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

Gary Cox* Adriane Fresh† Sebastian Saiegh‡ §

December 2, 2022

Abstract

We argue that the Great Reform Act's suffrage provisions were 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 monarch and allied patronal peers 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 unreasonably increase royal power. 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, and hence the behavior, of the new forces.

Keywords: Franchise extension; Democratization; State capacity, Great Reform Act

*William Bennett Munro Professor of Political Science, Department of Political Science, Stanford University,Encina Hall West, Room 303, Stanford, CA 94305, USA; gcox@stanford.edu

†Assistant Professor of Political Science, Department of Political Science, Duke University, Gross Hall 281, 140 Science Drive, Durham, NC 27708, USA; adriane.fresh@duke.edu.

‡Professor of Political Science, Department of Political Science, UC San Diego, Social Sciences Building 370, 9500 Gilman Drive, La Jolla, CA 92093, USA; saiegh@ucsd.edu

§Corresponding Author

1 Introduction

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

The Whigs' reforms, by more securely constraining the executive, led to substantial increases in public revenues and expenditures. In this way, their reforms were, in effect, the 1830s analogy to those passed in the 1690s following the Glorious Revolution (North and Weingast 1989). But the Whigs' reforms had an important additional effect. They also blunted traditional objections (explained below) to strengthening the domestic coercive apparatus of the state. Within a few years of the Reform Act's passage, professional police forces were founded in all major British towns. 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. All told, then, the Whigs offered a series of interlinked reforms to, first, build a more credible state, and then expand its policing capacity.

The previous literature on the Great Reform Act falls into three main schools, according to which the Whigs' suffrage reform was intended to: (1) gain partisan advantage vis-à-vis the Tories in a multi-dimensional policy environment in which economic and religious concerns interacted with calls for suffrage reform (Ertman, 2010; Bateman, 2018); (2) defuse a revolutionary threat (Acemoglu and Robinson 2000, 2006; Boix 2003; Przeworski 2009; Aidt and Franck, 2013, 2015); or (3) reduce the influence of landed magnates over borough

elections by abolishing rotten boroughs and making bribery and other private transfers less effective in the remaining boroughs (Kahan 2003; Lizzeri and Persico 2004). Our analysis falls mostly in the last—"clean up elections"—school.[1]

That said, no previous analysis has depicted cleaner elections as crucial to ensuring executive constraint. In contrast, we emphasize that suffrage reform was combined with budgetary reforms in order to constrain executives. Consistent with the idea that the Whigs' overall aim was to build a more credible state, in this paper we show that they repeatedly deployed the same recipe for executive constraint at the national and local levels; that their reforms promptly increased state revenues in the affected units of government; and that the first large project in which those revenues were invested was a vast expansion of the state's policing capacity. Our main contribution is thus to offer suffrage reform as a mechanism for cleaning up elections within the broader literature on constitutional commitment.

Our state-building account can also be viewed as amending revolutionary threat theory. Under that theory, elites confronted with social disorder must choose either concession or repression. Concession means expanding suffrage rights in order to make more credible promises of increased redistribution (Acemoglu and Robinson 2000, 2006). Repression, on the other hand, is conducted using the resources of the old regime, absent suffrage reform. We amend the latter assumption. Since repression requires resources, we argue that pre-democratic elites may have offered voting rights in order to attract greater resource investments from the middle class. Contemporaries may have therefore viewed suffrage reform as a way to constrain the executive and build state capacity, rather than as a concession.

In this way, our account also relates to a line of theories arguing that suffrage expansions occur when incumbent elites, unable to finance valuable new project(s) by themselves, offer

[1]We note that there are complimentarities between these schools of thought, particulary (1) and (3). Tory aristocrats had considerably more control over rotten boroughs, and of the voting behavior of the rural poor, than their Whig counterparts. Thus, reducing the electoral influence of landed magnates also conveyed a strong partisan advantage.

voting rights in exchange for contributions of new resources. Such theories are common in the study of corporations, where voting rights are offered in exchange for equity investments (Easterbrook and Fischel 1983). They are also common in political studies, where voting rights are offered in exchange for warfare investments (Barzel and Kiser 2001; Ticchi and Vindigni 2008) or frontier settlement (Engerman and Sokoloff 2005; Gailmard 2022).

The rest of our paper proceeds as follows. Section 2 explains why liberal thinkers viewed taxpayer suffrage as a means of curtailing royal and aristocratic electoral power. We then detail our account of the 1832 Reform in Section 3, contextualizing suffrage as part of the Whig's broader package of reforms. Various pieces of supporting evidence follow in Sections 4-7. In particular, we exploit existing geo-located rioting data to assess how English elites responded to rioting at the local level. Assembling data on local support for parliamentary reform, and adding new data on local support for expanding police services, we ask whether elites responded to local rioting by increasing their support for parliamentary reform, expanding investments in repressive capacity, both, or neither. Finally, Section 8 discusses the implications of our account for European democratization beyond Britain.

2 Suffrage Reforms to Protect Parliament's Independence

North and Weingast (1989) famously argued that the Glorious Revolution of 1689 imposed significant fiscal constraints on the English monarch. The post-Revolution state, however, had two distinct components. In the fiscal-(national)military component, financed by a budget subject to annual approval by parliament, the monarch faced new post-1689 constraints. In the civil component, the monarch was no more constrained than before the Revolution. The monarch received a lifetime grant of revenues known as the "Civil List" and retained full discretion over how to spend them. The resulting expenditures ranged between 27% and 35% of total current expenditures in the peacetime years 1699-1701, a considerable amount.

Leveraging the financial independence that the Civil List revenues afforded, the monarch routinely used sinecures, pensions, government contracts, Church preferments and other inducements—what contemporaries called "the influence of the Crown"—to secure ministers' and MPs' loyalty (Foord 1947; Harling 1996). Since the monarch controlled both civil patronage and the Civil List—the "fountain from which all blessings flowed" (Reitan 1966, p. 323)—the monarch could and did shower rents on supporters.[2] Given the monarch's vast income—the spending of which was not accountable to parliament—contemporaries worried that parliament's independence might be undermined. This worry motivated Dunning's famous parliamentary resolution that "the influence of the crown has increased, is increasing, and ought to be diminished," which marked the beginning of a half century of reforms seeking to abolish sinecures, curtail the payment of pensions to MPs, and bring the Civil List revenues onto the regular parliamentary budget (Harling 1996).

2.1 Opposition to building the civil state

Following the consolidation of the 1799 Dublin police in 1808, and its expansion into the counties under Peel's 'Peace Preservation Force' in 1814, Ireland saw the development of an organised police. On mainland Britain, however, different pressures did not allow for such a rapid acceptance of professional police forces. Although they faced endemic and costly rioting (Tilly 2008), English elites consistently opposed creating state constabularies similar to those in Europe (Palmer 1988, p. 18). In the case of Whig reformers, they wished to avoid doing anything that might increase the influence of the Crown. In their view, police forces paid and appointed by the monarch had led to royal absolutism on the continent, and would do the same at home (Philips 1980; Palmer 1988; Emsley 1991).[3] As Charles James

[2]The monarch's reach extended into the electoral process. For example, George III "spent upwards of £60,000 on the general election" of 1780 (Christie 1963, p. 715), equivalent to over 11,000,000 US dollars in 2020. Allied with the monarch, moreover, were patronal peers who effectively owned an array of "rotten" boroughs, enabling them to control over 200 seats in the House of Commons (Sack 1980).

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

Fox, leader of the Whig opposition, put it 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.

In rural Britain, a bastion of Toryism, there also existed significant resistance to establishing professional constabularies. Wealthy land-owners insisted that order should be kept by local, part-time, volunteer corps, such as the Yeomanry Cavalry. These para-military forces were largely controlled by county elites, required a local magistrate's order to act, and were usually only mobilised to support the civil power in cases of emergency. As Hay notes, under this system it was possible for local elites to maintain the most limited form of police which "...not only applied little pressure to their purses but also kept authority within a small group and, more important, within the county..." (Hay 2017: p.154).[4] Therefore English elites in both parties were willing to bear the costs of policing the riotous lower orders themselves, rather than create centrally-funded police forces that might encroach on their powers or become tools of royal absolutism.[5]

2.2 Reformers' advocacy of taxpayer suffrage

European liberals believed that the threat posed to parliament's independence by an unconstrained monarch could be mitigated by suffrage reform. Kahan's (2003) wide-ranging survey makes clear that taxpayer suffrage—a system in which all, and *only*, those paying a minimum amount of direct taxes had the vote—was the top choice of liberals to prevent excessive royal influence. 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.

[4]See Hay (2017) for a detailed discussion of the central role played by localism and dormancy in nineteenth century policing debates.

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

The reform bill imposed a new property requirement in the boroughs, restricting voting rights to men who paid a yearly rental of at least £10. As originally proposed, this requirement would have disenfranchised all existing poor voters. The Whigs later grandfathered in poor voters living within (or, in some cases, within seven miles of) borough boundaries, disenfranchising only non-residents.[6] Because there were many non-resident poor entitled to vote in some boroughs, their disenfranchisement meant that electorates *shrank* in one-third of the boroughs that were not abolished by the Great Reform Act (Salmon 2009).

If the Whigs' goal was to limit landed magnates' influence over borough elections, their approach made perfect sense. It was widely believed that landed magnates could exert strong influence over the rural poor—economically, socially and politically (Moore 1976). Thus, allowing the rural poor to vote was viewed as tantamount to increasing the number of votes the landed elites cast (Kahan 2003, pp. 26-27).[7] Disenfranchising the non-resident poor prevented this. As Bateman (2018, p. 255) puts it, reform "was intended to limit the power of nomination, especially among Tories, by 'placing the franchise as much as possible in the hands of the middle classes' and disenfranchising most of the laboring classes."

3 Our Account of the Great Reform Act

3.1 Constraining the monarch

We argue that the Great Reform Act was part of a two-pronged project to constrain royal power. British reformers had long recognized that constraining royal power required *both* empowering parliament *and* preventing the monarch and allied peers from controlling par-

[6]Non-resident voters who owned enough property in the borough retained their voting rights.

[7]As Sir Robert Peel explained: "The true reason of requiring any qualification with regard to 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). Peel in part quoted William Blackstone's *Commentaries on the Laws of England*, an influential treatise on the common law originally published 1765-1770.

liamentary elections. Thus, after the Glorious Revolution, reformers both expanded parliament's power over the purse (North and Weingast 1989) and erected new defenses against the monarch buying elections and suborning MPs (Brewer 1988, p. 159; Cox 2016, pp. 25-26).

In the 1830s, reformers followed the same logic. Their first major reform, the Civil List Act of 1831 (1 Wm IV, c. 25), put all expenses of the civilian government under parliamentary control (Chester 1981, p. 190). Soon thereafter, the Great Reform Act reduced the electoral influence of the monarch and allied peers by (i) abolishing the "rotten" boroughs; (ii) disenfranchising poor non-resident voters in the continuing boroughs; and (iii) enfranchising all those meeting a minimum property requirement (taxpayer suffrage).[8]

It was not just at the national level that the Grey Ministry pursued its two-pronged agenda to constrain executive power. At the local level, the Whigs viewed the unreformed municipal corporations—mostly un-elected—as corrupt executive powers that needed to be brought to heel. Their third major reform, the Municipal Corporations Act of 1835, thus required each town to have a town council empowered with complete control over the town budget and elected by taxpayer suffrage. Moreover, as if to underline the point that their budgetary and electoral provisions were complements, which acted together to constrain local executives, the Whigs *packaged* them together in single bills.[9]

3.2 Expanding state revenues

As North and Weingast's (1989) seminal work highlights, a central consequence of constraining executives is that their promises about what they will do with state revenues become more credible—thus leading to increased revenues and expenditures. In the aftermath of the Glorious Revolution, for example, improved state credibility led to a three-fold increase in tax revenues within a decade (Cox 2016, chs. 2-3) and an even larger increase in loan revenues (North and Weingast 1989).

[8]See Appendix A for a detailed account of the Whigs reform agenda in England and Wales.
[9]We provide a more detailed account of "packaging" in Appendix A.

If the Great Reform Act was part of an effort to constrain royal power over the state's domestic activities, as we have argued, then the British state's *civilian* revenues and expenditures should have increased. Consistent with this expectation, 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 the hypothesis that a break in civil spending occurred in 1836.[10] In other words, just as there had been a surge in military funds, after parliament gained control over the military budget in 1689, so there was an increase in civilian funds, after parliament gained full control over the civilian budget in 1831.

We also claim that the Whigs used the same reform recipe to constrain un-elected municipal corporations. Thus, we expect to see an increase in *municipal* revenues and expenditures. Consistent with this expectation, municipal expenditures increased substantially in the aftermath of the Municipal Reform Act of 1835, as we show below.

3.3 Expanding state capacity

Once parliament (and town councils) had been both empowered with full control over the purse and protected from royal (or local magnates') manipulation, the main argument against creating publicly funded police forces—that they would become tools of royal absolutism—disappeared. Given that constraining executive powers had made police forces politically viable, the Municipal Reform Act could, and did, require towns to establish police forces.

We can estimate the size of the resulting forces by considering eighty-one boroughs that established police forces in 1836 and reported their 1837 expenditures to parliament. On average, their police expenses constituted 23% of each borough's 1837 total. Assuming that

[10]The 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.

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.[11]

The new police forces entailed by far the largest 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).[12]

4 The Local Response to Social Disorder

Our account has implications for how local disorder should have affected elites' attitudes toward the Whigs' reform agenda. Confronted by disorder, pre-reform elites had two basic options. They could rely on the unreformed police system, bearing (as we explain further below) substantial private costs of policing. Or, they could seek to reform the police system and socialize the costs.

For those elites that desired police reform, the onset of social disorder would have provided a new reason to support the Whigs' reform package. In particular, they would have supported the Civil List Act of 1831 and the Great Reform Act of 1832 in order to constrain the monarch and thus defuse the primary traditional reason for opposing the creation of police forces. The traditional opposition to creating police forces had been loudly articulated in parliament, and had been successful in defeating proposals to create police forces until the Metropolitan Police

[11] Authors' calculations from *The ABSTRACT OF THE STATEMENT OF MONIES received and expended on account of certain BOROUGHS in England and Wales for 1837* (See Appendix D). Other boroughs also established police forces but we lack data on their initial expenditures, so we limit our analysis here to the first movers.

[12] The investment in new police forces naturally allowed a reduction in spending on more traditional forces, such as the Yeomanry Corps. However, total expenditures on repression increased. By examining relevant expenditures from the County Rates, as well as on the Yeomanry Corps, we calculate that the net increase in total repression spending between 1835 and 1838 was £58,768, or roughly 90% more than what was saved in the reduction of previous repression expenditures.

Act of 1829. Thus, we believe it was common knowledge among elites that any police reform had to deal with fears that they would be too much under the influence of the monarch. One way to do this was via special provisions pertaining to individual police forces, as had been done with the Metropolitan Police Act.[13] Another, and more general way, to mitigate elite fears was to reduce the resources that the monarch and allied peers controlled—which is precisely what the Whigs' initial reforms did.

Given that pro-police-reform elites would have had good reason to support the Whigs' initial reforms in order to make broader police reform feasible, why would any pre-reform elites have changed their minds about the workability of the unreformed police system? We propose that disorder, by increasing the private policing costs that elites bore, prompted a pivotal number of them to support the reforms needed to build a more credible state, which could then be trusted to create and manage professional police forces.

Our account contrasts with the well-known claim that disorder increased elites' threat perceptions—their perceived probability that the British regime would be toppled by revolutionaries—which in turn prompted them to support a *concessionary* suffrage reform designed to make future redistribution more credible. Both mechanisms—one depending on local costs, another on global threat assessments—might have been operative. However, each theory implies distinct observable consequences, which we seek to test in the remainder of the paper. Before doing so, we state the two Models of elite reactions to disorder more precisely.

4.1 The concession model

We take the concession Model from Aidt and Franck (2015, 2019), who have pioneered the empirical evaluation of revolutionary threat theory in the English case. In their view, those who experienced riots personally, or through their close social networks, significantly

[13]This act addressed traditional worries by establishing a separate Receiver to handle all monies funding the police; and subjecting 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 as the armed forces.

increased their threat perception. Importantly, however, Aidt and Franck also argue that such perceptions did not diffuse; they remained localized to an important extent. Where threat perceptions surged, so too did support for parliamentary reform. We then have:

Concession Model: Riots increased local elites' threat perceptions, thereby producing a localized increase in support for parliamentary reform as means of providing concession to those who threatened (Aidt and Franck 2015, 2019).[14]

4.2 The repression model

In what we call the repression Model, elites who experienced riots suffered cost increases due to property damage, fees paid to private associations, and service in unpaid policing forces. Such elites often wanted vigorous police action to be taken against the rioters and thus were more likely to become proponents of police reform. Thus:

Repression Model: Riots increased local elites' private policing costs, thereby causing a localized increase in demand for vigorous police action and, hence, for any reforms necessary to ensure that such action was forthcoming.

5 Exploring the Repression Model

The Repression Model argues that elites experiencing riots (i) suffered private cost increases; and (ii) increased their support for police action and reform. In this section, we examine these links.

5.1 The private costs of the Swing riots

The debate over parliamentary reform took place against a backdrop of social agitation. Most notably, the *Swing Riots* took place between August 1830 and the spring of 1831.

[14]The concession can be to the masses who themselves posed the threat of violence, or the middle classes who were at risk of joining them.

The riots began in Kent with the destruction of threshing machines, then quickly spread through southern England and East Anglia (Hobsbawm and Rude 1973; Tilly 1995; Aidt, Leon-Ablan and Satchell 2021). Holland (2005) documents 2,818 distinct violent incidents, mostly involving arson, machine breaking, animal maiming, and assault.

There are several ways to appreciate the magnitude of the private costs imposed by the riots. First, as there was no social insurance, all costs were borne privately. Second, the absence of professional police forces meant that local elites had to maintain order in their own locales. Among other things, this entailed service in the Yeomanry Cavalry. Being a part-time, locally-controlled force, the Yeomanry was not only more politically acceptable to rural society, but also less expensive than having permanent professional police forces. That said, rural elites' desire to minimize their unpaid service turned out to increase their exposure to the Swing Riots. In 1827, the corps, which had not been called out in aid of the civil power within the previous ten years, were wound up. The cuts reduced the Yeomanry by around 21,332 men, leaving a mere 8,351 in the ranks (Hay 2017).[15] These ill-timed disbandments proved to be extremely costly three years later. As they witnessed the Swing riots unfolding, magistrates and county officials lacked the means to contain the incidents.[16]

Third, the absence of professional police forces also meant that many members of the landed gentry paid dues to private associations for the prosecution of felons. These associations subsidized prosecutions, provided legal expertise, and insured members' losses (Philips 1993; Koyama 2014; Hay 2017). The Report of the Commissioners for Inquiring into the County Rates (1836) provides incomplete data on expenditures by private associations on

[15] In addition, those retained predominantly occupied the industrial north (where discontent was expected), rather than the southern counties of England.

[16] In most places, the Yeomanry was reinstated; but most regiments were only reestablished in the aftermath of the Swing Riots. As Hay (2017) notes, as of 1 January 1832, 84% of Yeomanry corps (78 of the 93 corps) had formed in December 1830 or later. The remaining 16% (15) either survived in 1827 or formed before the riots. As a result, the annual expenditures for the Yeomanry in Britain rose by roughly 220% in 1831, the year in which the bulk of Swing rioting costs would have been accounted for. This surge can be compared to a 59% increase in 1820 following the Peterloo massacre (1819).

prosecutions over the period 1830-34. But, 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.

5.2 The Swing Riots and urban police budgets

Did elites experiencing more intense Swing rioting in 1830-31 increase their support for police reforms that would enable a more effective suppression of future rioting? We lack data on the share of elites by locality who supported police reform in the early 1830s. However, we can gauge their attitudes indirectly by their willingness to fund the New Police in 1836-37.

Although required to establish police forces by the Municipal Corporations Act (1835), how much boroughs *spent* on their new forces was left up to their respective town councils. Elites bearing higher riot control costs in 1830-31 had an incentive to support larger initial police budgets in the towns in 1836-37. To see why, note first that most elites recognized that the Swing riots had been motivated largely by economic distress (Hobsbawn and Rudé 1968; Caprettini and Voth 2020). Thanks to a wave of rioting against the New Poor Law, many elites also recognized that the rural poor's condition had only worsened with that law. Clark and Page (2019) show that the New Poor Law delivered no welfare benefits, while Melander and Miotto (2021) document a surge in petty crime among those seeking to eke out a living outside the workhouses. Crucially, since many rural poor had traditionally sought employment in towns, agricultural distress implied a growing problem of urban crime. Moreover, since migrating paupers still faced difficulty qualifying for benefits outside their home parishes (Howells 2003), the effect of rural distress on urban crime would have been somewhat localized.

Putting these observations together, elites in areas that had experienced more severe Swing rioting had reason to expect a larger problem of urban crime in the mid-1830s. A natural response consistent with the Repression Model would have been to support larger initial

budgets for the police forces mandated by the Municipal Corporations Act. In contrast, since parliamentary reform had already been accomplished, the mechanism linking Swing riots to threat perceptions, and thence to support for parliamentary reform, would have shut down well before 1837-38, and thus could not have affected support for larger police budgets. (The next wave of rioting, associated with Chartism, did not begin until late 1838.)

To explore the relationship between Swing rioting and inaugural police budgets, we examine 138 provincial English towns that had no police forces prior to 1836 and for which we have observations on their initial police budgets in 1837 and 1838. This excludes London, which established a force in 1829, as well as 10 provincial towns that established police forces via special acts prior to municipal reform.[17] For each of the included boroughs, we know that they spent nothing on professional police forces in 1831, which we take as our pre-reform baseline year, but (potentially) spent non-zero amounts in 1837 and 1838.[18]

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 in a difference-in-differences set up. 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, we consider the number of Swing rioters (offenders) within 10km of each borough in 1830-31. Using this information we construct, $Riot\ Treatment$, an indicator variable that measures riot exposure at the extensive margin. It is equal to 1 if at least one person deemed responsible for a Swing riot was apprehended and zero otherwise.[20]

[17] We are agnostic about the effect of riots on repression spending in these excluded towns. Nonetheless, our main results remain unchanged if we include these additional observations in our statistical analyses (see Table D1 in Appendix D).

[18] We have data for 138 towns for 3 periods (1831, 1837, and 1838) for a total of 414 observations; missing data on population removes a further 19 towns from our sample, reducing its size to 357 (i.e. 119 times 3).

[19] We describe how we compiled our data in Appendix D.

[20] The data on rioters is the total (apprehended) Swing Riot offenders as geo-located from Holland's data.

To assess whether towns with more tumultuous hinterlands chose a higher level of urban police expenditures after the passage of the Municipal Corporation Act than those that did not experience any riots, we interact our *Riot Treatment* variable with an indicator (*Post*) equal to 1 in the years after the municipal reform was passed.[21] We are not interested in the counterfactual effect of the Municipal Corporations Act for the untreated group; instead our goal is to estimate the impact of the policy change on the treatment group—the treatment on the treated. The assumption we require is that those who were not exposed to rioters represent the counterfactual of how the treated group would have spent on policing had they not experienced riots; i.e., no time-varying confounders.[22] But no further assumptions about how the intervention affects outcomes (e.g., constant treatment effects) are required (Athey and Imbens 2006). We also include municipality fixed effects to account for any time-invariant municipality-level features that might affect police expenditures.

Table 1, Model 1, displays our main results (with cluster-robust standard errors). The results indicate that in boroughs that did not experience any riots within 10km in 1830-31, the level of per-capita police-related expenditures increased by £0.026, in the years after the municipal reform was passed. Using GDP per capita, the amount corresponds to

In ArcGIs, we located municipal boroughs, and calculated the percentage of the geo-located offenders within a given concentric distance from the borough. We consider other riot distances and the intensive margin in Appendix D.

[21]Specifically we look at post-1837 since this is the first post-reform year that we have data available.

[22]We lack the full use of a standard tool—a visual check of parallel trends—to help in validating this assumption as the treatment and control groups spent the same amount on professional police forces *subject to central supervision*—none at all—before the Municipal Corporations Act required all of them to create professional police forces. 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. This suggests a lack of a kind of anticipatory effect that might indicate different potential outcomes (under control) for those exposed to riots as compared to those not. 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.

Table 1: Relationship between the swing rioters and urban police expenditures

	Police expenditures per capita		
	(1)	(2)	(3)
ln(Population)	0.0072	0.0077	0.011
	(0.023)	(0.022)	(0.022)
Post-1837	0.026***	0.026***	0.027***
	(0.0045)	(0.0043)	(0.0038)
Riot Treatment (10km) × Post-1837	0.0094*		
	(0.0054)		
Riot Treatment$_1$ $(10km)\times$ Post-1837		0.010*	
		(0.0054)	
Riot Treatment$_{75th}$ $(10km)\times$ Post-1837			0.013**
			(0.0059)
Constant	-0.042	-0.046	-0.072
	(0.19)	(0.19)	(0.19)
Observations (Borough x Year)	357	357	357
R-Sqrd	0.71	0.71	0.71

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

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Notes: The above table presents the results from estimating $expenditure_{it} = \alpha_i + \beta_1 ln(population_{it}) + \beta_2 post1837_t + \beta_3 RiotTreatment \times post1837_t) + \epsilon_{it}$ where i indexes the municipal borough and t indexes the year. The sample is boroughs England that had not yet established police forces in 1835. The year sample is 1831, 1837 and 1838. Population is available decennially and linearly interpolated for non-decennial years. The dependent variable is total police-related expenditures per capita ($expenditure$), 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 $RiotTreatment$ measures a borough's riot exposure based on whether there was a Swing Riot offender detained within a concentric distance from the municipal borough. We evaluate a simple binary indicator (Model 1) along with other binary cut-offs.

£31.22 in today's relative income value.[23] In boroughs exposed to the Swing riots, total per-capita police-related expenditure rose to a total of £0.035, or roughly 8 pence, in the years after the municipal reform was passed. This amount corresponds to approximately £42 in today's income value. Therefore, post-1837 per-capita police-related expenditures were approximately 35% higher in towns that experienced riots within a 10km radius in 1830-31 relative to boroughs without riot exposure.[24]

More than half of the boroughs in our sample were not exposed to any riots within a

[23] https://www.measuringworth.com for monetary conversions in this paragraph.

[24] We considered other distances of Swing Riot exposure as well. We also estimated differences in the "dosage" of the continuous variable (intensive margin), the number of of Swing offenders within 30km of each borough in 1830-31. See Table D3 in the Appendix.

radius of 10 km; and in approximately sixty percent of them less than two offenders were detained within 10km of the municipal borough. The presence in the treated group of constituencies that were barely exposed to rioting activity likely attenuates the strength of the treatment. To gauge the sensitivity of our results to the choice of a cut-off, we carry out two robustness checks based on the distribution of Swing Riot offenders. First, the variable $Riot\ Treatment_1$ variable takes the value of 1 if strictly more than one offender was detained within 10km of the municipal borough and zero otherwise. Next, we code the indicator using the distribution's 75th percentile. In this case, the variable $Riot\ Treatment_{75th}$ takes the value of 1 if more than 7 offenders were detained within 10km of the municipal borough and zero otherwise. In Models 2 and 3, we repeat the analysis using these alternative cut-offs. The results are very similar, regardless of the measure.[25]

6 From Demand for Repression to the Great Reform Act

In this section, we argue that increased support for repression in areas hit harder by the Swing riots can help explain two key events in the passage of the Great Reform Act: the House of Commons' vote of no confidence in the Wellington Ministry on 15 November 1830, which initiated the reform process; and voters' endorsement of reform in the 1831 elections. These were arguably the most important turning points in the reform process and in each case we have systematic data on contemporaries' attitudes via the votes cast by either MPs or voters.

[25]In principle, one could assess support for police reform using MPs' votes in parliament on police reform measures; or constituents' activity in petitioning for or against police reform. In practice, however, no division on either the Municipal Corporations Act 1835 or the County Police Act 1839 reflected MPs' overall support for police reform; and police reform did not become an object of petitioning. Another possible way to measure local support for police reform would be to look at the inaugural budgets of the county police forces established in 1839-41 under the provisions of the County Police Act. We examined a model of these budgets and found that, while the results hold at the extensive margin, they do not at the intensive margin. That is, establishing rural police forces strongly affected expenditures but, among counties adopting forces, expenditures were insignificantly related to Swing rioting. This attenuation in the response may reflect the distance in time between the Swing riots (1830-31) and the counties' budgetary decisions (1839-41) and the occurrence of Chartist disturbances just as the police budgets were being decided.

6.1 Wellington's fall

When the House of Commons assembled for its first meeting after the election of 1830, Swing rioting was peaking. Yet, Wellington's government did not take action against rioters until November 11, over three months after the first riot. The government's inaction was consistent with traditional views on 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). Peel's reliance on the traditional decentralization of policing did not protect the government from being blamed and "the government's inability to restore order in the *Tory counties* disillusioned its own supporters..." (Quinault 1993, p. 197; italics added).

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 approval of their motion would be 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.[26] 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 those who did not vote indicate that, for many, abstention was intentional.[27] 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, seeking to discern what determined a member's level of support for reform.[28] In particular, we investigate whether MPs with higher private policing costs were

[26]By November 1830, rioting had not yet spread to Wales, and it never did spread to Scotland or Ireland.

[27]See https://www.historyofparliamentonline.org/ for biographies. For some examples of intentional abstention, see the articles on the Hon. George Anson, Thomas Tyrwhitt Drake, and Lord Bath.

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

more likely to support the Whigs' inaugural reform motion. We assess policing costs by counting the number of Swing riot offenders prior to 15 November 1830 within 10km of each borough. For county constituencies, we count the total number of riot offenders occurring within the borders prior to 15 November 1830. We control for the Whig share of the vote in the 1826 election; how each constituency's members voted on Lord John Russell's motion (of 23 February 1830) to give direct representation to Birmingham, Leeds, and Manchester; each MP's attitude toward Catholic Emancipation (which historians such as Clark (1985) argue was key to Wellington's fall); and an index of how "rotten" each constituency was in terms of its dominance by peers (Aidt and Franck 2015).[29]

Table 3 shows the results of our analyses (with errors clustered at the constituency level). We see that more votes for the Whigs in the 1826 election and 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). MPs from more "rotten" constituencies tended to support Wellington, while attitudes toward Catholic Emancipation had no significant effect.

In Model 1, we find that MPs whose constituencies experienced more nearby Swing riots were more likely to support reform. That said, Model 2 reveals that rioting had a substantial association with how *county* MPs voted on the Civil List but little or no association with how non-county MPs voted. This is consistent with traditional narrative histories, such as Quinault's (1993) quoted above, which note that a relatively small number of Tory MPs from the counties, led by Sir Edward Knatchbull of Kent, were the main dissidents whose defections brought down the government.

Our findings suggest that MPs from counties suffering more riots wanted more vigorous repressive action from the government and voted in the hopes of getting it. Some MPs may simply have wished to signal their dissatisfaction with the Wellington government's

[29]Since historians often use how each member voted in the division we are studying to decide their partisan affiliation, we do not control for party affiliation at the MP level.

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 + Number of Rioters (10km))	0.17**	-0.059
	(0.087)	(0.11)
County		0.091
		(0.22)
County × ln(1 + Number of Rioters (10km))		0.49***
		(0.17)
Observations	482	482
Pseudo R-Sqrd	0.10	0.12

Standard errors robust to clustering at the constituency level presented in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Notes: The above table presents the results from estimating $Pr(vote_i) = \beta_1 whig_i + \beta_2 reform_i + \beta_3 rotten_i + \beta_4 catholic_i + +\beta_5 ln(1 + riots_i) + \epsilon_i$ via ordered probit where i indexes the constituency. We measure the vote on the Civil List (*vote*) as -1 for a vote against, 0 for no vote, and 1 for a vote in favor. Our sample is the 482 English MPs eligible to vote in the division, and we cluster our standard errors to reflect the 282 constituencies. The number of rioters (*rioters*) is the total number of Swing Rioters in the county constituency or within 10km of the borough constituency measured before the Civil List vote date (5 November 1830) from Aidt and Franck (2015). We add 1 before taking the natural log since some constituencies did not experience the Swing Riots.

tepid response. Others may have thought the Whigs would mount a more effective response within the parameters of the unreformed polity. Still other MPs may already have realized that the Whigs were likely to establish New Police forces and favored them for that reason (Philips and Storch 1994). Whatever the mix of reasons, the positive association between rioting and voting against Wellington is consistent with the Repression Model.

Could one also interpret our results as supporting the Concession Model? If MPs perceived the riots as a revolutionary threat from their inception, then it is hard to understand why the Wellington government took no action until 11 November, why the newspapers barely covered the riots, and why they were never described as revolutionary. Moreover, the

leader of the Tory dissidents, Knatchbull, *opposed* parliamentary reform. Perhaps this is why no proponent of the Concession Model has argued that the riots should have affected votes on this motion.

We conclude that the crucial initial step in the reform process—bringing the Whigs into power—was facilitated by the reactions of elites in the counties hardest hit by the earliest Swing riots. These elites did not react by increasing their support for concessionary suffrage expansion. Rather, they increased their demand for vigorous repression.

6.2 The Swing Riots and the 1831 Elections

We now investigate how electors behaved in the crucial parliamentary election of 1831, held between April 28 and June 1. Aidt and Franck (2015) have persuasively shown 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.[30]

Our interpretation is that rioting increased local elites' private policing costs, thus shifting their support toward the Whigs, either on retrospective or prospective grounds. Retrospectively, elites in riot-stricken areas might have voted for the Whigs to reward them for their vigorous suppression of the Swing riots during their term. The Grey Ministry's quelling of the riots formed an important part of its record. How much voters appreciated that record would

[30]Their instrumental-variable results suggest even stronger effects. The divergence between their OLS and IV estimates might be driven by heterogeneous treatment effects. Here, we shall stipulate that Aidt and Franck's instrument is valid and proceed under that assumption. However, our account does not depend crucially on the validity of their instrument. First, our account makes a range of predictions—e.g., that suffrage reform should not have been a pure expansion; that suffrage reform should have been packaged with budgetary reform; and that riots increased local elites' demand for repression. Second, as regards the specific prediction that riots should have increased Whig support in the 1831 elections, the invalidity of their instrument would merely lower the quality of evidence for a causal relationship.

naturally have co-varied with their riot exposure—providing an alternative explanation of why Whig support tended to increase in areas with more severe rioting.[31] Riot-stricken elites might also have shifted toward the Whigs for prospective reasons. Simply put, the Whigs were the only party likely to pursue police reform (as indeed they soon did).[32]

Aidt and Franck (2015) offer a different interpretation of their results. In their view, rioting increased threat perceptions, leading more elites to favor a concessionary suffrage reform. Since only the Whigs advocated suffrage reform, elite preferences shifted toward them. To distinguish between these two possible interpretations, one can consider the mechanism—the sequence of intermediate steps—that each views as connecting increased rioting to increased electoral support for the Whigs. As we have shown above, there is consistent evidence in favor of the intermediate steps posited by the Repression Model. Is there also evidence supporting the intermediate steps posited by the Concession Model?

7 Exploring the Concession Model

According to Aidt and Franck (2019), English MPs had access to the same nation-wide information on violence, so the variation in their *threat* perceptions should primarily come from variation in violent unrest in their "local" area. While some of them would learn about violent unrest in their constituencies *first-hand*, others—for example, those who did not reside in the countryside during the winter—were not directly exposed to the Swing riots. Yet, as Aidt and Franck (2019) note, these latter MPs should still be influenced by the views of the people living in the constituencies in which they were elected. In this section, we examine the implications of the concession Model under alternative *informational* channels.

[31] We discuss the stark contrast between the Wellington and Grey Administrations' responses to the Swing riots in Appendix C.

[32] That said, police reform was not actively discussed in the 1831 election and voters hoping that the Whigs would push police reform would have discounted those future benefits.

7.1 Direct exposure to local riots and MPs' threat perceptions

To assess the claim that local disturbances observed first-hand made the prospect of revolution tangible in their minds, we consider the 86 MPs who sat for English counties. These MPs were always prominent local landowners in the counties they represented. As such, they were personally involved in dealing with the rural Swing riots. We ask: Were county MPs exposed to more Swing riots more likely to perceive a revolutionary threat?

We first operationalize threat perceptions via the extent to which MPs employed words and phrases related to riot and disorder in debate speeches.[33] Yearly data for the period between 1803 and 1853, based on all the debates that took place in the House of Commons recorded by Hansard, indicate that MPs' use of these terms spiked during the reform era (see Figure E1 in Appendix E).[34] Our main interest, however, is in the *cross-sectional* variation associated with riot exposure. As we show in Appendix E (Figure E3), MPs who experienced more Swing riots were *not* more likely to use such terms in their discussions of reform.[35]

An alternative approach is to identify county MPs whose biographers (from the History of Parliament Trust) depict them as perceiving a revolutionary threat and supporting reform.[36] Five of the 86 county MPs (6%) were so identified by their biographers. However, there was no relationship between the number of Swing riots in a county and the propensity of the county's MPs to perceive a revolutionary threat. There was similarly no relationship between

[33]The specific terms we consider are: riot, agitate, jacobin, violence, mob, bloody, popular excitement, white ribbon, white flag, insurrection. We consider variations on each of these core terms too (e.g., agitation) such as spelling differences. These terms were chosen based on a close reading of a sample of debates. We choose *not* to include variation on the term "revolution" because in *all* of the instances in which that term (or related terms) was used during the reform era (1830-32), the debate was about the revolutionary nature of the proposed changes rather than the threat of revolution.

[34]Using language in parliament to assess the preferences/thoughts of elites raises the question of whether MPs' speeches are informative. To check if MPs responded to current events (not just the riots), we also examined the extent to which they mentioned "corn laws" in debate speeches during the same period (1803-1853). This exercise (reported in Figure E.4) reveals that MPs disproportionately discussed the issue in 1842-43, at the height of the public debate on this topic. This finding increases our confidence that speech does reflect issue salience to some degree.

[35]Throughout the reform crisis, we also find that debate mentions of peer influence over elections dominated discussions of revolutionary threat.

[36]We focus here on counties, but Appendix E3 demonstrates a qualitatively similar pattern for boroughs.

riots per capita (or per acre) and MPs' threat perceptions (See Appendix E).

One might worry that MPs simply did not articulate their fears. However, if regime survival was at stake, MPs should have been willing to publicly characterize the threats they perceived—so that our two measurement strategies are plausible.

All told, our findings suggest that Swing riot exposure did not significantly affect county MPs' revolutionary threat perceptions. This conclusion is also consistent with Aidt and Frank's (2019) finding that support for parliamentary reform in the critical roll call vote that took place on March 22, 1831 did not stem from fears of revolution, but rather from peaceful agitation and public expressions of support.

7.2 Local petitioning and revolutionary threat perceptions

As mentioned above, many MPs did not directly observe the Swing Riots. Nonetheless, they could have still gauged the level of violent unrest in their "local" area based on their constituents' behavior—i.e. engaged in *fire-alarm*, rather than *police-patrol* oversight (McCubbins and Schwartz 1984). Specifically, an influx of petitions by fearful voters could convey credible information about the gravity of the situation (Aidt and Franck 2019). To be consistent with the concession Model, however, these petitions should have been fueled by fears of revolution. Otherwise, if no link between riots and petitions exists, the latter should be interpreted as local demonstrations in support of reform, rather than a *signal* that a revolutionary threat had to be defused via concession.

Table 3 shows our estimates of the relationship between the number of Swing riots occurring within 10 kilometers of each constituency and pro-reform petitions. Models 1-4 are cross-sectional analyses using total riots and total petitions during the reform period. In Models 1 and 2 we use the measure of pro-reform petitions calculated by Aidt and Franck (2015) as our dependent variable; while in Models 3 and 4 we use our own measure, based on information obtained from *Hansard*. The two indicators are strongly correlated (r=0.63).

Table 3: Relationship between Swing Riots and pro-reform petitions

	Pro-Reform Petitions				
	A&F Measure		Own Measure		
	(1)	(2)	(3)	(4)	(5)
ln(1 + rioters (10km))	0.048	0.070	0.0088	0.26	0.016
	(0.11)	(0.15)	(0.29)	(0.37)	(0.014)
Observations	244	244	244	244	3904
Adj. R-Sqrd	-0.0036	0.36	-0.0041	0.34	0.14
Specification	Cross-Sec.	Cross-Sec.	Cross-Sec.	Cross-Sec.	Panel
Week FE					✓
AF Controls		✓		✓	✓

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

Notes: Columns 1-4 of the above table presents the results from estimating $petitions_i = \beta_1(ln(1+rioters_i)) + \epsilon_i$ via ordered OLS where i indexes the constituency. The number of rioters ($rioters$) is the number of Swing Rioters in the county measured before the Reform vote, and the number of rioters within 10km of borough constituencies from Aidt and Franck (2015). We add 1 before taking the natural log since some constituencies did not experience the Swing Riots. Model 5 estimates a panel to evaluate potential non-parametric trend differences (note that our riot measure does not vary over time and there are no unit fixed effects). Model 2, 4 and 5 also includes a set of covariates from Aidt and Frank (2015, 2019): *Whig share 1826, Whig share 1826 Squared, Reform support in 1830, County constituency, Narrow franchise, Patronage index, Emp. fract. index, Agriculture (emp. share), Trade (emp. share), Professionals (emp. share), Population, Population density, Thriving economy, Declining economy, Distance to Urban Center, Connection to London, Market Integration, Cereal Area, and Dairy Area.*

Our measure, however, includes each petition's constituency of origin, the date when it was presented to the House of Commons, and the MP who introduced it.[37] Models 1 and 3 show specifications without any control variables. To account for potential confounders, we augment these Models with a battery of controls in Models 2 and 4. Following Aidt and Franck (2015), we include measures of political, institutional, economic, and demographic characteristics of each constituency (see their Table V, column (2)).[38] In Model 5, we leverage the additional information contained in our measure of pro-reform petitions, to disaggregate the counts by date, and use week and constituency fixed effects.

[37]Studies of petitioning indicate that those in higher social strata (hence enfranchised) were the most active organizers of petition drives (Huzzey and Miller 2020, p. 127), so our petitions mostly reflect voters' opinions. That said, pro-reform petitioning by the non-enfranchised would also arguably support the Concession Model.

[38]These include *Whig share 1826, Whig share 1826 Squared, Reform support in 1830, County constituency, Narrow franchise, Patronage index, Emp. fract. index, Agriculture (emp. share), Trade (emp. share), Professionals (emp. share), Population, Population density, Thriving economy, Declining economy, Distance to Urban Center, Connection to London, Market Integration, Cereal Area, and Dairy Area.*

As Table 3 shows, the number of riots within 10km of a constituency was not significantly correlated with the number of pro-reform petitions submitted by that constituency. The inclusion of control variables, as well as week and constituency fixed effects, substantially improves the fit but does not change the correlation.[39]

7.3 Aggregate level of riots and support for reform

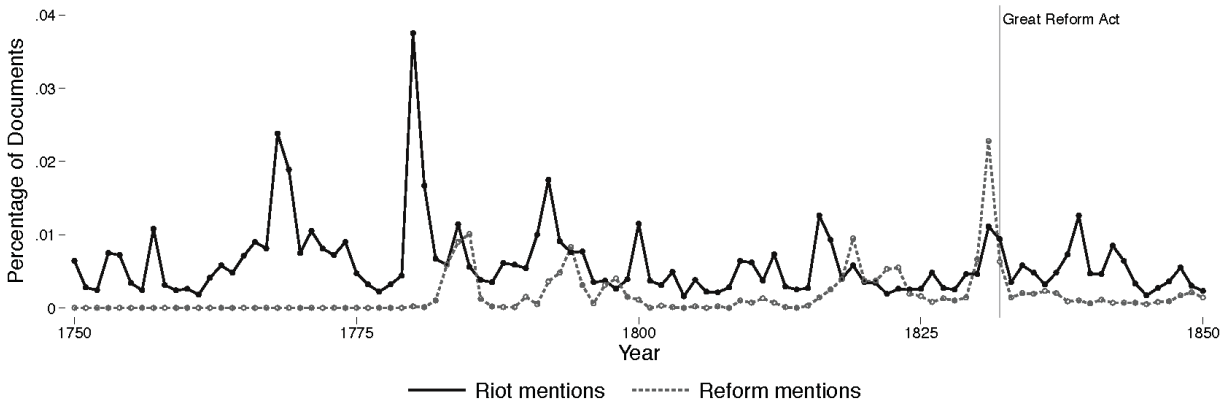
It seems like neither direct nor indirect exposure to local violent unrest affected MPs' threat perceptions. It remains possible that the aggregate, nation-wide, level of riots (rather than localized disturbances) could have (a) increased elites' threat perceptions; and thus (b) induced MPs to consider parliamentary reform.

To explore this possibility, we use online newspaper databases to compile yearly counts of the frequency with which British newspapers used the word "riot" over the period 1750-1850. Thus, we include not just the Swing riots of 1830-31 but many other outbursts of social disorder. Our counts correlate highly (at .76) with Horn and Tilly's (2009) riot counts. However, we cover all of England back to 1750, whereas they 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). The graph 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

[39]While most MPs presented pro-reform petitions from the constituencies that they represented in the House of Commons, some others did it on behalf of other places. For example, Henry Hunt did not present a single pro-reform petition on behalf of Preston (his constituency), but he presented 49 pro-reform petitions on behalf of 41 different constituencies. Therefore, one may also consider the relationship between the number of riots in an MP's constituency and the number of pro-reform petitions submitted by said MP. The results are qualitatively similar to the ones reported in Table 2 when we estimate the Models 3-5 using this alternative measure as our dependent variable (See Table F1 in Appendix F).

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



Sources: Authors' calculations based on word searches in *The Times* and the *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.

introduced in parliament.[40] 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.

8 Reconsidering the first West European suffrage reforms

Several other European countries imitated Britain's 1830s reforms, both empowering parliament (via budgetary reform) and protecting parliament's independence from the Crown (via various reforms including taxpayer suffrage). If the purpose of combining parliamentary power over the purse with taxpayer suffrage was to build a more credible state, then we should expect similar effects to those we have found: increasing state revenue and expenditures; and an expansion of public services. Dincecco (2011) has shown that European states' revenues and expenditures surged once they adopted British-style annual budgets. In this

[40]To confirm the lack of correlation visually apparent in Figure 1, we regressed either reform mentions, or reform bills, on various lagged counts of riots (Table B1 in Appendix B).

section, we consider whether the public services that expanded included the police.

Five countries sought to imitate Britain's parliamentary path, and implemented liberal constitutions that lasted at least a decade: Norway (1814), France (1830), Belgium (1831), Denmark (1848) and the Netherlands (1848).[41] In each of these cases, major reorganizations of existing police forces followed the liberal package of executive-constraining reforms. 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).[42] 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. Denmark reformed the Copenhagen police force, based on the Model of the Metropolitan Police in London (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.

The timing of these reforms is consistent with the argument that continental liberals reformed the police to further constrain the executive and ensure that the police were loyal to the new regimes. In addition, reformers may also have sough police expansion and efficiency. 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.

[41] Norway was part of Denmark but we consider it separately here.

[42] www.regjeringen.no/en/id4/

9 Conclusion

We have argued the Great Reform Act was part of a package of reforms intended to constrain the Crown's fiscal power and its influence over parliamentary elections. The Whigs' reforms made it possible 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 taxpayer 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.

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 and concession. Concession takes the form of suffrage expansion to make redistribution more credible, while repression is assumed not to require suffrage reform. We have challenged the latter assumption. In our account of Britain's reform era, suffrage reform 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 links suffrage reform to the literature stressing the connection between state credibility and state 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; Ticchi and Vindigni 2008).

References

Acemoglu, Daron, and James A. Robinson. 2000. "Why Did the West Extend the Franchise?" *Quarterly Journal of Economics* 115(4):1167–1199.

Acemoglu, Daron, and James Robinson. 2006. *Economic origins of dictatorship and democracy.* Cambridge: Cambridge University Press.

Aidt, Toke, and Raphael Franck. 2015. "Democratization under the threat of revolution" *Econometrica* 83(2):505-547.

Adit, Toke, and Raphael Franck. 2019. "What Motivates an Oligarchic Elite to Democratize?" *Journal of Economic History* 79(3):1-53.

Ansell, Benjamin, and David Samuels. 2014. *Inequality and Democratization.* Cambridge: Cambridge University Press.

Athey, Susan, and Guido W. Imbens. 2006. "Identification and Inference in Nonlinear

Difference-in-Differences Models," *Econometrica*, Vol. 74: 431-497.

Barzel, Yoram, and Edgar Kiser. 2002. "Taxation and Voting Rights in Medieval England and France" *Rationality and Society* 14(4):473-508.

Bateman, David A. 2018. *Disenfranchising Democracy.* Cambridge: Cambridge University Press.

Bates, Robert H. 2006. "The role of the state in development." In Barry R. Weingast and Donald A. Wittman, eds., *The Oxford Handbook of Political Economy.* Oxford: Oxford University Press.

Boix, Carles. 2003. *Democracy and Redistribution.* Cambridge: Cambridge University Press.

Bolton, Patrick, and Mathias Dewatripont. 2005. *Contract Theory.* Cambridge, MA: MIT Press.

Brewer, John. 1988. *The Sinews of Power.* Cambridge, MA: Harvard University Press.

Caprettini, Bruno, and Hans-Joachim Voth. 2020. "Rage against the machines" *American Economic Review: Insights* 2(3):305-20.

Chester, Sir Norman. 1981. *The English Administrative System, 1780-1870.* Oxford: Clarendon Press.

Clark, Gregory and Marianne E. Page. 2019. "Welfare reform, 1834: Did the New Poor Law in England produce significant economic gains?" *Cliometrica* 13: 221-244.

Clark, Jonathan. 1985. *English Society 1688-1832.* Cambridge: Cambridge University Press.

Cox, Gary W. 2018. "British state development after the Glorious Revolution." *European Review of Economic History* 24: 24-45..

Dincecco, Mark. 2009. "Fiscal Centralization, Limited Government, and Public Revenues in Europe, 1650-1913." *Journal of Economic History* 69:48-103.

Easterbrook, Frank, and Daniel Fischel. 1983. "Voting in corporate law" *Journal of Law*

and Economics 26(2):395-427.

Emsley, Clive, 1991. *The English Police: A Political and Social History.* New York: St. Martin's Press.

Engerman, Stanley L., Kenneth L. Sokoloff. 2005. "The evolution of suffrage institutions in the new world." *Journal of Economic History* 65(4):891–921.

Ertman, Thomas. 2010. "The Great Reform Act of 1832 and British Democratization." Comparative Political Studies 43(8/9): 1000-1022.

Ferejohn, John, and Frances M. Rosenbluth. 2017. *Forged Through Fire: War, Peace and the Democratic Bargain.* New York: Liveright Publishing.

Foord, A. S. 1947. "The Waning of 'The Influence of the Crown'." *English Historical Review* 62:484-507.

Gailmard, Sean. 2022. *Agents of Empire: British Imperial Governance and the Strategic Foundations of American Politics* unpublished book manuscript, University of California, Berkeley.

Gash, Norman. 1979. *Aristocracy and People: Britain 1815-1865.* Cambridge, MA: Harvard University Press.

Harling, Philip. 1996. *The Waning of Old Corruption: The Politics of Economical Reform in Britain, 1779-1846.* Oxford: Clarendon Press.

Hay, D. (Ed.) (1975). *Albion's fatal tree.* London: Allen Lane.

Hay, George. 2017. *The Yeomanry Cavalry and Military Identities in Rural Britain, 1815-1914.* London: Palgrave MacMillan.

Hobsbawm, Eric and George Rudé. 1968. *Captain Swing.* New York: Pantheon Books.

Holland, M. 2005. *Swing Unmasked: The Agricultural Riots of 1830 to 1832 and Their Wider Implications.* Milton Keynes: FACHRS Publications.

Horn, Nancy, and Tilly, Charles. 2009. Contentious Gatherings in Britain, 1758-1834. Ann Arbor, MI: ICPSR. https://doi.org/10.3886/ICPSR08872.v2

House, Jonathan. 2014. *Controlling Paris: Armed Forces and Counter-Revolution, 1789-1848*. New York: NYU Press.

Howells, Gary. 2003. "'On Account of their Disreputable Characters': Parish-Assisted Emigration from Rural England, 1834–1860." *History* 88(4):587-605.

Huzzey, Richard, and Henry Miller. 2020. "Petitions, parliament and political culture: Petitioning the House of Commons, 1780-1918." *Past and Present* no. 248: 123-164.

Kahan, Alan. 2003. *Liberalism in Nineteenth-Century Europe: The Political Culture of Limited Suffrage*. London: Palgrave Macmillan.

Koyama, Mark. 2014. "The law and economics of private prosecutions in industrial revolution England." *Public Choice* 159:277-298.

Lawrence, Paul, ed. 2014. *The Making of the Modern Police, 1780-1914. Vol. 2: Reforming the Police in the Nineteenth Century*. London: Pickering and Chatto.

Lizzeri, Alessandro, and Nicola Persico. 2004. "Why did the elites extend the suffrage?" *Quarterly Journal of Economics* 119(2):707-765.

Lyman, J. L. 1964. "The Metropolitan Police Act of 1829: An Analysis of Certain Events Influencing the Passage and Character of the Metropolitan Police Act in England." *Journal of Criminal Law, Criminology, and Police Science* 55(1):141-154.

MacDonagh, Oliver. 1977. *Early Victorian Government 1830-1870*. London: Wiedenfeld and Nicolson.

McCubbins, Mathew D., and Thomas Schwartz. 1984. "Congressional Oversight Overlooked: Police Patrols versus Fire Alarms," *American Journal of Political Science*, 28: 165-179.

Melander, Eric and Martina Miotto. 2021. *Welfare cuts and crime: Evidence from the New Poor Law*. Cage working paper no. 548.

Moore, D. C. 1976. *The Politics of Deference*. Hassocks: Harvester Press.

Morrison, Bruce. 2011. "Channeling the 'Restless Spirit of Innovation'." *World Politics*

63(4):678–710.

North, Douglass, and Barry R. Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century Britain." *Journal of Economic History* 49(4): 803–32.

Palmer, Stanley H. 1988. *Police and Protest in England and Ireland 1780-1850.* Cambridge: Cambridge University Press.

Philips, David. 1980. "'A new engine of power and authority"' In V.A.C. Gatrell, Bruce Lenman and Geoffrey Parker, eds. *Crime and the Law: The Social History of Crime in Western Europe since 1500.* London: Europa Publications.

Philips, David. 1993. "Crime, law and punishment in the Industrial Revolution." In Patrick O'Brien and Roland Quinault, eds., *The Industrial Revolution and British Society.* Cambridge: Cambridge University Press.

Philips, David, and Robert Storch. 1994. "Whigs and Coppers: The Grey Ministry's National Police Scheme, 1832," *Historical Research*, Volume 67, Issue 162: 75-90.

Philips, David, and Robert Storch. 1999. *Policing provincial England, 1829-1856.* London: Leicester University Press.

Prentice, Archibald. 1851. *Historical sketches and personal recollections of Manchester: Intended to illustrate the progress of public opinion from 1792 to 1832.* London: Charles Gilpin.

Przeworski, Adam. 2009. "Conquered or granted? A history of suffrage expansions." *British Journal of Political Science* 39(2):291-321.

Quinault, Roland. 1993. "The Industrial Revolution and parliamentary reform." In Patrick O'Brien and Roland Quinault, eds., *The Industrial Revolution and British Society.* Cambridge: Cambridge University Press.

Quinault, Roland. 1994. "The French Revolution of 1830 and Parliamentary Reform." *History* 79(257):377–393.

Redlich, Josef. 1908. *The Procedure of the House of Commons: A Study of its History and Present Form*. Translated by A. E. Steinthal. London: Archibald Constable & Co.

Reitan, E. A. 1966. "The Civil List in Eighteenth-Century British Politics: Parliamentary Supremacy versus the Independence of the Crown." *Historical Journal* 9(3):318-337.

Salmon, Philip. 2009. 'The English reform legislation, 1831-32', in *The House of Commons, 1820-32*, ed. D. Fisher. Cambridge: Cambridge University Press, vol. 1, pp. 374-412.

Teichman, Oskar. 1940. "The Yeomanry as an Aid to Civil Power, 1795—1867," *Journal of the Society for Army Historical Research*, Vol. 19: 127-143.

Thomas, R., and N. Dimsdale. 2016. "Three Centuries of Data - Version 2.3." *Bank of England*: http://www.bankofengland.co.uk/research/Pages/onebank/ threecenturies.aspx.

Ticchi, Davide, and Andrea Vindigni. 2008. "War and Endogenous Democracy." Unpublished working paper, IZA DP No. 3397.

Tilly, Charles. 2008. *Contentious Performances*. Cambridge: Cambridge University Press.

Trevelyan, George Macaulay. 1926. *History of England*. London: Longmans.

Wintle, Michael, 1996. "Policing the liberal state in the Netherlands: The historical context of the current reorganization of the Dutch police," *Journal Policing and Society*, Vol. 6: 181-197.