, Colette, Bernard Lepetit, and Henry Reymond. 1987. "Cartes postales: un espace de relation dans la France pré-industrielle." *Histoire & mesure*, 2(3–4): 89–113.

Centeno, Miguel, Atul Kohli, Deborah Yashar, and Dinsha Mistree. 2017. *States in the Developing World.* Cambridge: Cambridge University Press.

Chambru, Cédric. 2019. "Do the Right Thing! Leaders, Weather Shocks and Social Conflicts in Pre-Industrial France." EHES Working Paper 161.

Conchon, Anne. 2016. *La corvée des grands chemins au XVIIIe siècle.* Rennes: Presses universitaires de Rennes.

de Chaisemartin, Clément, and Xavier D'Haultfœuille. 2023. "Two-Way Fixed Effects and Difference-in-Differences Estimators with Several Treatments." *Journal of Econometrics*, 236(2): 105480.

de Chaisemartin, Clément, and Xavier D'Haultfœuille. 2024. "Difference-in-Differences Estimators of Intertemporal Treatment Effects." *The Review of Economics and Statistics*, 1–45.

De Juan, Alexander. 2016. "Extraction and Violent Resistance in the Early Phases of State Building." *Comparative Political Studies*, 49(3): 291–323.

Dube, Oeindrila, and Juan F Vargas. 2013. "Commodity Price Shocks and Civil Conflict: Evidence from Colombia." *Review of Economic studies*, 80(4): 1384–421.

Fearon, James D., and David D. Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review*, 97(1): 75–90.

Fressin, Thomas. 2021. *Atlas historique de la gendarmerie.* Centre de recherche de l'École des officiers de la gendarmerie nationale. `https://atlas-gendarmerie.fr/`.

Fressin, Thomas. 2022. "La maréchaussée et les grands chemins, 1720–1791." *Inflexions*, 49(1): 31–9.

Fressin, Thomas, and Jonathan Georges. 2022. "Maillage territorial et état de la maréchaussée à la fin du XVIIIème siècle." *Les Notes du CREOGN*, 65: 1–4.

Furetière, Antoine. 1690. *Dictionnaire universel.* Rotterdamn: Der Ausgaben den Haag.

García-Jimeno, Camilo, Angel Iglesias, and Pinar Yildirim. 2022. "Information Networks and Collective Action: Evidence from the Women's Temperance Crusade." *American Economic Review*, 112(1): 41–80.

Garfias, Francisco, and Emily Sellars. 2022. "When State Building backfires: Elite Coordination and Popular Grievance in Rebellion." *American Journal of Political Science*, 66(4): 977–92.

Gazagnadou, Didier. 2013. *La poste à relais en Eurasie.* Paris: Éditions Kimé.

Geloso, Vincent, and Vadim Kufenko. 2019. "Can Markets Foster Rebellion? The Case of the 1837–38 Rrebellions in Lower Canada." *Journal of Economic Behavior & Organization*, 166: 263–87.

Gorry, Jean-Michel. 2008. "Des communes de la Révolution aux communes actuelles." In *Des paroisses de Touraine aux communes d'Indre-et-Loire*, edited by Elisabeth Zadora-Rio, 121–83. Tours: FERACF.

Gorry, Jean-Michel. 2014. "L'administration générale et fiscale d'Ancien Régime." In *Atlas archéologique de Touraine*, edited by Elisabeth Zadora-Rio, 27. Tours: FERACF.

Hanson, Jonathan, and Rachel Sigman. 2021. "Leviathan's Latent Dimensions: Measuring State Capacity for Comparative Political Research." *The Journal of Politics*, 83(4): 1495–510.

Huntington, Samuel. 1968. *Political Order in Changing Societies.* New Haven: Yale university press.

Jamaux-Gohier, Théotiste. 2001. *La poste aux chevaux en Bretagne (1738–1873).* Mayenne: Éditions régionales de l'Ouest.

Krakovitch, Odile, Marie-Thérèse Lalguë-Guilhemsans, Thierry Roquincourt, and Eugène Vaille. 2000. *Postes, F 90 19001–19104, Répertoire numérique détaillé.* Paris: Centre historique des archives nationales.

Lepetit, Bernard. 1984. *Chemins de terre et voies d'eau.* Paris: Éditions de l'EHESS.

Levi, Margaret. 1989. *Of Rule and Revenue.* Oakland: University of California Press.

Lindvall, Johannes, and Jan Teorell. 2016. "State Capacity as Power: A Conceptual Framework." STANCE Working Paper 2016: 1.

Mann, Michael. 1984. "The Autonomous Power of the State." *European Journal of Sociology*, 25(2): 185–213.

Marchand, Patrick. 2006. *Le maître de poste et le messager.* Paris: Belin.

Markoff, John. 1985. "The Social Geography of Rural Revolt at the Beginning of the French Revolution." *American Sociological Review*, 50(6): 761–81.

McClintock, Cynthia. 1984. "Why Peasants Rebel: The Case of Peru's Sendero Luminoso." *World Politics*, 37(1): 48–84.

Melander, Eric. 2020. "Transportation Technology, Individual Mobility and Social Mobilisation." CAGE Working Paper 471.

Minetti, Alberto. 2007. "Efficiency of Equine Express Postal System." *Nature*, 426: 785–6.

Müller-Crepon, Carl, Philipp Hunziker, and Lars-Erik Cederman. 2021. "Roads to rule, roads to rebel: Relational state capacity and conflict in Africa." *Journal of Conflict Resolution*, 65(2-3): 563–590.

Nicolas, Jean. 2002. *La rébellion française. Mouvements populaires et conscience sociale (1661–1789).* Paris: Seuil.

Nordman, Daniel, and Marie-Vic Ozouf-Marignier, ed. 1989. *Atlas de la Révolution française. Le territoire.* Paris: EHESS.

Ridolfi, Leonardo. 2019. "Six Centuries of Real Wages in France From Louis IX to Napoleon III: 1250–1860." *The Journal of Economic History*, 79(3): 589–627.

Rogowski, Jon, John Gerring, Matthew Maguire, and Lee Cojocaru. 2022. "Public Infrastructure and Economic Development: Evidence from Postal Systems." *American Journal of Political Science*, 66(4): 885–901.

Scott, James. 1976. *The Moral Economy of the Peasant.* New Haven: Yale University Press.

Shapiro, Gilbert, and Markoff. 1998. *Revolutionary Demands: A Content Analysis of the Cahiers de Doléances of 1789.* Stanford: Stanford University Press.

Skocpol, Theda. 1979. *States and Social Revolutions.* Cambridge: Cambridge University Press.

Slater, Dan. 2010. *Ordering Power.* Cambridge: Cambridge University Press.

Soifer, Hillel. 2008. "State Infrastructural Power: Approaches to Conceptualization and Measurement." *Studies in Comparative International Development*, 43: 231–51.

Soifer, Hillel. 2015. *State Building in Latin America.* Cambridge University Press.

Straus, Scott. 2006. *The Order of Genocide.* Ithaca: Cornell University Press.

Sun, Liyang, and Sarah Abraham. 2021. "Estimating Dynamic Treatment Effects in Event Studies with Heterogeneous Treatment Effects." *Journal of Econometrics*, 225(2): 175–99.

Tanguy, Jean-François, Jean Le Bihan, and Yann Lagadec, ed. 2009. *Le canton, un territoire du quotidien?* Rennes: Presses universitaires de Rennes.

Tilly, Charles. 1990. *Coercion, Capital, and European States, AD 990–1990.* Oxford: Basil Blackwell.

Touzery, Mireille. 2024. *Payer pour le roi. La fiscalité monarchique. France, 1302–1792.* Paris: Champ Vallon.

Verdier, Nicolas. 2009. "La labilité du réseau aux XVIIIe et XIXe siècles. Le cas de la Poste aux chevaux dans le quart nord-ouest de la France." *Les nouvelles de l'archéologie*, 115: 13–7.

Verdier, Nicolas, and Anne Bretagnolle. 2007. "L'extension du réseau des routes de poste en France, de 1708 à 1833." In *Postes d'Europe XVIIIe–XXe siècles*, edited by Muriel Le Roux, 155–93. Rennes: Presses universitaires de Rennes.

Verdier, Nicolas, and Ludovic Chalonge. 2018. "La question des échelles en géohistoire. Les bureaux de la poste aux lettres du XVIIIe siècle à nos jours." *Cybergeo: European Journal of Geography*, 851.

Weber, Max. 1968. *Economy and Society.* New York: Bedminster.

The Road to Rebellion: State-Building and Rural Uprisings in the Run-Up to the French Revolution

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Supplementary Online Appendix

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Supplementary Figures

(a) A Horse-Post Relay

(b) A Horse-Post Postillon

Figure A1. Depictions of the Horse-Post

Notes. This figure displays contemporary depictions of an eighteenth-century horse-post relay in Panel (a), and of a postillon galloping two horses back to a horse-post relay in Panel (b). Sources: in Panel (a), lithography by Victor-Jean Adam and Louis-Philippe-Alphonse Bichebois, based on a painting of Jean-Antoine Duclaux, *La malle au relai*, 1817, Musée de La Poste; in Panel (b), painting of the French School, *Postillon en livrée ramenant deux chevaux au galop*, mid-nineteenth century, Musée de La Poste.

1

ROUTE DE LYON A MARSEILLE

*Par Vienne, Valence, Pont St Esprit et Aix*

39 Postes

de LYON à St Fons......................	Poste Royale
de St Fons à St Saphorin d'Ozon	Poste
de St Saphorin à VIENNE	Poste et demie
de Vienne à Auberive..................	Poste et demie
d'Auberive au Peage de Roussillon ..	Poste
du Peage à St Rambert...............	Poste et demie
de St Rambert à St Vallier...........	Poste et demie
de St Vallier à Tein	Poste et demie
de Tein à Sillart. ⋆..................	Poste
de Sillart à Valence..................	Poste
de Valence à la Paillasse.............	Poste
de la Paillasse à Loriol	Poste et demie
de Loriol à Laine.....................	Poste et demie
de Laine à Montelimart...............	Poste et demie
de Montelimart à Donzere............	Poste et demie
de Donzere à Pierrelatte.............	Poste
de Pierrelatte à la Palu	Poste
de la Palu au Pont St Esprit.........	Poste
du Pont St Esprit à Bagnols	Poste
de Bagnols à la Begude St Laurent ⋆.	Poste et demie
de la Begude à Pujeau ⋆..............	Poste
de Pujeau à AVIGNON	Poste
d'Avignon à St Andiol.........	Deux Postes
de St Andiol à Orgon	Poste
d'Orgon au Pont-Royal	Deux Postes
de Pont-Royal à St Canat.............	Poste et demie
de St Canat à AIX.............	Deux Postes
d'Aix au Pin	Deux Postes
du Pin à MARSEILLE	Poste et demie

Figure A2. List of Horse-Post Relays between Lyon and Marseille in 1751

Notes. This figure provides an excerpt from the 1751 edition of the *Liste générale des postes de France* held by the Bibliothèque historique des postes et des télécommunications. It depicts the distribution of the 29 horse-post relays along the 39-post route from Lyon to Marseille (about 312 kilometers).
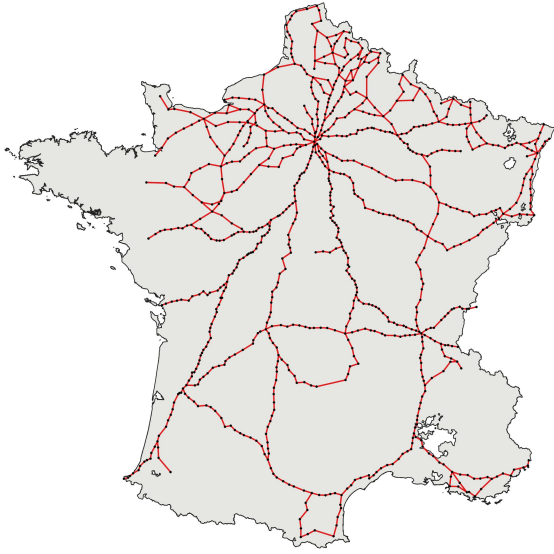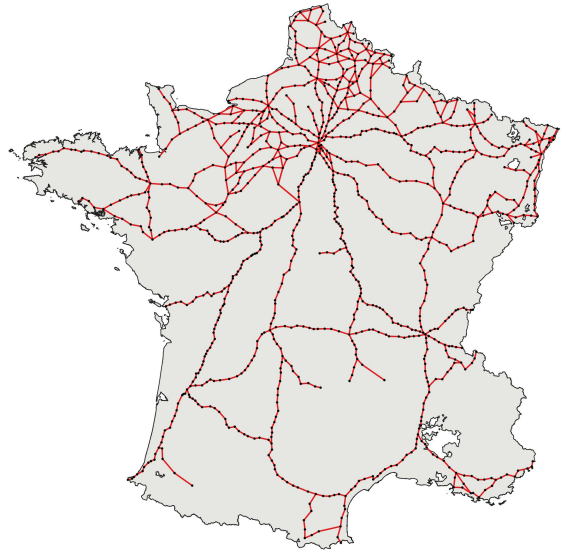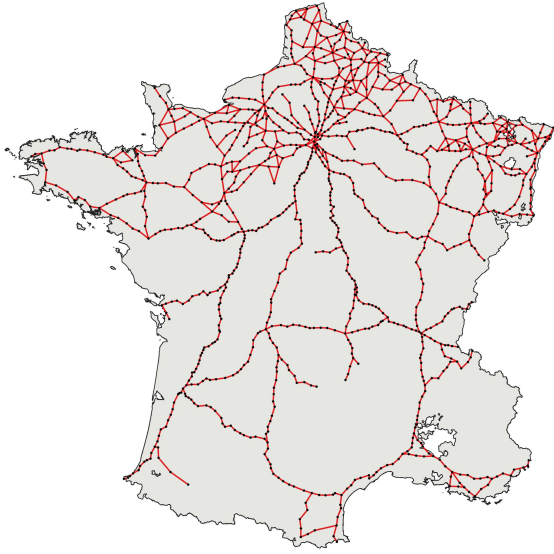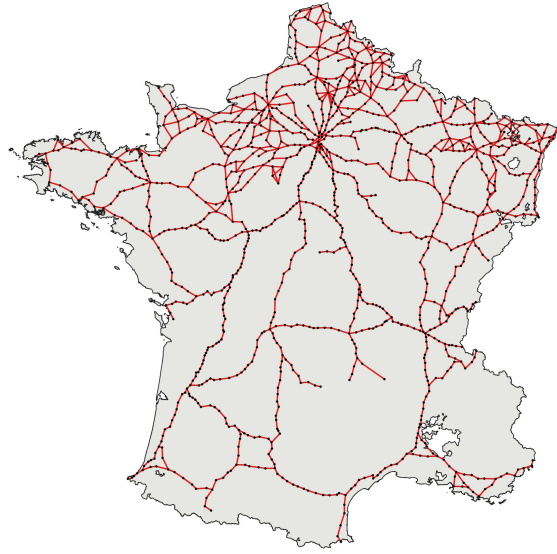
(a) 1721
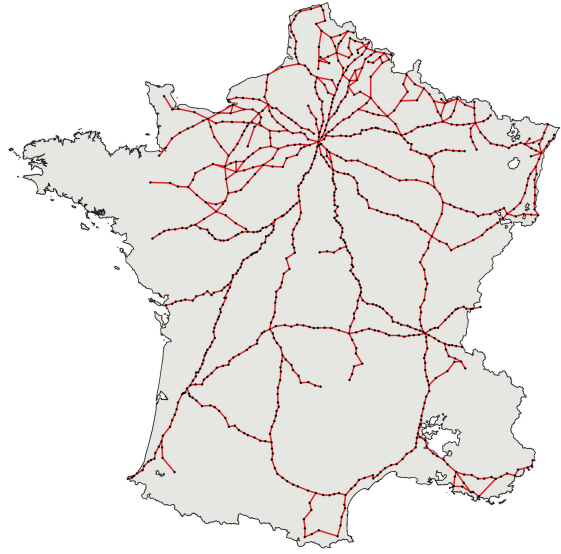
(b) 1731
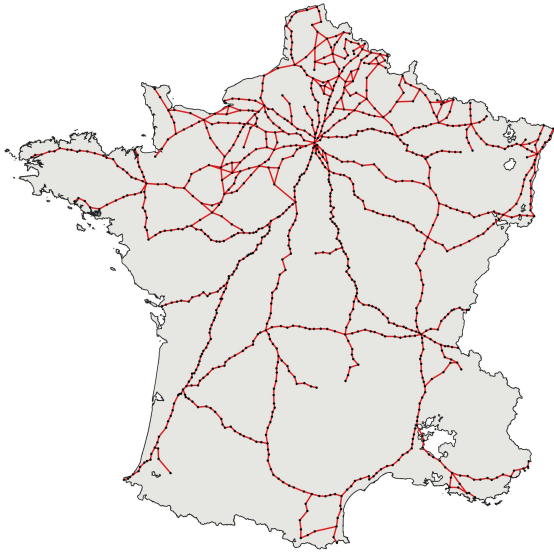
(c) 1741

(d) 1751

Figure A3. The Horse-Post Network (1721–51)

3

(a) 1762

(b) 1770
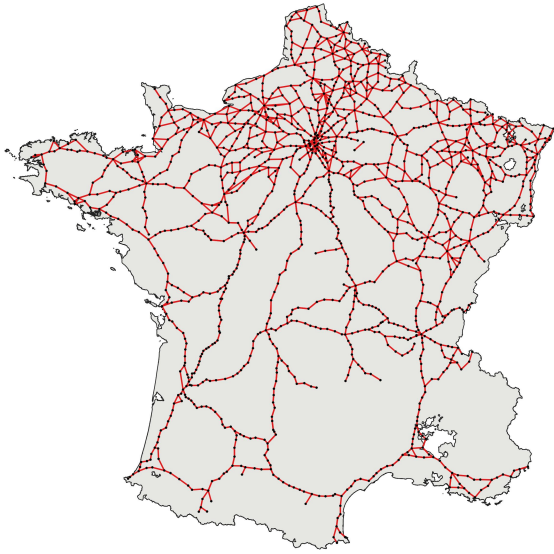
(c) 1780
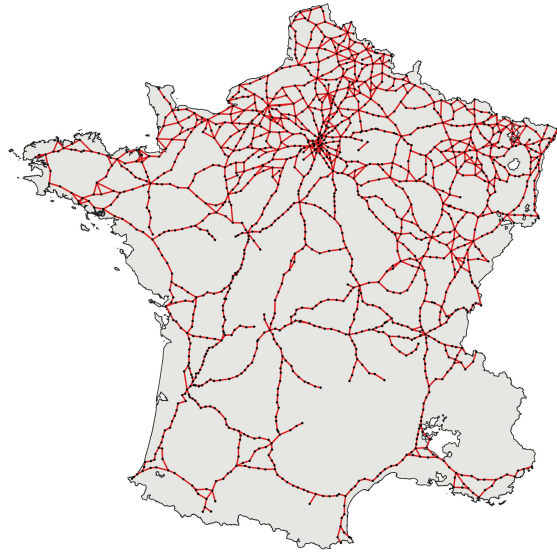
(d) 1790

Figure A4. The Horse-Post Network (1762–90)

4

Figure A5. Share of Parishes with a Nearby Horse-Post Relay (1721–90)

Notes. This figure shows the share parishes – among 35 thousand – with a nearby postal relay, i.e., a postal relay in their canton between 1721 and 1790.

Figure A6. Flow of Horse-Post Relays (1721–90)

Notes. This figure shows the flow of horse-post relays between 1721 and 1790. *Gains* stands for newly created relays in the preceding decade, while *Losses* stands for retired relays in the preceding decade.
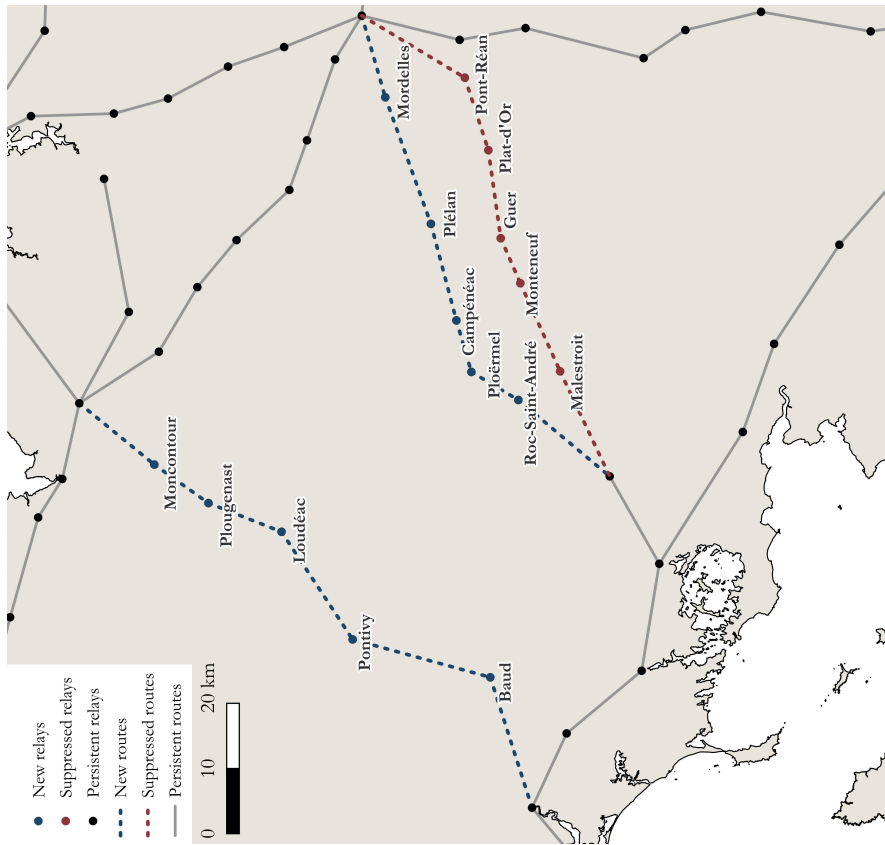
(a) New and Retired Horse-Post Relays and Routes (1760–70)
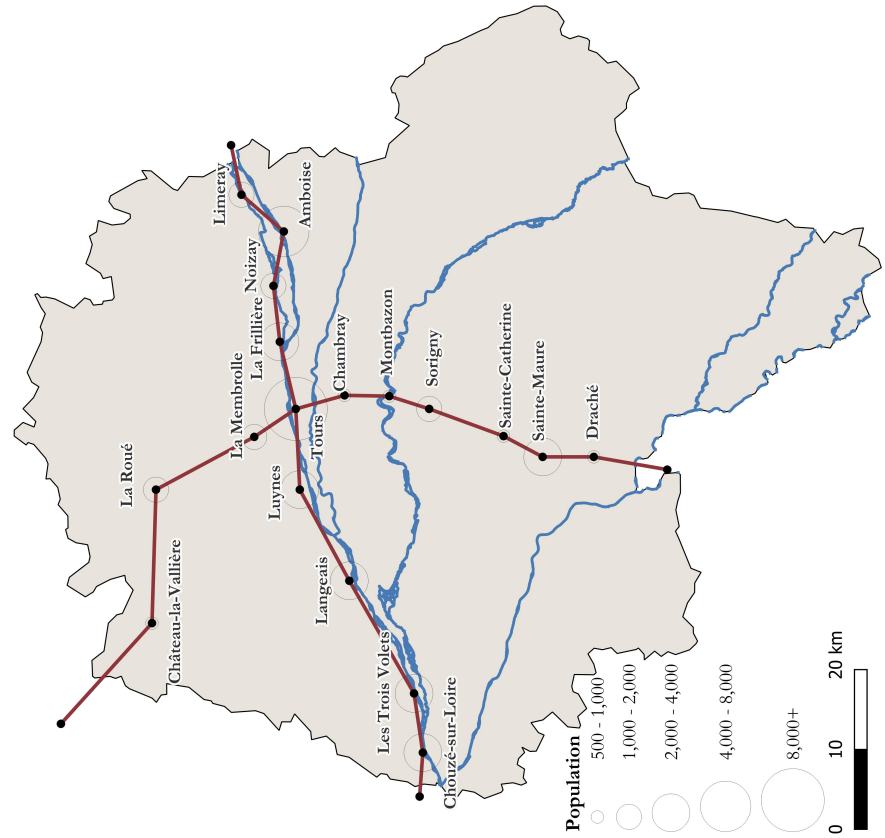
(b) Horse-Post Network in Touraine (1770)

Figure A7. Local Spatial Distribution of the Horse-Post Network in the 1760s and 1770s

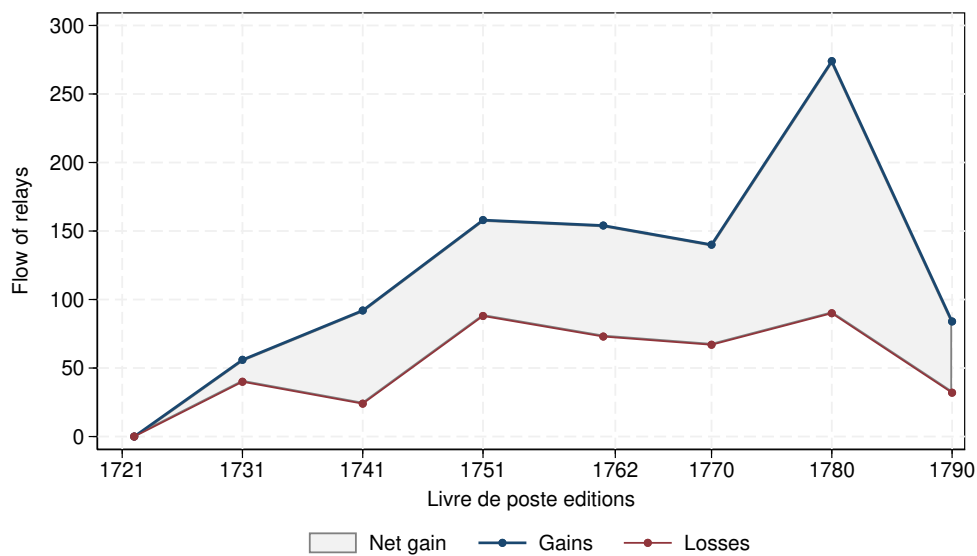*Notes.* This figure displays two instances of the local spatial distribution of the horse-post network in the 1760s and 1770s. Panel (a) focuses on the newly created and retired horse-post relays and routes in the region of Brittany between 1760 and 1770. *Persistent* relays and routes correspond to relays and routes that were present in both 1760 and 1770. Panel (b) focuses on the region of Touraine in 1770 – more precisely, in the post-Revolution département of Indre-et-Loire – along with its hydrographic network. In Panel (b), horse-post relays are displayed in black, horse-post roads, in red, and rivers, in blue. Population data are from the 1793 census.

6
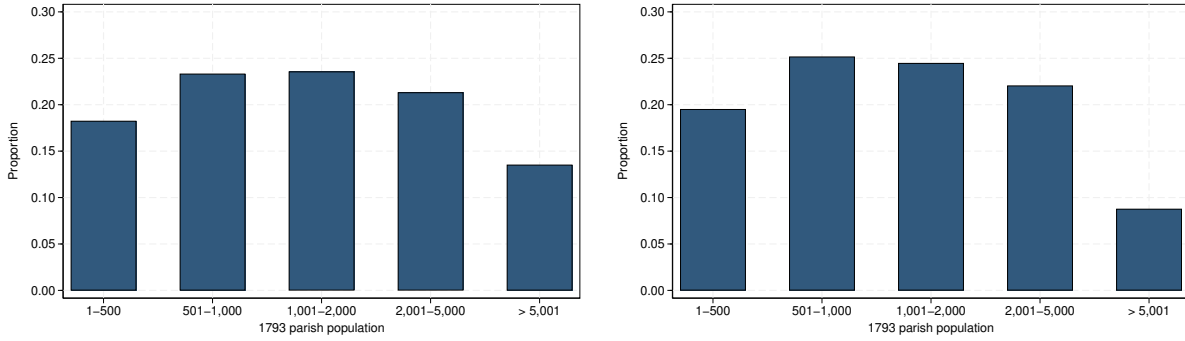
(a) All Horse-Post Relays

(b) New Horse-Post Relays

Figure A8. Population of Parishes with a Horse-Post Relay (1721–90)

Notes. This figure displays the distribution of the 1793 population among the parishes that had a horse-post relay during the eighteenth century. Panel (a) contains all 1,693 parishes that ever had a relay between 1721 and 1790. Panel (b) contains the 866 parishes that did not initially have a relay in 1721 but later had one between 1731 and 1790.
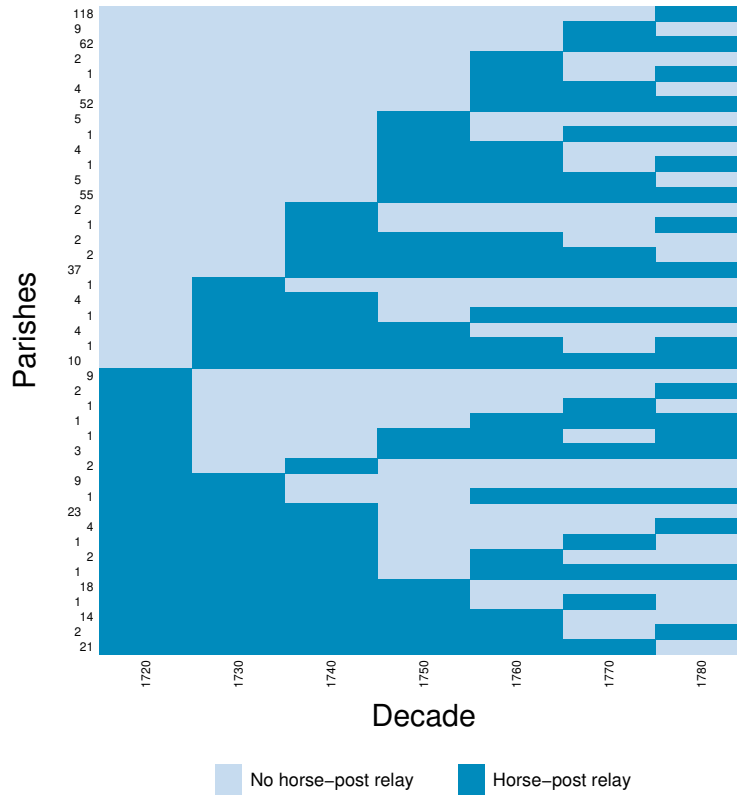
Figure A9. Collapsed 43 Treatment Histories among Parishes (1721–90)

Notes. This figure displays the 43 treatment histories among parishes that switched treatment at least once between 1721 and 1790. Numbers on the y-axis indicate the number of parishes with each treatment history. Figure produced with the `panelview` Stata command.

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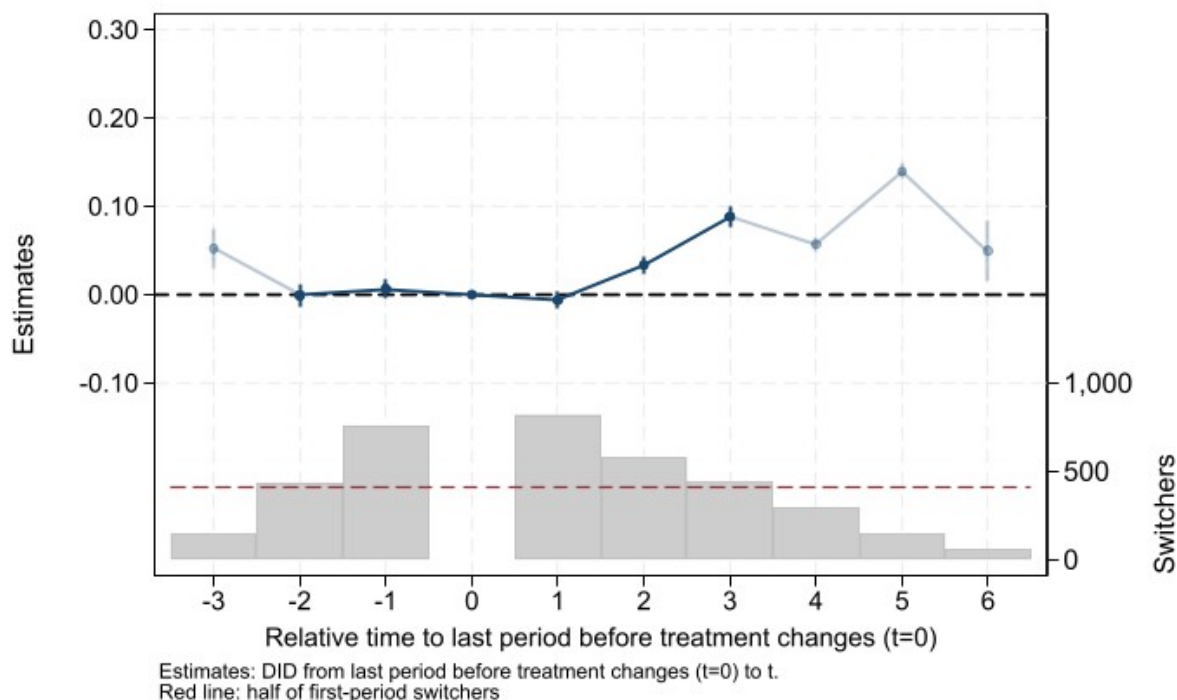
Figure A10. Event-Study Effects of New Horse-Post Relays on Rebellions

Notes. The top-half of this figure reports event-study effects δ_ℓ estimated through Equation 1 along with 95 percent confidence intervals. The unit of observation is a parish-decade from the 1720s to the 1780s. All regressions include parish and decade fixed effects as well as canton-by-decade fixed effects and parish-decade average wheat prices. This specification corresponds to Column (7) in Table 2. Estimates are calculated using the `did_multiplegt_dyn` Stata command. Dark blue estimates correspond to restricting the estimation to two leads and three lags, while light blue estimates do not impose this restriction and uses three leads and six lags in the estimation. The bottom-half of this figure reports the number of switchers used for identification of each event-study effect. The red dotted line denotes half of first-period switchers.

Figure A11. Horse-Post Relays, Letter-Post Offices, and Maréchaussée brigades (1720–90)

(a) 1720–2   (b) 1790
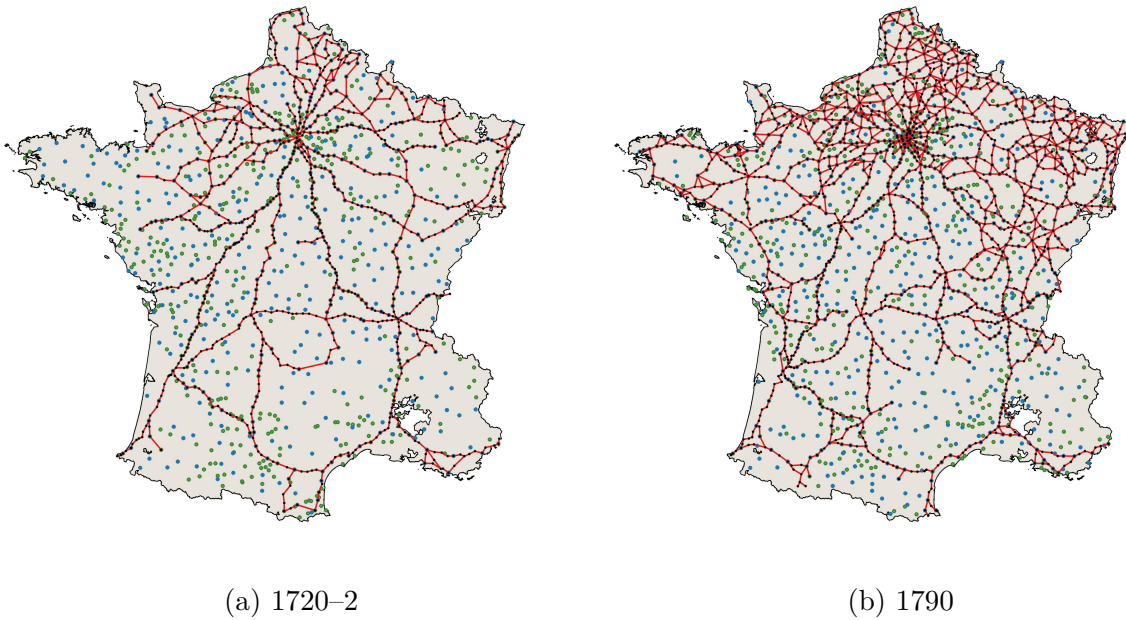
Figure A12. The Horse-Post Network, Letter-Post Offices, and Maréchaussée Brigades

Notes. This figure displays distribution of horse-post relays (black dots) based on the 1721 and 1790 editions of the *Liste générale des postes de France* together with the distribution of letter-post offices (green dots) based on the 1722 and 1790 editions of the *Almanach royal* and of maréchaussée brigades (blue dots) based on the Fressin's (2021) *Atlas historique de la gendarmerie.*
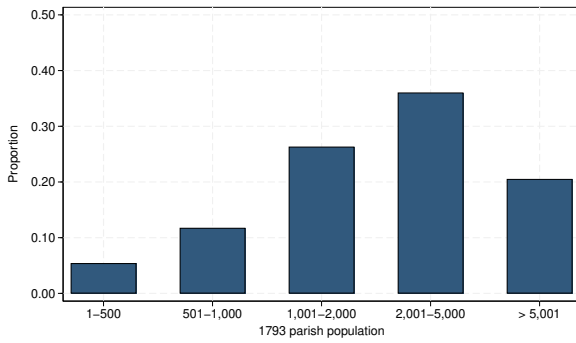
(a) All Letter-Post Offices
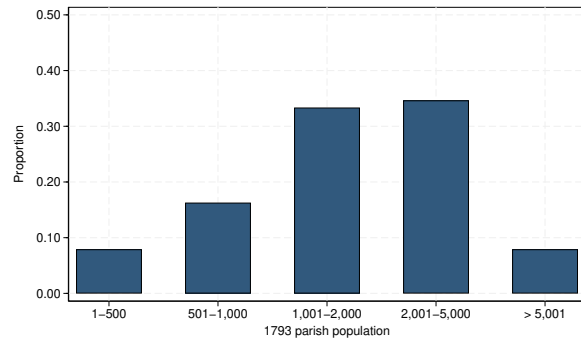
(b) New Letter-Post Offices
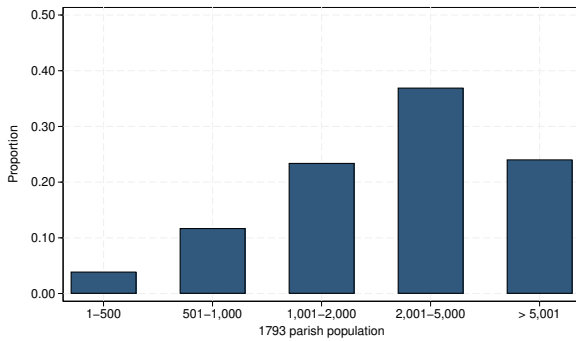
(c) All Maréchaussée Brigades
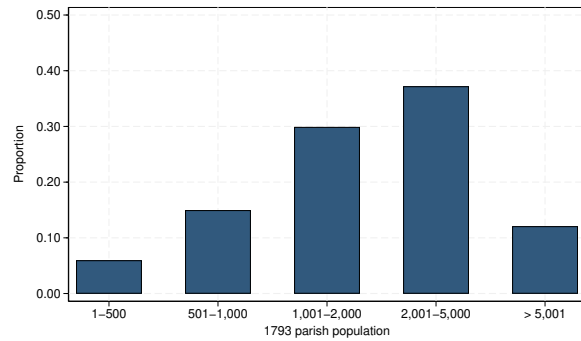
(d) New Maréchaussée Brigades

Figure A13. Population of Parishes with a Letter-Post Office or a Maréchaussée Brigade (1721–90)

Notes. This figure displays the distribution of the 1793 population among the parishes with a letter-post office or a maréchaussée brigade during the eighteenth century. Panel (a) contains all 1,482 parishes that ever had a letter-post office between 1721 and 1790. Panel (b) contains the 621 parishes that did not initially have a letter-post office in 1721 but later had one between 1731 and 1790. Panel (c) contains all 1,102 parishes that ever had a maréchaussée brigade between 1721 and 1790. Panel (d) contains the 589 parishes that did not initially have a maréchaussée brigade in 1721 but later had one between 1731 and 1790.
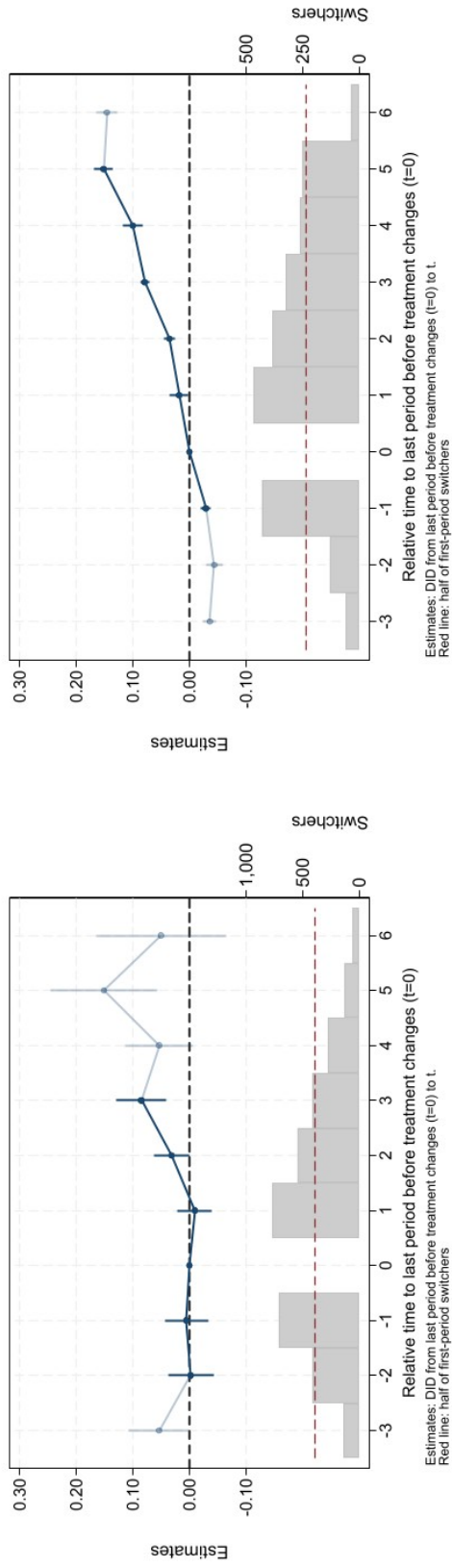
(a) Horse-Post Relays, Accounting for Letter-Post Offices   (b) Letter-Post Offices

Figure A14. Event-Study Effects of New Horse-Post Relays and Letter-Post Offices on Rebellion

Notes. Panel (a): the top-half of this figure reports event-study effects δ_ℓ estimated through Equation 1 along with 95 percent confidence intervals extended to include letter-post offices as an additional treatment variable. Estimates are calculated using the `did_multiplegt` Stata command. Panel (b): the top-half of this figure reports event-study effects δ_ℓ estimated through Equation 1 along with 95 percent confidence intervals where the treatment variable is the presence of letter-post offices. Estimates are calculated using the `did_multiplegt_dyn` Stata command. Both panels: the unit of observation is a parish-decade from the 1720s to the 1780s. All regressions include parish and decade fixed effects as well as canton-by-decade fixed effects and parish-decade average wheat prices. Dark blue estimates correspond to restricting the estimation to two leads and three lags, while light blue estimates do not impose this restriction and uses three leads and six lags in the estimation. The bottom-half of these figures report the number of switchers used for identification of each event-study effect. The red dotted lines denote half of first-period switchers.

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Figure A15. Event-Study Effects of New Horse-Post Relays on Maréchaussée Brigades

Notes. The top-half of this figure reports event-study effects δ_ℓ estimated through Equation 1 along with 95 percent confidence intervals. The unit of observation is a parish-decade from the 1720s to the 1780s. All regressions include parish and decade fixed effects as well as canton-by-decade fixed effects and parish-decade average wheat prices. Estimates are calculated using the `did_multiplegt_dyn` Stata command. Dark blue estimates correspond to restricting the estimation to one leads and two lags, while light blue estimates do not impose this restriction and uses two leads and four lags in the estimation. The bottom-half of this figure reports the number of switchers used for identification of each event-study effect. The red dotted line denotes half of first-period switchers. This regression excludes decades 1730 and 1760 as data on maréchaussée brigades are missing for these periods.
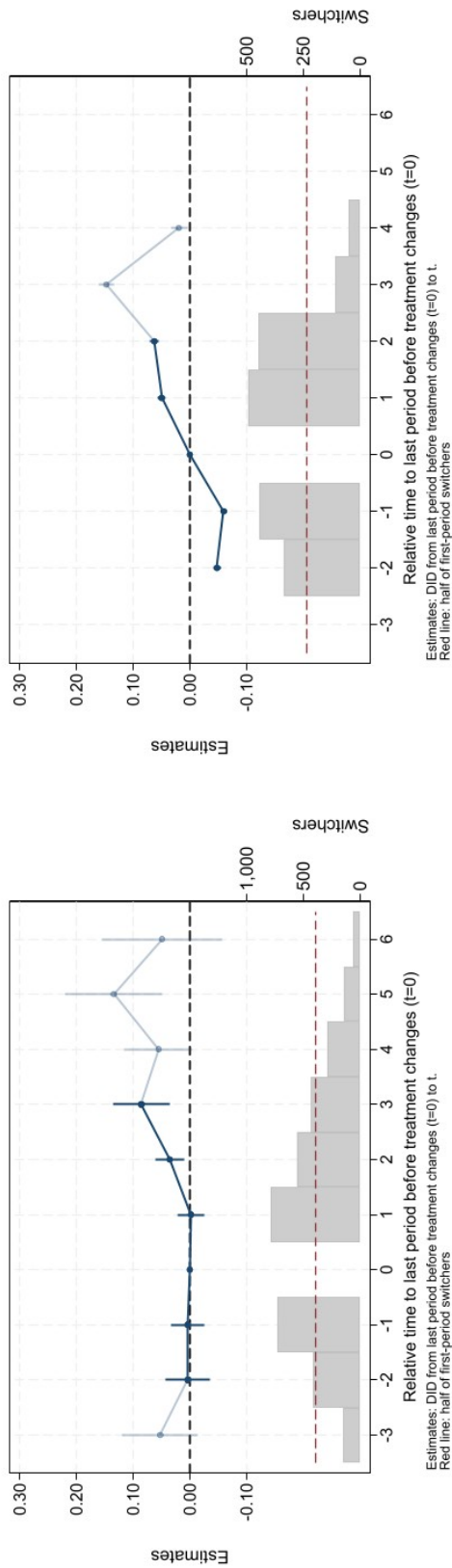
(a) Horse-Post Relays, Accounting for Maréchaussée Brigades

(b) Maréchaussée Brigades

Figure A16. Event-Study Effects of New Horse-Post Relays and Maréchaussée Brigades on Rebellion

Notes. Panel (a): the top-half of this figure reports event-study effects δ_ℓ estimated through Equation 1 along with 95 percent confidence intervals extended to include letter-post offices as an additional treatment variable. Estimates are calculated using the `did_multiplegt` Stata command. Panel (b): the top-half of this figure reports event-study effects δ_ℓ estimated through Equation 1 along with 95 percent confidence intervals where the treatment variable is the presence of letter-post offices. Estimates are calculated using the `did_multiplegt_dyn` Stata command. Both panels: the unit of observation is a parish-decade from the 1720s to the 1780s. All regressions include parish and decade fixed effects as well as canton-by-decade fixed effects and parish-decade average wheat prices. Dark blue estimates correspond to restricting the estimation to two leads and three lags in Panel (a) and one lead and two lages in Panel (b), while light blue estimates do not impose this restriction and uses three leads and six lags in the estimation in Panel (a) and two leads and four lags in Panel (b). The bottom-half of these figures report the number of switchers used for identification of each event-study effect. The red 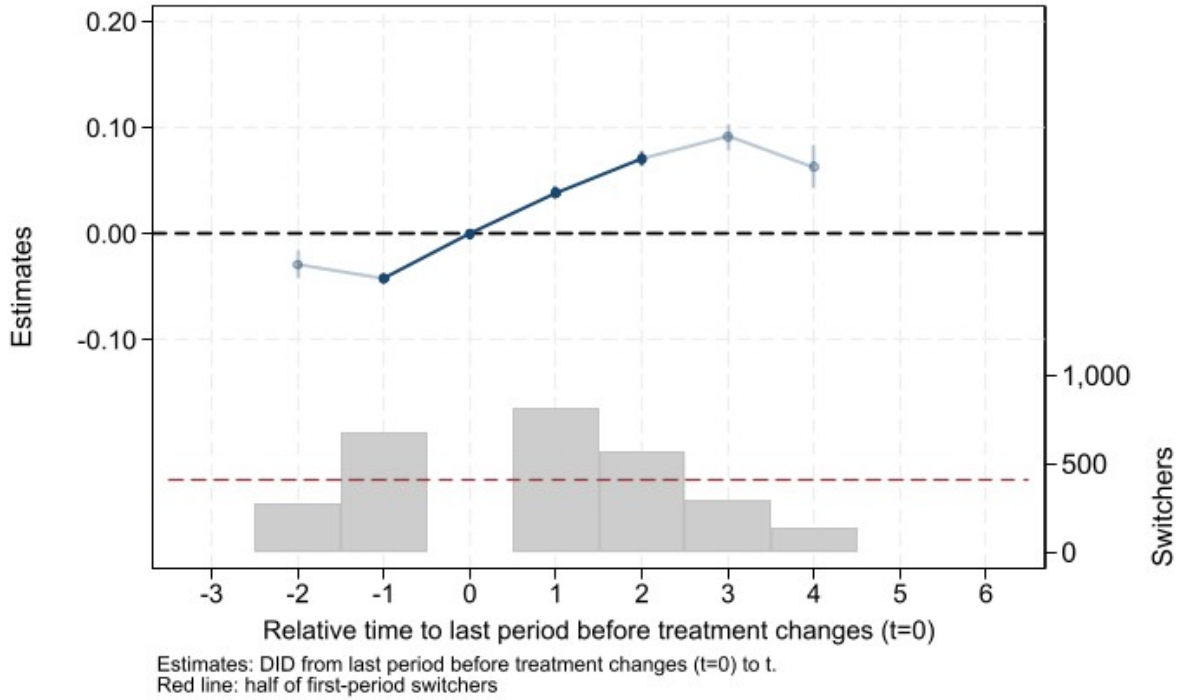dotted lines denote half of first-period switchers. The regression in Panel (b) excludes decades 1730 and 1760 as data on maréchaussée brigades are missing for these periods. We assume constant spatial distribution for these years in Panel (a).

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Table A1. Distribution of Rebellions by Decade

	1720s	1730s	1740s	1750s	1760	1770s	1780s	1720s–80s
% Weak rebellions (4–10)	33.0	29.8	32.3	35.9	38.2	33.0	32.2	33.6
% Moderate rebellions (11–50)	47.8	47.3	51.9	45.0	42.2	44.0	43.3	45.1
% Strong rebellions (> 50)	19.1	22.7	15.3	18.1	19.5	22.2	23.8	20.7
% Rebellions against state authorities	29.8	21.4	21.4	25.6	15.8	14.4	12.6	18.1
% Rebellions with attacks on state buildings	14.6	12.3	10.0	14.1	15.4	16.2	12.7	13.9
% Rebellions against taxation	41.8	38.1	42.4	40.4	33.6	33.2	33.2	36.2
% Rebellions against nobility	10.5	12.3	7.4	8.7	11.2	7.6	11.2	9.7
% Rebellions against clergy	1.5	1.6	1.7	0.8	1.4	0.6	0.6	0.99
# Rebellions	467	383	632	735	798	1,271	1,451	5,737

Notes: This table reports the distribution of rebellions between the 1720s and 1780s across various characteristics. *Weak*, *Moderate*, and *Strong* refers to the intensity of rebellions, classified by number of participants. *State authorities* refers to rebellions against state authorities, including the judiciary, the military, the police, and state reforms initiatives. *State buildings* refers to rebellions during which a building belonging to state authorities was attacked. *Taxation* refers to rebellions against taxation.

Table A2. Average Total Effect of New Horse-Post Relays on Rebellions: Shorter Panels

Outcome:	Number of rebellions				
	(1)	(2)	(3)	(4)	(5)
Horse-post relay	0.031***	0.036***	0.025***	0.030***	0.021**
	[0.004]	[0.004]	[0.005]	[0.007]	[0.009]
Observations	15,143	13,913	9,800	7,151	4,766
Switchers (overall)	1,840	1,707	1,151	866	567
Switchers (at least once)	820	778	697	561	417
Panel	1720–80	1730–80	1740–80	1750–80	1760–80
Outcome mean	0.023	0.025	0.028	0.030	0.033
Outcome within s.d.	0.230	0.237	0.220	0.228	0.243
Periods $(-t; +T)$	$(-2; +3)$	$(-1; +3)$	$(-1; +2)$	$(-1; +2)$	$(-1; +2)$

Notes: This table reports the average total effect of non-normalized event-study effects δ_ℓ estimated through Equation 1. The unit of observation is a parish-decade in the decades indicated in the *Panel* row. All regressions include parish and decade fixed effects as well as wheat prices and decade-by-canton fixed effects. The outcome is the number of rebellions in a given parish and decade. *Observations* represent to the number of parish-decade observations effectively used in the estimation. *Switchers (overall)* represent to the total number of parish-decade observations that switched treatment over the period, while *Switchers (at least once)* represent the number of parishes that switched at least once. *Outcome within s.d.* represent the standard deviation once decade and parish fixed effects are accounted for. *Periods $(-t; +T)$* represent the number of event-study effects and placebos estimated. Standard errors are clustered at the parish level and reported in brackets. Estimates are calculated using the `did_multiplegt_dyn` Stata command.
*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

Table A3. Average Total Effect of New Horse-Post Relays on Rebellions by Intensity

Outcome:	Number of rebellions			
	(1)	(2)	(3)	(4)
Horse-post relay	0.031***	0.012***	0.010**	0.007***
	[0.004]	[0.002]	[0.003]	[0.001]
Observations	15,143	15,143	15,143	15,143
Switchers (overall)	1,840	1,840	1,840	1,840
Switchers (at least once)	820	820	820	820
Intensity	All	Weak	Moderate	Strong
Outcome mean	0.023	0.008	0.010	0.005
Outcome within s.d.	0.230	0.096	0.133	0.081
Periods $(-l;+L)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$

Notes: This table reports the average total effect of non-normalized event-study effects δ_ℓ estimated through Equation 1. The unit of observation is a parish-decade in the decades indicated in the *Panel* row. All regressions include parish and decade fixed effects as well as wheat prices and decade-by-canton fixed effects. The outcome is the number of rebellions in a given parish and decade by intensity, where *Weak* denotes rebellions with 4–10 participants, *Moderate*, rebellions with 11–50 participants, and *Strong*, rebellions with 50+ participants. *Observations* represent to the number of parish-decade observations effectively used in the estimation. *Switchers (overall)* represent to the total number of parish-decade observations that switched treatment over the period, while *Switchers (at least once)* represent the number of parishes that switched at least once. *Outcome within s.d.* represent the standard deviation once decade and parish fixed effects are accounted for. *Periods $(-t;+T)$* represent the number of event-study effects and placebos estimated. Standard errors are clustered at the parish level and reported in brackets. Estimates are calculated using the `did_multiplegt_dyn` Stata command.

*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

Table A4. Average Total Effect of New Horse-Post Relays on Rebellions by Region

Outcome:				Number of rebellions					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Horse-post relay	0.031*** [0.004]	0.024*** [0.009]	−0.045*** [0.004]	0.013 [0.010]	0.140*** [0.023]	0.118*** [0.015]	0.020** [0.009]	0.034*** [0.004]	0.064*** [0.009]
Region	France	Paris	Normandy	Brittany	South West	Languedoc	South East	East	North
Observations	15,143	5,042	2,170	869	764	1,119	142	4,096	732
Switchers (overall)	1,840	653	205	209	113	115	36	439	64
Switchers (at least once)	820	320	89	80	53	51	15	187	23
Outcome mean	0.023	0.034	0.011	0.044	0.018	0.020	0.024	0.011	0.015
Outcome within s.d.	0.230	0.325	0.132	0.268	0.181	0.150	0.180	0.106	0.121
Periods $(-t;+T)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-1;+3)$	$(-1;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$

Notes: This table reports the average total effect of non-normalized event-study effects δ_ℓ estimated through Equation 1. The unit of observation is a parish-decade from the 1720s to the 1780s. All regressions include parish and decade fixed effects as well as wheat prices and decade-by-canton fixed effects. The outcome is the number of rebellions in a given parish and decade. Columns (2)–(9) provide estimates based on the following regional samples: Column (2) includes the parishes of the Parliament of Paris, which includes the généralités of Amiens, Bourges, Chalons, Limoges, Lyon, Moulins, Orléans, Paris, Poitiers, Riom, Soissons, and Tours; Column (3) includes the parishes of Normandy, which includes the généralités of Caen, Rouen, and Alençon; Column (4) includes the parishes of Brittany, which includes the généralité of Rennes; Column (5) includes the parishes of the South West, which includes the généralités of Bordeaux and La Rochelle; Column (6) includes the parishes of Languedoc, which includes the généralités of Auch, Montauban, Montpellier, Perpignan, and Toulouse; Column (7) includes the parishes of the South East, which includes the généralités of Grenoble and Aix; Column (8) includes the parishes of the East, which includes the généralités of Dijon, Nancy, Strasbourg, Besançon, and Metz; Column (9) includes the parishes of the North, which includes the généralités of Lille and Valenciennes. *Observations* represent to the number of parish-decade observations effectively used in the estimation. *Switchers (overall)* represent to the total number of parish-decade observations that switched treatment over the period, while *Switchers (at least once)* represent the number of parishes that switched at least once. *Outcome within s.d.* represent the standard deviation once decade and parish fixed effects are accounted for. *Periods* $(-t;+T)$ represent the number of event-study effects and placebos estimated. Standard errors are clustered at the parish level and reported in brackets. Estimates are calculated using the `did_multiplegt_dyn` Stata command.

*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

Table A5. Sources of Rebellious Events

Type of sources	Rebellions	Base rates
All	5,737	
Archives	5,098	89% of all rebellions
Secondary sources	993	17% of all rebellions
National archives	2,280	45% of rebellions with archival sources
Series E — Minutes of government council	205	9% of rebellions with national archival sources
Series Z1A — Financial administration (cours des aides)	1,109	49% of rebellions with national archival sources
Series Z1C — Maréchaussée jurisdiction	438	19% of rebellions with national archival sources
Départemental archives	2,270	45% of rebellions with archival sources
Series B — Courts and justices	1,260	56% of rebellions with départemental sources
Series C — Provincial administration	917	40% of rebellions with départemental sources
Other archives	629	12% of rebellions with archival sources

Notes: This table reports the sources of the rebellions from Nicolas's (2002) survey that occurred between 1720 and 1789 on the territory of the kingdom of France. Each event may have multiple sources, so that base rates do not sum to one.

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Table A6. Average Total Effect of New Horse-Post Relays on Rebellions by Type of Sources

Outcome:				Number of rebellions				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Horse-post relay	0.031***	0.028***	0.016***	0.032***	0.024***	0.020***	0.030***	0.022***
	[0.004]	[0.003]	[0.003]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
Observations	15,143	15,143	15,143	15,143	15,143	15,143	15,143	15,143
Switchers (overall)	1,840	1,840	1,840	1,840	1,840	1,840	1,840	1,840
Switchers (at least once)	820	820	820	820	820	820	820	820
Sources	All	Archives	National archives	No series Natl. E	No series Natl. Z1A	No series Natl. Z1 C	No series Dept. B	No series Dept. C
Outcome mean	0.023	0.021	0.009	0.022	0.018	0.021	0.018	0.019
Outcome within s.d.	0.230	0.205	0.127	0.226	0.217	0.225	0.211	0.217
Periods $(-t;+T)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$

Notes: This table reports the average total effect of non-normalized event-study effects δ_ℓ estimated through Equation 1. The unit of observation is a parish-decade from the 1720s to the 1780s. All regressions include parish and decade fixed effects as well as wheat prices and decade-by-canton fixed effects. The outcome is the number of rebellions in a given parish and decade depending on the type of sources used. For details about the meaning of the types of sources mentioned in the *Sources* panel, see Table A5. *Observations* represent to the number of parish-decade observations effectively used in the estimation. *Switchers (overall)* represent to the total number of parish-decade observations that switched treatment over the period, while *Switchers (at least once)* represent the number of parishes that switched at least once. *Outcome within s.d.* represent the standard deviation once decade and parish fixed effects are accounted for. *Periods* $(-t;+T)$ represent the number of event-study effects and placebos estimated. Standard errors are clustered at the parish level and reported in brackets. Estimates are calculated using the `did_multiplegt_dyn` Stata command.

*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

Table A7. Examples of Rebellions Used in the Analysis

Year	Parish	Horse post	Summary	Description	Intensity	Social categories	Weapons
1766	Brest	1740	Attack on public building	Three public clerks are mobbed as they try to grab a bottle. The arrival of the judges does not restore calm. Fifty men arrive with the master of the castle, who take the clerks to their offices. The mob continued to protest, then threw stones at the castle, smashed the windows and tore off the containers.	Strong (>50)	No information	Rocks
1771	Chantilly	1730	Attack on public official	A car is transporting 3 people without a permit from the messenger bureau. The inspector of the bureau impounds the car. But other messengers bar the road and armed with batons insult the inspector, who takes refuge in the nearby tavern. They argue that this is illegal on the Prince's land.	Weak (4–10)	Journeymen	Sticks and bars
1775	Xertigny	1770	Resistance to arrest	Two maréchaussée horsemen, in disguise, come to arrest a deserter soldier. The village colludes with the soldier, and even the farm employees.	Medium (11–50)	Artisans, notables	None
1781	Mirande	1770	Resistance to militia draw	On the day of the militia draw, uproar and threats from the crowd in the town of Sauviac, in the presence of the authorities (subdélégué, notables...). Those who did not have sticks went to cut some in the woods outside the town. The first consul (a doctor), wearing a chaperon and led by the armed inhabitants of Mirande (craftsmen), tried to calm things down. The agitated people agreed to leave the town and the gates were closed. Two arrests.	Medium (11–50)	Peasants, agricultural workers	Sticks, bars, and knives
1788	Poligny	1770	Resistance to militia draw	A soldier in the Enghien regiment said that he was suddenly attacked by several people from the village of Tourmort, who hit him several times with large sticks they were armed with.	Weak (4–10)	Peasants	Sticks and bars

Notes: This table reports examples of cases used in the analysis. Descriptions are provided verbatim from Nicolas's (2002) survey.

Table A8. Average Total Effect of New Horse-Post Relays on Rebellions

Outcome:	Number of rebellions			
	(1)	(2)	(3)	(4)
Horse-post relay	0.031***	0.012***	0.020***	0.011***
	[0.004]	[0.003]	[0.003]	[0.004]
Observations	15,143	10,756	11,291	9,556
Switchers (overall)	1,840	1,283	1,360	1,148
Switchers (at least once)	820	568	612	511
Parishes ever hosted				
A letter-post office	Yes	No	Yes	No
A maréchaussée brigade	Yes	Yes	No	No
Outcome mean	0.023	0.016	0.015	0.013
Outcome within s.d.	0.230	0.204	0.122	0.115
Periods $(-l;+L)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$	$(-2;+3)$

Notes: This table reports the average total effect of non-normalized event-study effects δ_ℓ estimated through Equation 1. The unit of observation is a parish-decade. All regressions include parish and decade fixed effects as well as wheat prices and decade-by-canton fixed effects. The outcome is the number of rebellions in a given parish and decade. *Observations* represent to the number of parish-decade observations effectively used in the estimation. *Switchers (overall)* represent to the total number of parish-decade observations that switched treatment over the period, while *Switchers (at least once)* represent the number of parishes that switched at least once. *Outcome within s.d.* represent the standard deviation once decade and parish fixed effects are accounted for. *Periods $(-t;+T)$* represent the number of event-study effects and placebos estimated. Standard errors are clustered at the parish level and reported in brackets. Estimates are calculated using the `did_multiplegt_dyn` Stata command.
*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

Given the concurrent development of the letter post and maréchaussée brigades, we provide estimates of the development of the horse post on rebellion across four different types of parishes: all parishes – our baseline – those that never hosted a letter-post office, those that never hosted a maréchaussée brigade, and those that never hosted neither a letter-post office nor a maréchaussée brigade. Results above suggest that the "uncontaminated" parishes still exhibit a positive causal relationship between the establishment of horse-post relays and rebellion, with comparable magnitude relative to the sample within standard deviation.

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Heterogeneity

Results of the population-weighted regression in Column (6) of Table 3 suggest a stronger rebellions response to exposure to horse-post relays in more populous parishes. We now assess whether this heterogeneity can account for the average total treatment effects we identify.

We capture heterogeneity in population size by dividing parishes along quartiles of 1793 population among those with a relay per the following thresholds: less than 500 inhabitants, 500–999, 1,000–2,999, and more than 3,000. We then expand the full specification by further including population group-by-decade fixed effects to compare changes in rebellious activity across parishes within the same canton and population group. We report the results in Column (2) of Table A9. The estimate of 0.016 is significant at the one-percent level, and roughly half the size of the baseline, consistent with our previous results. To account for the potential relationship between the number of rebellions and population, we also run this specification when the outcome is an indicator variable that equals one if there was at least one rebellion. The estimate in Column (7) of 0.012 is again roughly half the size of the baseline estimate in Column (6), suggesting that while part of the results are linked to the relationship between population and rebellion, half are due to heterogeneity in the response to exposure to the horse post in more populous parishes.

We further assess the nature of this heterogeneity by including parish type-by-decade fixed effects, where we define types according to whether parishes were the seat of an administrative center, where we consider six types of administrative centers: those of *subdélégations*, *bailliages*, *évêchés*, *recettes des finances*, *districts*, and *départements*—with the last two administrative divisions created right after the Revolution. We similarly find lower estimates than the baseline in Columns (3) and (8), but not as low as the previous ones, reinforcing our interpretation.

In addition, we explore whether differential response across taxation zones can explain our results. We classify each parish into a type of *gabelle* (salt) taxation in the 1780s, as there were wide disparities in the level of taxation across these zones: *petites gabelles*, *grandes gabelles*, *gabelles de salines*, *gabelles du réthelois*, *quart bouillon*, *province rédimée*, and *province franche*. We then include taxation zone-by-decade fixed effects. Results in Columns (4) and (9) are nearly identical to baseline estimates.

Finally, we assess whether our results may be driven by the connectivity of parishes to the network of paved roads by including connectivity-by-decade fixed effects, where we divide parishes along quartiles of distance to a paved road: less than 500 meters, 0.5–1 kilometer, 1–3, and over 3 kilometers. Estimates in Columns (5) and (10) are nearly identical to the baseline, suggesting little heterogeneity along connectivity.

Table A9. Average Total Effect of New Horse-Post Relays on Rebellions Accounting for Heterogeneity across Parish Types

Outcome:	Number of rebellions					𝟙[rebellions]				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Horse-post relay	0.031***	0.016***	0.018***	0.033***	0.031***	0.022***	0.012***	0.015***	0.024***	0.021***
	[0.004]	[0.005]	[0.003]	[0.004]	[0.004]	[0.003]	[0.004]	[0.003]	[0.003]	[0.003]
7 decade × groups FE	No	Population	Seats	Gabelles	Roads	No	Population	Seats	Gabelles	Roads
Observations	15,143	4,985	12,331	14,801	6,315	15,143	4,985	12,331	14,801	6,315
Switchers (overall)	1,840	1,180	1,505	1,832	1,509	1,840	1,180	1,505	1,832	1,509
Switchers (at least once)	820	523	669	816	672	820	523	669	816	672
Outcome mean	0.023	0.023	0.023	0.023	0.023	0.016	0.016	0.016	0.016	0.016
Outcome within s.d.	0.230	0.230	0.230	0.230	0.230	0.114	0.114	0.114	0.114	0.114
Periods $(-t; +T)$	$(-2; +3)$	$(-2; +3)$	$(-2; +3)$	$(-2; +3)$	$(-2; +3)$	$(-2; +3)$	$(-2; +3)$	$(-2; +3)$	$(-2; +3)$	$(-2; +3)$

Notes: This table reports the average total effect of non-normalized event-study effects δ_ℓ estimated through Equation 1. The unit of observation is a parish-decade from the 1720s to the 1780s. All regressions include parish and decade fixed effects as well as wheat prices and decade-by-canton fixed effects. Columns (2) and (7) include population group-ny-decade fixed effects, where we define four groups of less than 500, 500–999, 1,000–2,999, and more than 3,000 inhabitants. Columns (3) and (8) include parish type-by-decade fixed effects, where we define types depending on whether parishes are the seat of administrative centers, among which subdélégations, bailliages, évêchés, recettes des finances, districts, and départements. Columns (4) and (9) include gabelle type-by-decade fixed effects, where gabelle taxation may be of the following types: *petites gabelles, grandes gabelles, gabelles de salines, gabelles du réthelois, quart bouillon, province rédimée,* and *province franche.* Columns (5) and (10) include parish connectivity-by-decade fixed effects, were we define four groups of connectivity depending on the distance of parishes to a paved road: less than 500 meters, 0.5–1 kilometer, 1–3, and above 3. The outcome is the number of rebellions in Columns (1)–(5) and an indicator for the occurrence of at least one rebellion in Columns (6)–(10). *Observations* represent to the total number of parish-decade observations effectively used in the estimation. *Switchers (overall)* represent the number of parishes that switched at least once, while *Switchers (at least once)* represent the number of parishes that switched treatment over the period. *Periods* $(-t; +T)$ represent the number of event-study effects and placebos estimated. *Outcome within s.d.* represent the standard deviation once decade and parish fixed effects are accounted for. Standard errors are clustered at the parish level and reported in brackets. Estimates are calculated using the `did_multiplegt_dyn` Stata command.
*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

23

Consequences for Revolution-Era Political Societies

Political societies were clubs created between 1789 and 1793 in which local notables discussed political affairs, social issues, and reforms passed by the National Convention, but also coordinated revolutionary action. Over this period, about six thousand political societies were created. They played a critical role in the diffusion of the ideas of the Revolution (Boutier, Boutry and Bonin, 1992). The most prominent ones were sponsored by the Parisian *club des jacobins*, which was pivotal during the Revolutionary period.

We assess whether the dynamic effects of the expansion of the horse-post network on rebellious activities in the *run-up* to the Revolution played a *during* the Revolution, specifically by fostering local political organization that later emerged under the form of political societies. To do so, we first estimate the direct effect of prior rebellions on the formation of later political societies as follows:

$$(A.1) \qquad \texttt{societies}_{pc} = \alpha + \beta \log \texttt{rebellions}_{pc} + X_{pc} + \gamma_c + \varepsilon_{pc},$$

where $\texttt{societies}_{pc}$ denotes political societies (all or Jacobin societies) created between 1789 and 1793 in parish p in canton c, and $\texttt{rebellions}_{pc}$, the number of rebellions that occurred in parish p throughout the eighteenth century. To account for potential omitted factors, we further control for the log distance to Paris, the log 1793 population, an indicator variable that equals one if the parish was the seat of an administration (subdélégation, bailliage, évêché, recettes des finances, district, département), and an indicator variable that equals one if the parish ever had a letter-post office during the eighteenth century. We also include canton fixed effects, γ_c, and cluster standard errors at the level of cantons.

Next, we turn to a 2SLS approach and analyze whether rebellions induced by the presence of a horse-post relay in a parish fostered the creation of these societies. Specifically, we instrument the number of rebellions by an indicator variable that equals one if the parish ever had a horse-post relay during the eighteenth century.

The results of this analysis are reported in Table A10. The OLS analysis reveals that rebellious activities in the run-up to the Revolution are positively correlated with the creation of political societies. Turning to the 2SLS strategy, we find that, consistent with our analysis, the presence of a horse-post relay is associated with more rebellions (first-stage panel) as well as to the creation of political societies (reduced-form panel). Results in the 2SLS panel suggest that rebellions stemming from a horse-post relay was associated with a substantially higher likelihood of a political society emerging during the Revolution.

Table A10. The Horse-Post, Rebellions, and Political Societies

Societies	All	All	Jacobin	Jacobin
	OLS. Outcome: political societies			
log rebellions	0.339**	0.082***	0.174***	0.049***
	[0.010]	[0.009]	[0.008]	[0.006]
	First stage. Outcome: log rebellions.			
Horse-post relay	0.241***	0.047***	0.241***	0.047***
	[0.014]	[0.011]	[0.014]	[0.011]
Cluster-adj. F-stat	295.49	19.40	295.49	19.40
	Reduced form. Outcome: political societies.			
Horse-post relay	0.378***	0.720***	0.180***	0.025***
	[0.013]	[0.011]	[0.010]	[0.007]
	2SLS. Outcome: political societies.			
log rebellions	1.573***	1.53***	0.749***	0.538***
	[0.088]	[0.416]	[0.045]	[0.186]
Cantons FE	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes
Observations	35,087	35,087	35,087	35,087

Statistics: All political societies: 0.145 (mean); 0.230 (within s.d.). Jacobin societies: 0.022 (mean); 0.127 (within s.d.). Log rebellions: 0.077 (mean); 0.227 (within s.d.).
Notes: This table reports the coefficients of estimating various versions of Equation A.1. The unit of observation is a parish. See the text for the definition of variables and the list of controls. Standard errors are clustered at the canton level and reported in brackets. Estimates are calculated using the `reghdfe` Stata command in the OLS and reduced-form panels, and the `ivreghdfe` Stata command in the first-stage and 2SLS panels.
*** $p \leq 0.01$. ** $p \leq 0.05$. * $p \leq 0.10$.

Data Appendix

Shapefile of France in 1789 We focus on the territory of the Kingdom of France as of 1789. This is equivalent to the current territory of mainland France, with three main exceptions: the Duchy of Savoy, the County of Nice, and the Comtat Venaissin—these territories represent approximately three percent of France's current territory.[1] The base shapefile of the extent of France in 1789 we use in Figures 1, 4, A3, A4, A7, and A12 is from Gay, Gobbi and Goñi (2024) based on data in Gay, Gobbi and Goñi (2023).

Historical GIS of the horse-post network To create the historical GIS of the horse-post network displayed in Figures 1, A3, A4, A7, and A12, we digitized the 1721, 1731,

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[1]Other exceptions include several small municipalities (Montbéliard, Salm), independent cities (Avignon, Mulhouse), counties (Saar-Werden, Sault), and lordships (Montjoie, Mandeure, Bidache). Furthermore, Corsica is excluded from the analysis as it was not incorporated into France until November 30, 1789.

1741, 1751, 1762, 1770, 1780, and 1790 editions of the *Liste générale des postes de France* available at the Bibliothèque nationale de France and at the Bibliothèque des postes et télécommunications.[2] These practical publications were designed for portability, with a relatively small and sturdy format that enabled them to be carried in a jacket pocket while riding a horse. Because they were printed for practical purposes, they were not systematically preserved. As a result, not all editions are available today, and in particular the 1720, 1730, 1740, 1750, 1760, and 1761 editions (Granderoute, 1991). We subsequently extracted all the segments between horse-post relays within each listed itinerary, along with their start and end points, and matched this set of locations to a GIS of France's parishes.[3] Finally, we drew straight lines between each node and combined segments to recreate the set of itineraries provided in the various editions of the *Liste générale des postes de France*.[4]

Rebellions   We gather information on rebellions throughout the eighteenth century based on archival material collected by Jean Nicolas (2002). As is the case with much of the French historiography of popular uprisings in Ancien Régime France (Porchnev, 1963; Mousnier, 1967; Foisil, 1970; Bercé, 1974; Pillorget, 1975), Nicolas (1973; 1974) began systematically collecting archival information on these events in the late 1970s, at a time when this kind of quantitative historical survey was common (Karila-Cohen et al., 2018). While his survey initially focused on the region of the Duchy of Savoy, it expanded in the early 1980s as Jean Nicolas recruited collaborators throughout the country (Nicolas, 1985). This survey was conducted until 1989, during which time a substantial number of coding sheets were produced, amounting to nearly 40 thousand pages. These sheets are currently preserved in the Bibliothèque François Lebrun at the University of Rennes-2. A database of the entire content of these record was then created – independently from the HISCOD project (Chambru and Maneuvrier-Hervieu, 2024) – and will soon be made available.

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[2]The content of these books was updated annually by the horse-post administration and published by royal privilege. This privilege was granted to the Jaillot family from 1708 to 1779, after which it reverted to the postal administration (Fordham, 1922; Granderoute, 1991). In addition to the lists of horse-post relays and itineraries, these books also contained a small map of the horse-post network (Verdier, 2007, pp. 8–10; Verdier, 2009*a*, pp. 3–4).

[3]Specifically, we match the set of horse-post relays we use IGN's (2021) ADMIN-EXPRESS 2021 shapefile of communes as our reference GIS in RGF-Lambert93 projection, which we match to the set of parishes that existed before the Revolution using Cristofoli et al.'s (2021) tabular version of the *Histoire administrative des communes* (HAC) database, disseminated on the website `cassini.ehess.fr` (Motte et al., 2003; Motte and Vouloir, 2007).

[4]Contemporary maps of the horse-post network proceeded in the same way, i.e., by linking relays through straight lines (Verdier, 2009*b*). In fact, these were the first maps of a network produced in France, such as Sanson's *Carte géographique des postes qui traversent la France* published in 1632 (Arbellot, 1980).

Admministrative and territorial divisions   We assign each parish to a specific généralité based on Gay, Gobbi and Goñi (2024), which draws on Brette (1904). For subdélégations, we use data from Cristofoli et al. (2021), which draws from Arbellot et al.'s (1986) historical atlas.[5] Finally, we assign each parish to a canton based on information in `cassini.ehess.fr` (Motte et al., 2003; Motte and Vouloir, 2007).

Wheat prices   To construct a parish-level measure of decade-average wheat prices, we first compute decade-average wheat prices in *livre tournois* per *setier* at 132 locations available in Ridolfi's (2019) 8,616 quotations over the eighteenth century. We then perform an inverse distance-weighted spatial interpolation of these prices over the territory of the Kingdom of France by generating a raster layer of prices through a 135×146 matrix. Finally, we compute spatially weighted price averages for each decade and each parish polygon.

1793 population   We measure the size of each parish by its population in the 1793 census, the first census available in France, based on data in Cristofoli et al. (2021). Moreover, we determine the rural status of a parish if it had less than two thousand inhabitants.[6]

Connectivity   We assess the connectivity of parishes to the network of paved roads according to Cassini's maps published in 1756–90 through Perret, Gribaudi and Barthelemy's (2015) historical GIS.

Seats of administrative divisions   We determine whether parishes were the seat of an administrative division among six types of administrations: *subdélégations*, *bailliages*, *évêchés*, *recettes des finances*, *districts*, and *départements*—with the last two administrative divisions created right after the Revolution. We collect this information from Nordman and Ozouf-Marignier (1989, pp. 75–81).

Gabelles   We assign each parish to a type of *gabelle* (salt) taxation in the 1780s, as there were wide disparities in the level of taxation across these zones: *petites gabelles*, *grandes gabelles*, *gabelles de salines*, *gabelles du réthelois*, *quart bouillon*, *province rédimée*, and *province franche*. We collect this information based on the manual vectorization of the *Carte des gabelles* of 1781 available on Gallica under Archival Resource Key (ARK): 12148/btv1b8445425x.

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[5]For details on the reliability of Arbellot et al.'s (1986) atlas, see Vovelle (1986) and Lepetit (1988).

[6]This threshold has been used by French statisticians throughout the nineteenth century to classify towns as rural or urban (Le Mée, 1971; Roncayolo, 1987).

Historical GIS of letter-post offices To create the historical GIS of letter-post offices displayed in Figure A12, we digitized the *Ordre général des courriers* available in the annual editions of the *Almanach royal*, the contents of which we cross-validated with the *Cartes des bureaux de postes* of 1741 and with the 1754 and 1782 editions of the *Dictionnaires des postes*. These three later sources are the earliest and only official publications of the postal administration providing the list of letter-post offices for the eighteenth century. The annually updated list of these offices was transmitted by the postal administration to the royal administration, which included it in its annual editions of the *Almanach royal*. The editions of the *Almanach royal* we use are those for 1722 (pp. 270–88), 1731 (pp. 369–86), 1740 (pp. 367–81), 1750 (pp. 382–96), 1762 (pp. 442–58), 1770 (pp. 535–46), 1780 (pp. 609–22), and 1790 (pp. 642–66), which are available on Gallica under the following ARK: 12148/cb34454105m. The 1741 *Cartes des bureaux des postes établis sur les différentes routes du Royaume de France* are available under ARK 12148/btv1b53136438t. The 1754 edition of the *Dictionnaire des postes* is available under ARK 12148/bpt6k6283454r (we digitized the 1782 edition of the *Dictionnaire des postes* ourselves). We subsequently matched this set of locations to a GIS of France's parishes.

Historical GIS of the maréchaussée brigades The historical GIS of maréchaussée brigades displayed in Figure A12 is based on Fressin's (2021) *Atlas historique de la gendarmerie*. It provides the spatial distribution of brigades for 1720–30 based on the *État général des maréchaussées de France* (1720–30), for 1738 based on the *Abrégé militaire pour l'année 1738*, for 1750 based on *Les Maréchaussées de France* by Guillotte, for 1771 and 1779 based on the *Registres d'inspection de la maréchaussée* of these years, and for 1790 based on the *État de la maréchaussée pour l'année 1790*.

Political societies We collect information on political societies created between 1789 and 1793, together with their affiliation to the Jacobin societies from Boutier, Boutry and Bonin (1992, pp. 77–101).

Software Appendix

Treatment histories To display the 43 treatment histories of the horse-post relays in Figure A9, we use Mou and Xu's (2023 [2022]) `panelview` Stata command (Mou, Liu and Xu, 2023).

Estimation of treatment effects To estimate the treatment effects of the horse-post (and letter post) on rebellion reported in Tables 2, 3, A2–A9, and in Figures 5, 6, A10,

and A14 Panel (b), we use de Chaisemartin et al.'s (2024 [2023]) `did_multiplegt_dyn` Stata command, which is an extension of de Chaisemartin, D'Haultfoeuille and Guyonvarch's (2024 [2019]) `did_multiplegt` command. Note that the Stata version of `did_multiplegt_dyn` produces event-study plots that match the standard TWFE output, so that they can be interpreted in the same way (Roth, 2024, footnote 2).

To estimate the treatment effects of the horse-post concurrent with the letter post reported in Figure A14 Panel (a), we use de Chaisemartin, D'Haultfoeuille and Guyonvarch's (2024 [2019]) `did_multiplegt_dyn` Stata command, where we follow the guidelines provided in the Stata command's documentation and de Chaisemartin and D'Haultfœuille's (2023, appendix pp. 5–11).

Estimation of consequences for political societies To estimate the correlation between horst-post relays, rebellions, and political societies in Table A10, we use Correia's (2023 [2014]) `reghdfe` State command in the OLS and reduced-form panels, and Correia's (2023 [2014]) `ivreghdfe` Stata command in the first-stage and 2SLS panels.

References

Arbellot, Guy. 1980. "Le réseau des routes de poste, objet des premières cartes thématiques de la France Moderne." In *Actes du 104e Congrès national des Sociétés savantes, Bordeaux 1979, Section d'histoire moderne et contemporaine*, edited by Ministère des universités. Comité des travaux historiques et scientifiques, 97–115. Paris: Bibliothèque nationale.

Arbellot, Guy, Jean-Pierre Goubert, Jacques Mallet, and Yvette Palazot. 1986. *Carte des généralités, subdélégations et élections en France à la veille de la Révolution de 1789.* Paris: Éditions du CNRS.

Bercé, Yves-Marie. 1974. *Histoire des Croquants: étude des soulèvements populaires au XVIIe siècle dans le sud-ouest de la France.* Paris-Genève: Librarie Droz.

Boutier, Jean, Philippe Boutry, and Serge Bonin, ed. 1992. *Atlas de la Révolution française. Les sociétés politiques.* Paris: EHESS.

Brette, Armand. 1904. *Atlas des bailliages ou juridictions assimilées ayant formé unité électorale en 1789 dressé d'après les actes de la convocation conservés aux Archives nationales.* Paris: Imprimerie Nationale.

Chambru, Cédric, and Paul Maneuvrier-Hervieu. 2024. "Introducing HiSCoD: A New Gateway for the Study of Historical Social Conflict." *American Political Science Review,* 118(2): 1084—-91.

Correia, Sergio. 2023 [2014]. *reghdfe: Stata Module to Perform Linear or Instrumental-Variable Regression Absorbing Any Number of High-Dimensional Fixed Effects.* Boston, MA: Statistical Software Components, Boston College Department of Economics. `https://ideas.repec.org/c/boc/bocode/s457874.html`.

Cristofoli, Pascal, Marie-Christine Vouloir, Bertrand Duménieu, and Claude Motte. 2021. *Des chefs-lieux de Cassini aux communes de France (1756–1999) [database].* Paris: Laboratoire de démographie et d'histoire sociale [producer]; Paris: EHESS [distributor]. `https://doi.org/10.5281/zenodo.4515223`.

de Chaisemartin, Clément, and Xavier D'Haultfœuille. 2023. "Two-Way Fixed Effects and Difference-in-Differences Estimators with Several Treatments." *Journal of Econometrics*, 236(2): 105480.

de Chaisemartin, Clément, Diego Ciccia, Xavier D'Haultfoeuille, Felix Knau, Mélitine Malézieux, and Doulo Sow. 2024 [2023]. `did_multiplegt_dyn`: *Stata Module to Estimate Event-Study Difference-in-Difference (DID) Estimators in Designs with Multiple Groups and Periods, with a Potentially Non-Binary Treatment that May Increase.* Boston, MA: Statistical Software Components, Boston College Department of Economics. `https://ideas.repec.org/c/boc/bocode/ss459222.html`.

de Chaisemartin, Clément, Xavier D'Haultfoeuille, and Yannick Guyonvarch. 2024 [2019]. `did_multiplegt`: *Stata Module to Estimate Sharp Difference-in-Difference Designs with Multiple Groups and Periods.* Boston, MA: Statistical Software Components, Boston College Department of Economics. `https://ideas.repec.org/c/boc/bocode/s458643.html`.

Foisil, Madeleine. 1970. *La révolte des Nu-pieds et les révoltes normandes de 1639.* Paris: Presses universitaires de France.

Fordham, Herbert G. 1922. "The Listes Générales des Postes de France, 1708–1779, and the Jaillots, Géographes Ordinaires du Roi." *The Library*, s4–III(2): 115–36.

Fressin, Thomas. 2021. *Atlas historique de la gendarmerie.* Centre de recherche de l'École des officiers de la gendarmerie nationale. `https://atlas-gendarmerie.fr/`.

Gay, Victor, Paula E. Gobbi, and Marc Goñi. 2023. *Bailliages in 1789 France [database].* Harvard Dataverse. `https://doi.org/10.7910/DVN/T8UXHK`.

Gay, Victor, Paula Gobbi, and Marc Goñi. 2024. "The Atlas of Local Jurisdictions of Ancien Régime France." *Journal of Historical Geography*, 84: 49–60.

Granderoute, Robert. 1991. "Liste générale des postes de France." In *Dictionaire des journaux, 1600–1789*, Volume 2, edited by Jean Sgard, Chapter 843, 773–4. Paris: Universitas.

IGN. 2021. *ADMIN-EXPRESS édition mars 2021 par territoire France métropolitaine [database].* Paris: IGN. `https://geoservices.ign.fr/adminexpress`.

Karila-Cohen, Karine, Claire Lemercier, Isabelle Rosé, and Claire Zalc. 2018. "Nouvelles cuisines de l'histoire quantitative." *Annales. Histoire, sciences sociales*, 73(4): 771–83.

Le Mée, René. 1971. "Population agglomérée, population éparse au début du XIXe siècle." *Annales de démographie historique*, 455–510.

Lepetit, Bernard. 1988. "Guy Arbellot, Jean-Pierre Goubert, Jacques Mallet, Yvette Palazot, Carte des fénéralités, subdélégations et élections en France à la veille de la Révolution de 1789." *Annales. Histoire, sciences sociales*, 43(1): 120–1.

Motte, Claude, and Marie-Christine Vouloir. 2007. "Le site cassini.ehess.fr. Un instrument d'observation pour une analyse du peuplement." *Bulletin du Comité français de cartographie*, 191: 68–84.

Motte, Claude, Isabelle Séguy, Christine Théré, and Dominique Tixier-Basse. 2003. *Communes d'hier, communes d'aujourd'hui. Les communes de la France métropolitaine, 1801–2001. Dictionnaire d'histoire administrative.* Paris: INED.

Mou, Hongyu, and Yiqing Xu. 2023 [2022]. *`panelview`: Stata Module to Visualize Panel Data.* Boston, MA: Statistical Software Components, Boston College Department of Economics. `https://ideas.repec.org/c/boc/bocode/s459034.html`.

Mou, Hongyu, Licheng Liu, and Yiqing Xu. 2023. "Panel Data Visualization in R (`panelView`) and Stata (`panelview`)." *Journal of Statistical Software*, 107(7): 1–20.

Mousnier, Roland. 1967. *Fureurs paysannes. Les paysans dans les révoltes du XVIIe siècle (France, Russie, Chine).* Paris: Calmann-Lévy.

Nicolas, Jean. 1973. "Pour une enquête sur les émotions populaires au XVIIIe Siècle. Le cas de la Savoie." *Annales historiques de la Révolution française*, 214(1): 593–607.

Nicolas, Jean. 1974. "Pour une enquête sur les émotions populaires au XVIIIe siècle. Le cas de la Savoie." *Annales historiques de la Révolution française*, 215(1): 111–53.

Nicolas, Jean. 2002. *La rébellion française. Mouvements populaires et conscience sociale (1661–1789).* Paris: Seuil.

Nicolas, Jean, ed. 1985. *Mouvements Populaires et Conscience Sociale: XVIe–XIXe Siècles. Actes du Colloque de Paris, 24–26 mai 1984.* Paris: Maloine S.A. Éditeur.

Nordman, Daniel, and Marie-Vic Ozouf-Marignier, ed. 1989. *Atlas de la Révolution française. Le territoire.* Paris: EHESS.

Perret, Julien, Maurizio Gribaudi, and Marc Barthelemy. 2015. "Roads and Cities in 18th Century France." *Scientific Data*, 2: 150048.

Pillorget, René. 1975. *Les mouvements insurrectionnels de Provence entre 1596 et 1715.* Paris: Presses universitaires de France.

Porchnev, Boris. 1963. *Les soulèvements populaires en France de 1623 à 1648.* Paris: S.E.V.P.E.N.

Ridolfi, Leonardo. 2019. "Six Centuries of Real Wages in France From Louis IX to Napoleon III: 1250–1860." *The Journal of Economic History*, 79(3): 589–627.

Roncayolo, Marcel. 1987. "Population agglomérée, villes et bourgs en France: réflexions sur les enquêtes de 1809–1811." In , Volume 96, 201–20.

Roth, Jonathan. 2024. "Interpreting Event-Studies from Recent Difference-in-Differences Methods." Working Paper.

Verdier, Nicolas. 2007. "Le réseau technique est-il un impensé du XVIIIe siècle: le cas de la poste aux chevaux." *Flux*, 68: 7–21.

Verdier, Nicolas. 2009*a*. "Les formes du voyage: cartes et espaces des guides de voyage." *In situ*, 15: 1–18.

Verdier, Nicolas. 2009*b*. "Penser le réseau au XVIIIe siècle et au début du XIXe siècle: le cas de la Poste." In *Réseaux en question: utopies, pratiques et prospective*, edited by Annie Bleton-Ruget, Nicole Commerçon and Martin Vanier, 129–38. Mâcon: Institut de recherche du Val de Saône-Mâconnais.

Vovelle, Michel. 1986. "Carte des généralités, subdélégations et élections en France à la veille de la Révolution de 1789 par Guy Arbellot, Jean-Pierre Goubert, Jacques Mallet, Yvette Palazot." *Annales historiques de la Révolution française*, 264: 232–3.