

Why Did the Elites Extend the Suffrage? Democracy and the Scope of Government, With an Application to Britain's 'Age of Reform.'

Alessandro Lizzeri and Nicola Persico*

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Abstract

A new rationale is presented for why an elite may wish to expand the franchise even in the absence of serious threats to the established order. Expanding the franchise can turn politicians away from particularistic politics based on ad-personam redistribution within the elite, and foster competition based on provision of public programs with diffuse benefits. Under some circumstances, this shift in mode of political competition more than compensates the elite for the dilution of their influence.

*Lizzeri: Department of Economics, New York University, 269 Mercer Street, New York, NY 10003. E.mail: alessandro.lizzeri@nyu.edu. Persico Department of Economics, University of Pennsylvania, 3718 Locust Walk, Philadelphia PA 19104; email: persico@ssc.upenn.edu. Web: <http://www.ssc.upenn.edu/~persico>. The authors are grateful to the NSF for financial support. We would like to thank Martin Daunton, Jayasri Dutta, Antonio Merlo, Wolfgang Pesendorfer, Pedros Ramos Pinto.

1 Introduction

This paper analyzes the process by which a political system becomes more democratic by progressively extending the franchise. Our goal is to understand the forces that shape the rules of democracy. In its general form, the question we ask is whether change is imposed on the political system from the outside or is initiated by insiders. In the specific case of suffrage, we inquire when, if at all, would it be in the interest of the elites to extend the franchise in response to changes in the environment. We argue that this is likely to happen when the traditional political arrangements fail to respond to the challenges raised by these changes in the environment. More concretely, this can take place if rational politicians adopt policies that damage a majority of the elite in order to cater to narrow, but electorally pivotal, special interests groups within the elite. In that case, an extension of the franchise is favored by a majority of the elite because a broadening of the electorate reduces the electoral appeal of special-interest politics.

We focus on processes of institutional change that are controlled by the elites. Thus, we do not address those circumstances in which a political system is changed abruptly by extraordinary events such as revolutions. Furthermore, we do not attempt to account for the simultaneous evolution of all features of a political system: we focus exclusively on the expansion of the electoral representation, and ignore changes in other constitutional parameters. We will discuss these issues at length in the Conclusions.

We concentrate on suffrage because the extent of the franchise is one of the key parameters that characterizes a political system. It, more powerfully than any other variable, determines the degree to which a political system can be considered democratic. Furthermore, the extent and composition of the franchise determines the scale and scope of state activity, since the response of government policy to different groups is shaped by their participation in the political system.¹ Historically, the right to vote has been the privilege of elites defined by requirements of wealth, ethnic and social characteristics, place of residence, etc. Accordingly, these elites were favored by the workings of the political system. In most countries the size of the franchise has tended to grow over time, reaching the current broad degree of representativeness in the first half of the 20th century. The extension of the franchise has coincided with a sea-

¹(Lindert, Meltzer and Richard, Lott and Kenny).

change in the role played by the government. If we want to understand the incentives for government to reinvent its role, the evolution of suffrage is a good place to start.

In many historical instances, franchise expansions were relatively peaceful—they entailed little overt violence. This suggests that, in this dimension, political systems are capable of evolving and peacefully reinventing their role. Yet the moderate degree of violent conflict should be puzzling, because the interests of the elite and of the disenfranchised are seemingly in sharp contrast on the issue of suffrage. Enlarging the franchise dilutes the elite’s power to influence policy, resulting in a loss for the elite. This idea is reflected in many formal models of political decision making. In the median-voter model, for instance, expanding the franchise generally changes the identity of the decisive median voter, which guarantees that more than 50 percent of the elite would oppose the expansion. Similarly, in models of redistributive politics (Lindbeck Weibull, Myerson,) the elite would resist an expansion of the franchise since it would result in an increase in the number of individuals claiming a share of a pie of given size. Standard models, therefore, do not explain why the elite does not always expend considerable resources in resisting the expansion, quite possibly resorting to overt conflict with the disenfranchised when expanding the franchise has important consequences.²

To rationalize peaceful expansions of the franchise, some recent papers (Acemoglu and Robinson 2000, 2001, and Conley and Temimi 2001) introduce the threat of revolution. In these models, the disenfranchised group gains the right to vote by effectively threatening the social order, and hence the position of the enfranchised group. What the disenfranchised seek (and get) from the expansion is a transfer of resources from the elite.³ According to this view, franchise expansions are voluntary only in appearance; indeed, they are implemented under the menace of subversion of the existing order.

²In a model of information aggregation a’ la Feddersen and Pesendorfer (AER****), increasing the number of voters could have a positive effect. In this model the conflict of interest is secondary, and adding informed voters might generate more informed outcomes. It would seem, however, that this informational effect ought to be negligible when in reality the elite is large and conflicts of interest dominate.

³The reason that the disenfranchised pursue suffrage, instead of transfers, is that the franchise is hard to revoke, and so guarantees not only current transfers, but also a commitment to future transfers. Acemoglu and Robinson (2000) present evidence on 19th-century Britain, Germany, and France.

According to this view, the political system evolves only in response to a push from the outside, from those who are not participating in the process.

In this paper we propose a less adversarial, more consensual view of the process of franchise expansion. In our model, we emphasize the welfare gains that follow from when the franchise is expanded. These welfare gains take the form of increased provision of public goods and decreased reliance on special-interest politics. Our motivating example is the British “age of reform.” This term refers to the political transformations (the franchise expansions of 1832, 1867, and 1884) and associated transformations in the role of government in 19th-century Britain.⁴

During the period of franchise reform, the public sector underwent a drastic transformation. A major component of this transformation was a shift to spending on programs with diffuse benefits. In Section 4 we document that, while total government spending (central and local) as a fraction of GDP remained roughly constant (except for wars), the *composition* of spending changed dramatically. Spending on local public goods (municipal spending) rose from 17% of total government spending in 1790 to 41% in 1890.⁵ Much of this massive increase was due to spending on public health infrastructure like sewerage systems, filtered water, and paved and drained roads.⁶ To understand the context in which these expenditures were undertaken and who benefited from them, one must consider the plight of British cities in the 19th century. Massive inflows from the countryside in response to the industrial revolution swelled the population of large cities at unprecedented rates. Because of the pressure on a fragile infrastructure, cities were in a constant state of public health emergency. Epidemics of cholera and other diseases ravaged the urban populations; in the 1830s, life expectancy in large provincial cities was only 29 years, a 25% decline from the previous decade, and more than ten years below that of the country as a whole. It is important to understand that these epidemics cut across classes (especially for water-borne diseases such as cholera). Thus, all urban social classes benefited from public health expenditures and the returns on spending on public health in cities were very high following the period of urbanization (Williamson). The lamentable state of public health was a crucial part of the public debate in the 19th century and there was widespread

⁴See, for example, the Introduction in Mandler (1990).

⁵See Veverka (1963).

⁶See Peacock and Wiseman (1961) and Millward and Sheard .

acknowledgment of the failure of the existing institutions to deal with the problem. In contrast, spending on transfers actually decreased during the 19th century—from a peak of 2 percent of GDP in 1820 to less than 1 percent of GDP through most of the rest of the century (Lindert). This is not what would be expected in the “threat of revolution” scenario, according to which expanding the franchise should generate a redistribution of resources from the elite to the disenfranchised.⁷

Furthermore, the reform period is marked by the progressive elimination of tariffs, a process that begins in 1842. The best-known example of this policy is the repeal of the Corn Laws (1846). Most observers interpreted the abolition of duties as a welfare-enhancing process, in which the working classes and the industrialists (who joined forces in the Anti-Corn Law League) benefited while landed interests lost out.

The picture that emerges, then, is one in which the expansion of the franchise is accompanied by (a) changes in the nature of public spending toward more broad-based programs, (b) no greater transfers to the lower classes, and (c) greater benefits for a majority within the elite (the commercial and urban classes) but not necessarily for all of the elite (not for the landed classes). A median-voter framework could account for point (a), but cannot explain voluntary franchise expansion. Point (b) cannot be accounted for by a “threat of revolution” model or by a model of pure redistributive politics. Point (c) is a good starting point, but begs the question of why the commercial and urban classes would need to expand the franchise to achieve their desired policies, when they formed a majority of the restricted franchise. We propose a “hybrid” model of political competition which features a tension between public goods provision and redistributive politics. The model can account for points (a) through (c). In particular, the model identifies conditions under which franchise expansion is instrumental to an achievement of better political outcomes for a majority of the elite. Thus, the model will account for voluntary expansion of the franchise.

In the model, politicians can choose a combination of two policy instruments, redistribution (ad-hominem benefits) and a public good with diffuse benefits. Politicians, who court specific subset of voters in the elite, find redistributive policies more expedient, all other things being equal, than policies whose diffuse benefits cannot be directed to swing voters. Thus, competition for votes induces politicians to rely excessively on

⁷Transfers increase after the 1890s. This is what Acemoglu and Robinson view as supportive of a “threat of revolution model.” We will return to this issue in Section 4.

instruments of special interest politics. In this setup, members of the elite may wish to reform the political system to provide incentives for politicians to employ the power of office towards the provision of policies with diffuse benefits. Enlarging the franchise will do just that, since increasing the number of voters reduces the fraction of the electorate that can be wooed with ad-hominem promises and therefore, by comparison, increases the electoral value of policies with diffuse benefits. Politicians, then, become more likely to provide such policies. This effect pushes the political outcome in the direction preferred by the elite.

The fact that an expansion of the franchise changes the composition of public spending in a direction that is favored by the elite, is suggestive of the existence of a benefit to the elite as a consequence of the extension of the franchise. But we are after a stronger theoretical result: we wish to show that a majority of the elite can be better off after the expansion. This is surprising, since it would seem that, under the restricted franchise, electoral competition for the votes of the elite would guarantee that the lot of a majority in the elite cannot be improved by expanding the franchise. However, electoral competition is not necessarily a flawless mechanism. For one thing, as argued above, it will generally result in excessive special interest politics. Furthermore, the redistributive strategy of politicians is such that not *all* members of the elite are given large transfers, only *those who are swing voters*; in equilibrium, members of the elite who are not swing voters lose out from special interest politics. Thus expanding the franchise, with the consequent shift in policy towards public goods provision, is strictly preferred by those who are not swing voters. When these voters form a majority, a majority of the electorate will prefer to expand the franchise. We show that a majority in favor of an extension of the franchise will form when the value of public goods becomes sufficiently high, as was the case in British cities in the 19th century.

There is compelling historical evidence of a decrease in the amount of pork-barrel politics and increase in the provision of policies with broad appeal, during the reform period, as predicted by our model. The key phenomenon here is the decline in the so-called “electoral corruption,” the practice by which candidates purchased votes in exchange for transfers (monetary or otherwise). Historians agree that electoral corruption declined dramatically as a result of the extension of the franchise. (Seymour, Harling, Cox). In addition, there is evidence that after the franchise expansions a larger fraction of the politicians’s time in office was devoted to the production of legislation

(see Cox and Section 4). In sum, our model allows a unified interpretation of a broad range of phenomena associated with the expansion of the franchise in Britain.

Our model of consensual expansion of the franchise can, we believe, offer a consistent view of the British “age of reform.” This view is somewhat provocative because it asserts that the self-interest of the elites is not necessarily an obstacle to democratization. Indeed, self-interest may conceivably dictate relinquishing some power. If this view proves convincing, then our confidence should increase that sometimes the incentives are right for a political system to reform itself along some dimension.⁸

Were does that leave the “threat of revolution” story? We are not arguing that the forces portrayed in our stylized model represent the totality of the forces that generate an enlargement of the franchise. Important historical changes tend to result from the combination of many different factors, and franchise expansion is no exception. In each occurrence of expansion, there are elements of extra-economic conflict between the disenfranchised and the elite, and there is no question that the “threat of revolution” was used by contemporaries as a rhetorical argument. But, was there a realistic threat of revolution in 18th century Britain? In this, historians differ. Many scholars discount the “threat of revolution” story in accounting for the causes of British franchise reforms. This is partly because they reckon that the revolutionary movements in 19th-century Britain were weak and did not impact the politics of reform.⁹ However, some historians place more stock in the threat of revolution; we refer to Acemoglu and Robinson (2000) for a presentation of that strand of the literature. Our position is that our model is not alternative, but rather complementary to existing views of franchise expansion. The forces highlighted in our model may well co-exist with a threat of revolution. The key point is that the model does not *need* the threat of revolution to explain the franchise expansion.

⁸For this argument to have power it is not necessary that self-interest be the only factor at play: if some measure of threat of revolution is present, then that will be an additional force for expansion.

⁹The democratic demands of the lower classes were represented by the Chartist movement. The height of Chartist power was reached in the demonstrations of 1848, which echoed the unrest across Europe. But “when the demonstrations of 10 April did not come off and it became evident that the greatest mass movement of the nineteenth century had ended in failure, Prince Albert wrote the next day to Baron Stockmar ‘We had our revolution yesterday, and it ended in smoke.’ Of course, historians more or less unanimously agree—which in itself is quite a noteworthy fact—that there existed neither cause nor chance for a successful revolution in Britain in 1848.” Cited from Wende 1999, p. 147.

1.1 Related Literature

Economic Literature on Franchise Extension

The question of franchise expansion has been studied by historians, political scientists, and more recently economists. The literature has put forward some explanations for voluntary expansion. The leading explanation is one of expansion under threat: the disenfranchised group gains enlargement by effectively threatening the social order and hence the position of the enfranchised group (Acemoglu and Robinson (2000), Conley and Temini (2001)). We have discussed the way in which our paper differs from this view.

While most scholars of the period recognize the rhetorical power of the “threat of revolution” story, many downplay the “threat of revolution” story in accounting for the causes of British franchise reforms. This is partly because they reckon that the revolutionary movements in 19th-century Britain were weak and did not impact the politics of reform.¹⁰ A detailed discussion of this important question must await Section 4.

There is some literature that documents the change in the composition of public spending associated to the expansion of the franchise to women. Lott and Kenny (1999) show that the introduction of women’s suffrage is accompanied by an expansion in spending on public goods. Kenny (2001) shows that the introduction of women’s suffrage came earlier in states with a smaller percentage of women. This is consistent with the notion that extending the franchise has a cost for the elite because the extension induces politicians to divert resources away from the elite towards the newly enfranchised group. When that group is too large, in our model the cost to the elite exceeds the benefits of expansion. Finally, Engerman and Sokoloff (2001) consider the evolution of suffrage institutions in the Americas. They argue that societies where the wealth distribution was initially more unequal, perhaps due to differences in their ini-

¹⁰The democratic demands of the lower classes were represented by the Chartist movement. The height of Chartist power was reached in the demonstrations of 1848, which echoed the unrest across Europe. But “when the demonstrations of 10 April did not come off and it became evident that the greatest mass movement of the nineteenth century had ended in failure, Prince Albert wrote the next day to Baron Stockmar ‘We had our revolution yesterday, and it ended in smoke.’ Of course, historians more or less unanimously agree—which in itself is quite a noteworthy fact—that there existed neither cause nor chance for a successful revolution in Britain in 1848.” Cited from Wende 1999, p. 147.

tial factor endowments, had narrower franchises than more equal societies. This is also consistent with our model because, as shown in Sections 3 and 4, in societies that are more heterogenous, the value of targeting transfers is more valuable to candidates, so that the provision of public goods is particularly inefficient. Another piece of historical evidence discussed by Engerman and Sokoloff is that frontier states in the US adopted universal white male suffrage earlier.

Sociological explanations have been proposed that can account for the apparently puzzling phenomenon of voluntary expansions. These explanations invoke a change in the acceptable norms of behavior of the elite, and are comprehensively reviewed by Acemoglu and Robinson (2000). While a change in moral norms can certainly account for franchise expansions, at least in the sense of proximate cause, it is interesting to see the extent to which we are able to account for this phenomenon purely on the basis of standard wealth-maximizing model of behavior. In this paper we rationalize franchise expansion in an “amoral” model, thus proposing a competing explanation. This can be evaluated vis-a’-vis the “moral” explanations to help assess how much each contributes as a “prime” cause and how much as a “proximate” cause.

2 The Simple Logic of Franchise Expansion: An Example

To illustrate the key forces in our environment, we analyze an environment in which some very stark assumptions are made. There are two candidates who have no preferences over policies and maximize the share of the vote. There are two goods: money and a public good. There is a set of identical citizens C of measure 1; each citizen is endowed with one unit of money. We assume that producing the public good takes all the resources in the economy and gives utility G to all citizens. Candidates, therefore, can either offer transfers or the public good.

There are two kinds of citizens: the elite and the “oppressed”. The elite citizens are in set E which is a subset of measure η of the set of citizens C . We compare the case in which only citizens in the elite have the right to vote with the case in which all citizens can vote. Each voter votes for the candidate who promises her the greatest utility.

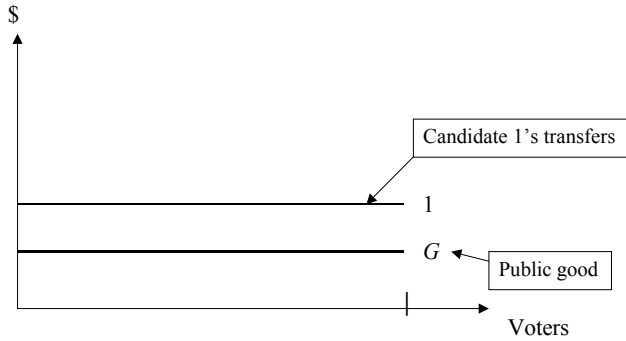
The electoral game is sequential.¹¹ First, candidate 1 chooses whether to offer transfers or the public good. Then, candidate 2 observes the offer made to each voter by candidate 1 and chooses whether to offer transfers or the public good. Finally, each citizen observes the offer made to her by each candidate and citizens in the elite vote. The policy offered by the candidate with a majority of the votes (of the enfranchised) gets implemented.

There are several stark features of this game. One is the fact that the voting game is sequential. The second is that the public good is an all-or-nothing policy. The third is the absence of ideology among voters. These stark features are not present in the analysis of the main model of Section 3. In the present section, however, we take advantage of the stylized nature of our assumptions to convey an intuition for why an elite may choose to expand the franchise.

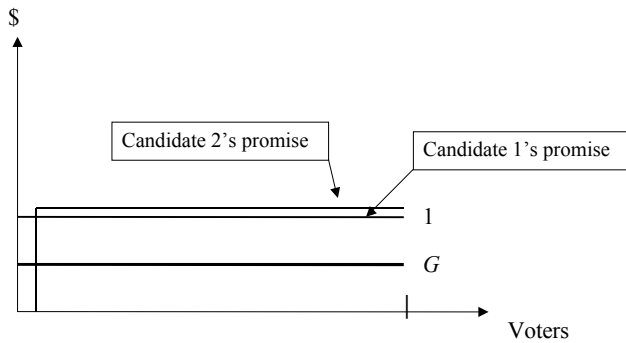
¹¹The sequential aspect of our game is related to the lobbying model of Groseclose and Snyder (1996).

2.1 Universal suffrage

Case $G < 1$. In this case, producing the public good is actually wasteful. Candidate 1 can promise a higher utility to each voter by promising redistribution. Under a mild additional assumption on the structure of the game, it can be shown that in equilibrium candidate 1 treats all voters equally and promises each voter \$1, as shown in the picture below.¹²



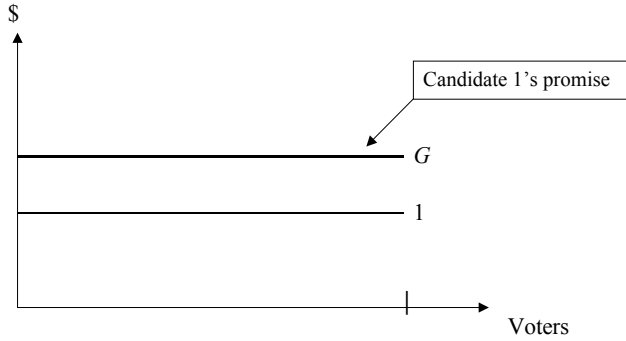
Given this strategy for candidate 1, candidate 2 promises $1+\varepsilon$ to almost all voters (and zero to a small fraction of voters), and wins with a vote share arbitrarily close to 1. See the picture below.



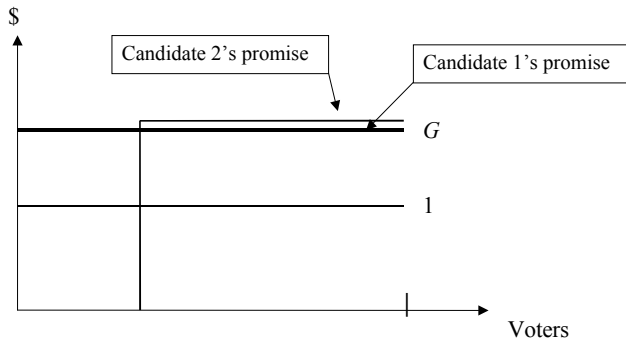
When $G < 1$, therefore, all voters get a utility of \$1.

¹²The reason we need an additional assumption is that candidate 1 has a vote share of zero no matter how he distributes transfers, so we have multiple equilibria. We select the equal-treatment equilibrium by looking at the equilibrium of a nearby game in which with some (possibly small) probability candidate 2 can distribute less money (possibly slightly less) than candidate 1. In this perturbed game, candidate 1 has positive vote share with positive probability and, more importantly, the unique equilibrium is to treat all voters equally.

Case $1 < G < 2$ The best response for candidate 1 is to promise the public good, since the public good gives more utility per voter than can be achieved with transfers. See the picture below.

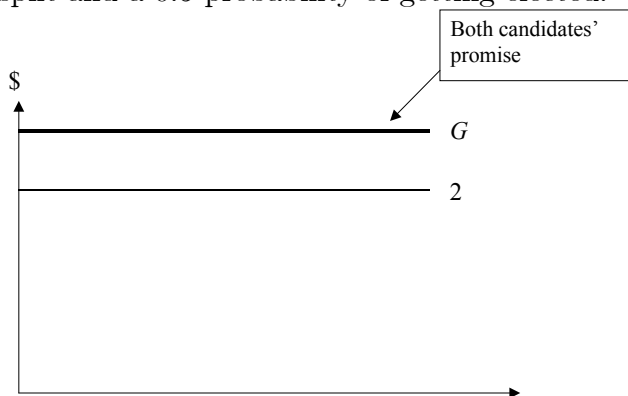


Now consider candidate 2's strategy. Offering the public good leads to a vote share of 50 percent since it leads to a tie with candidate 1. The alternative strategy, offering transfers, entails expropriating a minority and redistributing the resources to a majority of voters. This strategy is profitable if more than 50 percent of the voters can be bought off, i.e., can be offered $G + \varepsilon$. Since $G < 2$, more than 50 percent of the voters can be bought off, so this strategy is preferable to offering the public good.



In equilibrium, candidate 2 wins the election and his policy is implemented. Since candidate 2 maximizes vote share, his incentive is to make ε as small as possible in order to save money with which more voters can be bought. Thus, in the unique subgame-perfect equilibrium we must have $\varepsilon = 0$ (and all voters who are offered G by candidate 2 vote for than candidate). Whenever $1 < G < 2$, therefore, a fraction of the voters get G and the remaining get zero.

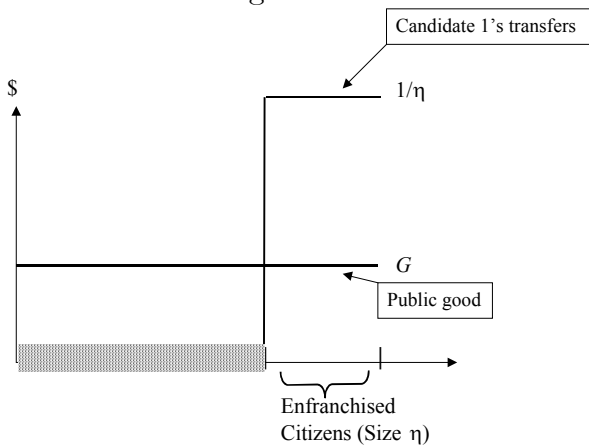
Case $G > 2$ Candidate 1 chooses to promise the public good (this is the case whenever $G > 1$). If candidate 2 chooses to redistribute, he garners a vote share below 50 percent. Thus, candidate 2 will also promise the public good, resulting in a 50-50 split and a 0.5 probability of getting elected.



When $G > 2$, therefore, all voters receive G .

2.2 Restricted Suffrage

We now consider the case in which only a fraction η of the citizens has the right to vote. From the point of view of candidates, this corresponds to ignoring the welfare of citizens who belong to the shaded section in the picture below.



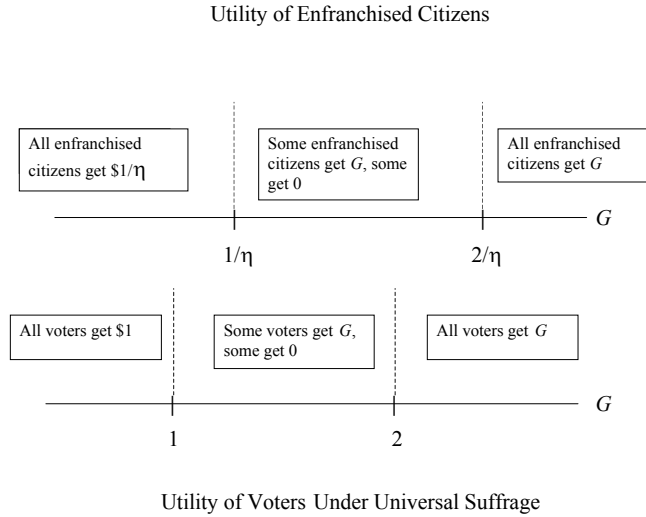
Candidates will be pursuing the favor of members of the elite by, if expedient, expropriating the disenfranchised. Since the disenfranchised can be expropriated at no electoral cost, the total amount to be redistributed within the elite equals 1. This game corresponds to a “rescaled” version of the game with universal suffrage, one in which

there is $1/\eta$ per capita to redistribute (and producing the public good still requires all the money in the economy). In this game, reasoning just as in the case of universal suffrage, candidate 1 will promise the public good if and only if $G > 1/\eta$, and candidate 2 will promise the public good if and only if $G > 2/\eta$.

Elite members receive $1/\eta$ whenever $G < 1/\eta$. When $1/\eta < G < 2/\eta$, some (a majority of) members of the elite receive G , the rest receive zero. When $G > 2/\eta$, all members of the elite receive G .

2.3 Comparing Restricted With Universal Suffrage from the Elite's Viewpoint

Let us compare the welfare that members of the elite enjoy under restricted suffrage to that under universal suffrage. The following picture shows that when $G < 1/\eta$, members of the elite strictly prefer restricted suffrage; when the public good is not very powerful, or when the elite is a very small clique, then the elite does not want to expand the suffrage. When $G > 2$ the public good is provided under both regimes, so elite members are indifferent as to expanding the franchise. When $1/\eta < G < 2$, the preference of elite members are not clear since this simple model does not specify who in the elite gets G and who gets 0; we will return to this issue in the next section, where in a richer model we show that in this case the elite prefers not to expand the franchise.



When $2 < G < 2/\eta$, however, expanding the franchise constitutes a Pareto-improvement for the elite. Some members strictly prefer expansion (under universal suffrage they get G , instead of 0 under restricted suffrage), some are indifferent. Any small amount of uncertainty about their position (i.e., about who will be the ones who get G) would drive all members of the elite to strictly prefer expansion. This surprising phenomenon is the focus of this paper.

The main force that generates this phenomenon is the fact that (a) members of the elite are not treated equally by the winning candidate—some are expropriated in order to be able to buy off the rest; and (b) candidates do not even maximize the utility of those members of the elite who vote for them—they just make them indifferent to the other candidate’s offer. Expanding the franchise reduces the incentive for candidates to play with redistribution within the elite, and increase the incentives for more efficient, broad-based programs. Put differently, the reason why the elite can benefit from franchise expansion is that politicians do not behave efficiently from the point of view of the elite. When only the elite is enfranchised, politicians have an incentive to resort to redistributive policies even in circumstances in which the elite prefers other means of competition (the public good). As the franchise is expanded, the strategic value to politicians of redistributive policies declines—bringing the politicians’ incentives more in line with the elite’s.

3 Theory

We build on the model of redistributive politics provided by Lindbeck and Weibull (1987) and Dixit and Londregan (1996). There are two parties (or candidates), R and L . Candidates make promises about policy which are binding once in office. Candidates maximize the probability of winning.¹³

There is a continuum of citizens of measure 1. Citizens are divided into two groups, indexed by i , and so will voters. Each citizen of group i is endowed with ω_i units of a consumption good, which we will call “money.” We denote the aggregate resources of the economy with $\omega = \omega_1 + \omega_2$. In this paper, politicians will be able to allocate the entire endowment of the economy independent of the extent of the franchise. For this reason, only the level of the aggregate resources will matter, not the distribution of endowments.

Not all citizens vote. Those who have the right to vote we call “elite,” the rest we call “disenfranchised.” Voters can be citizens of either group. The measure of citizens of group i who vote is n_i . The size of the elite is $n_1 + n_2 \leq 1$.

A public good can be produced from money using the technology $g(\cdot)$. All citizens benefit equally from a unit of the public good. The function g is increasing, strictly concave, and differentiable. We assume $g'(0) = \infty$. This assumption ensures that the equilibrium level of public good provision is greater than 0.

Voters in group i are promised by a politician a certain amount of transfers c_i and enjoyment of the common level of the public good g , under the feasibility constraint that

$$n_1 c_1 + n_2 c_2 + g \leq \omega.$$

The citizens’ preferences are represented by a utility function

$$U_i(c_i + g),$$

with U_i strictly increasing, concave, and differentiable. Citizens also care about ideology. Each citizen in group i is endowed with a personal ideological parameter x , which denotes the additional utility that the citizen enjoys if party L is elected. For each citizen, x can be positive or negative and is the realization of an independent draw from random variable X_i . We denote with F_i and f_i the c.d.f. and densities of X_i .

¹³All the results are exactly the same if candidates maximize their vote share.

Suppose a member of group i with ideological preference x is promised consumption $c_{iL} + g_L$ by party L and $c_{iR} + g_R$ by party R . Then this voter will vote for party L if and only if

$$U_i(c_{i,L} + g_L) - U_i(c_{i,R} + g_R) > x.$$

Since x is distributed according to F_i in group i , party L 's vote share is given by

$$S_L = n_1 F_1 (U_1(c_{1,L} + g_L) - U_1(c_{1,R} + g_R)) + n_2 F_2 (U_2(c_{2,L} + g_L) - U_2(c_{2,R} + g_R)).$$

Party R 's vote share is simply $1 - S_L$.

In equilibrium, party L takes as given party R 's promises and chooses a platform (c_{1L}, c_{2L}) that solves

$$\begin{aligned} \max_{c_{1L}, c_{2L}} S_L \text{ s.t.} & \quad (1) \\ c_{1L}, c_{2L} & \geq 0 \\ g_L & = g(\omega - n_1 c_{1L} - n_2 c_{2L}) \\ n_1 c_{1L} + n_2 c_{2L} & \leq \omega \end{aligned}$$

As in Lindbeck and Weibull (1987), in order to guarantee existence of a pure strategy equilibrium in the proportional system, we assume that the objective function of both candidates is strictly concave. A sufficient condition is that, for all i , $F_i(U_i(c_L)) - U_i(c_R)$ be strictly concave in c_L and strictly convex in c_R . We refer the reader to Lindbeck and Weibull (1987) for details.

Assumption 1: Group 1 is the swing group. We assume that for all y , $f_1(0) \cdot U'_1(y) \geq f_2(0) \cdot U'_2(y)$.

The quantity $f_i(0) \cdot U'_i(y)$ represents the increase in group i 's votes for a candidate (L or R) in response to an increase in the consumption promised by that candidate to group i . This increase is evaluated at a point in which both candidates offer the same consumption y to voters in group i . Under assumption 1, if group 1 and group 2 were being promised the same consumption, then it would pay for a candidate to redirect his promises from group 2 to group 1: the loss of group-2 votes is more than compensated by the gain in group-1 votes.

3.1 Equilibrium

In this paper we focus on symmetric equilibria, those in which a group of voters is promised the same consumption by both parties. We want to characterize the sym-

metric equilibrium through an analysis of first order conditions. To this end, we write down the Lagrangean for program (1). When we do this, we can ignore the last constraint in light of our assumption that $g'(0) = \infty$.

$$\mathcal{L}_L = \sum_{i=1}^2 n_i F_i(U_i(c_{i,L} + g(\omega - \sum_{j=1}^2 n_j c_{j,L}) - U_i(c_{i,R} + g_R))) + \sum_{i=1}^2 \mu_i c_{i,L}.$$

The first order conditions are, for $k = 1, 2$

$$\frac{\partial \mathcal{L}_L}{\partial c_{k,L}} = n_k f_k(0) U'_k(c_{k,L}^* + g_L^*) + n_k \sum_{i=1}^N n_i f_i(0) U'_i(c_{i,L}^* + g_L^*) g'(\omega - \sum_{j=1}^N n_j c_{j,L}^*) + \mu_k = 0.$$

These conditions are necessary and sufficient for a symmetric equilibrium of our game. We remark that these do not depend on candidate R 's action. In fact, these first order conditions are the same as those for the Lagrangean for the following ancillary problem.

$$\begin{aligned} \max_{c_1, c_2} & n_1 f_1(0) U_1(c_1 + g) + n_2 f_2(0) U_2(c_2 + g) \text{ s.t.} \\ & c_1, c_2 \geq 0 \\ & g = g(\omega - n_1 c_1 - n_2 c_2) \end{aligned} \quad (2)$$

Problem (2) is a concave maximization problem and therefore has a unique solution. We denote its solution with c_1^* , c_2^* , and g^* . The solution corresponds to the symmetric Nash equilibrium for our game. Problem (2) is a simple constrained problem. We now exploit its properties to characterize the equilibrium outcome.

Lemma 1 *Assume assumption 1. If at the symmetric equilibrium group 2 receives a positive amount of transfers, then group 1 receives more transfers.*

Proof: We need to show that if $c_2^* > 0$, then $c_1^* > c_2^*$. Substitute for g in program (2) to get

$$\max_{c_1, c_2} n_1 f_1(0) U_1(c_1 + g(\omega - n_1 c_1 - n_2 c_2)) + n_2 f_2(0) U_2(c_2 + g(\omega - n_1 c_1 - n_2 c_2)) \quad (3)$$

Since $c_2^* > 0$, the derivative of the objective function with respect to c_2 must equal zero, which means

$$f_2(0) U'_2(c_2^* + g^*) - [n_1 f_1(0) U'_1(c_1^* + g^*) + n_2 f_2(0) U'_2(c_2^* + g^*)] g'(\omega - n_1 c_1^* - n_2 c_2^*) = 0. \quad (4)$$

The derivative of (3) with respect to c_1 equals

$$f_1(0)U_1'(c_1^* + g^*) - [n_1f_1(0)U_1'(c_1^* + g^*) + n_2f_2(0)U_2'(c_2^* + g^*)]g'(\omega - n_1c_1^* - n_2c_2^*). \quad (5)$$

Substitute for the expression in brackets from (4) and suppose, by contradiction that $c_1^* \leq c_2^*$. We get

$$\begin{aligned} & f_1(0)U_1'(c_1^* + g^*) - f_2(0)U_2'(c_2^* + g^*) \\ & \geq f_1(0)U_1'(c_2^* + g^*) - f_2(0)U_2'(c_2^* + g^*) > 0, \end{aligned}$$

where the first inequality obtains from the premise that $c_2^* \geq c_1^*$ together with the concavity of U , and the second inequality comes from assumption 1. We have shown that the derivative of (3) with respect to c_1 is positive, which is incompatible with c_1^* solving problem (3). Therefore, we have contradicted our premise that $c_1^* \leq c_2^*$. ■

In equilibrium, some public good is always provided (remember that we assume $g'(0) = \infty$). Lemma 1 allows us to classify the equilibrium according to which groups receive transfers. It is possible that both groups receive transfers. This will happen in equilibrium if producing the public good is inefficient at the margin, so that resources are better used by transferring money, and when the two groups are similar to each other in terms of their elasticity to consumption. Alternatively, in equilibrium it may be that only group 1 receives transfers. This is the case when group 1 has a much larger elasticity to consumption than group 2, so that candidates find it profitable to promise to group 1 all money that is not used to produce the public good. Finally, it is possible that in equilibrium all money used to produce the public good and none is left to transfer. This will be the case when producing the public good is very efficient.

3.2 Effects of the Franchise

We study the effects of increasing the size of group 2 on equilibrium consumption of the different groups. This experiment corresponds to an enlargement of the franchise which lets in a new group whose low electoral responsiveness to promises is the smaller than or equal to group 2's. We will show that, in some circumstances, group 2 members of the elite benefit from the expansion of the franchise; in other circumstances, group 2 members lose from the expansion. Group-1 members of the elite never gain from the expansion.

Lemma 2 *Suppose that in the symmetric equilibrium elite members of both groups receive a positive amount of transfers. Then expanding the franchise to a small number of citizens of either group increases the amount of public good promised in equilibrium; elite members of both groups receive less transfers and are worse off for the expansion.*

Proof: Start from a given size $n_1 + n_2$ of the elite. If in equilibrium both groups receive transfers, it must be that the derivatives of expression (3) with respect to c_2 and c_1 equal zero at the equilibrium point. These derivatives are displayed in equation (4) and expression (5). Multiply the first by n_2 and the second by n_1 , then add them up to get

$$[n_1 f_1(0) U'_1(c_1^* + g^*) + n_2 f_2(0) U'_2(c_2^* + g^*)] \{1 - (n_2 + n_1) g'(\omega - n_1 c_1^* - n_2 c_2^*)\}.$$

In equilibrium this expression must equal zero. Since the term in square brackets is strictly positive, the term in curly brackets must equal zero in equilibrium. In equilibrium, that is,

$$g'(\omega - n_1 c_1^* - n_2 c_2^*) = \frac{1}{(n_2 + n_1)}. \quad (6)$$

If the franchise is expanded, n_1 or n_2 increase and thus g' becomes smaller. Thus, more public good is provided.

Let us now check what happens to per-capita consumption after the expansion. Consider the equilibrium for a given size $n_1 + n_2$ of the elite; subtract the two derivatives in equation (4) and expression (5). At an equilibrium point they both equal zero, and so does their difference

$$f_1(0) U'_1(c_1^* + g^*) - f_2(0) U'_2(c_2^* + g^*) = 0. \quad (7)$$

Now, suppose the franchise is enlarged to a small number of group-1 citizens. To understand what happens to per-capita consumption in equilibrium, we can look at how equation (7) changes when n_1 becomes larger (the argument for n_2 is exactly the same). The expansion means that there are then less resources per voter, so at least one group previously in the elite must get less per-capita consumption. This means that the equilibrium value of at least one between U'_1 or U'_2 must increase after the expansion. But then equation (7) guarantees that both increase, i.e., that elite members of both groups decrease their consumption as the franchise is expanded. ■

Lemma 3 *Suppose that at the symmetric equilibrium only elite members of group 1 receive a positive amount of transfers. Then expanding the franchise to a small number of citizens of group 2 increases the amount of public good promised in equilibrium; elite members of group 1 receive less transfers and are worse off for the expansion, while elite members of group 2 are better off.*

Proof: We focus here on the generic case in which promising group-2 members any amount of transfers is strictly dominated in equilibrium. Then, the derivative of (3) with respect to c_1 is strictly negative for all values of c_1 , given that all other variables are at their equilibrium values. Strict negativity of the derivative will not be upset by a small change in the equilibrium variables due to an increase in n_2 . A small expansion of the franchise, therefore, does not change the fact that in equilibrium group-2 voters receive no transfers.

Let us show that the amount of public good increases as a result of the expansion. Start from a given size $n_1 + n_2$ of the elite. If in equilibrium group 1 receives positive transfers, it must be that the derivatives of expression (3) with respect c_1 equals zero at the equilibrium point. This derivative is expression (5). Equating to zero and rearranging yields, taking into account that $c_2^* = 0$,

$$[1 - n_1 \cdot g'(\omega - n_1 c_1^*)] f_1(0) U_1'(c_1^* + g^*) = n_2 f_2(0) U_2'(g^*) g'(\omega - n_1 c_1^*). \quad (8)$$

Let us see how the equilibrium changes as n_2 increases. Suppose by contradiction that less public good were promised. Then g' would increase and the term in brackets on the left hand side would decrease. Since group 2 only consumes the public good, group 2's per-capita consumption would decrease; this would increase U_2' , and the right hand side of the equation would increase. To maintain the equality in (8), as required by equilibrium, U_1' would have to increase, which means that group 1's consumption would have to decrease. But now we argue that this is not possible, that is, group 1's consumption cannot decrease as less public good is offered. Doing this will result in a contradiction, thereby proving that more public good must be promised in equilibrium as n_1 increases.

To establish the required impossibility, we prove the equivalent statement that group 1's consumption level cannot increase as the level of public good is increased from the level of the equilibrium with restricted franchise. This statement must be true since if it were not, it would be possible for a candidate to increase the consumption

that is promised to both groups, contradicting the optimality of the original public good level. ■

We now want to tie together the results of Lemmas 2 and 3 to obtain a global result on how the utility level of elite members change as the franchise is extended to an increasing number of group-2 citizens. The key result that allows us to do this is the following.

Lemma 4 *There exists a threshold $\bar{n}_2 \geq 0$ such that, when the measure of group-2 citizens in the elite exceeds \bar{n}_2 , all the resources are devoted to public good production; further expanding the franchise does not affect the equilibrium. Suppose the measure of group-2 elite is below \bar{n}_2 . As the franchise is progressively extended to include an increasing number of group-2 citizens, the following is true. The provision of public good increases. The consumption of group 1 citizens always decreases. The consumption of group 2 citizens may initially decrease (because they receive less transfers), but then increases (because they receive zero transfers and more public good).*

Proof: Let us categorize the equilibrium depending on whether each group receives positive transfers. An equilibrium is type I if both groups receive positive transfers, type II if only group 1 receives positive transfers, and type III if no group receives positive transfers. As the franchise is expanded, the equilibrium will change type. When the equilibrium is of type III, expanding the franchise does not change the type of the equilibrium. Indeed, at a type III equilibrium, resources are strategically more valuable if used to produce the public good than if used to redistribute. Enlarging the franchise does not alter the number of votes that can be gained by redistribution, but it increases the number of voters that benefit from the public good. Therefore, candidates are even more inclined to provide the public good after the expansion. This means that if n_2 is such that a type III equilibrium obtains, any increase in the size of the franchise does not affect the equilibrium. We now argue that, as more group-2 citizens are enfranchise, the direction of change is from type I to type II to type III.

To this end, observe that the equilibrium cannot switch from type II to type I since in a type I equilibrium the transfers to group-2 voters are decreasing in the fraction of new group-2 voters (Lemma 2). Also, as the franchise encompasses more group-2 voters, the equilibrium cannot switch from type III to type II since in a type II

equilibrium the transfers to group-1 voters are decreasing in the fraction of new group-2 voters (Lemma 3). Finally, we need to rule out the possibility that the equilibrium might switch from type I to type III. Suppose by contradiction that there were a value n_2 at which in equilibrium both groups receive public good g^* and no transfers, and such that at $n_2 - \varepsilon$ both groups receive transfers for any small $\varepsilon > 0$. Then at n_2 the derivatives of (3) with respect to c_1 and c_2 must equal zero when evaluated at $c_1^* = c_2^* = 0$. Subtracting the two derivatives we get

$$f_1(0)U_1'(g^*) - f_2(0)U_2'(g^*) = 0,$$

which contradicts assumption 1.

Having established that the direction of change for the equilibrium is type I \rightarrow II \rightarrow III, the statements in the lemma follow immediately from Lemmas 2 and 3. \blacksquare

3.3 Voluntary Franchise Expansion

The results in the previous section translate immediately in the main result of the paper.

Theorem 1 *Assume that a majority of the elite is composed of group-2 citizens. The majority will strictly prefer to expand the franchise to a small measure of group-2 members if and only if the majority receives positive transfers before the expansion. If the franchise expansion under consideration is large, i.e., a large measure of group-2 citizens are to receive the franchise, then it is possible that a majority of the elite might strictly prefer to expand even if the majority receives positive (but small) transfers before the expansion.*

If politicians were to propose a referendum on franchise expansion in which only the elite votes, therefore, there are circumstances in which a majority in the elite would approve of it. This result is the basis for the main contention of this paper, that there are plausible circumstances in which franchise expansion would be beneficial to a majority of the elite. In such circumstances, political opposition to the expansion within the elite would not be sufficient to prevent the expansion. A section of the elite would be a driving force for the expansion.

3.4 Discussion of the Model

Two assumptions made in Theorem 1 might seem especially restrictive. First, the assumption that the newly enfranchised citizens only include group-2 citizens. This assumption can be relaxed to allow for a more mixed newly enfranchised group. Take, for example, an elite composed of n_1 group-1 voters and n_2 group-2 voters; if the newly enfranchised comprise a ratio of group 1 to group 2 voters equal to n_1/n_2 , then it remains true that more public good is provided after the expansion, which benefits the group-2 elite members.

The other apparently restrictive assumption is that the elite is composed of a majority of group-2 citizens. If this assumption fails and group-1 voters are a majority within the elite, then within our simple model voluntary expansion would not arise since group-1 elite members always stand to lose from the expansion (Lemma 4). A richer version of the model helps make this assumption less stark. Consider a model in which, instead of only two groups of voters, there are many groups of voters. Imagine that these groups are ordered according to their electoral responsiveness to consumption, along the lines of assumption 1. In such a model, the equilibrium transfers will be higher for groups with higher electoral responsiveness. Depending on the production function of the public good, some groups with low electoral responsiveness will receive no transfers in equilibrium. As providing a unit of the public good becomes more efficient, i.e., as the function $g'(\cdot)$ uniformly shifts upwards, *caeteris paribus* voters receive less transfers and a greater fraction of the elite members only receive the public good. For $g'(\cdot)$ sufficiently large, more than 50 percent of the elite will only receive the public good in equilibrium, and therefore a majority of the elite will favor franchise expansion. In this sense, the result of Theorem 1 holds irrespective of the composition of the elite—provided that producing the public good is sufficiently efficient.

3.5 Conflict of Interest Among Voters is Key for Voluntary Expansion

In this section we propose a thought experiment aimed at showing that, absent a conflict of interest between members of the elite and disenfranchised citizens, in our environment there is no incentive for elite members to expand the franchise. We now specify formally what we mean by “absent a conflict of interest.”

The conflict of interest in our model comes from the fact that politicians can (and do) use taxes and transfers to redistribute resources from the disenfranchised to the elite. The instrument of transfers gives rise to the conflict of interest. If not used to provide transfers, the resources of the disenfranchised could be used to provide public goods. With respect to public good provision, both voters and non-voters have common interests in the sense that the benefits of the public good accrue to everyone. Our goal is to provide a model in which there is no conflict of interest between the elite and the disenfranchised. To preview the spirit of our formalization, politicians will be forbidden from redistributing from the disenfranchised to the elite. This will force politicians to employ the resources of the disenfranchised to provide public good.

We consider the following thought experiment. Imagine that the resources of the disenfranchised cannot be used in a way that gives rise to conflict of interest, i.e., cannot be redistributed to the elite. Instead, we assume that the only way that these resources can be used by politicians is to provide public goods, which benefits the elite and the disenfranchised alike. Under this constraint, politicians will generally choose to direct the resources of the disenfranchised to public good provision. This will result in a provision of public good which exceeds the level of provision that would prevail if the disenfranchised become part of the electorate. In that case, the resources of the formerly disenfranchised could be transferred directly to (a possibly small) fraction of the elite under the guise of transfers. This would result in less public good provision relative to the case of restricted suffrage. It is possible that a majority of the elite is worse off because of the lower public good provision.

We use this observation to argue that, in a model in which we have eliminated the conflict of interest between the elite and the disenfranchised, expanding the franchise is not beneficial for a majority of the elite.

4 The British Age of Reform

In this Section we discuss some aspects of the history of Britain in the 19th century. We use the ideas developed in the model to interpret some of the developments during this century. We emphasize that we do not claim that the forces highlighted in our model are the only effects that explain the phenomena that we discuss. Such a claim would be absurd. This historical discussion is meant to illustrate how some aspects of the British case can be interpreted in a manner which is consistent with our model.

We first provide a summary description of the major reforms in the franchise, distinguishing between the parliamentary and the municipal franchise, and the franchise for bodies that govern welfare spending.

We then describe what we view as the most plausible ‘exogenous’ shock that may, as interpreted through our model, have driven these reforms in the franchise. For our model to explain a voluntary expansion of the franchise we need to be able to show that there was an exogenous change in the value of public goods around the time when the reforms were undertaken. The major change we focus on is the rapid urbanization that occurred in Britain as a result of the industrial revolution. As a consequence of urbanization, the value of urban public goods increased dramatically in the 19th century, in particular the value of public health infrastructure such as sewerage, waterworks, and paved and drained roads. As late as 1861, many cities had no integrated sewerage system and no comprehensive supply of filtered water. Partly as a consequence of this, accounts of life in these cities during the middle decades of the 19th century present a picture of a large fraction of people living in appalling sanitary conditions. We argue that this situation is caused by a political failure of the old institutions controlled by a small subgroup within a divided elite. According to our model this failure can be ameliorated by extending the franchise at the local level. However, municipal reform requires parliamentary reform because the reform of local institutions must follow that of the national ones.

We then describe a radical transformation in the role of government during the 19th century. Some major changes in the composition of public spending are exactly in the direction predicted by our model. We also show that large changes in investment in public health infrastructure coincide with the extension of the municipal franchise in the late 60s. Again, this is consistent with our model.

We conclude by arguing that some groups within the elite receive additional benefits from the extension of the franchise because the extension of the parliamentary franchise results in enhanced efficiency at the national level. In this respect we refer in particular to two important transformations in 19th century Britain: the end of ‘old corruption,’ and the transformation of the tax system from one based largely on excise taxes and tariffs, such as the corn laws, to one where the income tax played an important role.

4.1 Franchise Reform in 19th Century Britain

Our sources for franchise reform are especially: Seymour (1915), Keith-Lucas (1952), Hennock (1973), Smith (1992).

4.1.1 Parliamentary Franchise

The parliamentary franchise was extended gradually during the 19th century. The first important reform is the so called Great Reform Act of 1832. This reform formalizes the link between franchise and property ownership which was only partial prior to 1832. This act had two major components. First, it lowered the property restrictions on voting, second, it enfranchised some large cities such as Birmingham and Manchester which previously had no representation. Thus, this act reformed the geographic as well as the socio-economic basis for the right to vote. It represented a shift in favor of cities and the middle classes, and it almost doubles the size of the voting population to approximately 800,000 people.

For the second extension of the franchise we must wait until the 1867 Representation of the People Act which significantly lowers the property threshold for the franchise and led to an 88% increase in the size of the electorate to the point where approximately 1 in 10 citizens had the right to vote. The next change in suffrage is the 1884 Franchise Act which essentially brought household suffrage to England by extending the franchise especially in counties. At this point about 1 in 5 citizen has the franchise.

An additional important reform in voting which is indirectly related to the franchise was the 1872 Ballot Act which introduced secret voting. This reform made explicit vote buying more difficult.

4.1.2 Local Franchise and Institutions

In the first half of the 19th century the panorama of English local institutions was quite complex. Keith-Lucas (1977) divides these into four major categories: The Quarter Sessions, the vestries, the municipal corporation, and a variety of bodies that have been called statutory or ad hoc commissions.

The 19th century saw a complete transformation of local institutions. Keith-Lucas (1952) writes: “when Lord Melbourne took office in 1834 very few elected local authorities were to be found in the whole of England; when Mr Gladstone resigned in 1894 every town and village which was more than a mere hamlet had its governing council, elected by the people themselves. During these sixty years there had been born the two democracies of Central and Local Government, as partners to manage the affairs of England.”

Prior to 1835 the municipal corporation was run by oligarchies for the purpose of jobbery and influencing parliamentary elections. The 1835 Municipal Corporations Act was considered a watershed in the history of local institutions in Britain. This act establishes elected bodies that became the precursors of the modern municipal councils. The franchise was based on the principle of one ratepayer-one vote: anyone who paid the rates (a property tax) had the right to vote. Despite the appearance of democracy however, there were two obstacles to a large electorate. First, there was a three year residence requirement. This contrasted with a one year requirement for parliamentary elections and represented a substantial restriction in an era of great mobility and immigration into cities. The second obstacle to a large electorate was the treatment of “compounders”: cities did not bother collecting taxes from individuals with relatively low income; they collected taxes from their landlord who was expected to collect from his tenants by raising the rent. The individuals who thus paid rates indirectly through their landlord were called compounders. Heterogeneous treatment of compounders by different cities led to significant differences in the size of electorate (Leeds has an electorate which was three times as large as Birmingham). Also, recipients of aid of any sort, most notably poor relief, were disqualified from voting. The overall effect of these restrictions was that the municipal franchise was initially approximately the same as the parliamentary one as established by the 1832 Act.

An important change in the size of the municipal electorate took place as a result of the 1850 Small Tenements Act which enfranchised compounders. However, adoption

of this Act was voluntary so that some cities had substantial increases in the size of the electorate whereas others did not.

The next major change in the electorate is the 1869 Municipal Franchise Act & Assessed Rates Act which is analogous to the parliamentary reform of 1867. This act reduces the residence requirement to one year and definitively enfranchises compounders. It brings the municipal electorate to 1 voter for every 5 to 7 citizens depending on the city. The electorate increases sixfold in some cities. The 1888 act catches up at the municipal level with the 1884 Act at the central level.

The following table (from Hennock 1973) summarizes the changes in the size of the electorate for a few major cities.

	Birmingham %	Leeds %	Ipswich %
1841	3	10	8
1851	3	9	8
1861	3	13	10
1871	18	19	15
1911	19	20	20

The importance of municipal corporations grew throughout the century as they started to take over several of the roles of the ad hoc bodies and of the improvement commissioners.

Parish vestries came in several varieties. Open vestries were very democratic almost like town halls. Closed vestries were run by very select elites. As we will see below, public policy at the local level was very limited and was mostly concerned with assistance to the poor.

Vestries are subject to a very different kind of reform, especially with respect to the management of poor relief (welfare spending). The first major change is the 1818-9 Sturgess-Bourne Act, Vestries Act. This reform introduces a graduated franchise based on property: those who owned a property rated £50 had the right to 1 vote, those rated £75 – 2 votes, £100 – 3 votes, £125 – 4 votes £150 – 5 votes, and those rated over £150 – 6 votes. Furthermore, property owners who were not resident in the area had the right to vote with a graduated franchise. Finally. the consent of a supermajority (two thirds) of the property owners was required to substantially raise taxes.

The 1831 Act abolished closed vestries on a more democratic basis.

The 1834 Poor Law Amendment Act reforms the poor law by establishing Poor

Law Guardians that supervise unions of parishes. These are elected on the basis of a graduated franchise similar to that of the Sturges-Bourne Act. Again, recipients of poor relief are excluded from the franchise. It is understood that property owners have a dominant role in voting on issues related to poor law spending.

4.1.3 Interpretation

The history of the franchise in England is very complex and we cannot hope to discuss all its features in this paper. However, a number of aspects of the reform of the franchise that emerge from the previous discussion are particularly important for interpreting historical events in light of our model.

First, there is an important contrast between the reform of the franchise for the institutions devoted to public spending in local infrastructure (municipal corporations) and for those devoted to poor relief: the latter are much less democratic. This suggests that there is no linear progress toward democracy as would be predicted by a theory of reform that highlights the acceptance by the elites of democratic values. Second, throughout most of this century there is no extension of the franchise to the poor since in most elections, those who receive public assistance have no right to vote. Third, there is a different treatment of county and borough franchise: the extensions before 1884 are clearly in favor of cities (see Davis and Tanner 1996). Finally, franchise reform does not represent the whole picture of the institutional reform at the local level: one important additional aspect of change is that municipal corporations take over more and more responsibilities from older institutions (see Hennock 1973).

4.2 The Increased Value of Local Public Goods During the Industrial Revolution: The Plight of Cities

4.2.1 Urbanization

Driven by the spread of mass production due to steam powered mechanization, some cities in England grew at phenomenal rates (e.g., between 1820 and 1830, Bradford grew by 78%, Manchester by 47%, and Glasgow by 38%...Flinn).

In 1700 there were only six provincial (not London) towns with a population over 10,000 (all less than 33,000), by 1801 there were 48. In 1801 only 17% of the population

of England and Wales lived in cities of more than 20,000 inhabitants. By 1911 61%. In 1801 only London had more than 100,000 inhabitants. By 1841 six English provincial towns and one Scottish city recorded populations over 100,000, with Liverpool, Manchester, and Glasgow each well over 200,000. In 1801 only 17% of the population of England and Wales lived in cities of more than 20,000 inhabitants. By 1911 this ratio had increased to 61%.

4.2.2 Urban Mortality

We now argue that urbanization has dramatic effects on the mortality experience in Britain. We will then link this experience to the increased value of public health infrastructure.

The following table (taken from Szreter and Mooney 1998) draws a contrast between the mortality experience in England as a whole and the mortality in the new large cities (excluding London).

	1800s	1810s	1820s	1830s	1840s	1850s	1860s	1870s	1880s	1890s
Cities >100,000	-	-	35	29	30	34	34	38	40	42
England and Wales	40	41	41	41	41	41	41	43	45	46

In Britain as a whole, life expectancy at birth had increased from the low 30s in the 1730s to 40-41 in 1820s **CITE**. There was no further increase until the 1870s. It is remarkable that this lack of improvement in life expectancy coincides with the period of most rapid economic growth. In London life expectancy was 37 (much higher than a century earlier). In Surrey it was 45, and in the so called ‘Healthy districts’ it was 49 in 1851. Thus, there is something going wrong with the mortality experience in the new large cities. Wages in cities were higher than in the countryside (**CITE**) thus, poverty alone cannot explain this discrepancy. Several commentators (especially Szreter) attribute this experience to breakdown of public health infrastructure.

There are several reasons for the big differences in mortality experience between cities and rural areas. Lack of sanitation and crowding were responsible for repeated

outbreaks of diseases such as cholera, typhus, typhoid fever, and smallpox.¹⁴ Diarrhea is 8 times more fatal among urban than rural children. Williamson (1990): crowding, density, and size of urban environment explain a large part of variation in infant mortality (**EXPAND**).

4.2.3 Public Good Nature of Health Infrastructure

We now argue that (a) health infrastructure really was a public good with effects across social classes and that (b) contemporaries understood the link between the state of public health infrastructure and the spread of disease.

(a) “Mortality was less class-specific in the early nineteenth century than it was to become in the early twentieth century after the sanitary reformers had made significant progress in eradicating the water-borne diseases.” Williamson (1990, p. 282). More anecdotically, the Brontes, Shelley, and Keats, are all well-to-do individuals who die of tuberculosis. There were differences in life expectancy across social classes. However, the changes go roughly in the same direction (see Wood).

The following quotes are representative of the feelings of the time. From William Farr’s Annual Report (1838): “All classes of the community are directly interested in their adoption, for the epidemics which arise in the east end of the town [London] do not stay there; they travel to the west and prove fatal.” (Cited from Williamson 1990, p. 293).

The Second Report of the Parliamentary Commission of Inquiry into the State of Large Towns and Populous Districts (1844): “The presence of such emanations, whether they be derived from stagnant ditches, open cesspools, or from accumulation of decaying refuse, is a great cause of disease and death, not confined to the immediate district in which they occur, but extending their influence to neighborhoods, and even to distant places.”

(b) Until late in the 19th century there was no germ theory of disease. Thus, the contemporaries could not have a detailed understanding of the causes of disease. However, they did have a theory that, for the purpose of justifying investment in health infrastructure, had the same effect. The theory was that disease was carried by

¹⁴Real wages were rising much faster in cities than in rural areas. This helps explain why people were migrating from the countryside and suggests that higher mortality in cities was not simply due to lack of subsistence means in cities.

miasma. “This disease-mist, arising from the breath of two millions of people, from open sewers and cesspools, graves and slaughterhouses, is continual . . . in one season it is pervaded by cholera . . . at another it carries fever [typhus] on its wings. Like an angel of death it has hovered for centuries over London. But it may be driven away by legislation.” W. Farr, Tenth Annual Report of the Registrar General (1847), cited from Williamson (1990), p. 283. The link between cholera and water was shown by Snow in 1849.

4.3 Public Spending

In the 19th century, total government spending as a fraction of GDP exhibits a significant decline. Total government spending drops from 12% of GDP in 1790 to 7.5% of GDP in 1890. There was a peak of more than 20% of GDP in 1815 driven by the Napoleonic wars.

Figure on total spending.

An important conclusion that can be drawn from the behavior of total government spending in the 19th century is that the extensions of the franchise that took place in 19th century Britain did not generate an expansion in the size of government, if anything the opposite happened, and several commentators argued that the extension of the franchise was partially responsible for the overall retrenchment of government. This picture is in contrast with the one drawn by Meltzer and Richard (1981). Thus, if we want to examine the effects of the franchise on the public sector, one has to look at the composition of public spending.

4.3.1 Demise of Welfare Spending

The system of public assistance to the poor in England and Wales was governed by the poor law. During the last decades of the 18th century and the first decades of the 19th century, transfers to the poor had reached unprecedented heights, to reach a peak at 2% of GDP by the 1820s (Lindert 1994). This was among the highest levels in Europe and was a cause for alarm among taxpayers. The consequence of the institutional reform of the poor law of 1834 was felt immediately: transfers dropped dramatically in the aftermath of the reform (to reach 1% of GDP) and never reached the previous

level of the 1790-1820 period until the 20th century¹⁵

4.3.2 Increased Importance of Local Spending

The composition of public spending changed dramatically. “Perhaps the most striking development of the period [before 1890] was in the size and character of local government expenditure. At the beginning of the nineteenth century, the major function of local government was the organization and provision of poor relief. By 1890 expenditure had increased to five times the 1820 level, as more and more services were undertaken. ... poor relief ...was only 12 percent of local expenditure in 1890.” Peacock and Wiseman (1963).

	1790	1840	1890
Total Expenditure	23	64	123
Central Gov't	19 (83%)	50 (78%)	73 (59%)
Local Gov't	4 (17%)	14 (22%)	50 (41%)
Local Gov't other than CG Grants	4 (17%)	14 (22%)	40 (33%)
Administration and other	4 (17%)	10 (16%)	27 (22%)
National Debt	9 (39%)	27 (42%)	19 (15%)
Defense	6 (26%)	15 (23%)	35 (28%)
Social Services	2 (9%)	6 (9%)	24 (20%)
Economic and Environmental Svc's	2 (9%)	6 (9%)	18 (15%)

This table shows that the share of local government increased from 12% to 41% of total spending from 1790 to 1890 with a near doubling of this share taking place after 1840.

We will argue that almost all the increase in “social” and “economic and environmental” services are public goods since transfers decrease after 1834. Daunton (2001) argues that capital formation in social overheads and infrastructure was the most rapidly growing sector of the British economy between 1850 and 1910.

4.3.3 Large Fraction of Increase in Local Spending is Really on Public Health

We now argue that investment in public health infrastructure constituted a large fraction of the increase in local spending that took place in the 19th century. In particular,

¹⁵See Lindert (1994) for a discussion of the evolution of welfare spending in 19th century Britain and Besley, Coate, and Guinnane (1992) for an informational rationale for the changes in the law.

a big increase takes place after the extension of the franchise in 1867-69.

Spending on public health is mainly on sewerage and waterworks, widening, paving and draining roads. Spending on vaccination is also of some importance.¹⁶

McKeown & Record (1962) argue that in the period of 1850-1900, public health accounts for 25% of decline in mortality. Szreter (1988), Bell & Millward (1995) suggest a greater impact of public health.

The amount requested by local authorities in subsidized loans for sanitary activities from the central exchequer increased eightfold, from 11 million during 1848-1870 to 84 million during 1871-1897 (see Szreter (1988) , Wohl).

“Together, water and public-health schemes constitute between bd and be of all local annual capital expenditure on non-trading services.” (Bell and Millward 1998).

4.4 Was there Underinvestment in Public Health?

Consistent with our model, there is some evidence of under-investment in public health in the early part of the century in Britain: Meeker (1974) calculates that in the US, social rate of return to investment in public health between 6 and 16 percent. Williamson (1990) argues that, given the rate of return on private investment, this is evidence of underinvestment in public health. He argues that it is likely there as underinvestment in Britain as well. Indeed, Britain was much more urbanized than the U.S., thus, the need for investment was greater.

Szreter suggests that political/administrative breakdown in rapidly growing cities is responsible for this (p.701). First half of 19th century saw little investment in public health (see Cherry 1980, Population and Development Review on voluntary hospitals). Szreter argues (p. 703) that failure of political response to disease was in part due “...to disruption of established social relations, ideologies, and structures of authority.” As predicted by our model, after the 1867-1869 acts extending the franchise, investment in local infrastructure starts to increase. The amount requested by local authorities in subsidized loans for sanitary activities from the central exchequer increased eightfold, from 11 million during 1848-1870 to 84 million during 1871-1897 (see

¹⁶It may be surprising that we include roads as public health infrastructure. See Bell and Millward (1998) and Wohl for a discussion of this. The main reason for this is that unpaved roads were repositories of germs coming from

Szreter (1988) , Wohl). Daunton (2001) states that capital formation in social overheads and infrastructure was the most rapidly growing sector of the British economy between 1850 and 1910. There is also a lot of anecdotal evidence of attempts to improve the local infrastructure which failed in the 1840s and 1850s which finally succeeded in the 1870s (see Barber on Leeds, Elliott on Bradford, Hennock on Birmingham).

Szreter concludes as follows: “...It seems likely that the intra-elite conflicts and cross-cutting clashes of interests among holders of different grades and types of property, along with ethnic or denominational rivalries of the sort found in the British historical case will typically characterize such rapid economic growth in most societies. . . . The necessarily politically negotiated bargaining to promote expensive environmental and social improvements can all too easily become bogged down for decades by sectional conflicts and defensive political standoffs. . . . The British case indicates the great importance of constitutional arrangements and of political organization, particularly the extent to which the poorer sections of the community have an effective political voice.”

4.5 Other Effects of Extension of the Franchise on Economic Policy

4.5.1 Taxation

From Excise and tariffs to the income tax. Tariffs start declining in 1842. The Corn Law was abolished in 1846. The income tax was reintroduced in 1842 after being used temporarily during the Napoleonic wars.

4.5.2 End of ‘Old Corruption’.

We argue that two big transformations of the first half of the 19th century that can at least in part be attributed to the Great Reform Act of 1832 are consistent with our model.

One is the end of ‘old corruption’. The second is the retrenchment of government spending that was driven by the concern with efficiency and economy. These two transformations are related and are consistent with the effects described in our model: reducing wasteful spending, and reducing transfers to a parasitic elite in a world where

taxes are distortionary can be viewed similarly to an investment in the public good.

The term ‘old corruption’ is used by the radicals at the end of the 18th century, beginning of the 19th century. It refers to “A parasitic system that taxed the wealth of the nation and diverted it into the pockets of a narrow political clique whose only claim to privileged status was its proximity to the sources of patronage” (Harling (1996)). “‘Old Corruption’ is a more serious term of political analysis than is often supposed; for political power throughout most of the 18th century may best be understood not as a direct organ of any class or interest but as a secondary political formation, a purchasing point from which other kinds of economic and social power were gained or enhanced.” (Thompson cited by Harling)

We could not find detailed evidence of the size and importance of this ‘old corruption’ but there is some evidence that its existence and importance was not simply a propaganda exercise by the radicals. For instance, Rubinstein (1983) states that “A sizable proportion of those who flourished during the early 19th century were neither landowners nor merchants, but were engaged in activities which would now be classified as in the professional, public administrative, and defense occupational categories, including especially Anglican clerics, soldiers, lawyers and judges, government bureaucrats and placemen. Nearly 10% of all British half-millionaires deceased in the early 19th century, and as many as 23% of those leaving more than 150,000 but less than 500,000 during 1809-1829 were engaged in such activities.” (p. 74-75) Rubinstein goes on to discuss evidence that the numbers of these ‘parasitical’ wealthy individuals declined dramatically by the middle of the 19th century.

Several researchers argue that this kind of corruption was not simply a means for the elite to enrich itself. Rather, it was an integral part of a pre-democratic parliamentary government. Buying off votes was a necessary part of politics in a world with no strong parties, where personal politics predominated (Harling p.15-16, see also Cox (1987)). Rubinstein argues that “The reform of parliament itself was seen by nearly all radicals as a necessary preliminary measure for the systematic ending of old corruption, and whatever the reforming work of the previous Tory governments it is difficult to disagree with this assessment. If one studies the long-term effects of the Great Reform Bill upon Britain’s elite structure, I think one sees just how fundamental a reforming measure it really was, and why one should not underestimate its importance or interpret it merely as a clever holding action by the old elite.” (Rubinstein (1983), p. 74-75).

For instance, the Ecclesiastical commission (1835) and Established Church Bill (1836) essentially ended ecclesiastical wealth accumulation.

4.5.3 Retrenchment and Efficiency

The radical reformers abhorred the idea of a large public sector: high public spending was not perceived to be a good thing for the poor. It was rather viewed as a manifestation of bad government or colonial war adventures favored by the privileged class (e.g., the East India Company). The following figure (figure from Daunton) shows that public spending as a fraction of GDP displayed a dramatic decline between 1815 and the end of the century.

The Great Reform Act of 1832 appears to have played an important role in reducing wasteful spending and creating a more responsive and efficient government. “First, the most important result of the 1832 reform act had been the reduction of public expenditure” (Taylor, p. 28). “Radicals argued that the reform act had not gone far enough in extinguishing ‘interest’ in the house of commons, ..., the only way to increase the independence of the house of commons was by changing its composition through extension of the suffrage. An admixture of new voters would enhance the character of the representation in the house of commons. A widening of the suffrage was not desired for its own sake, but for the purpose of changing the type of MP returned.” (Taylor p.30)

4.6 Effects of Extension of the Franchise on Political Organization

Seymour (1915, p. 447) finds the reason in the fact that “[a] different attitude on the part of agents must have resulted from an increased electorate and the comparative equality in the value of votes; direct bribery would have proved too expensive, if it could have been made possible, to provide for it on a large and organized scale.” As a result of the expansion of the franchise, Seymour estimates a significant decrease in the sums spent on elections (pp. 448 and ff.) and finds that “the very nature of electioneering has been transformed,” from purchasing a constituency with bribes to winning it by

promises of legislation (pp. 453-4).¹⁷ This argument was well understood by contemporaries; Cox (1987, pp.56 and ff.) states that “When Parliament sought to deal with bribery that had become too extensive, their method was often simply to expand the offending borough boundaries so as to include more electors.” In addition, Cox (1987 pp. 59 and ff.) demonstrates that the reforms increased the appetite of representatives for introducing new legislation. This is evidence of increased policy production by local representatives, consistent with the fact that local public good provision required approval by Parliament while transfers in the form of bribery obviously did not.

5 Conclusions

Political institutions evolve in response to changes in the environment; some adapt and thrive, others resist change and become obsolete. For given environmental parameters, much has been written on the effect of different constitutional arrangements on the efficiency of the political outcome (see Persson and Tabellini 2001 for a review of the literature on constitutional design). The process, however, by which a political system reforms itself has received much less attention.

We have presented a model in which, under some circumstances, the elite unanimously wishes to expand the franchise. In the model: (a) the pool of voters (enfranchised and not) is identical; (b) voters compete for scarce resources; (c) the disenfranchised citizens uniformly benefit (get richer) from the expansion (d) members of the elite unanimously prefer to expand the franchise (because they too get richer); (e) there is no threat of punishment in the model.

This is a statement that, we feel, deserves to be taken seriously by measuring whether the overall welfare of the elite (taxes, transfers, and public spending) is increased after an expansion.

Our analysis amounts to a new model of franchise expansion, one in which the elite is a willing partner in the expansion. The fact that voters compete for scarce resources introduces a cost for the elite of expanding the franchise that is proportional to the scope of the expansion. In our model, voluntary expansions of the franchise

¹⁷That the methods of electioneering were transformed by the reforms is well accepted in the scholarly literature. In fact, many scholars read the reform process as one of dealing with “corruption” (i.e., contesting elections by bribing voters). See Seymour (1915), Harling (1996).

are less likely when the size of the elite is small relative to the size of the newly enfranchised population. The fact that the cost of expansion is smaller when the newly enfranchised are few is consistent with Kenny (2001), who documents that women gained the right to vote earlier in those states where they constituted a smaller fraction of the population. More generally, we could view this aspect of the result as suggestive of the fact that democratization via non-violent means (referendum, or constitutional reform) is particularly difficult when the country is governed by a small oligarchy. In these cases, revolutions are more likely to be successful at achieving an expansion of the franchise. In contrast, if the size of the elite is already quite large, then peaceful expansions are much more likely.

In our model, the presence of competition for resources between the elite and the disenfranchised has a surprising effect. We now argue that the presence of competition is exactly what makes it worthwhile for the elite to expand the franchise. To this end, consider as a thought experiment a model in which politicians cannot expropriate the disenfranchised and transfer their resources to the elite. In such a model the strategic value of redistribution need not, as is the case in our model, diminish as the franchise is expanded; franchise expansion just “scales up” the game of electoral competition that was previously focused on the elite. Thus, enlarging the franchise need not result in a changed mode of political competition, and the incentives for the elite to expand the franchise would be absent.

The thought experiment reveals that competition with the disenfranchised is precisely what creates the incentive for the elite to expand the franchise. This observation should be surprising, especially when contrasted with the implications of a model of pure redistribution. In a model where there is no public good, the fact that the elite competes with the disenfranchised and expropriates them is reason for the elite to resist expansion.

The question of representation is important even today and in countries where most adults have the right to vote, because not all segments of society participate equally in elections. Until the recent past, this concern was even more substantial since political participation was much more segregated.

In our leading example of 19th-century Britain, the extension of the franchise represents by far the most important institutional change; changes in other parameters were comparatively unimportant, as a quick review of the literature will confirm. So,

while one can think of other dimensions along which a political system might evolve (presidential vs. parliamentary organization of government, say, or other constitutional arrangements), in point of fact the system in Britain evolved along the dimension of franchise.¹⁸

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¹⁸Also, our theoretical result (the elite may sometimes wish to initiate franchise expansion) is all the stronger and more provocative for the simplicity of the environment we consider.

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