The Political Economy of Suffrage Reform: The Great Reform Act of 1832*

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Abstract

Prominent scholars have viewed the Great Reform Act as a concession made by incumbent elites in order to defuse a revolutionary threat. In this paper, we argue that suffrage reform was part of a broader effort to constrain the executive, thereby enabling an expansion in the state's repressive capacity. When they came to power, the Whigs first increased parliament's power over the purse; and then bolstered its independence from the Crown by reforming parliamentary elections. These reforms to constrain the executive were followed almost immediately by substantial investments in the state's policing capacity. Professional police forces had been stoutly opposed by the gentry since the Glorious Revolution on the grounds that they would increase Crown power too much. Once budgets and elections had been reformed at all levels of governance (national, municipal and county), taxpayers could be confident that their elected representatives would control the finances of the new forces—and so professional police forces were established in all major British towns.

Keywords: Franchise extension; Democratization; State capacity

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Theories of suffrage expansion can be divided into two broad families. Redistributive theories depict broader voting rights as leading to a redistribution of income away from the old elite. Thus, existing elites allow suffrage expansions only when they would otherwise risk an even worse outcome, oftentimes a revolutionary expulsion from power (Acemoglu and Robinson 2000, 2006; Boix 2003; Przeworski 2009). Collective-action theories envision broader voting rights as eliciting larger contributions to public goods. Suffrage expansions occur only when the existing elite cannot finance some valuable new public project(s) by itself. Common in the study of business corporations (Easterbrook and Fischel 1983), collective-action theories have also been used to explain franchise extensions in polities (Barzel and Kiser 2001; Lizzeri and Persico 2004; Ticchi and Vindigni 2008).

In this paper, we offer a collective-action account of Britain's Great Reform Act, perhaps the most storied of all suffrage adjustments. We argue that the Whigs' main goal was to constrain the executive (cf. Ansell and Samuels 2014) and that they did so by (i) increasing parliament's budgetary control and (ii) reducing the influence of the Crown and allied peers over parliamentary elections. As part of the latter effort, the Whigs proposed taxpayer suffrage—the logic being that property owners were numerous and independent enough to stand up to the Crown and peerage.

Some MPs may also have anticipated that suffrage reform would lead to greater redistribution (Acemoglu and Robinson 2001) or to greater provision of public health infrastructure (Lizzeri and Persico 2004). However, it was decades before either redistribution or public health provision began, so these considerations should have been heavily discounted.

There was one public service, however, that was both logically connected to executive constraint (as we explain below) and was provided immediately after parliamentary reform—the police. Indeed, professional police forces were founded in all major British towns within a few years of the reform act's passage. The new police represented the single largest new

civil expenditure *ever* undertaken by the municipal corporations and were paid for by new taxes levied by taxpayers' elected representatives at the local and national levels. Existing revolutionary-threat accounts (e.g., Acemoglu and Robinson 2000, 2006; Boix 2003) say nothing about this robust expansion of state policing capacity.

Asking who would have benefited from an effort to enhance the state's credibility—and hence its capacity—we argue two points. First, those enjoying more of the rents afforded by the unreformed budgetary system (see Foord 1947; Harling 1996) should have opposed the whole reform project. Second, as we describe in more detail below, those bearing more of the private policing costs implied by the unreformed police system should have favored the whole reform project. We provide evidence consistent with these expectations from the vote in the House of Commons that brought down Wellington's Ministry in 1830, the parliamentary election of 1831, and the initial funding of the new police. We contrast expectations under a threat theory with ours in each analysis.

We believe our account generalizes beyond the British case. Throughout Western Europe, nineteenth-century liberal reformers sought to constrain royal power by giving parliament power over the purse and protecting parliament's independence by implementing taxpayer suffrage (Kahan 2003). Moreover, in all cases where liberal constitutions survived, police reform followed. This suggests that early European efforts to democratize were deeply linked to fundamental concerns about who would control the coercive apparatus of the state.

To develop our argument, we begin by explaining why liberals viewed taxpayer suffrage as a weapon against royal and aristocratic power. We then describe how British elites viewed the competing threats they faced—from above and below—before elaborating our account and presenting supportive evidence.

Suffrage reforms to protect parliament's independence

Enlightenment and liberal prescriptions for state reform focused mainly on constraining executive power. Their central and most famous demand was that parliament be given power over the purse (Montesquieu 1989 [1748], p. 164; Madison 2009 [1788], p. 298).

Yet, empowering parliament would not, by itself, suffice to constrain the executive. It was also necessary to ensure that parliamentary elections were not rigged by the monarch, and that MPs were not suborned. To put the point simply, parliament needed both *power* and *independence* to constrain the Crown.¹

Recognizing this point, English reformers after the Glorious Revolution of 1689 implemented both reforms enhancing parliament's power over the purse (North and Weingast 1989; Cox 2016) and reforms limiting the monarch's ability to influence elections and suborn MPs (Kemp 1957). Throughout the long 18th century, moreover, Whig reformers sought both to enhance parliament's fiscal power (which was incomplete, as we shall see below) and to improve parliament's independence from the Crown (also imperfect). This tradition of both empowering and protecting parliament was later followed on the continent: all of Western Europe's first liberal constitutions—in Spain (1812), Norway (1814), Portugal (1822), France (1830), Belgium (1831), Netherlands (1848), and Denmark (1849)—combined budget reform with efforts to bolster MPs' independence from the Crown.

Prominent among the reforms bolstering parliament's independence was taxpayer suffrage—a system in which all, and only, those paying a minimum amount of direct taxes had the vote (Kahan 2003). The logic was that property owners—who would constitute the bulk of those qualifying for the vote—were too independent for monarchs and magnates to control. As Sir Robert Peel explained: "The true reason of requiring any qualification with regard to

¹This point is central to modern theories of "veto players" (Cox and McCubbins 2001; Tsebelis 2003) and has been raised in the early modern context by Stasavage (2003).

property in voters, is to exclude such persons as are in so mean a situation, that they are esteemed to have no will of their own. If these persons had votes, they would be tempted to dispose of them under some undue influence or other. This would give a great, an artful, or a wealthy man, a larger share in the elections than is consistent with general liberty" (H C Debates xxiv, p.1207).

Were the suffrage provisions of the Great Reform Act a concession to defuse a revolutionary threat or a shield to protect parliament's independence against a threat from above? In the next two sections, we build the case for the primacy of the threat from above even in the United Kingdom, where royal power had already been limited.

The Threat From Above

North and Weingast (1989) famously argued that the Glorious Revolution of 1689 imposed significant fiscal constraints on the English monarch's power. The post-Revolution state, however, had two distinct components. In the fiscal-military component, financed by a budget subject to annual approval by parliament, the monarch faced new constraints. In the civil component, still financed by a lifetime "Civil List" grant to the Crown, the monarch was no more constrained than before the Revolution. The monarch retained full discretion over how to spend Civil List revenues and was not required to inform the House of Commons in any way until almost a century later (cf. Redlich 1908, vol. III, p. 162; Chester 1981, p. 78). The resulting expenditures ranged between 27% and 35% of total current expenditures in the peacetime years 1699-1701, a considerable amount of money.

Rents and Influence

Leveraging his financial independence, the monarch routinely allowed ministers to use sinecures, pensions, government contracts, Church preferments and other inducements—constituting

what contemporaries called "the influence of the Crown"—to secure MPs' loyalty (Foord 1947; Harling 1996). Since the Crown controlled both civil patronage and the Civil List—the "fountain from which all blessings flowed" (Reitan 1966, p. 323)—ministers could and did shower rents on their supporters.

Allied with the Crown were various patronal peers who controlled access to many seats in the House of Commons (Sack 1980). MP Daniel O'Connell described this system of "oligarchy" in typical terms: "it was by no means unusual to hear...of the number of [MPs] who sat and voted for this peer, or that borough holder. As long back as the year 1792, an hon. Member of that House, now a noble Lord (Earl Grey), [claimed that] 240 persons were returned under the influence of Peers" (H C Debates xxiv, pp.1207-1208).

The absence of police

Because they could neither defund the civil state, nor dismiss the Crown appointees who staffed it, MPs refused to create centralized civil bureaucracies (Cox 2018). Opposition to centrally controlled civil bureaucracies was most adamant regarding police forces. Louis XIV had established a professional police force in Paris in the 1660s and many continental powers subsequently set up urban forces on the Paris model. However, the "state constabularies, not only in France, Germany and Russia but also in Austria, Spain, Italy, and even in liberal Holland and Belgium, served the negative function for Englishmen of models that were to be avoided, not emulated" (Palmer 1988, p. 18).

British elites believed continental police forces had disciplined the lower orders but that they had also trampled elite liberties and been instrumental in establishing royal absolutism (Philips 1980; Palmer 1988; Emsley 1991; Hay 2017). In thinking through the trade-off that professional police entailed—better control of the lower orders versus larger risks to their own interests—the English gentry decided that they feared the Crown more than the mob.

As the Abbé le Blanc reported in 1737 during his travels, "the English said they 'had rather be robb'd ... by wretches of desperate fortune than by [government] ministers" (Palmer 1988, p. 72).²

To avoid central control over domestic policing, the gentry insisted that order should be kept through the voluntary, unpaid and decentralized efforts of country squires (Wasson 1985). Charles James Fox, leader of the Whig opposition, expressed the traditional view in 1792 during a parliamentary debate:

The police of this country was well administered ... by gentlemen who undertook to discharge the duty without deriving any emolument from it, and in the safest way to the freedom of the subject, because those gentlemen being under no particular obligation to the executive power, could have no particular interest in perverting the law to oppression.

How deeply the gentry opposed police can be illustrated by considering the Gordon riots of 1780, "nearly a week of unchecked, appalling rioting" in London (Lawrence 2014, p. xi). When the government, in response, sought to establish a paid police force in the metropolis, they faced withering opposition based on the threat to English liberties that such a force would represent (Philips 1980, pp. 166-67).

The absence of professional police forces meant that local elites had to maintain order in their own locales, incurring several costs. One cost was unpaid labor, such as service as a magistrate or in the Yeomanry Cavalry. The latter were volunteer corps that turned out frequently to control disturbances such as enclosure protests, food riots, and Luddite violence (Teichman 1940; Hay 2017). Another cost was property damage (Voth and Caprettini 2017). Finally, there were the dues paid to thousands of private associations which helped to catch and prosecute offenders, as well as insure members' losses (Philips 1993; Koyama 2014; Hay 2017). The expenses associated with keeping the peace varied widely across the elite,

²The trade-off between fear of state predation and fear of rebellion in building state capacity has been recently considered by, among others, Bates (2006) and Ansell and Samuels (2014).

depending on the location of their estates.

Summary

The Glorious Revolution was a crucial, but incomplete, reform. The Crown retained control over the entire civil state and was initially as unconstrained as it had been historically in that domain. This created a threat from above so large that English elites refused to allow the creation of professional police forces long after such forces had been established on the continent. Indeed, reducing the Crown's unilateral budgetary control over the civil state became a central goal of the Whigs by the late 18th century (Foord 1947; Roberts 1966; Harling 1996). In the aftermath of the American Revolution, Edmund Burke's Civil List Act of 1782 inaugurated a half century of incremental reforms that put more and more Civil List revenues under parliamentary control (Reitan 1966; Wasson 1985; Harling 1996; Morrison 2011).³

The Threat from Below

To document the incidence of social disorder in Britain, we use a yearly count of the frequency with which British newspapers used the word "riot." Our counts correlate highly (a correlation coefficient of .76) with Tilly's previous riot counts (Horn and Tilly, 2009). However, we cover all of England back to 1750, whereas Tilly covered only the south of England for the 19th century.

As Figure 1 shows, the UK experienced considerable disorder in the late 18th and early 19th centuries. It was "an aristocracy tempered by riot," as Trevelyan famously described it (1926, p. 553).

³In the web appendix, we list all "economical reform" (or budgetary reform) enactments from the 1780s to the reform era, showing that they were all supported by the Whigs.

Figure 1 also plots newspaper mentions of "parliamentary reform," showing that no correlation existed between rioting and discussion of reform in the eighty years prior to the reform crisis. There is similarly no correlation between rioting and reform proposals in parliament.⁴ Our findings corroborate Morrison's (2011) observation that social disorder, even when more severe than that experienced during the reform crisis, was not associated with serious consideration of reform before the 1830s. As Morrison notes, this poses a puzzle for standard revolutionary-threat accounts.

Figure 1: Trends in newspaper corpus mentions of riots and reform, 1750-1850

Sources: Authors' calculations based on word searches in The Times and th Eighteen Century Burney Newspaper's Collection. See the notes below for more details.

Notes: The above plot presents the trends in keyword mentions in major newspaper collections from 1750 to 1850. The trends are normalized by the number of documents to account for the secular trend in newspaper growth during the period. The search term for reform was "parliamentary reform" and the search term for riots was simply "riots." We exclude mentions of "France" for the riot series account to eliminate discussions of continental riots (like the Shelbourne riots of 1784) that did not represent within-Britain disorder. The vertical line indicates the passage of the 1832 Great Reform Act.

Figure 1 also raises the question of why British elites who faced endemic rioting did not

⁴To confirm the lack of correlation visually apparent in Figure 1, we regressed either reform mentions, or reform bills, on various lagged counts of riots (for details, see the web appendix). In the appendix we also detail the construction of our riot variable and show that previous continental revolutions (1792, 1820) did not predict reform proposals either.

enfranchise new partners to help finance greater repression. Our answer is that English elites feared Crown abuse of professional police forces more than they feared dealing with the lower orders without the assistance of such forces.

Our Account of the Great Reform Act

Having introduced the two threats that British elites faced—their still-unconstrained monarch and the riotous lower orders—we can describe how parliamentary reform finally arrived. When the Whigs came to power, we argue that they first addressed the threat from above. Their first major enactment—the Civil List Act 1831—reformed the budget, assuring the House of Commons' control over all civil spending. Their second major effort—the Great Reform Act 1832—reduced the electoral influence of the Crown and the patronal peers. Thus, the Whigs increased MPs' power over the purse while reducing their electoral dependence on the Crown and its aristocratic allies, in pursuit of two long-held goals.

Because these two acts substantially reduced the influence of the Crown, they made police reform politically feasible. Within a year of coming to power, and six months before the Great Reform Act passed, the Whigs announced their intention to introduce professional police forces under central supervision (in the King's Speech of December 1831). A few years later, they succeeded in enacting a sweeping reform of urban policing.

To the extent that the Whigs' police reforms were not anticipated, one can say that their suffrage reforms were part of a package aimed at constraining the power of the Crown and its allied peers—completing the reform that had begun at the Revolution. To the extent that the Whigs' police reforms were anticipated, one can say that their suffrage reforms were part of a package aimed at recruiting middle-class allies to help finance a more robust state response to social disorder. In either case, suffrage reform was designed mainly to constrain the executive—which would, following the logic in North and Weingast (1989), build state

capacity.

The Whigs' Reform Agenda

In this Section, we describe the Whigs' reforms in greater detail. We put particular emphasis on how the Whigs packaged reforms together.

National reforms

Table 1, Panel A, lists the Whigs' main proposals to reform national institutions under three headings—budgetary, electoral and police. The Whigs used a motion to investigate the Civil List, rather than a motion to reform parliament, as their preferred vehicle to bring down Wellington's government. In other words, their first proposal sought to limit the Crown's financial independence, not to subdue the masses.

Once in power, the Grey Ministry quickly enacted the Civil List Act 1831 (1 Wm IV, c. 25), requiring that all expenses of the civilian government henceforth be subject to parliamentary scrutiny, appropriation and audit. Annual expenses of "no less than £696,000 [were] brought within the cognizance and control of Parliament" (Chester 1981, p. 190).

As regards electoral reform, one of the Whigs' chief objectives was to reduce the number of "rotten" boroughs controlled by patronal peers. Their other main objective was taxpayer suffrage. Since the poor were often politically subservient to their landlords, allowing them to continue to vote would help sustain patronal influence. Thus, the Whigs disenfranchised enough poor so that electorates shrank in one-third of parliamentary constituencies (Salmon 2009). Previous accounts have largely ignored this significant element of disenfranchisement that the Great Reform Act entailed.⁵

⁵Taxpayer suffrage also made partisan political sense, since the majority of existing poor voters supported

Table 1: The Whig reform agenda in England and Whales

Act of Parliament (or Proposal)	Budgetary Reform	Electoral Reform	Police Reform	
A. Reforms of national institutions				
Civil List Act, 1831	\checkmark			
Great Reform Act, 1832		\checkmark		
Parliamentary Boundaries Act, 1832		\checkmark		
Melbourne's proposal on national police, 1832			\checkmark	
B. Reforms of municipal institutions				
Lighting and Watching Act, 1833	\checkmark	\checkmark	\checkmark	
Municipal Corporations Act, 1835	\checkmark	\checkmark	\checkmark	
C. Reforms of county institutions				
County Rates Act, 1834	\checkmark			
A bill to establish councils for the management				
of county rates in England and Wales, 1837-8	\checkmark	\checkmark	\checkmark	
County Police Act, 1839	\checkmark		\checkmark	

Notes: The table lists the major proposals promoted by the Whigs to reform national, municipal and county institutions in England and Wales. The Whigs promoted similar reforms in Scotland (e.g., the Burgh Police (Scotland) Act of 1833) and at other levels of local government in England and Wales (e.g., Hobhouse's Vestries Act of 1831).

After their budgetary reforms had been completed and their electoral reforms were under way, the Grey Ministry announced their intention to investigate "the best means of improving the Municipal Police of the kingdom" in the King's Speech of December 1831 (Philips and Storch 1994, p. 79). Lord Melbourne (the Home Secretary) subsequently circulated a bold plan to create a national police force among his ministerial colleagues (Philips and Storch 1999), the budget of which would have been controlled by parliament. However, the cabinet opted for a more decentralized approach, as described next.

Municipal reforms

At the national level, institutional reforms were sequenced—budgets first, then elections, then police. At the municipal level, they were simultaneous (see Panel B of Table 1). Soon after passage of the Great Reform Act, the Lighting and Watching Act of 1833 offered the Tories (Salmon 2009). While Tory-sponsored amendments saved the votes of some poor voters, the enacted reform still disenfranchised large numbers of poor voters and approximated the original goal of suffrage censitaire.

simultaneous budgetary, suffrage and police reforms to the unincorporated towns in England and Wales. The Burgh Police (Scotland) Act of 1833 offered similar but more ambitious reforms for the Scottish burghs. Two years later, the Municipal Corporations Act of 1835 reformed 178 English and Welsh boroughs, requiring that (1) the borough's taxpayers elect the town council; (2) the town council approve an annual and auditable budget; and (3) the town council establish, pay, and regulate a constabulary force. Although Lord John Russell judged that the budgetary provisions were "the most important part, no doubt" of the bill, they attracted little discussion and no amendments. Similarly, the "very important" police provisions were not controversial. Given the security afforded by the budgetary and electoral reforms, Country MPs who previously "would not tolerate even the idea of a police force" supervised by Crown ministers (Hay 1975, p. 18) now sanctioned the creation of centrally supervised police forces in every major town.

It is important to stress that the Whigs' urban policing measures were not simply corollaries of Sir Robert Peel's famous Metropolitan Police Act (1829). That act financed a metropolitan police force while leaving the Civil List intact and thus preserving the unreformed budgetary system. In order to address traditional worries that police would increase Crown influence, the act established a separate Receiver to handle all monies funding the police; and subjected the Receiver's accounts to annual parliamentary scrutiny (Lyman 1964, pp. 150-151). Fiscally speaking, then, the metropolitan police were paid in the same way that the armed forces were.

Some contemporaries advocated financing police in the provincial towns on the same model. For example, a pamphlet published by Montague Gore (soon to be a Whig MP), and recounted in *The Times* on 14 January 1832, proposed

⁶H C Debates xxviii, p. 554.

⁷A previous attempt at such a police force in 1785 had provoked "ferocious hostility" from the City of London under concerns about funding, accountability and liberty (Emsley, 1991).

the establishment of a police force similar to that of London, in all considerable towns... [In] answer to the objection of such a measure placing too much power in the hands of the Crown, [Mr Gore recommended] that the Police Bill, like the Mutiny Bill, should be made annual, and thus the real control and authority over the new force be vested in the legislature.⁸

In contrast to Gore's approach, the Grey Ministry proposed a more radical way to finance the police. They first abolished all unreformed budgets at both the national and municipal levels, replacing them with annual and auditable budgets—thereby reducing the threat from above. They then financed the new police using a combination of local rates approved by town councilors and central transfers approved by MPs, thereby addressing the threat from below.

County reforms

At the county level (see Panel C), the Whigs first reformed budgetary procedures (via the County Rates Act 1834) and then sought to renovate county governance along the lines of their earlier municipal reforms. Although their 1837-38 proposal failed, the County Police Act (1839) enabled counties to form police forces, something that about half promptly did.

Which Threat Did Reform Address?

In this section, we consider four types of macro evidence that the Great Reform Act was part of a state-building reform seeking mostly to constrain royal and aristocratic power, not a concessionary suffrage expansion intended to appease the lower orders or their middle-class allies.

⁸ The Times (London, England), Saturday, 14 January 1832, page 4; Issue 14748. The Mutiny Bill was a measure, passed each year, that stipulated the size and funding of the English (and then the British) Army. Whig theorists viewed it as a central factor in preserving liberty, since funding lapsed unless a new bill was enacted.

Suffrage was part of a package of reforms

As shown in the previous section, suffrage reform was packaged with other reforms, rather than being offered as a stand-alone measure. At all levels of government, the Whigs sought to establish annual budgets, taxpayer suffrage, and professional police forces subject to supervision by the Home Secretary. The Ministry never proposed reforming suffrage rights pertaining to a level of government whose budgets remained unreformed. Nor did they ever propose establishing police forces in units of government that still had unreformed budgets and elections. On four separate occasions, Ministers packaged budgetary, electoral and police reforms together in single bills. This packaging followed a standard liberal recipe of both empowering and protecting the independence of parliament; and reflected traditional English reluctance to establish police forces under crown control.

Reformers emphasized the threat from above, not from below

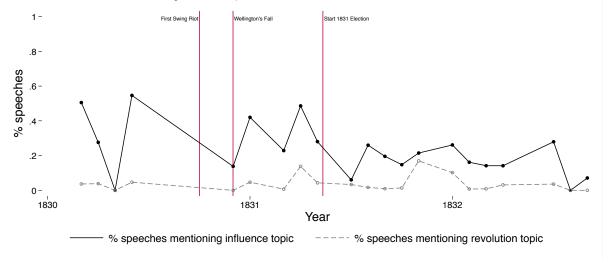
Most Whigs supported the Great Reform Act as a way to end the excessive influence of landed oligarchs; few suggested that reform was the price that had to be paid for domestic peace. While Lord Grey famously suggested that his reform would "prevent the necessity of revolution," other prominent reformers—including the King's brother, the Duke of Sussex—dismissed the idea of revolutionary contagion from the continent as "humbug" (Pearce 2003, p. 196). If a revolutionary threat was the reformers' main argument for reform, they did not manage to secure solid adherence to that idea among their own ranks.

To more systematically assess the relative prominence of threat-from-below and threat-fromabove arguments, we identified all debates on parliamentary reform contained in Hansard's from 1830 to 1832.⁹ Using two dictionaries, one containing typical terms used to discuss

⁹Our sample of speeches includes the major debates on reform, as well as those that discuss public impatience with reform, particular constituencies, and other related topics. We exclude Scottish and Irish reform discussions.

excessive influence (e.g., rotten borough, corrupt, and influence), the other containing terms pertinent to the tumultuous lower orders (e.g., revolution, riot, and mob), we compiled preliminary lists of speeches that considered reform as a remedy to (i) the excessive influence of the Crown and patronal peers; and/or (ii) the threat from below.¹⁰ After reading random samples of both the "influence" and "revolution" speeches, we adjusted our preliminary counts to take account of the false positive rates our detailed reading revealed.¹¹

Figure 2: Percentage of Parliamentary Speeches in Reform Debates Referencing Patronal Influence and Revolutionary Threat, 1829-1832



Source: Authors' calculations based on data from Hansard via Eggers and Spirling (2014).

The result of this analysis can be seen in Figure 2. The basic finding is that well less then 10% of reform speeches referred to social disorder in the average period, while the percentage referring to influence was typically above 20%. When the reform bill was first introduced,

¹⁰Our dictionary was constructed by comprehensively reading two full sessions of debates, as well as additional unsystematic reading of other speeches and contemporaneous texts. The goal was to identify enough key terms that we would not miss relevant speeches in a category as a result of false negatives. In our coding, the presence of one dictionary term is sufficient for a speech to be coded as making a particular argument.

¹¹For example, we found that about 3% of speeches about "influence" used our search words in ways that were unrelated to patronal and crown influence. Thus, we multiplied our preliminary count of "influence" arguments by .97.

speakers were about ten times more likely to mention the issue of influence as the issue of revolutionary threat (as can be seen by looking at the data points closest to 1831 in the figure).

Public expenditures on repression went up, not down

Under a threat account, the main benefit of conceding suffrage rights would have been to reduce the cost of repression. Yet, expenditure on police forces greatly expanded.

Looking at the costs paid through local taxation, 81 boroughs that established police forces in 1836 pursuant to the Municipal Corporations Act (1835) reported their expenditures to parliament. On average, police expenses constituted 23% of each borough's total. Assuming that other municipal expenses did not change between 1835 and 1837 (consistent with historical accounts such as MacDonagh 1977), this implies that police expenses caused an immediate 30% increase in borough expenditures, on average. This was by far the largest new civil expenditure program ever undertaken by the municipal corporations. Indeed, from the Revolution to the reform era, the municipal corporations were rarely entrusted with new duties by local taxpayers, who almost invariably preferred to set up special-purpose units of government whose budgets they could control (MacDonagh 1977; Cox 2018).

The central government also shouldered a portion of police-related expenses, as it made fiscal transfers and hired central staff in order to exercise the Home Secretary's supervisory role. While we are not aware of a detailed accounting of these expenses, it is worth noting that the central government's total civil expenditures, expressed as a percentage of GDP, declined on average by 4.7 percentage points per year in the last twenty years before the Municipal Reform Act, and increased on average by 1.0 percentage points per year in the first twenty years after. A structural breaks test (a Wald supremum test) is consistent with

¹²See The ABSTRACT OF THE STATEMENT OF MONIES received and expended on account of certain BOROUGHS in England and Wales for 1837.

the hypothesis that a break in civil spending occurred in 1836.¹³

Redistribution did not increase after reform until decades later

Under a threat account, the anticipated increase in redistribution via the provision of public goods would be the main reason for potential rebels to accept suffrage rights and abandon rebellion. Yet, other than the police, public services did not expand until decades later.

Riots and Reform

Although we think the four points made in the previous section have considerable weight, none provides micro-level evidence about who supported reform and how the threat from below affected their preferences. Accordingly, in the rest of the paper, we explore the mechanism by which threats from below (operationally measured by riots) translated into elite support for suffrage reform. Under threat theory, more rioting causes elites to revise their risk assessments—the probability of a successful revolution—upward, making them more willing to concede reform.

We envision a different mediating variable. Nearby rioting should have increased the *private* policing costs that individual elites bore. We begin by demonstrating that the Swing riots did in fact cause substantial increases in private policing costs. We then trace how these higher private costs affected voting behavior at three crucial stages of the reform process: how MPs voted in the vote of no confidence that brought down Wellington's ministry in 1830; how citizens voted in the 1831 election that gave the Whigs the majority they needed to push their reform bill through the House of Commons; and how city councils voted in

¹³The spending data for these calculations are from Mitchell (1988, pp. 578-80, 587-89). The GDP data are from Thomas and Dimsdale (2016). An agnostic test puts the break year in 1838, which may reflect the fact that only 81 of 178 reformed boroughs had set up their police forces in 1836. As the others followed, the center's costs would have increased.

1836-37, when setting the initial budgets for the new urban police forces that the Whigs mandated.

By looking at three distinct stages in the reform process, it becomes easier to discern which mediating variable—risk assessment or private cost—is doing the work. For example, under threat theory, the revolutionary threat should dissipate after suffrage reform. Thus, any connection between rioting in 1830-31 and police expenditures in 1836-37 cannot be mediated by risk assessments, since those should all have diminished to a common low level. We discuss the plausibility of each mediating variable for each of our analyses below.

The Swing riots

In late July 1830, an uprising in Paris overthrew King Charles X. In addition to provoking an immediate and sharp increase in British Consol yields (Dasgupta and Ziblatt 2015, p. 16), the Paris uprising sparked several revolutions on the continent and likely inspired the Swing riots, a wave of rural disturbances that began a month later (Quinault 1994, p. 389-390). The Swing riots were vast; Holland (2005) documents some 2,818 distinct violent incidents, mostly involving arson, machine breaking, animal maining, and assault.

The private costs of the Swing riots

Wellington's government did not take any action against the rioters until November 11, over two months after the first riot. The government's inaction was consistent with traditional views on dealing with social disorder: "as [Home Secretary Sir Robert] Peel had written to the Horsham magistrates, the protection of individual properties was their responsibility, not his; and, for the purpose, he urged them to enrol 'specials', form voluntary associations and...revive the old corps of Yeomanry Cavalry" (Hobsbawm and Rudé 1968, p. 254).

Figure 3 shows the sums expended for the Yeomanry and Volunteer Corps in England and

Scotland from 1816 to 1842. An early spike in expenditures followed the Peterloo massacre (1819). A significant reduction in expenditures took place in 1828, after Canning's government decided to eliminate corps that had not been called out in aid of the civil power within the previous ten years. The Yeomanry disbandments, however, had to be reversed three years later to cope with the Swing Riots of 1830. Annual expenditures rose by roughly 220% in 1831, compared to a 59% increase in 1820.

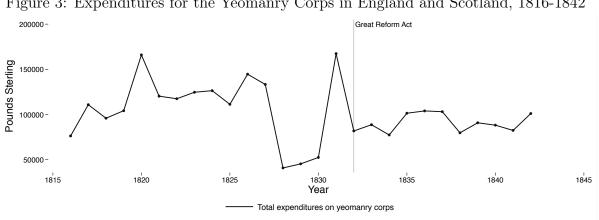


Figure 3: Expenditures for the Yeomanry Corps in England and Scotland, 1816-1842

Source: Authors' calculations based on data collected from British Parliamentary Papers.

Something similar occurred with other private peacekeeping costs. The Report of the Commissioners for Inquiring into the County Rates (1836) provides data on expenditures by private associations on prosecutions over the period 1830-34. If one focuses on the 21 associations providing data for all five years, one finds that their costs in 1830-31 were 74% larger on average than their costs in 1833-34.

The Swing riots confronted British elites with substantial challenges in maintaining order, motivating them to consider reform. A crucial difference with previous spikes in disorder was that the party in power had long advocated budgetary and suffrage reforms that would, if accomplished, make a more robust repressive response to disorder politically feasible.

Wellington's Fall

By the time the House of Commons assembled for its first meeting after the election of 1830, rioting was peaking and "the government's inability to restore order in the Tory counties disillusioned its own supporters..." (Quinault 1993, p. 197). Hoping to take advantage of the government's awkward position, the Whigs moved for an inquiry into the Civil List on 15 November 1830, knowing that their motion was tantamount to a vote of no confidence in the government.

As far as we know, no quantitative analysis of the subsequent vote has been conducted. Here, we focus on the behavior of English MPs. By November 1830, rioting had not yet spread to Wales, and it never did spread to Scotland or Ireland. Of the 482 English MPs still alive and eligible to vote in the Civil List division, 147 (31%) voted against the motion to reform the Civil List, 145 (30%) did not vote, and 190 (39%) voted in favor.

Biographies of MPs indicate that, for many, abstention was intentional.¹⁴ In other words, there were three levels of support for reform: opposition (voting against the motion); waffling (not voting); and support (voting for the motion). We conduct ordered probit analyses below, seeking to discern what determined a member's level of support for reform.¹⁵

In particular, we investigate whether MPs with lower rents and higher policing costs were more likely to support the Whigs' inaugural reform motion. We estimate the rents each MP enjoyed under the old regime by whether they served in either a "nomination" or a "rotten" borough (using a variable coded by Aidt and Franck 2015). We assess policing costs by counting the number of Swing riots that occurred prior to 15 November 1830 within 10km of each borough or university constituency (using Holland 2005). For county constituencies,

¹⁴Member biographies can be found at https://www.historyofparliamentonline.org/. For some examples of intentional abstention, see the articles on the Hon. George Anson, Thomas Tyrwhitt Drake, and Lord Bath.

¹⁵We coded MPs' votes from the division list in Hansard's, checking against each member's biography at https://www.historyofparliamentonline.org/.

we count the total number of riots occurring within county borders prior to 15 November 1830.

In addition to rents and riots, we control for (i) the Whig share of the vote in the 1826 election; (ii) how the constituency's members voted on Lord John Russell's motion (of 23 February 1830) to give direct representation to Birmingham, Leeds, and Manchester; and (iii) each MP's attitude toward Catholic Emancipation (which some historians, such as Clark (1985), argue was a key factor in Wellington's fall). Since historians often use how each member voted in the division we are studying to decide their partisan affiliation (see, for example, the History of Parliament Project biographies), we do not control for party affiliation at the MP level.

Table 2 shows the results of our analyses (with errors clustered at the constituency level). Looking at the control variables, we see that more votes for the Whigs in the 1826 election, as well as more votes for Russell's reform motion in parliament, both strongly predicted support for reform of the Civil List (and hence for bringing in a Whig Ministry). However, attitudes toward Catholic Emancipation had no significant effect.

MPs from more "rotten" constituencies (according to Aidt and Franck's 2015 index) were less likely to support reform. This accords with one of our main hypotheses.

MPs whose constituencies experienced more nearby Swing riots were more likely to support reform (Model 1). That said, since the riots were purely rural, they imposed immediate costs only on those with rural property. Indirect costs would be imposed on the market towns in areas affected by rioting, to the extent that harvests were impaired, but this would take some time. Consistent with this line of reasoning, Model 2 reveals that rioting had a substantial association with how county MPs voted on the Civil List but little or no association with

Table 2: Relationship between the swing riots and the Civil List vote of 15 November 1830

	Civil List Vote		
	(1)	(2)	
Whig Constituency Vote Share, 1826	0.012***	0.013***	
	(0.0028)	(0.0028)	
Reform Support by then-MP, 1830	0.43***	0.50***	
	(0.13)	(0.13)	
Rotten Borough Index	-0.23**	-0.17^*	
	(0.097)	(0.098)	
Support for Catholic Emancipation	0.033	0.024	
	(0.076)	(0.077)	
$ln(1 + ext{Number of Riots})$	0.17^{**}	-0.059	
	(0.087)	(0.11)	
County		0.091	
		(0.22)	
${\rm County} \times \ln(1 + {\rm Number\ of\ Riots})$		0.49***	
		(0.17)	
N	482	482	
Pseudo R-Sqrd	0.10	0.12	

Standard errors robust to clustering at the constituency level presented in parentheses.

Notes: The above table presents the results from estimating equation $CLvote_i = \alpha + \beta_1 whiq_i + \beta_2 reform_i + \beta_3 rotten_i + \beta_4 catholic_i + \beta_4 rotten_i + \beta_5 rotten_i + \beta_5$ $\beta_5 ln(1+riots_i) + \beta_6 county_i + \epsilon_i$ where i indexes the parliamentary constituency. We measure the vote on the Civil List (CLvote) as -1 for a vote against, 0 for no vote, and 1 for a vote in favor. We use ordered probit to estimate the above equation. Our sample are the 482 English MPs eligible to vote in the division, and we cluster our standard errors to reflect the 282 constituencies with MPs voting. The variables for the Whig share of the constituency vote in 1826 (whig), Support for Russel's reform in 1830 (reform) and the index for the rottenness (rotten) of the borough are from Aidt and Franck (2015). MP support for Catholic Emancipation (catholic) was coded by the authors from History of Parliament Project Biographies. The number of riots (riots) is the number of Swing Riots in the county measured before the Civil List vote date (5 November 1830) from data provided by Holland (2005). We add 1 before taking the natural log since some counties did not experience the Swing Riots.

how non-county MPs voted. 16

The results of Model 2 are consistent with our hypothesis that local elites bearing higher private protection costs under the unreformed policing system were more likely to support

^{*} p < 0.1, ** p < 0.05, *** p < 0.01

¹⁶The lack of effect in non-county constituencies may also reflect the fact that few boroughs had experienced any "riot treatment" by the time of the division under study. 71% of the boroughs had not experienced any nearby riot by 15 November 1830; and only 5% had experienced five or more. In contrast, riot exposure in the counties varied widely.

bringing in a Whig Ministry. Some of these MPs may simply have been dissatisfied with Wellington's handling of the riots; others may have thought the Whigs would mount a more effective response within the confines of the unreformed polity; and still others may already have realized that the Whigs were likely to establish new police forces (Philips and Storch 1994).

Is it possible to interpret our results as supporting threat theory? Did nearby riots increase MPs' risk assessments, which in turn affected their votes? Prior to the vote on 15 November, newspaper coverage of the Swing riots was scant and never suggested that the rioting had any revolutionary potential. This was not because the newspapers were shy about discussing revolution. They frequently ran articles about revolution — but none of them mentioned the Swing riots. If contemporaries did view the Swing riots as increasing the risk of revolution, then the lack of newspaper coverage and the government's inaction until November 11 are very hard to understand. Thus, the mechanism generating the correlation we find between rioting and MPs' votes against Wellington was much more likely the raising of private costs of protection, rather than any revision of revolutionary threat perceptions.

The 1831 Election

The peak of Swing rioting occurred in November and December of 1830. Thus, by examining events in 1831 we can assess how elites responded after the bulk of the riots had occurred. In particular, we consider the election of 1831, held between April 28 and June 1.¹⁷

Aidt and Franck (2015) have already shown that the pro-Whig vote swing from 1830 to 1831 was substantially blunted in "nomination" and "rotten" boroughs. Since the patrons of such boroughs tended to receive a higher share of the unreformed system's rents, the MPs they nominated tended to oppose reform.

¹⁷In this era, elections were held over several weeks, not on a single day.

Aidt and Franck also persuasively show that the Whigs posted stronger electoral gains in constituencies that were exposed to more Swing riots (cumulatively, prior to the election). Their OLS results indicate that "exposure to one additional riot within a radius of 10km from a constituency increased the share of Whigs elected in that constituency by 0.47 percentage points relative to past Whig support" (p. 526). Were a constituency to move from the first quartile of riot exposure to the third, the share of seats won by the Whigs would increase by 5.2 percentage points. Their instrumental-variables results (which can be interpreted as causal) suggest even stronger effects.

Our interpretation is that elites experiencing a higher riot intensity in their own locale (prior to the election of 1831) should have faced higher private costs of property protection and, thus, should have become more likely to support the Whigs. Some might have retrospectively rewarded the Whigs for Lord Melbourne's vigorous suppression of the Swing riots in the half year he had been Home Secretary (Brock 1973, p. 134). Others might have anticipated that the Whigs would pursue police reform, as indeed they began to do early in the first session of the reformed parliament.

Aidt and Franck view their results differently. They assume that elites nearer to Swing rioting perceived a higher threat of rebellion than more distant elites (p. 506), and thus interpret their results as supporting revolutionary-threat theory. We see two main problems with this interpretation.

First, it is not clear why elites exposed to more riots could not persuade elites exposed to fewer riots that a serious revolutionary threat existed. In standard models, asymmetric private information can survive only if informed actors cannot credibly communicate with uninformed actors (Fearon 1995). We know that British elites had many opportunities to discuss threats facing the regime. They wrote innumerable letters, read the same newspaper articles, and attended the same parliamentary debates. Thus, estimates of the regime's

probability of survival should have been based on the same information, unless there was some inability to communicate credibly. Aidt and Franck's interpretation implicitly relies on the existence of such an impediment but no one has explicitly argued that one existed.

Second, as noted in the previous section, newspapers did not depict the Swing riots as contributing to a revolutionary threat. Moreover, had there been a significant risk of regime overthrow, then investors should have decreased their holdings of regime-dependent securities—such as pound sterling notes, British Consols, and Bank of England stock—as these might become worthless after revolutionaries seized power. However, that is not how investors behaved (Cox and Saiegh 2019).¹⁸

The Swing Riots and the New Police

We have argued that the Swing riots increased the private policing costs that some elites bore, thus increasing their demand for professional police forces paid by a broader tax base. If this account is valid, then areas experiencing more intense rioting should have taken up the Whigs' police reforms with greater alacrity. In this section, we show that they did.

Although required to establish police forces by the Municipal Reform Act (1835), how much boroughs spent on their new forces was left up to their respective town councils. In this section, we examine 147 provincial English towns that had no police forces prior to 1836 and reported their expenditures to parliament in 1837-38. (Note that these towns are different units from the parliamentary constituencies analyzed in Table 2.) We exclude London, which established a force in 1829, as well as 11 provincial towns that established police forces via special acts prior to municipal reform. For each of the included boroughs, we know that

¹⁸Aidt and Franck (2019) have also investigated how English MPs voted in the division that precipitated the 1831 election. Their analysis does not bear on our hypothesis — that local rioting increased local elites' private costs, thus generating support for reform—because they measure violent events only at the county level.

they spent nothing on professional police forces before 1835, but (potentially) spent non-zero amounts in 1837 and 1838. We measure our outcome as per capita police-related expenditure (expenditure_{it}) in borough i and year t.¹⁹

We model this expenditure as depending on two main factors that affected local property owners' demand for protection. First, more populous towns tended to have greater urban crime, which we would expect to increase demand for police services. Thus, we include $ln(pop_{it})$, the logged population of borough i in the 1831 census, and linearly interpolated for 1837 and 1838 (bracketing by 1831 and 1841). Second, to assess whether towns with more tumultuous hinterlands spent more, we include $ln(1 + rioters_30km_i)$, the logged number of Swing offenders within 30km of each borough in 1830-31 (plus 1) interacted with an indicator equal to 1 $(post_t)$ in the years after the municipal reform was passed.²⁰ Because we are modeling local police expenditures (rather than MP votes in parliament) we think the data-genrating process (and thus, the necessary controls) are different from Table 2.²¹

All boroughs included in our analysis were on a parallel trend of expenditure on professional police—none at all—prior to 1835.²² In that year, the Municipal Reform Act required all of them to create professional police forces. Insofar as that Act was exogenous to any individual municipal borough, we would not expect the potential outcomes of municipal expenditure to

¹⁹Our data are from the Abstract of the statement of monies received and expended on account of certain boroughs in England and Wales for 1837, and the same title for 1838.

²⁰Specifically we look at post-1837 since this is the first post-reform year that we have data available. The data on rioters is the total (apprehended) Swing Riot offenders as geo-located from Holland's data. In ArcGIs, we located municipal boroughs, and calculated the percentage of the geo-located offenders within a given concentric distance from the borough. Note that this measure of rioters is distinct from the number of riot incidents.

²¹In addition to the fact that the units are different.

²²This is certainly true in terms of expenditure on professional police *subject to central supervision*. If we loosen the definition of "professional" police to any officer (e.g., a constable or serjeant at mace) given a salary and charged (even if not exclusively) with policing duties, and drop the requirement that they be subject to central supervision, it is still largely true that there was no spending on so-defined police prior to 1835. Examining the first 70 sample boroughs listed in the appendices to the First Report of the Commissioners appointed to inquire into the Municipal Corporations in England and Wales (1835)), 80% spent nothing on so-defined police, while another 17% spent less than 20 pounds per annum. Only Oxford (70 pounds) and Bristol (468 pounds) had larger expenditures.

differ across the boroughs. Our specification includes municipality fixed effects that account for any time-invariant municipality-level features that might have affected police expenditures. But we must still assume that no factors, other than population, varied overtime and affected both riot exposure and police expenditure.

Table 3, Model 1, displays our main results (with cluster-robust standard errors). The constant term reveals that boroughs with the smallest populations (1,500) and no nearby riots spent virtually nothing on the police before the reform, confirming that boroughs included in the sample were on a parallel trend. Regarding the relationship between riot exposure and post-reform police expenditures, a natural way to assess their interaction is to measure the extent to which the effect of these two factors together exceeds the effect of each considered individually. In this case, because there were no expenditures on professional police prior to 1835, the combined effect of both factors, the coefficient β_3 , necessarily exceeds the product of the effects of these factors considered separately.

In terms of these factors' individual effects, the results indicate that boroughs that did not experience any riots within 30km in 1830-31 increased their total per-capita police-related expenditures by 0.017 pounds in the years after the municipal reform was passed. To assess the additive effect of riots, we estimate the predicted post-reform expenditures setting the different rioters measures at their mean values. Next, we compute the marginal effect of riot exposure as the difference between the predicted outcomes and the estimated post-reform expenditures of boroughs without any riots in 1830-31. Consider the case of boroughs where at least one Swing Riot offender was detained within a 30km radius. The mean value of the variable ln(1+ rioters) is 4.19. The associated linear prediction of the total per-capita police-related expenditures for such a representative borough amounts to .0304 pounds (with a .003 standard deviation) in the years after the municipal reform was passed. These results reveal that the post-1837 increase in per-capita police-related expenditures was roughly 77%

Table 3: Relationship between the swing rioters and urban police expenditures

	Police expenditures per capita		
	(1)	(2)	(3)
ln(Population)	0.012	0.0093	0.0083
	(0.021)	(0.022)	(0.023)
Post-1837	0.017***	0.023***	0.027***
	(0.0049)	(0.0049)	(0.0040)
$ln(1 + \text{Number of rioters } 30\text{km}) \times \text{Post-}1837$	0.0032***		
	(0.00093)		
$ln(1 + \text{Number of rioters } 20\text{km}) \times \text{Post-}1837$		0.0027^{**}	
		(0.0010)	
$ln(1 + \text{Number of rioters } 10\text{km}) \times \text{Post-}1837$			0.0027^{*}
			(0.0014)
Constant	-0.087	-0.058	-0.052
	(0.18)	(0.19)	(0.19)
Observations (Borough x Year)	357	357	357
R-Sqrd	0.72	0.72	0.71

Standard errors robust to clustering at the constituency level presented in parentheses.

Notes: The above table presents the results from estimating equation $policeExp_{it} = \alpha_i + \beta_1 ln(population_{it}) + \beta_2 post1835_t + \beta_3 (ln(1+rioters_i) \times post1837_t) + \epsilon_{it}$ where i indexes the municipal borough and t indexes the year. The sample of boroughs are those in England that had not yet established police forces in 1835 when the Municipal Corporations Act was passed. The sample of years are 1831, 1837 and 1838. Population is available decennially and linearly interpolated for non-decennial years. The dependent variable is measured as total police-related expenditures per capita (policeExp), α_i are municipal borough fixed effects, post1837 is in indicator equal to 1 after 1837 and the passage of the reform (note that we don't take into account different trends, only average levels, after the passage of the reform due to our limited data), and rioters measures the number of Swing Riot offenders (i.e., rioters) detained within a given concentric distance from the municipal borough.

higher in towns that experienced an average amount of riots within a 30km radius in 1830-31 relative to boroughs without any riot exposure.

In Models 2 and 3, we repeat the analysis using the number of Swing riots within 20km and 10km, respectively. The results are very similar, regardless of which measure of riot intensity we use. In terms of riots' additive effects the mean values of the variables ln(1+rioters 20km) and ln(1+rioters 10km) are 2.86 and 1.31, respectively. The associated linear predictions of the total per-capita police-related expenditures for both types of representative boroughs amount to 0.0307 pounds (with a standard deviation of 0.003) in the years after the municipal reform was passed.

^{*} p < 0.1, ** p < 0.05, *** p < 0.01

We have already noted that rioting in 1830-31 should not affect decisions made after 1832, if threat theory holds, because suffrage expansion should defuse the revolutionary threat. We would also point out, that if riots did increase fears of rebellion among those elites near enough to personally witness their effects, and these fears were not fully removed by suffrage expansion, then such elites could have supported increased funding for the British Army, which was the main institution tasked with quelling rebellion in the unreformed polity (Gash 1979, pp. 5-6). If instead riots increased the private costs born by those elites whose properties were attacked, then affected elites should have become more likely to support the creation of publicly funded police forces. Consistent with this latter hypothesis, we have shown that the local intensity of Swing rioting was associated with higher per-capita police expenditures in the boroughs that established forces after the Municipal Corporations Act (1835).

Reconsidering suffrage expansions

The first suffrage reforms

Outside Great Britain, a wave of liberal constitutions mandated the first suffrage expansions in Western Europe. All these constitutions stipulated both empowering parliament (via budgetary reform) and protecting parliament's independence from the Crown (via various reforms including taxpayer suffrage). Ensuring parliament's independence from the executive was logically necessary to ensure that the former could constrain the latter; and liberal theorists in fact advocated taxpayer suffrage mainly as a means to bolster parliament's "independence" (Kahan 2003). Thus, there is considerable direct evidence that early suffrage reforms on the continent were aimed mainly at constraining the threat from above, rather than appearing the threat from below.

Why then did the earliest continental suffrage reforms occur during social disorder? We agree with threat theorists that social disorder confronted incumbent elites with a choice between repression and concession. However, since dealing with disorder required exercising the state's repressive apparatus, and possibly expanding it, the issue of who controlled that apparatus was inevitably raised. Executives advocated that they be given full power to restore order, dispensing with any parliamentary and judicial constraints that might slow them down. Parliamentarians favored new rules that would ensure British-style "parliamentary supremacy." Polities that chose the latter option were then in a position to reorganize their pre-existing police forces to ensure their loyalty to the new liberal regime and possibly to improve their funding or efficiency.

Did the continental polities that chose the parliamentary path in fact reorganize their police forces? The countries whose liberal constitutions lasted at least a decade were Norway (1814), France (1830), Belgium (1831), Denmark (1848) and the Netherlands (1848). In each of these cases, there were major reorganizations of the existing police forces. In Norway, article 17 of the constitution stipulated that royal ordinances pertaining to the police would remain in force only provisionally until the next Storting reviewed them; and subsequent statutes created the Ministry of Justice and the Police (1818) (www.regjeringen.no/en/id4/). In France, the Gendarmerie royale de Paris, which had been loyal to the ousted king, was disbanded and replaced by a new Garde municipale de Paris in 1830, while the National Guard was reorganized in 1831 (House 2014, pp. 41, 43). Belgium created its national Rijkswacht/Gendarmerie on the basis of the already existing constabulary (en.wikipedia.org/wiki/Gendarmerie (Belgium)/). Denmark reformed the Copenhagen police force, based on the model of the London Metropolitan Police (Christensen 2017). Finally, the Netherlands' Municipality Act of 1848, modeled on the UK's Municipal Corporations Act of 1835, set up city police forces; and the National Police were established in 1851 (Wintle 1996). Thus, all countries that adopted durable liberal constitutions combined budgetary reform, taxpayer suffrage, and

police reform.

Probably the main reason for the liberal reforms of the police on the continent was to further constrain the executive and ensure that the police were loyal to the new regimes. Possibly, reformers also thought that the forces could be expanded or made more efficient. In France, for example, the *Garde municipale de Paris* doubled in size over its first decade (House 2014, p. 43). That said, there was less reason to expand the forces on the continent since, unlike the UK, such forces had long been in existence.

Later suffrage reforms

Once a country had constitutionalized its monarch, further suffrage reforms should no longer have been about constraining the executive. In these later reforms, many considerations may have been in play. In some cases, reformers may have sought to defuse revolutionary threats (as in Acemoglu and Robinson 2001) or to incorporate new segments of the tax-paying population into the electorate in order to finance new public services (as in Lizzeri and Persico 2004; Timmons 2005). In other cases, royalist forces may have promoted suffrage expansions as "poison pills" to counteract pressure to expand parliament's budgetary control (as in Pittaluga et al. 2015).

Conclusion

We have argued the Great Reform Act was part of a package of reforms intended to build a state that would credibly serve middle-class interests. In particular, political reform offered a way to create professional police forces, fund them with taxes, and put them under ministerial supervision, while assuring the gentry that the resulting forces would not become akin to a standing army under Crown control.

The reforms gave voting rights to middle-class citizens for the same reason that firms offer such rights to prospective share-holders. Investors must be able to check executives' misuse of funds, else they will not voluntarily invest (Easterbrook and Fischel 1983; Bolton and Dewatripont 2005, p. 527).

Voting rights alone, however, were insufficient. In the unreformed polity, some domestic public services were still financed by funds that lay outside the annual purview of elected representatives. If this state of affairs continued, then voting rights would be of little value to taxpayers in controlling domestic services, because their elected representatives would lack financial control. Thus, both suffrage and budgetary reforms were essential to attract a new infusion of equity from the middle class.

The necessary trio of reforms were offered in quick succession at the national level. The Grey Ministry first pushed through the Civil List Act (1831), ensuring that MPs would control all public spending. It then pushed through the Great Reform Act (1832), ensuring that the middle class would control MPs' elections. While the reform bill was still in progress, the Ministry began to consider a scheme for a national police force, before opting to pursue a more decentralized approach.

At the borough level, the Municipal Corporations Act (1835) implemented the analogous reforms all at once. Its budgetary clauses ensured that councilors would control all local spending; its suffrage clauses ensured that middle class voters would control town councilors' elections; and its police clauses required every borough to establish a professional police force, giving the Home Secretary overall supervisory control.

At the county level, the Whigs enacted budgetary reform (1834), sought electoral reform (1837-38), and then enacted the permissive County Police Act (1839). Within a decade of the initial budgetary-cum-suffrage reforms at the national level in 1831-32, all boroughs and half the counties had established police forces.

A prominent school of democratic theorists, including Acemoglu and Robinson (2000, 2006) and Boix (2003), views elites facing revolutionary challenges as having two mutually exclusive options: repression or (concessionary) reform. In our account of Britain's reform era, the adjustment of suffrage rights was part of a broader effort to enhance the state's credibility, allowing an expansion of its repressive capacity vis-a-vis the lower orders. Thus, our account is closer to the political economy literature stressing the connection between state credibility and military capacity (e.g., North and Weingast 1989; Dincecco 2009; Ansell and Samuels 2014; Ferejohn and Rosenbluth 2017); and to theories stressing the importance of endowing equity investors with voting rights (e.g., Easterbrook and Fischel 1983; Bolton and Dewatripont 2005, p. 527; Barzel and Kiser 2001).

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Online Appendix to "The Political Economy of Suffrage Reform: The Great Reform Act of 1832"

Appendix is for online publication only.

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Appendix Contents

\mathbf{A}	Riots and Reform in the Newspaper Corpuspa	age	43
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A Riots and Reform in the Newspaper Corpus

To more formally evaluate the relationship implied in Figure 1 in the main text of the paper, we consider a simple time series specification in which we relate newspaper corpus mentions of riots, to the total number of bills that considered either suffrage reform or parliamentary reform more generally.

Our simple specification takes the form

$$reform_t = \alpha + \beta riots_t + \epsilon_t \tag{1}$$

where t indexes the year; $reform_t$ is one of two measures, either the count of reform-related bills considered in parliament, or the percentage of documents in the newspaper corpus that mention reform; and $riots_t$ is one of two measures, either the newspaper corpus mentions of riot activity (excluding documents that also mention France), or the post-1800 violent incidents from Horn and Tilly (2009).

The correlations are presented in Table A1 below.

Table A1: The relationship between riots and reform bills

	Proposed Bills			Newspaper Reform Mentions		
	(1)	(2)	(3)	(4)	(5)	(6)
$riots_t$	-0.31**	, ,	, ,	0.046	, ,	, ,
	(0.13)			(0.069)		
$\Delta(riots_t - riots_{t-1})$	` ,	-0.073		, ,	0.029	
		(0.060)			(0.064)	
$riots_t$ (Horn & Tilly)		,	-0.00029		, , ,	0.0032*
,			(0.0015)			(0.0019)
Obsv. (Years)	83	82	33	83	82	33
Year range	1750 - 1832	1750 - 1832	1800-1832	1750 - 1832	1750 - 1832	1800 - 1832

Robust standard errors in parentheses.

^{*} p < 0.1, ** p < 0.05, *** p < 0.01

B Repression of Riots

As Bend (2018) notes, having been out of power for the majority of the early nineteenth century, the Whigs were eager to demonstrate competence in the early months of their minority government. Prime Minister Charles Grey gave Home Secretary Viscount Melbourne ample powers to suppress social unrest, by any and all means: "... Magistrates were advised to swear in special constables; to form local defense associations; military detachments were dispatched to reinforce provincial forces and assisted in the arrest of leaders; royal pardons were offered to supplement local rewards to identify and convict incendiaries; Bow Street officers were dispatched to aid in their detection; and inaction or conciliation to the will of the crowd was severely reprimanded ..." (Bend 2018: 208)

In addition, the Grey Ministry resorted to a 1812 statute that introduced the death penalty for the destruction of machinery to further suppress any serious disturbances. According to Archibald Prentice's account:

"On the 9th of January [of 1831], judgement of death was recorded against twenty-three prisoners, for the destruction of a paper machine in Buckinghamshire; In Dorset, on the 11th, against three, for extorting money, and two for robbery; at Norwich fifty-five prisoners were convicted of machine breaking and rioting; at Ipswich three of extorting money; at Petworth twenty-six for machine breaking and rioting; at Gloucester upwards of thirty; at Oxford twenty-nine; and at Winchester out of upwards forty convicted six were left for execution. Four of these were afterwards respited; but two of them were executed on the 15th. At Salisbury, forty-four prisoners were convicted, of whom two were executed on the 25th. In the whole upwards of eight hundred of the rioters were tried ... and all of those who were convicted, with the exception of the four cases mentioned, were sentenced to various terms of transportation and imprisonment." (Prentice 1851: 372-373).

Finally, as noted in the main body of the paper, the 1828 Yeomanry disbandments, were reversed in 1831 to cope with the Swing Riots (see Figure 3)