

WHY DID THE ELITES EXTEND THE SUFFRAGE?  
DEMOCRACY AND THE SCOPE OF GOVERNMENT,  
WITH AN APPLICATION TO BRITAIN'S  
"AGE OF REFORM"\*

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A new rationale is presented for why an elite may want to expand the franchise even in the absence of 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 programs with diffuse benefits. If these programs are valuable, a majority of the elite votes in favor of an extension of the franchise despite the absence of a threat from the disenfranchised. We argue that the evolution of public spending and of political competition in nineteenth century Britain is consistent with our model.

I. INTRODUCTION

At the beginning of the nineteenth century, in most countries, narrow elites had a disproportionate influence on public affairs. Even in England, where parliament was an influential institution, suffrage was mostly the privilege of the wealthy, and some members of parliament were elected in boroughs with as few as 100 voters, while cities such as Manchester did not have any representative. A century later, most western countries had universal male suffrage, with female suffrage to arrive shortly thereafter. What brought about this "democratic revolution?" In many cases, the elites were forced out of power after violent revolutions. However, there are important examples, such as England, where democratization took the form of gradual extensions of the suffrage, and these were accompanied by little overt violence. "It is the peculiar pride of England that [the record of social and political reform] is to be found on the statute book, not in the annals of revolution" [Cheyney 1931, p. vii]. Such peaceful democratizations are difficult to rationalize within the benchmark political-economic models. In those models, extending the franchise dilutes the elite's power to influence policy and results

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in a loss for the elite.<sup>1</sup> If the interests of the elite and of the disenfranchised are in sharp contrast on the issue of suffrage, and given that the elite controlled the levers of power, why did the British elite allow democratization?

The question of peaceful expansions of the franchise has recently been revived by Acemoglu and Robinson [2000, 2001, 2003] and Conley and Temimi [2001]. These papers 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. According to this view, franchise expansions are voluntary only in appearance; indeed, they are implemented under the threat of subversion of the existing order. While we do not dispute that the latent threat of violence helped bring about the extension of suffrage in Britain, the question is whether the possibility of revolution was so serious to, *by itself*, have persuaded the elite to extend the franchise, or whether there are some *other political-economic considerations* that might have tipped the balance in the calculus of the elites.

The goal of this paper is to explore the power of an alternative explanation. Rather than being forced to give up power, in our model the elites willingly extend the franchise because elections with a broader franchise can give better incentives to politicians. The model is inspired by the observation that since the end of the eighteenth century, the contemporaries felt a growing need to address the failure of political institutions both at the national and at the local level. Political institutions were dominated by clientelism and patronage (pork-barrel politics), which absorbed much of the public revenue at the expense of programs of public utility. This political failure was felt with increased acuteness in the early decades of the nineteenth century, due to the plight of rapidly growing cities and the parlous state of finances following the Napoleonic wars. The initial core that

1. 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 [Meltzer and Richard 1981]. Similarly, in models of redistributive politics [Lindbeck and Weibull 1987; Myerson 1993] 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, suggest that the elite should expend considerable resources in resisting the expansion, possibly resorting to overt conflict with the disenfranchised. In a model of information aggregation à la Feddersen and Pesendorfer [1997], increasing the number of voters could have a positive effect because conflicts of interest are secondary; adding informed voters can generate more informed outcomes. However, this informational effect ought to be negligible when the elite is large and conflicts of interest dominate.

favored reform (politicians who were influenced by the ideas of so-called “philosophical radicals” like Jeremy Bentham and James Mill), was joined gradually by centrist Whigs such as Lord Russell, Lord Brougham, and eventually the leader of the Whigs Lord Grey. These politicians viewed reform as essential to reduce the pervasiveness of patronage and to coax the machinery of government to serve the public purpose.<sup>2</sup>

In what follows, we show that the effects of franchise reform were consistent with the reformers’ expectations. The extension of the franchise caused a shift away from special-interest politicking toward a more public-oriented legislative activity.<sup>3</sup> Seymour [1915, p. 447], for example, finds that as a result of the expansion of the franchise “the very nature of electioneering has been transformed,” from purchasing a constituency with bribes to winning it by promises of legislation [pp. 453–454].<sup>4</sup> Phillips and Wetherell [1995] provide quantitative evidence that the Reform Act of 1832 led to a dramatic change in voting patterns consistent with the end of patronage-based politics. They show that, prior to 1832, a voter who had voted Tory in one election was almost as likely in the next election to vote Tory as to vote Whig. Thus, pre-1832 voting behavior was characterized by an almost complete lack of party allegiance. In contrast, they showed that after 1832, voting behavior started to exhibit the pattern of correlation resembling modern partisan voting. This evidence is consistent with the notion that 1832 marked the change from patronage politics where votes go to the highest bidder, to a vote based on nontargetable platforms.<sup>5</sup>

The changes in English public finances during the age of reform are equally revealing and amount to an increase in the scope of government.<sup>6</sup> The franchise in nineteenth century England was extended progressively at the parliamentary level with the three Reform Acts of 1832, 1867, and 1884; this expansion was roughly replicated at the level of local government (except for

2. In subsection V.D we provide historical evidence that substantiates this interpretation of the contemporaries’ view of reform.

3. The diminished importance of special interest in politics has been analyzed extensively by historians under the rubric of “waning of Old Corruption.”

4. See subsection V.D for corroborating arguments by contemporaries.

5. This is the interpretation put forward by Phillips and Wetherell [1995]. Prior to Phillips and Wetherell, it was Cox [1987] who first argued for the demise of patronage based on an analysis of voting patterns and of parliamentary minutes. We will further elaborate on this issue in subsection V.E.

6. Section V will address the connection between public spending and franchise reform in more detail.



FIGURE I  
Government Expenditure (Source. Daunton [2001]) and Poor Relief and Pensions (Source. Lindert [1994])

bodies governing welfare spending). Figure I shows that total government spending (central and local) as a fraction of GDP showed no increase between 1790 and 1890 after accounting for war spending.<sup>7</sup> Since the expansion of the franchise does not seem to have coincided with a large increase in total government spending, let us examine the *composition* of spending. Spending on welfare actually decreased during the nineteenth 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. This pattern seems to contradict a literal interpretation of the “threat of revolution” model.<sup>8</sup> A similar picture emerges if we look at taxation. Figure II depicts taxes and direct taxes as a fraction of GNP. Total taxation as a fraction of GNP decreases between 1800 and 1870, and in

7. The large peak around the start of the century reflects military spending on the Napoleonic wars.

8. However, this should not be overemphasized: even though direct transfers declined, we have no data on indirect transfers. As mentioned by Acemoglu and Robinson [2000], trade unions were recognized, and strikes legalized following the 1867 reform, which changed industrial relations thereby probably increasing wages. Furthermore, transfers did increase after the 1890s. Nevertheless, especially in view of the fact that poor relief actually decreased after the 1832 reform, the expansion of the franchise does not seem to be associated with a large redistribution of resources from the elite to the disenfranchised. We will return to these issues in Section V.

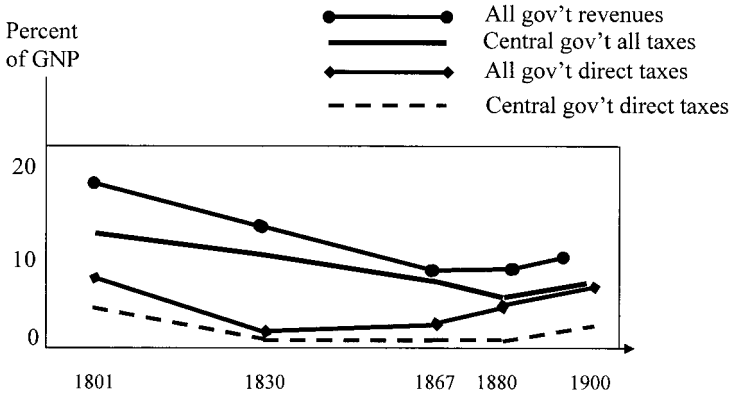


FIGURE II  
Taxation as a Fraction of GNP (Source: Lindert [1989])

1900 has not yet reached its 1800 level.<sup>9</sup> The age of reform is also 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). The conventional view—at least since David Ricardo and the Manchester School—is that the abolition of duties would result in increased social welfare benefiting the working classes and the industrialists, who joined forces in the Anti-Corn Law League against the landed interests. Taken as a whole, the picture that emerges from Figures I and II does not seem to provide *prima facie* support for the idea that franchise expansion is primarily associated with increased redistribution from the rich to the poor.

Instead, there is a dramatic change in local public spending. Spending by local governments rose from 17 percent of total government spending in 1790 to 41 percent in 1890 (see Figure III). Much of this massive increase reflected spending on public health infrastructure like sewerage systems, filtered water, and paved and drained roads.<sup>10</sup>

A picture emerges, then, in which the voluntary expansion of

9. This evidence, however, must be interpreted with caution. As shown in Figure II, direct taxes, a key redistributive tool, increased substantially as a fraction of GNP after 1870 (albeit from a very low base), and the tax system became more progressive.

10. See Peacock and Wiseman [1961] and Millward and Sheard [1995]. The paving of roads was considered a public health measure because dirt roads constituted a breeding ground for microorganisms (see subsection V.F).

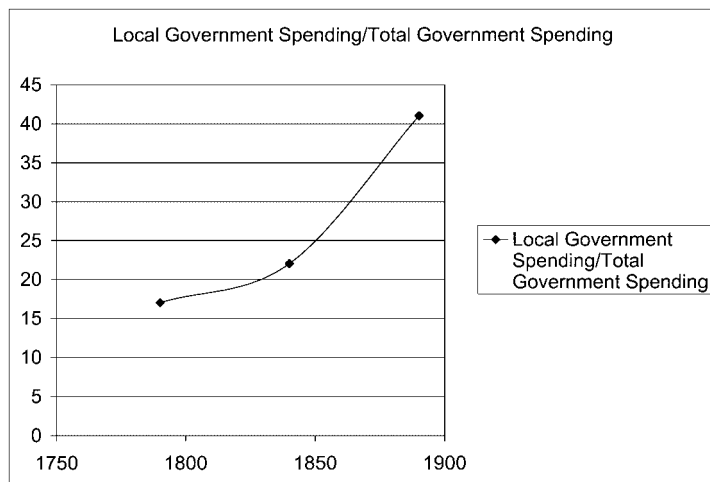


FIGURE III  
Local Government Spending (*Source*. Veverka [1963])

the franchise is accompanied by (a) more spending on public goods; (b) no greater direct transfers to the lower classes; (c) a shift in policy in a direction favored by a majority within the elite (the commercial and urban classes) but not necessarily of all of the elite (not the landed classes); and (d) a change in the nature of political competition away from patronage politics. A static median-voter framework could account for point (a), but cannot explain voluntary franchise expansion. Point (b) cannot be accounted for by a model of pure redistributive politics. Point (c) highlights the internal divisions of the elite, a feature that has hitherto received little attention in the formal literature but which is crucial in our account of voluntary expansion.<sup>11</sup> Point (d) has not yet been addressed in a formal model. Our paper discusses 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 (d). Specifically, the model identifies conditions under which franchise expansion

11. A notable exception is Acemoglu and Robinson’s [2000, 2003] theory of the “middle-class drive,” which we discuss in Section II. In the more qualitative political science literature, the connection between franchise expansion and the presence of divisions within the elites has previously been identified. O’Donnell and Schmitter [1986], for example, emphasize the cleavage between regime “hard-liners” and “soft-liners,” the latter being more favorable to democratization.

is optimal for the elite in response to an increase in the value of public goods, i.e., in the opportunity cost of redistributive politics. Remarkably, the model delivers a franchise expansion that is truly voluntary—it does not require any degree of power of the disenfranchised over the elite.

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 subsets 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. 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 toward 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 force pushes the political outcome in the direction preferred by the elite.

The fact that a majority of the elite can be better off after the expansion is surprising, since it would seem that, under the restricted franchise, electoral competition for the votes of the elite would guarantee that the welfare of a majority in the elite cannot be improved by expanding the franchise. However, the redistributive strategy of politicians is to favor members of the elite *who are swing voters*; those who are not swing voters suffer from patronage politics. Thus, expanding the franchise, with the consequent shift in policy toward public goods provision, is favored by those who are not swing voters. When the number of these voters exceeds 50 percent, a majority of the electorate will prefer to expand the franchise.

In this model, support for franchise reform increases in response to an exogenous increase to the value of public goods. We now argue that, in nineteenth century England, it was an increase in the demand for local public goods in British cities that provided the reformers with a powerful, and ultimately decisive, argument for reform. With the industrial revolution, urban populations grew very rapidly. Because of the pressure on their fragile infrastructures, cities were in a constant state of public health emergency. Epidemics of cholera and other diseases ravaged ur-

ban populations; in the 1830s, life expectancy in large provincial cities was only 29 years, a 25 percent decline from the previous decade, and more than ten years below that of the country as a whole.<sup>12</sup> In these circumstances, spending on health and sanitation constituted a real public good whose benefits accrued to all urban classes. William Farr alludes to this point in his 1838 *Annual Report* “[T]he epidemics which arise in the east end of the town [London] do not stay there; they travel to the west and prove fatal” [Williamson 1990, p. 293]. This was especially true of water-borne diseases such as cholera and typhoid. The surge in local public spending, then, was a direct response to an exogenous shock: rapid urbanization. This shock raised the value of local public goods not only for the (nonvoting) urban poor but also, crucially for our argument, for the (voting) urban middle classes.

The plight of British cities in the nineteenth century demanded effective government provision of public goods. But the preexisting political structure made public-oriented policies impossible. On this, most students of local government agree. The increased provision of local public goods could not have come about without the expansion of the franchise, which started the “municipal revolution,” the progressive reform of local government initiated by the Municipal Corporations Act of 1835. According to Smellie [1949], for example, “[t]he most important changes in the structure of English local government followed the extension of the suffrage in 1832 to the middle class, in 1867 to the urban working class, and in 1884 to the agricultural labourer.” In our interpretation, then, the plight of British cities with its attendant increase in the value of public goods caused an overflow in the dissatisfaction with the old political order, thus tipping the political balance in favor of reform. Additional impetus for reform, especially in the second half of the nineteenth century, may have been provided by the demand for public education. Insofar as public education benefited the industrial elite by creating a more educated labor force, it is possible that a majority of the elite may have seen franchise reform as a way of directing public resources away from pork barrel and into public education. This issue is discussed in greater detail in subsection V.G.

Our model of consensual expansion of the franchise can, we

12. Cholera, for example, struck England in 1831–1832 (32,000 deaths). Other cholera epidemics occurred in 1848–1849 (62,000 deaths), 1853–1854 (20,000), and 1866–1867 (14,000). See Wohl [1983], pp. 118–119. See also subsection V.B.



believe, contribute to building a coherent picture of England's age of reform. Our contribution is somewhat provocative because it asserts that the self-interest of the elites is not necessarily an obstacle to democratization. We reiterate, however, that we do not take our model literally as showing that the franchise expansion happened in the absence of any pressures from the disenfranchised. What we take from the model is that there are shifts in public spending that follow the expansion of the franchise, and that these shifts may be beneficial for important subsets of the elite. We recognize that 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 powerful rhetorical argument. But, was there a realistic threat of revolution in nineteenth century England? Historians differ. Some scholars discount the threat of revolution partly because they reckon that the revolutionary movements in nineteenth-century England were weak and did not impact the politics of reform.<sup>13</sup> Others place more emphasis on the threat of revolution (for a recent contribution, see Cunningham [2001]); we refer to Acemoglu and Robinson [2000, 2003] for a deeper discussion of this 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 coexist with a threat of revolution. The key point is that the model does not *need* the threat of revolution to explain the franchise expansion.

The paper proceeds as follows. The related literature is discussed in Section II. In Section III we present an example that illustrates the basic logic behind our theoretical results. Section IV presents the analysis of the model. Section V collects some historical evidence related to our model. Section VI offers some concluding remarks.

13. The 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" [Wende 1999, p. 147].

See Hamburger [1963] for an argument that the threat of revolution was a "bluff" by the Radicals.

## II. RELATED LITERATURE

The question of franchise expansion has been studied by historians, political scientists, and more recently economists. The literature has put forward several 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. Justman and Gradstein [1999], Acemoglu and Robinson [2000], and Conley and Temimi [2001] present such a model. In Acemoglu and Robinson's model, the franchise is a favored instrument used to transfer (future) resources because the franchise entails a commitment.<sup>14</sup>

Acemoglu and Robinson [2000, 2003] also consider alternative theories of franchise expansion, notably a model of "middle-class drive." In this model, the working classes' preferences are assumed to be aligned with the middle class. If both classes are enfranchised, the probability that the upper class gets into power decreases relative to the case in which the working classes do not have the franchise. Thus, extending the franchise influences future policies in favor of the middle class against the interest of the upper class. Therefore, it is rational for the middle class to support franchise extension to the working classes. Interestingly, in this model franchise extension arises in the absence of a threat of revolution. However, Acemoglu and Robinson discount the power of the model to explain the historical evidence. Indeed, the 1832 Act was chiefly about enfranchising the middle classes, and the 1867 Act was largely a bipartisan act that was passed by a conservative government.

A different strand of the literature sees democratization as the solution to a commitment problem of the elite in the context of a holdup problem (see, e.g., Olson [2000] and Weingast [1997] for a review of that literature). In this vein, Fleck and Hanssen [2002] provide a model where farmers underinvest in the land because of fear of being expropriated by a dictator.<sup>15</sup> In their model, democracy is a way to commit not to expropriate. Fleck

14. Justman and Gradstein focus on the reduction in inequality associated with democratization. Conley and Temimi place particular emphasis on the degree to which the preferences of the disenfranchised are opposed to those of the elite.

15. In a similar vein, but in a more general framework, Jack and Lagunoff [2003] present a general dynamic model of franchise extension in which the franchise is extended progressively.

and Hanssen relate this result to exogenous variation in the type of land in different areas of ancient Greece, and argue that democracy is more likely to emerge in areas where the type of cultivation requires more intensive investment. This idea is probably less relevant for the case of early nineteenth century England: those resisting extension of the franchise were the members of the landed aristocracy, whereas those in favor of extending the franchise were the members of the urban and industrial elite who were responsible for a large fraction of capital investment during the industrial revolution.

Llavador and Oxoby [2002] consider a median voter model in which an incumbent government can extend the franchise without the approval of a majority of the voters. In contrast, tax policy needs approval of a majority of the voters. Therefore, a party in power may be able to manipulate the median voter in the population by changing the franchise. In our model, we do not allow franchise changes to occur under less than majority approval. Indeed, we can even allow for franchise reforms that require supermajorities.

Lott and Kenny [1999] show that the introduction of women's suffrage in the United States 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 toward the newly enfranchised group. When that group is too large, in our model the cost to the elite exceeds the benefits of expansion. 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, had narrower franchises. Finally, Aidt, Dutta, and Loukoianova [2001] estimate the relation between public spending and the spread of democracy in western Europe in the period 1830–1939. They find that the extension of the franchise to poorer voters had no impact on the size of government but, consistent with our model, it had a positive effect on the composition of government spending, increasing spending on public goods.

Our model is based on the idea that distortions can arise when redistributive policies targeted to particular subsets of the electorate are overprovided at the expense of projects with

diffuse benefits. This idea can be traced back at least to Buchanan and Tullock [1962]. Bates [1981], in his analysis of programs designed to boost agricultural production in Africa, describes the incentives to set up inefficient production schemes which require hiring officials in various localities, instead of just allowing prices to increase which would not allow politicians to target any spoils. Lizzeri and Persico [2001] compare winner-take-all with proportional systems, and consider the effects of the magnitude of districts, in terms of public good provision. Persson and Tabellini [1999, 2000a, 2000b] provide empirical evidence on the provision of public goods in different political systems.

### III. THE SIMPLE LOGIC OF FRANCHISE EXPANSION: AN EXAMPLE

To illustrate in the simplest way the key forces of our model, we first analyze an example of democratic provision of public goods in which some very stark assumptions are made. Most of these assumptions are then dispensed within the main analysis of the model. We compare the equilibrium under restricted suffrage with the equilibrium under universal suffrage. We show that in the equilibrium with restricted suffrage, no public good is provided, whereas under universal suffrage the public good is provided. What is more, we show that the equilibrium allocation under universal suffrage involves a Pareto improvement relative to the allocation under restricted suffrage.

There are two parties which maximize the share of the vote. There is a measure 1 of identical citizens. There are two goods: money and a public good. Each citizen is endowed with one unit of money. Citizens have linear utility for money so that consuming one dollar gives them utility 1. Producing the public good takes all the money that is present in the economy and gives utility  $G$  to all citizens. Therefore, a party can either promise to tax all the endowment from all citizens and to provide the public good, or promise to redistribute resources across voters by choosing ad personam taxes and transfers.

One half of the population (the elite) has the right to vote. We assume that  $2 < G < 4$ . Under this assumption, the allocation that maximizes the sum of the utilities of the members of the elite entails providing the public good (it is impossible to give more than 2 to all members of the elite without providing the public good).

The electoral game is sequential. First, party 1 chooses whether to promise transfers or the public good. Then, party 2 observes the promise made to each voter by party 1 and chooses whether to promise transfers or the public good. Finally, each voter observes the promise made to her by each party and votes for the party who promises her the greatest utility. The policy offered by the party with a majority of the votes (among the enfranchised) gets implemented.

**Political equilibrium under restricted suffrage.** Assume for the moment that party 1 promises the public good (this is true in equilibrium). Then, party 2 will offer transfers and win a majority of the votes. Party 2 will offer nothing to the half of the population which is disenfranchised. It will also offer nothing to some members of the elite so that it can target a mass of almost  $1/G$  of elite members and promise them  $(G + \epsilon)$ , a bit more than the value of the public good. By taking  $\epsilon \rightarrow 0$ , the mass of elite members who vote for party 2 is  $1/G$ , and that party's vote share is  $2/G$  (recall that the elite is half of the population). Party 2's vote share is larger than 50 percent since  $G < 4$ . In contrast, opting to provide the public good leads to a tie with party 1. Thus, party 2 will promise redistribution, will garner a vote share of  $2/G$ , and the implemented policy results in a fraction  $2/G$  of the elite receiving a utility level of  $G$  and the rest of elite members receiving 0. Let us now go back and check that, indeed, party 1 offers the public good. Suppose that party 1 promises redistribution; then party 2 could win a vote share arbitrarily close to 100 percent by promising  $\epsilon$  more than party 1's promise to  $1 - \epsilon$  of the voters. Thus, by offering the public good, party 1 can at least guarantee itself a nonnegligible vote share.

**Political equilibrium under universal suffrage.** For the same reason as before, party 1 will promise the public good. Now let us compute party 2's best response. If party 2 chooses to redistribute, the most it can garner is a vote share of  $1/G$  which is below 50 percent. Relative to the case of restricted suffrage, this vote share is smaller because now all citizens vote, and so the strategic advantage of redistribution is smaller. Party 2 will therefore promise the public good, resulting in a 50-50 split and a

0.5 probability of getting elected.<sup>16</sup> With universal suffrage, therefore, all elite members receive  $G$ .

**Universal suffrage is Pareto-improving for the elite.**

Under restricted suffrage, a majority of the elite receive a utility level of  $G$ , and the rest receive 0. Under universal suffrage, all elite members receive  $G$ . This means that some members are considerably better off under expansion and some are indifferent. Expanding the franchise results in a Pareto improvement for the elite. Furthermore, 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 favor expansion.

The fact that elite members *unanimously* prefer expansion is specific to this example. In the next section we analyze a model that relaxes some of this example's stark assumptions. There, the voting game is simultaneous instead of sequential, the public good is a continuous instead of an all-or-nothing policy, and voters are endowed with an ideological motive. In that more realistic model elite members will not be unanimous in their preference for expansion, but we provide conditions under which a *majority* of the elite favors expansion.

#### IV. THEORY

We build on the model of redistributive politics of Lindbeck and Weibull [1987] and Dixit and Londregan [1996]. We modify their framework by adding the possibility of investment in a public good and a restricted franchise.

There are two parties,  $R$  and  $L$ . Parties make binding promises about policy in order to maximize their vote share.<sup>17</sup>

There is a continuum of citizens of measure 1. Citizens are

16. The argument does not hinge on the precise nature of the tie-breaking rule. The analysis would be unchanged if we perturbed the tie-breaking rule, as long as party 2 obtains at least  $1/G$  of the votes when both parties offer  $G$ . The issue of tie-breaking, however, is relevant for the existence of equilibrium in the case of restricted franchise. In the analysis we have sidestepped the issue by making party 2 offer  $G + \epsilon$  and taking  $\epsilon$  to 0. When  $\epsilon = 0$ , however, party 2's payoff is discontinuous, which creates problems for existence of equilibrium. This problem is a technical artifact of the stark nature of this example; it would not arise if, for instance, we assumed that transfers have to be multiples of some minimal unit of account (e.g., one cent). Thus, our discussion can be interpreted as the limit of such a game when the unit of account becomes infinitesimal. In any event, this problem disappears when the game is simultaneous as we assume in the next section.

17. In this model all the results are exactly the same if parties maximize the probability of winning.

divided into groups that are indexed by  $i \in \{0, 1, \dots, N\}$ . Group  $i$  is composed of a mass  $n_i$  of citizens. Each citizen of group  $i$  is endowed with  $\omega_i$  units of a consumption good, which we will call “money.” We denote the aggregate resources of the economy by  $\omega = \sum_{i=0}^N n_i \omega_i$ . We assume that taxation is nondistortionary, and that all the endowment can be taxed away. This implies that only the level of the aggregate resources  $\omega$  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.” We assume that citizens of groups  $0, \dots, s$  are voters, and those in groups  $s + 1, \dots, N$  are disenfranchised. Thus, the extent of the franchise is measured by the fraction of citizens who have the right to vote:  $\sum_{i=0}^s n_i$ . We assume that  $n_0 < (\sum_{i=0}^s n_i)/2$ ; that is, group 0 on its own does not constitute a majority within the elite.

A public good can be produced from money using the technology  $g(I)$ , where  $I$  denotes the amount invested in the public good. The function  $g$  is assumed to be strictly increasing, strictly concave, and twice differentiable. We also assume that  $g'(0) = \infty$ ; this assumption ensures that the equilibrium level of public good provision is greater than 0. If  $I$  is invested in the public good and citizen  $i$  consumes  $c_i$  of the consumption good, citizen  $i$  receives utility

$$U(c_i + g(I)).$$

We assume that for all  $y \geq 0$  the function  $U(y)$  is continuous and strictly increasing, concave, twice differentiable, that  $U'(y)$  is bounded away from 0, and that  $U'(0) = \infty$ .

Parties simultaneously choose platforms, i.e., nonnegative vectors  $(I, c_1, \dots, c_N)$  such that  $I + \sum_i n_i c_i = \omega$ . A note about terminology: consider a citizen who has initial endowment  $\omega_i$  and who ends up with private consumption  $c_i$ . It is convenient to call  $c_i$  the *transfer* to a citizen in group  $i$ , implying that the citizen’s entire endowment  $\omega_i$  is taxed away and then a portion  $c_i$  is returned to him as a transfer.

In addition to these “material” preferences, the citizens’ preferences also reflect their *ideology*. This is captured by endowing each citizen with a personal ideological parameter  $x$  that denotes the additional utility that the citizen enjoys if party  $R$  is elected. The parameter  $x$  is meant to capture additional elements of the political platforms of the two parties which are not related to economic policy. An example would be the parties’ attitudes to-

ward issues such as foreign policy or religious values. 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  $F_i$  the c.d.f., with  $f_i$  the density of  $X_i$ , and we assume that  $f_i$  is differentiable. Parties only know the distribution  $F_i$  of the ideology of citizen  $i$ , but they do not know the exact realization of the value of  $x$ . Thus, the parties' promises cannot depend on  $x$ , although they can depend on  $i$ .<sup>18</sup>

Suppose that a member of group  $i$  with ideological preference  $x$  is promised consumption  $c_{iL} + g(I_L)$  by party  $L$  and  $c_{iR} + g(I_R)$  by party  $R$ . This voter prefers that party  $L$  is elected if and only if

$$U(c_{iL} + g(I_L)) - U(c_{iR} + g(I_R)) > x.$$

We assume that voters vote as if they are pivotal. In this context, this means that a preference for a party translates into a vote for that party. Thus, the probability that a voter in group  $i$  votes for party  $L$  is

$$F_i(U(c_{iL} + g(I_L)) - U(c_{iR} + g(I_R))).$$

Adding up over voters we obtain party  $L$ 's vote share:

$$S_L = \frac{1}{(\sum_{j=0}^s n_j)} \cdot \sum_{i=0}^s n_i [F_i(U(c_{iL} + g(I_L)) - U(c_{iR} + g(I_R)))].$$

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

Given party  $R$ 's platform, party  $L$  chooses a platform  $(c_{iL}, \dots, I_L)$  that solves

$$(1) \quad \max S_L$$

subject to

$$c_{iL} \geq 0 \quad (i = 0, \dots, N)$$

$$I_L + \sum_{i=0}^s n_i c_{iL} = \omega.$$

18. Note that, in the example in Section III, ideology was absent: all voters voted solely according to their material preferences. Thus, the result about franchise extension in that setup does not rely on the presence of ideology. In the model of Lindbeck and Weibull, the presence of an ideological component is essential for the existence of equilibria in pure strategy.



In writing the last constraint, we have implicitly assumed that parties will not waste any transfers on citizens who do not have the right to vote. This is obviously true in equilibrium.

As in Lindbeck and Weibull [1987], in order to guarantee existence of a pure strategy equilibrium, we assume that the objective function of both parties is strictly concave. A sufficient condition is that, for all  $i$ ,  $F_i(U(z)) - U(y)$  be strictly concave in  $z$  and strictly convex in  $y$ . We refer the reader to Lindbeck and Weibull for details. Throughout the remainder of this paper we also make the two following assumptions.

**ASSUMPTION 1 (Ordering of groups).** We assume that  $f_i(0)$  is decreasing in  $i$ .

**ASSUMPTION 2 (Symmetry).** We assume that  $f_i$  is symmetric around 0.

As will become clear, Assumption 1 implies that the return in terms of vote share of offering one more dollar to voters in a given group is smaller for higher indexed groups. This in turn implies that parties will tend to promise more consumption to voters with lower  $i$ . For a given size of the franchise  $s$ , this assumption is merely an ordering of the indices  $i$  and is therefore without loss of generality. The substantive content of this assumption is that disenfranchised citizens are less responsive than the elite. Making this assumption simplifies the exposition. We will show later that this assumption can be relaxed considerably without affecting the substance of the argument (see the discussion in subsection IV.G).

Assumption 2 guarantees that newly enfranchised groups are not biased in favor of either party. Thus, neither party is favored by an extension of the franchise. This allows us to separate the forces identified in our model from a “partisan” motive for franchise extension, in which the newly enfranchised voters are a natural constituency for one of the parties.

#### *IV.A. Benchmark: Absent Public Good, No Voluntary Expansion of the Franchise*

Suppose that  $g(I) \equiv 0$ , i.e., investing in the public good is wasteful. Then this game specializes to the model of Lindbeck and Weibull [1987]. In this environment, parties offer transfers only to members of the elite. Parties allocate the total endowment  $\omega$  so that the marginal return, in terms of vote share, of a dollar spent

on a member of group  $i$  is the same as the marginal return of a dollar spent on a member of group  $j$ . Formally, the equilibrium conditions read as follows:

$$(2) \quad f_i(0)U'(c_i) = f_j(0)U'(c_j) \text{ for all } i, j \in \{0, \dots, s\}.$$

Thus, groups that are more responsive (higher  $f_i(0)$ ) receive higher transfers.

We now argue that, in this environment, an extension of the franchise is opposed by *all* members of the elite. Suppose that members of group  $k$  are newly enfranchised. The allocation for members of group  $k$  is determined by a version of equation (2), which means that newly enfranchised voters receive a positive share of the total endowment  $\omega$ . But then less than  $\omega$  is left to allocate among previous elite members, which means that they all receive less than before the expansion. We have therefore demonstrated the following result.

**THEOREM 1.** With pure redistribution (no public good) the elite unanimously opposes extending the franchise.

We now turn to the case in which providing the public good is part of the political equilibrium.

#### IV.B. Public Good Provision That Maximizes the Elite's Welfare

The allocation that maximizes the utilitarian social welfare of the members of the elite is the solution to the following maximization problem:

$$\max_{I, c_1, \dots, c_s} \sum_{i=0}^s n_i U(c_i + g(I))$$

subject to

$$I + \sum_{i=0}^s n_i c_i = \omega.$$

Note the difference between this maximization problem and the maximization problem (1) faced by parties. The welfare maximization problem does not depend on ideology. This is because the distributions  $F_i$  of ideology were all assumed to be symmetric. Therefore, there is no *aggregate* ideological bias at the group level. While each voter's ideological bias may lead him to regret or

rejoice in the election of a particular party, the ideological component cancels out within each group. Consequently, in this setup the voters' ideological motives do not affect the welfare comparisons between policies.

The maximization problem is solved by substituting for  $I$  in the objective function and taking first-order conditions with respect to  $c_i$ . Inspection of the first-order conditions immediately reveals that at the allocation that maximizes the elite's welfare each elite member receives the same amount of transfers. If we denote by  $I^{SM}$  the investment level that solves the maximization problem, from the optimality conditions we have (assuming that  $I^{SM} < \omega$ )

$$(3) \quad g'(I^{SM}) = \frac{1}{\sum_{i=0}^s n_i}.$$

Clearly,  $I^{SM}$  depends on the extent of the franchise: the larger the franchise, the larger the welfare-maximizing level of investment in the public good. This reflects the fact that, when the franchise represents a small fraction of the population, it is wasteful (from the point of view of the enfranchised) to devote a large amount of resources to the production of a public good whose benefits are mostly enjoyed by nonenfranchised citizens.

*IV.C. (Under)Provision of Public Good in the Political Equilibrium*

We now parameterize the production function of the public good by a nonnegative scalar  $V$ :

$$g = g(I, V).$$

We make the following assumptions on the partial derivatives of  $g$ :

$$g_V > 0, \quad g_{IV} > 0.$$

An increase in  $V$ , therefore, raises both the total and the marginal value of one unit of investment in the public good. In addition, we assume that for all  $I > 0$  we have  $\lim_{V \rightarrow 0} g_I(I, V) = 0$ , which means that the marginal productivity of investment becomes 0 as  $V$  approaches 0. Finally, we assume that  $g_{IV}$  is bounded away from 0. For example,  $g(I, V) = V \cdot g(I)$  satisfies all these assumptions provided that  $g(I)$  is increasing and concave and  $V \geq 0$ .  $V$  can be seen as a parameter representing the efficiency of the production function of the public good. Another way to interpret

$V$  is as the value of a specific public good in the eyes of the citizens. The second interpretation will become relevant in the following sections.

The following proposition characterizes the equilibrium for a given suffrage level  $s$ . Our first task is to show that members of groups with a smaller index  $i$  receive more transfers (and therefore greater utility) than members of a group with a higher  $i$ . The intuition for this result is straightforward (and very close to results in Dixit and Londregan [1996]). Groups with a lower  $i$  are composed of individuals who are more responsive to electoral promises. The electoral competition between the parties will be more intense for those voters, resulting in a higher level of promised utility. This result is proved in part (ii) of the next proposition.

The fact that voters who belong to different groups are treated differently in equilibrium has important consequences for the level of public good provision. Since the public good cannot be targeted to individual groups within the elite, it is a relatively inflexible instrument of electoral competition. The parties' incentive to treat votes differently will lead them to distort their platforms toward the targetable instrument (transfers) relative to the efficient level. This effect results in underprovision of the public good relative to the level that maximizes the elite's welfare. This is shown in part (iv) of the next proposition.

Parts (i) and (ii) show that the root of the inefficiency is in the incentive for parties to treat voters differently. Absent this incentive, the targetability of the transfers has no strategic value and public good provision is efficient.

**PROPOSITION 1.** In a symmetric political equilibrium:

- (i) If all voters are identical ( $f_i(0) = f(0)$  for all  $i$ ), then all voters receive equal amounts of transfers, and investment in the public good maximizes the social welfare of the elite.

Suppose that voters are heterogeneous ( $f_0(0) > f_s(0)$ ).

Then:

- (ii) Voters in more responsive groups (smaller  $i$ ) are promised more transfers;
- (iii) For any size of the franchise  $s$ , there is a  $\underline{V} > 0$  such that, if  $V < \underline{V}$ , then in equilibrium all groups in the elite receive positive transfers; in these circumstances, the

public good is provided at the level that maximizes the elite's welfare;

- (iv) For any  $s$ , and for any  $m \in \{1, \dots, s\}$ , there are  $V_{MAX} > \bar{V} > \underline{V}$  such that if  $V_{MAX} > V > \bar{V}$ , then in equilibrium groups  $m, \dots, s$  in the elite are promised no transfers and the public good is underprovided relative to the level that maximizes the elite's welfare; and if  $V > V_{MAX}$ , all the resources are invested in the public good, and this maximizes the elite's welfare.

This proposition establishes that investment in the public good never exceeds  $I^{SM}$ , the level that maximizes the welfare of the elite. A party that promised an investment above  $I^{SM}$  could improve its offers to all elite members by reducing investment slightly and transferring to each voter an equal share of the money thus saved. Part (iii) also establishes that, if all voters receive positive transfers, then investment in the public good must maximize the welfare of the elite. Intuitively, if this were not the case, a party could proportionately reduce the transfers to all voters and invest the proceeds in the public good, thereby increasing the utility promised to all voters. Note that this argument fails if some voters receive zero transfers. If some voters receive positive transfers and some receive zero transfers, the public good is underprovided.

The intuition for the underprovision described in part (iv) is the following. A party uses transfers to equate the marginal returns to spending across groups; in equilibrium, a party strives to allocate resources so that less responsive voters (those with lower  $f_i$ ) receive fewer resources. The party is constrained in its ability to implement this profile when some voter receives zero transfers, since the party cannot decrease the utility of these voters without reducing the provision of the public good. This is the force that leads to underprovision of the public good. Intuitively, some groups receive zero transfers when (a) the technology  $g$  for producing the public good is relatively productive, and (b) groups are relatively heterogeneous in their responsiveness. Then, (a) calls for a large investment in the public good and, at the same time, (b) calls for highly responsive groups to receive much higher utility than the less responsive ones. Effect (b) leads to parties concentrating the few resources that are left after the investment on the most responsive groups, leading to zero transfers to the least responsive groups. A potential criticism is that this argument may appear to rely on the perfect substitutability

between public and private consumption. For instance, if voter  $i$ 's utility is  $U(h(c_i) + g(I))$ , for some function  $h$  with infinite derivative at 0, then no voter would receive zero transfers. However, a more realistic version of the model would not be subject to this criticism. For instance, if a fraction of citizens' endowment is not taxable by the government (for example, because a portion of income is private information), or if tax rates are less than 100 percent because of distortions involved in taxation, then all groups would have a positive amount of private consumption even if parties were to offer zero transfers to some groups. In this variant of the model, even though  $h'(0) = \infty$ , some groups of voters can be offered no transfers by the parties leading to underprovision of the public good.<sup>19</sup>

The lack of targetability of the public good is especially stark in our model since all voters value the public good the same. Underprovision would still be present in a model in which the voters' valuations for the public good are heterogeneous, provided that the public good is not targetable, or at least that its benefits to groups  $1, \dots, s$  are not perfectly aligned with the order of their responsiveness (the  $f_i$ 's).

#### *IV.D. Extending the Franchise Increases Public Good Provision*

We now show that extending the franchise induces parties to promise more public good (and therefore less transfers).

**PROPOSITION 2.** Extending the franchise to groups  $s + 1, \dots, s + K$  (for any  $K = 1, \dots, N - s$ ) increases the equilibrium provision of the public good. The increase is strict unless all the resources are already devoted to public good production.

The intuition for Proposition 2 is the following. As argued in the discussion following Proposition 1, parties face a trade-off between offering the public good, which is a more efficient way of offering utility to voters, and offering transfers, which are more targetable. The public good benefits equally the elite and the disenfranchised, and parties do not internalize the benefits of the disenfranchised. As the franchise is extended, promising to invest in the public good becomes more appealing to parties because the parties internalize the utility of these additional voters. While seemingly straightforward, this intuition rests on the fact that the newly enfranchised voters are not expected to receive large

19. We are grateful to an anonymous referee for pointing out this issue.

amounts of transfers. This is ensured by Assumption 1, which guarantees that elite members are more responsive than the disenfranchised. We discuss this assumption further in subsection IV.G.

*IV.E. Conditions for Franchise Expansion to Benefit a Majority of the Elite*

We now provide conditions under which a majority of the elite strictly prefers to extend the franchise. These conditions are related to the value of investing in the public good. When investing in the public good produces a large return, much of the resources of the economy will be devoted to public good production, and little will be left for redistribution. This means that few groups within the elite will receive any transfers. All the remaining groups will be in favor of franchise expansion, since that increases public good provision.

**THEOREM 2.** Suppose that voters in the elite are heterogeneous ( $f_0(0) > f_s(0)$ ). For any  $s$ , there exist  $V_{MAX} > \bar{V} > \underline{V} > 0$  such that,

- (i) when  $V$  is such that  $\bar{V} < V < V_{MAX}$ , a majority of the elite strictly prefers any extension of the franchise relative to the status quo. Larger extensions (those with more new voters) are preferred to smaller ones;
- (ii) for  $V < \underline{V}$  the elite unanimously opposes extending the franchise;
- (iii) for  $V > V_{MAX}$  the elite is indifferent to extending the franchise.

The proof of Theorem 2 can immediately be adapted to show that, if  $\bar{V}$  is large, a supermajority within the elite will benefit from expanding the franchise. By choosing  $\bar{V}$  large enough, the supermajority can be made as large as to include groups 1, . . . ,  $s$ . Note, however, that the elite can never be unanimous in its support for expansion: group 0 will never strictly favor expansion. This is because, so long as not all the resources are invested in the public good, group 0 receives positive transfers and therefore stands to lose from the expansion.

Theorem 2 may seem counterintuitive. If a majority of the elite is not satisfied with the status quo, one should expect a more appealing alternative to be proposed by the parties. The reason this does not happen is that, in addition to caring about policy, voters also care about ideology. Indeed, assume that  $V_{MAX} > V >$

$\bar{V}$ , and consider, for instance, a deviation by party  $L$  from the equilibrium platform toward a greater provision of the public good. As was shown in Theorem 2, when  $V$  is high enough, a majority of voters receive zero transfers. Hence party  $L$  would receive some more votes from the majority of voters in the groups who receive no transfers from party  $R$ . However, not all voters in these groups would switch their vote in favor of party  $L$  because those with high ideological attachment to party  $R$  would still vote for party  $R$  despite the more favorable promise by party  $L$ . In fact, the gain in votes among the voters who receive zero transfers would be more than offset by a loss in the votes from the voters who receive positive transfers in equilibrium. The reason is that the latter voters are more responsive to promises of economic benefits, or in other words, less given to voting according to their ideology. This discussion leaves open the question of how an extension of the franchise can come about. This is the subject of the next subsection.

#### *IV.F. Incentive for Political Actors to Propose Franchise Expansion*

In this subsection we discuss two mechanisms by which a franchise expansion might come about: a referendum among elite members, and the inclusion of reform by a party in his electoral platform. Our analysis is framed within an infinite-horizon dynamic game in which an election takes place in each period. The election is similar to the one analyzed in the previous subsections. Here, however, voters may be called to vote not only on platforms of public good and transfers, but also on the issue of reform. If franchise reform is adopted, then all future elections are conducted under the expanded franchise. Parties maximize the discounted value of their expected vote share. Voters maximize the discounted sum of utilities, and discount the future at a rate  $\delta$ . We shall start off with a restricted franchise at date 0 and ask whether for a given value of  $V$  there is an incentive to extend the franchise from time 1 onward. One interpretation of this exercise is that, prior to time 0, the value of  $V$  of investing in the public good was so low that the restricted franchise was optimal for the elite; we start the analysis at the moment (time 0) when a permanent change in the value  $V$  raises the issue of a franchise extension.

We restrict attention to subgame perfect equilibria that are obtained as limits of subgame perfect equilibria of finite horizon



games. We also maintain the assumption that voters vote as if they are pivotal (as we have assumed thus far). Throughout this subsection we will use the unqualified terminology “equilibrium” to refer to this equilibrium notion.

The case  $V > V_{MAX}$  is trivial, since then all the resources are already devoted to producing the public good. Extending the franchise will not change the equilibrium allocation, and therefore, the elites are indifferent over whether the franchise is extended, and the disenfranchised have no incentive to ask for enfranchisement. For the sake of exposition, in what follows, we assume that when  $V > V_{MAX}$  franchise reform is adopted.

**Extension via referendum.** This is a dynamic game in which each period is composed of a referendum stage and an electoral stage. The electoral stage is identical to the one analyzed in the previous subsections. Prior to the electoral stage, a referendum stage takes place in which any elite member can submit a proposal for a referendum expanding the franchise to all citizens. Submitting the proposal is costless. If the proposal is submitted, then elite members vote for or against it, and the proposal passes if it is approved by a majority of the elite members.<sup>20</sup> While we shall mainly be interested in the infinite horizon version of the game, it is convenient to think of the game consisting of  $T$  periods (with  $T$  possibly equal to infinity). If a referendum is successful in period  $t$ , it defines the voting population in all subsequent periods  $t + 1, \dots, T$ .

It is easy to see that, as a consequence of Theorem 2, when  $V$  is sufficiently high, if a referendum on the extension of the franchise is called in any period, a majority of the elite would vote Yes. Thus, if  $V$  is sufficiently high, in the equilibrium of the referendum game, a referendum is called in the first period and is successful; i.e., the franchise will be expanded. In contrast, if  $V$  is sufficiently low, a direct consequence of Theorem 2 is that a referendum will never be approved.

**Extension via election of parties who propose franchise reform.** Historically, the extension of the franchise did not come about via referendum. Rather, franchise reform was implemented by legislatures elected under the restricted franchise. We now turn to environments in which franchise expansion can only

20. The reasoning and the results would be analogous if passing the referendum required the approval of a supermajority, say two-thirds, of the elite.

come about as part of a politician's platform. In this environment, politicians have control of the reform agenda. We show that this makes franchise reform harder to implement compared with the benchmark case of a referendum. This is because parties have relatively weak incentives to include franchise reform in their platform. The reason is that franchise expansion benefits precisely those elite members who are not very responsive to electoral promises, and who are therefore electorally less valuable to parties.

We study a dynamic game in which each period is composed of an electoral stage only (no referenda). The electoral stage in period 0 is the same as the one analyzed in the previous subsections except for the following feature. In addition to a platform of public good and transfers, a party can also promise to extend the franchise. If a party that proposes franchise extension is elected, then franchise reform is permanently adopted, i.e., all future elections are conducted under the larger franchise. For simplicity, we shall describe the equilibrium of the game in which parties are given only one chance to include reform in their platform. If in period 0 reform is not adopted, i.e., if no party includes reform in his platform or if the party who includes reform is defeated, then reform will never again be available in the future.<sup>21</sup>

To understand whether reform is adopted in equilibrium, we now discuss the party's incentives to include reform as part of his platform. These depend on whether the vote share is increased by proposing reform given that the other party does not. This in turn depends on how voters feel about electing the reform party. Start by considering the truncation of the game to period  $T > 1$ , and let us analyze the backwards induction equilibrium of this finite horizon game. Consider a voter with ideology  $x$ , and suppose that party  $R$  offers reform at  $t = 0$  whereas party  $L$  does not. If reform is never implemented, which means that party  $L$  is elected in the current period, the voter's discounted stream of utility is

$$U(c_i^* + g(I^*)) + \sum_{t=1}^T \delta^t [U(c_i^* + g(I^*)) + \frac{1}{2}x],$$

21. The assumption of a one-off opportunity of extending the franchise is not essential for the result obtained in Proposition 3 below. We have considered the game in which parties can propose reform at any date. In that game there is an equilibrium in which immediate franchise expansion obtains.

where  $\delta$  represents the discount factor (assumed identical for all voters), and  $c_i^*$  and  $I^*$  represent the equilibrium policies implemented under the restricted franchise as characterized in Proposition 1. If reform is implemented, which means that party  $R$  is elected, the voter's utility stream is

$$(4) \quad U(c_i^* + g(I^*)) + x + \sum_{t=1}^T \delta^t [U(c_i^{US} + g(I^{US})) + \frac{1}{2}x],$$

where  $c_i^{US} + I^{US}$  represent the equilibrium policies implemented under universal suffrage which were also characterized in Proposition 1.

Note that the term  $\sum_{t=1}^T \delta^t (\frac{1}{2}x)$  appears in both expressions. This term represents the discounted value of the voter's ideology given that in equilibrium both parties win with probability  $\frac{1}{2}$  regardless of the size of the franchise. The voter will vote for the reform party if the second expression is larger than the first one; i.e., if

$$(5) \quad x \geq \sum_{t=1}^T \delta^t [U(c_i^* + g(I^*)) - U(c_i^{US} + g(I^{US}))].$$

The term in brackets is negative for those groups  $i$  which before the expansion receive no transfers. As  $\delta$  converges to 1 and  $T \rightarrow \infty$ , the right-hand side converges to  $-\infty$  for these groups. Thus, voters in these groups will vote for party  $L$  for sure. By Theorem 2, when  $V$  is high enough (i.e., when  $V > \bar{V}$ ), the proportion of these groups within the elite exceeds 50 percent. Thus, when  $V$  is large enough and voters are sufficiently patient, the reform party is victorious in period 0.

Suppose now that  $V < \underline{V}$ . By Theorem 2, the term in brackets on the right-hand side of equation (5) is greater than 0 for all  $i \leq s$ . This means that more than 50 percent of the voters in each group opposes the reform party. Thus, regardless of the discount factor, the reform party would lose the elections and so has no incentive to propose franchise reform. This proves the following proposition.

PROPOSITION 3. For any  $s < N$ , there are two values  $\bar{V}$  and  $\underline{V}$  such that, in the equilibrium of the political reform game, if  $V > \bar{V}$  and if voters are sufficiently patient, both parties include reform in their platform in the first period, and reform is

adopted. If  $V < \underline{V}$ , for any  $\delta$ , neither party includes reform in its platform.

Note that, in order to ensure franchise expansion, an additional condition on the voters' patience is necessary that was not necessary in the referendum game. The reason why this additional condition is necessary is that in the political reform game if a voter wants reform he has to choose the party who proposes it, and incur the ideological cost (or benefit)  $x$ . That was not the case in a referendum, where the reform issue is voted upon in isolation. In the political reform game, voting for reform entails selecting a particular party: the issue of franchise reform is bundled with the ideological baggage of the party who proposes it. The idea that calling a referendum entails an unbundling of issues has been introduced and studied by Besley and Coate [2002]. In our setup, the fact that reform is more difficult to pass when it is bundled with the rest of a party's platform (i.e., in the political reform game) reflects the intuition discussed at the end of subsection IV.E. When voters are patient, however, Proposition 3 shows that the long-run benefits of reform overwhelm the friction created by the bundling.

#### *IV.G. Discussion of the Model*

Assumption 1 has provided a convenient way to organize the exposition, and assuming that the members of the elite are more politically responsive than the disenfranchised seems empirically plausible given the fact that electoral turnout and other forms of political influence are highly correlated with traits such as education and income. This observation holds with special force once we note that political responsiveness should not be interpreted literally as willingness to vote on the basis of transfers. It can also represent the degree of involvement in government and other kinds of pressure groups. However, it is worth pointing out that Assumption 1 can be considerably relaxed without jeopardizing the key features of our results, and in particular the conclusions of Proposition 2. One extension is to replace Assumption 1 with the requirement that to every group in the elite with a given  $f_i$  corresponds an equal-sized group among the disenfranchised with the same  $f_i$ , and vice versa. This means that the responsiveness of the disenfranchised citizens is identical to that of the elite (and also, less crucially, that moving to universal suffrage doubles the size of the electorate). In this case, moving

to universal suffrage makes the public good more valuable in the eyes of the candidates. To see this, observe that one unit of transfers purchases half as many vote shares after the extension as it did before, while the public good suffers no such drawback. This increased electoral efficiency of the public good leads to increased provision. Another extension is to consider selective franchise expansion. Suppose that, consistent with historical experience, the elite can select the groups to be enfranchised. Then the groups that will be chosen are those known to be least responsive to electoral promises. In this scenario of selective enfranchisement we would expect some franchise expansion to take place even when Assumption 1 fails; i.e., even if some groups within the disenfranchised are more responsive than groups within the elite. In this version of our model, the elite will simply ignore these very responsive groups and instead “cherry-pick” the enfranchisees among the less responsive groups.

A related issue is the role of income heterogeneity in the political process. Our model allows for income heterogeneity, since per capita endowments ( $\omega_i$ ) are not restricted to be equal across groups. In our model, this heterogeneity does not affect the political outcome. The reason that the initial distribution of income does not play a role in the analysis is twofold: first, candidates are allowed to offer any menu of taxation and transfers, rather than being restricted to offering linear policies; second, taxation is assumed to be nondistortionary. Due to these assumptions, any electoral platform can be thought of as taxing the entire endowment in the economy ( $\sum \omega_i$ ) and then redistributing the proceeds. A richer model would allow income distribution to affect the political outcome. Such a model would feature distortionary taxation and perhaps for imperfectly targetable taxes and transfers. The effects of income heterogeneity within such a model would, we suspect, depend on the specific ways in which the fiscal instruments are modeled. One effect, however, seems robust: richer individuals would have a lower marginal utility for consumption which, within our model, is equivalent to being less responsive to policy platforms. In this scenario, then, if the groups to be enfranchised were cherry-picked by the elite as described above, then *ceteris paribus* the elite would choose wealthier groups of citizens for franchise extension over less wealthy ones.

## V. THE BRITISH AGE OF REFORM

In this section we offer corroborating evidence for the interpretation of franchise reform that was outlined in the introduction. Here is a roadmap for this section.

*Three franchises and their different dynamics.* We distinguish between (i) parliamentary franchise, (ii) municipal franchise, and (iii) franchise for bodies that govern welfare spending. At the same time that the franchise in the first two bodies was expanded, the franchise for welfare spending became more restrictive. We interpret this duality as an indication that it may be misleading to read the process of franchise reform primarily through the lens of redistribution from rich to poor.

*Urbanization and the increased value of local public goods.* In the early decades of the nineteenth century, England experienced rapid urbanization in connection with the industrial revolution. We document a sharp increase in the value of urban public goods, particularly public health infrastructure such as sewerage, waterworks, and paved roads. According to our model, it is this increase in the value of public goods that pushed support for franchise reform within the elite above the majority threshold.

*Failure of old institutions and the need for franchise reform.* We discuss the pre-1832 failure to provide local public goods. Municipal corporations were controlled by a small and entrenched subgroup within the elite to the detriment of the rest of the elite.

*The contemporary viewpoint.* This subsection reports extracts from the correspondence and speeches of some key contemporary politicians to demonstrate that they viewed franchise reform as a means of reducing patronage and increasing the effective provision of local public goods. Extension of the parliamentary franchise was viewed as a precondition for municipal reform.

*Franchise reform and the decline of special interest politics.* We provide additional evidence of shifts in the nature of electioneering and of voting patterns in connection with the reform acts. This evidence is consistent with a shift away from pork-barrel redistribution and toward policies with broad appeal.

*Franchise reform associated with increased spending on public health.* We describe the effects of franchise reform on the role of government during the nineteenth century. We show that the

increase in local public spending, which was described in the introduction, was largely devoted to improvements to public health infrastructure.

*Franchise reform and education.* Expenditure on public education greatly increased in the latter part of the nineteenth century. We outline a possible connection between the expansion of the franchise and the advantages for the capitalist elite of public education. Public education may represent an additional rationale, alongside local public goods, for the elite's willingness to extend the franchise in the second part of the nineteenth century.

#### *V.A. Three Franchises and their Different Dynamics*

The main sources for this subsection are Hennock [1973], Keith-Lucas [1952, 1977], and Seymour [1915].

**Evolution of the Parliamentary Franchise.** The parliamentary franchise was extended gradually during the nineteenth 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 socioeconomic basis for the right to vote. The act represented a shift in favor of cities and the middle classes, and it almost doubled 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 lowered the property threshold for the franchise and led to an 88 percent increase in the size of the electorate. The next change in suffrage was the 1884 Franchise Act which essentially brought household suffrage to England by extending the franchise especially in counties. At this point about one in five citizen had the franchise.

**Evolution of the Local Franchise.** Up to the first half of the nineteenth 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 corporations, and a variety of bodies that have been called

statutory or ad hoc commissions. The nineteenth century saw a complete transformation of local institutions. The 1835 Municipal Corporations Act, which established elected bodies that became the precursors of the modern municipal councils, represents a milestone in the reform of local institutions in the first half of the century. Prior to 1835 many towns were not even incorporated, and in others, the municipal corporation was run by oligarchies for the purpose of jobbery and of influencing parliamentary elections (see subsection V.C). By midcentury, almost all cities were incorporated, and in most cities the municipal corporation was becoming the most important vehicle for undertaking most local public projects. The franchise established in 1835 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 major 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."<sup>22</sup> Finally, recipients of aid of any sort, most notably poor relief, were disqualified from voting. The overall effect of these restrictions was that the municipal electorate was approximately the same as the parliamentary one despite the fact that the latter was in principle much more narrowly defined by the act of 1832 (see Keith-Lucas [1952]).

As mentioned before, the role of municipal corporations evolved gradually as more towns (e.g., Manchester and Birmingham in 1838, and Bradford in 1847) became incorporated, and corporations took over a growing number of the tasks previously undertaken by improvement and ad hoc commissions, and by the parishes (see Hennock [1973]). In terms of the municipal franchise though, the next change 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

22. 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.



substantial increases in the size of the electorate, whereas others did not.

A substantial expansion of the franchise occurred following the 1869 Municipal Franchise Act and Assessed Rates Act which is analogous to the parliamentary reform of 1867. This act reduced the residence requirement to one year and definitively enfranchised compounders thereby effectively bringing the vote to laborers. This act brought the municipal electorate to one voter for every five to seven citizens, depending on the city. The electorate increased sixfold in some cities. The 1888 act extended to the municipal level the reforms instituted at the parliamentary level by the 1884 Act.

**Evolution of the Franchise for Welfare Spending.** The poor laws refer to the system of law and norms governing poor relief. Spending on poor relief was almost exclusively a local affair. Parish vestries were mainly responsible for the management of poor-law spending. In the first half of the century, the administration of poor relief evolved in a manner that provides a sharp contrast with the gradual democratization of the parliamentary and municipal franchise.

The two major reforms in this respect were the 1818–1819 Sturges-Bourne Act and the Poor-Law Amendment Act of 1834. While vestries were very heterogeneous prior to these reforms, several vestries were effectively very democratic, making decision in meetings open to all, and often attended by crowds of poor individuals with a stake in voting for increased relief.<sup>23</sup> Both acts introduce a graduated franchise based on property:<sup>24</sup> there was a minimal threshold for obtaining one vote, and wealthier individuals could cast more votes up to a maximum of six. 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. By 1834 property owners had taken a dominant role in voting on issues related to poor-law spending.

23. This is only a partial picture: other vestries, known as closed or select vestries, were governed by small groups of individuals accountable to no one. Closed vestries were abolished in 1831.

24. The main difference between the two acts is that the Sturges-Bourne Act related to parishes, while the Poor Law Amendment Act created the Boards of Guardians that supervised unions of parishes. While both acts were designed to limit the electoral voice of recipients of public assistance, the Sturges-Bourne Act was only partially successful.

**Key Lessons from the Evolution of the Franchises.** The previous discussion highlights the following instructive features of the reform process.

First, there is a sharp contrast between the reform of the franchise for institutions devoted to public spending on local infrastructure (municipal corporations) and for those devoted to poor relief: the latter are reformed to become less democratic. Second, until 1917, those who receive public assistance are disqualified from voting. 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]).

The first two features do not square with a theory of linear progress toward democracy based on the progressive acceptance by the elites of democratic values. The duality in the reform of the franchise also suggests that a full understanding of the forces driving franchise reform requires going beyond a simple picture of redistribution from the rich to the poor, and suggests that the destination of public spending should be taken into account. We saw in the introduction that the evolution of public spending reflects this pattern in the evolution of the franchise: poor-law spending declines at the same time that spending on public goods increases dramatically. The third feature, the different treatment of counties and boroughs, is evidence of what we suggest is a major force driving franchise reform, namely the failure of urban infrastructure to cope with the rapid inflow of immigrants from the countryside.

#### *V.B. Urbanization and the Increased Value of Local Public Goods*

**The Plight of Cities: Urbanization and Urban Mortality.** In the first decades of the nineteenth century some cities in England grew at phenomenal rates. Between 1820 and 1830, Bradford grew by 78 percent, Manchester by 47 percent, and Glasgow by 38 percent.<sup>25</sup> 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 percent of the population of England and Wales lived in cities of more than 20,000 inhabitants; by 1911, 61 percent did. In 1801 only London had more than 100,000 inhabitants; by 1841 six English provin-

25. The discussion in this section draws on Szreter [1997].

cial towns and one Scottish city recorded populations over 100,000, with Liverpool, Manchester, and Glasgow each well over 200,000.

This mass urbanization had a dramatic effect on mortality. Until the first decades of the nineteenth century, life expectancy in England had been increasing steadily for almost a century [Wrigley and Schofield 1981], but from then on there was no further increase until the 1870s [Szreter and Mooney 1998]. This is despite the fact that economic growth was as high as it had ever been. Furthermore, life expectancy in major provincial cities was much lower than in the rest of the nation and that things worsened between the 1820s and the 1840s.<sup>26</sup> While life expectancy was much higher in the countryside, wages were higher in cities than in the countryside, and the disparity was increasing [Lindert 1994]. Thus, the plight of cities cannot be solely attributed to poverty.

The high mortality in the new large cities is attributed by several scholars to a breakdown of public health infrastructure, in particular, the inability of a fragile infrastructure to cope with rapid city growth [Szreter 1997; Williamson 1990; Wohl 1983]. Many cities did not have an integrated sewerage system, drinking water was not filtered, roads were unpaved and did not have proper drainage systems, thereby becoming breeding grounds for bacteria. Lack of sanitation and crowding were responsible for repeated outbreaks of diseases such as cholera, typhus, typhoid fever, and smallpox.

**Public Good Nature of Health Infrastructure.** We now argue that (a) health infrastructure really was a public good that benefited all social classes and that (b) contemporaries understood the link between the state of public health infrastructure and the spread of disease.

With respect to (a), Williamson [1990, p. 282] writes: "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." The following quote, drawn from the *Second*

26. For the period preceding 1851 the data are much less reliable, and Szreter and Mooney [1998] draw mainly on information from Glasgow. However, the worsening living conditions in cities during those decades are confirmed by a number of other accounts. For instance, Huck [1995] reports that infant mortality increased in cities during that period.

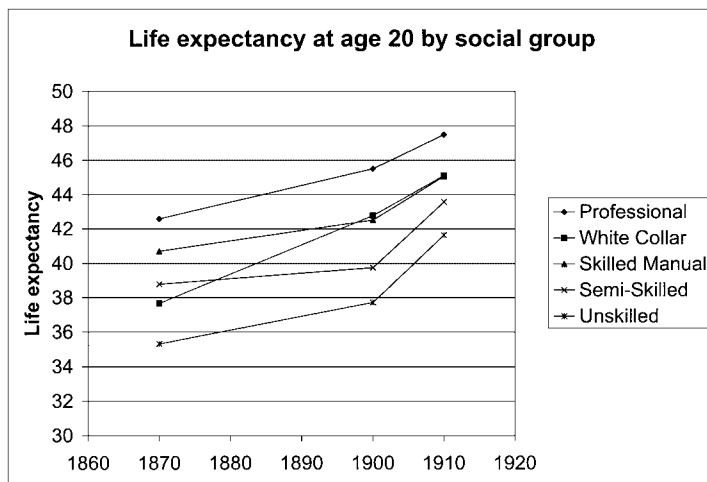


FIGURE IV  
Life Expectancy at 20 by Social Group

*Report of the Parliamentary Commission of Inquiry into the State of Large Towns and Populous Districts* [1844] bears witness to the perceived externality in the sanitary conditions of the poor districts. “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.”

Note that our argument is not that there were no differences in life expectancy across social classes, but simply that all classes had their life expectancy reduced by the unsanitary conditions of the poor parts of towns. Figure IV provides some support for the view that the life expectancy of most professions moved in lock-step. It shows evidence of a common trend affecting the rise in life expectancy, at least since the 1870s.<sup>27</sup>

With respect to point (b), it is important to note that until late in the nineteenth century there was no germ theory of disease. The theory was that disease was carried by *miasma*.<sup>28</sup> Some of

27. We were unable to find earlier data on mortality by profession. These data are taken from Woods [2000], Table 6.7.

28. In the words of W. Farr, “This disease-mist, arising from the breath of two millions of people, from open sewers and cesspools, graves and slaughterhouses, is

the knowledge about the consequences of water contamination was, however, based on sound empirical evidence. For instance, the link between cholera and water was shown by Snow in 1849 in a famous study of the pattern of infection around a fountain in central London. Thus, while contemporaries could not have a detailed understanding of the causes of disease, they did have a theory that, for the purpose of justifying investment in health infrastructure, had a similar effect.

*V.C. Failure of Old Institutions and the Need for Franchise Reform*

In this subsection we establish two points. First, before the 1835 municipal reform the structure of local government was not suited to undertaking the vast spending on local public goods that was necessary to cope with the growing size of cities. Second, the post-1835 municipal corporations were more successful in gradually assuming responsibility for providing local public goods.

Before the Municipal Corporations act, cities were unable to provide investment in local public goods. In the words of Williamson [1994], “[b]y 1830 [ . . . ] Britain had accumulated an enormous deficit in her social overhead capital stocks by pursuing seventy years of industrialization on the cheap.” What are the roots of this failure of city government? Much attention has been devoted to the failure of the corporation before 1835. Pre-1835 corporations were private institutions, which held property not in trust, but just as individuals own property. The corporations were governed by the common council, which was sometimes elected by the freemen but more commonly self-perpetuating. “Few corporations admit a positive obligation to expend the welfare of their income for objects of public advantage. Such expenditure is regarded as a spontaneous act of generosity [ . . . ] At Cambridge, the practice of turning corporation property to the profit of individuals was avowed and defended by a member of the council” [Jennings 1935, p. 59]. The state of affairs that resulted from this organizational structure is described in the 1835 *Municipal Corporations Report*:

The evils which have resulted from mismanagement of the corporate property are manifold and are of the most glaring kind. Some corporations have

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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” [*Tenth Annual Report of the Registrar General, 1847*, Williamson 1990, p. 283].

been in the habit of letting their land by private contract to members of their own body, upon a rent and at fines wholly disproportionate to their value, and frequently for long terms of years. Others have alienated in fee much of their property for inadequate considerations. [. . .] In general the corporate funds are but partially applied to municipal purposes [. . .] but they are frequently expended in feasting, and in paying the salaries of unimportant officers [. . .] [Jennings 1935, pp. 58–59].

While the *Municipal Corporations Report* is not necessarily an impartial source, it is evidence of the fact, widely accepted in the literature on the history of local government, that the pre-1835 corporations were grossly inadequate as a system of local government. In the words of the Webbs [1963, p. 451] “the complaint was not so much that the Corporations performed the Municipal Functions badly, as that they did not, in the great majority of cases, perform them at all.”

The Municipal Corporations Act of 1835 provided a new unified structure that superseded the myriad of local exceptions. This unified structure was more democratic, as the council was now composed for three quarters by representatives elected by the ratepayers. In addition, corporations were now public bodies, whose surplus could only be used for “the public benefit of the inhabitants and the improvement of the borough” [Smellie 1949, p. 39]. The effects of the act of 1835 were felt gradually, as initially the act applied only to the 179 boroughs which were incorporated. In time, however, more cities adopted corporations charters (e.g., Manchester and Birmingham in 1838, and Bradford in 1847). While the initial power of the corporations was relatively restricted, they saw their powers increased by a series of reorganizations that eliminated the power of special authorities that predated 1835. “By the time the Municipal Corporations Act of 1882 was passed, [the corporations] had acquired powers for the general regulation of their roads and streets, the provision of a system of drainage and sewage, the care of public health [. . .], the supply of gas and water, [. . .] the provision of fire brigades and control of an adequate police force” [Smellie 1949].

#### *V.D. Franchise Reform: The Contemporary Viewpoint*

Our model argues that it is the move away from patronage and toward broad-based public spending programs that can motivate an elite to extend the franchise. We now present the views of some of the key actors in the reform movement to show, in their own words, that they thought of the gains from reform in terms of

the trade-off between pork-barrel politics and public goods provision. The first part of this subsection is mostly devoted to one side of the trade-off (end of patronage); the second part discusses the other side (the elite's desire for increased provision of public goods). The emphasis is added.

Lord Russell<sup>29</sup> was a key figure in the reform process for almost half a century. He made numerous speeches in parliament in favor of reform or describing specific reform proposals. Especially interesting for evaluating his early thinking is his speech made in the House of Commons on April 25, 1822. This speech outlines in more detail than later speeches the broad philosophical underpinnings of his thinking on reform. In this speech he describes the current situation thus: "I could, if I did not fear to fatigue the attention of the House, and if the thing were not so well known, read a number of letters clearly showing many instances in which the return of members to this House was returned *by money only; by bribery the most direct*: but the thing is so commonly acknowledged, so universally allowed to be the case, that it would be taking up the time of the House unnecessarily" [Hansard, *Parliamentary Debates*, April 25, 1822, p. 62].

After talking of other shortcomings of the system, Lord Russell adds:

One of the worst consequences of this system is the possession of power without responsibility. In fact, the individual thus buying himself in, *represents only the commercial House to which he belongs*. I remember on one occasion, a member who had got into the House by dint of money, and who was afraid lest I should criticize the means by which he had obtained his seat, came to me, and assured me, that he had no wish whatsoever to enter parliament, but that he did so to oblige his partners in trade. Now, that is exactly the kind of representative that I do not wish to see in this House. I do not wish to see men returned here for commercial houses, representing only their partners, and naturally anxious to oblige the government in order to procure patronage and favour for their establishment [Hansard, *Parliamentary Debates*, April 25, 1822, pp. 63–64].

Later in the speech [Hansard, p. 70] Lord Russell offers an empirical analysis to support his contention that a narrow franchise is responsible for inefficiency and corruption. He makes use of the fact that there is a large variation in the size of the population of districts electing members of parliament, and effectively correlates the size of the voting population in a constitu-

29. Lord (later Earl) John Russell (1792–1878) was several times prime minister and leader of the Whigs for many decades.

TABLE I

Population of borough	Against wasteful projects	In favor of wasteful projects
Under 500	1	19
500–1000	12	33
1000–2000	17	44
2000–3000	19	46
3000–5000	25	44
Over 5000	66	47

Source. Lord Russell, speech of April 25, 1822.

ency with the likelihood that the member representing it will vote against the government on projects that he judges wasteful. His argument is collected in Table I.

As this line of argument suggests, a major part of Lord Russell's argument in favor of reform is actually based on its desirability for enhancing the efficiency of the political system. Notably, and particularly relevant from our perspective, much of this discussion makes no reference to how reform would improve the lot of the disenfranchised. Rather, reform is viewed as desirable from the perspective of the elite itself. The prereform system is viewed as too flawed to offer any prospect of efficient public policies.

The idea that franchise reform would favor efficient government was shared by many other politicians. For instance, in a speech on October 7 in the House of Lords in support of the second reading of the Reform bill, Lord Brougham (Lord Chancellor) says this about the prereform political system:

[...] the borough system affords endless temptations to *barter political patronage for parliamentary power*—to use official influence for the purpose of obtaining seats in the Commons, and, by means of those seats, to retain influence [Hansard, p. 235].

The Crown is stripped of its just weight in the government by the masters of the rotten boroughs; they may combine; they do combine, and their union enables them to dictate their own terms. The people are stripped of their most precious rights by the masters of the rotten boroughs—for they have usurped the elective franchise, and thus gained an influence in Parliament which enables them to prevent its restoration. The best interests of the country are sacrificed by the masters of the rotten boroughs—for their nominees must vote according to the interest, not of the nation at large, whom they affect to represent, but of a few individuals whom alone they represent in reality [Hansard, p. 245].

And in a speech in the House of Commons in February 1831,



Mr D. W. Harvey said: “A Reform would extinguish the influence which now corrupted the elections. A reform would sweep away those places to obtain which electors were corrupted. Great and little men, landlords and tenants, masters and servants, would have but one interest—that of good government” [Hansard, *Parliamentary Debates*, February 28, 1831, p. 16].

The shift away from patronage politics after the reform was felt immediately by contemporary politicians. In 1833 D. Le Marchant, private secretary to the Lord Chancellor, Lord Brougham, writes about the effect of the reform:

They [the government that passed the reform bill] demolished by this blow the groundwork which had supported all previous administrations.—All that, for which former parties contended, and for which they sought to be in place.—*With this reform, patronage*, the main lever of former politicians, *inevitably perished*, and has left the present ministers, as it will leave all future administrations, dependent solely on the support of the people. [. . .] To get rid of this wretched system was the great object of the Reform Bill: and it has been got rid of.

We now turn to the elite’s desire for increased provision of public goods. The debate concerning the Municipal Corporations Act of 1835 which brought democracy to the English towns, is especially illuminating. The Royal Commission established in 1833 to report on the state of local government and the necessity for reform wrote:

In general, *the corporate funds are but partially applied to municipal purposes*, such as the preservation of the peace by an efficient police, or in watching or lighting the town, &c.; but they are frequently expended in feasting, and in paying the salaries of unimportant officers. In some cases, in which the funds are expended on public purposes, such as building public works, or other objects of local improvement, an expense has been incurred much beyond what would be necessary if due care had been taken. [. . .]

The report concluded:

we report to YOUR MAJESTY that there prevails amongst the inhabitants of a great majority of the incorporated towns a general, and, in our opinion, a just dissatisfaction with their Municipal Institutions; a distrust of the self-elected Municipal Councils, whose powers are subject to no popular control [. . .] a discontent under the burthens of Local Taxation, while *revenues that ought to be applied for the public advantage are diverted from their legitimate use*, and are sometimes wastefully bestowed for the benefit of individuals, sometimes squandered for purposes injurious to the character and morals of the people. We therefore felt it to be our duty to represent to YOUR MAJESTY that the existing Municipal Corporations of England and Wales neither possess nor deserve the confidence or respect of YOUR MAJESTY’S

subjects, and that a thorough reform must be elected, before they can become, what we humbly submit to YOUR MAJESTY they ought to be, useful and efficient instruments of local government [*Report of the Royal Commission 1835*].

The parliamentary debate on the Municipal Corporations Act of 1835 echoed this sentiment. Particularly notable is the following quote from a speech made by Sir Robert Peel (many times prime minister and a Tory leader during the first half of the century):

I think *Parliament has a right to require*, by the law now passed, *that the revenues of these corporations [ . . . ] shall be henceforth devoted to public purposes, connected with the municipal interests*. I must say that if I were a member of any corporation, so far from looking at this question in a mere narrow, party light, I should feel a much greater interest, a much stronger, direct, personal, pecuniary interest, in seeing the corporate funds applied to public purposes, than in seeing them applied [ . . . ] to any object of mere electioneering and party interest [Hansard, *Parliamentary Debates*, June 5, 1835, p. 560].

Lord Russell introducing the Act in the Commons said:

[ . . . ] the practice has been for Municipal Corporations not to employ the powers which they are invested for the purpose for which they are intended; they employed them in no manner for the *good government and well-being of the boroughs*—not that they might be ‘well and quietly governed’ [ . . . ] but for the sole object of establishing an influence for the election of Members of this House. I now proceed to the method I propose to adopt, not for continuing these sinister and indirect practices, but for establishing *really good government in corporate towns* [ . . . ] [Hansard, *Parliamentary Debates*, June 5, 1835, p. 551].

In the debate on the Act in the Lords, Lord Brougham read with approval a petition: “They seek [ . . . ] restoration. They require that property which for so many hundreds of years was applied strictly for *public purposes* should be so applied again.” [Hansard, *Parliamentary Debates*, August 12, 1835, p. 325].

These quotes show that contemporary politicians saw Municipal Reform as a means of replacing patronage with the pursuit of projects of public utility. We conclude this section by arguing that the Parliamentary and Municipal Reforms were inextricably linked. In the eyes of politically savvy contemporaries, the extension of the franchise at the local and parliamentary level were one and the same political project. This point is especially important, since our model deals with franchise expansion without distinguishing between a local and a national level, as the means for

the elite to ensure increased provision of the public good. In support of this position we have the words of Joseph Parkes, the secretary of the Royal Commission appointed by the Whigs in 1833 to report on municipal corporations. Parkes wrote in his personal correspondence (to the Earl of Durham, September 1835) that the Corporations Act was “our postscript to the Reform Bills; in fact Municipal Reform is the steam engine for the Mill built by Parliamentary Reform” [Fraser 1982, p. 4]. In another letter (to the Earl of Durham, January 5, 1836), he describes the Municipal Reform Bill as “the greatest political revolution ever accomplished. I don’t except the [parliamentary] Reform Bills . . . , for though *they were the keys to this change*, yet this Municipal Reform alone gives the vitality . . . It is the ‘breath of life’ ” [Fraser 1982, p. 5].

Parkes’ correspondence, of course, is the ultimate political insider document. But the connection between Parliamentary and Municipal reform was clear to a much broader audience. In 1833, *The Times* newspaper wrote: “the fact is that *parliamentary reform, if it were not to include corporation reform likewise, would have been literally a dead letter*” [Fraser 1979, p. 5].<sup>30</sup>

### *V.E. Franchise Reform: The Political Historian’s View*

We conclude our historical analysis by discussing two important transformations in political life during the first half of the nineteenth century. The first transformation is in the organization of political activity itself, with a move away from personal politics and toward voting on broad programs proposed by national parties. The second transformation is the so-called end of “old corruption,” i.e., a reduction in the cronyism that was prevalent until the beginning of the nineteenth century. We see these two transformations as two sides of the same coin, and argue that they can, at least in part, be attributed to the reform process in a way that is consistent with our model.

**Impact of reform on voting behavior.** As we have seen in the introduction, the 1832 reform was associated with a marked decrease in the number of “floating voters,” voters who switched their allegiance between parties in successive elections. Since a large fraction of these floating voters is regarded as indicative of

30. Fraser [1979, p. 5] writes that the 1832 and 1835 reforms were “but two horses in the same harness.”

an electoral contest dominated by patronage, we have interpreted this pattern as supportive of our theory. Additional evidence of a change in voters' behavior is provided by Cox [1987] and Phillips and Wetherell [1995]. They focus on the percentage of split voting in elections, i.e., the fraction of voters who, when voting in a two-member constituency, cast one vote for a Tory candidate and one for a Whig candidate. The fraction of the split voters declines after 1832. Cox differs from Phillips and Wetherell as to the precise timing of the decline in split voters (see Cox [1995]), but both agree that the decline reflects a decrease in patronage brought about by the reform acts, as predicted by our theory. In addition, Cox [1987 pp. 59 and ff.] suggests that the reforms increased the tendency of parliamentary representatives to introduce new broad-based legislation.

These findings jibe with contemporary accounts of pre-1832 elections being fought with bribes and feasting, of political agents who handed out money outside the polling booths, and of voters who unashamedly declared their allegiance to "Mr. Most," the candidate willing to pay the highest bribe. The conventional view, to which we subscribe, is that expansion of the suffrage made it too expensive to contest elections on the basis of bribery. Cox [1987, pp. 56 and ff.], for example, 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."<sup>31</sup> As a result of the expansion of the franchise, Seymour [1915] 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. 453–454].<sup>32</sup>

These transformations are consistent with what our model predicts is the consequence of a franchise expansion. Once direct bribery becomes unprofitable as an electoral strategy, electoral

31. Another historian making the same argument is Seymour [1915, p. 447], who writes 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."

32. That 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] and Harling [1996].

politics and parliamentary politics become more directly linked, leading to the possibility of national policies with broad electoral appeal. Our view, then, accords with that expressed in Cox [1987], who sees in the reform act the beginning of powerful political parties with broad platforms.

**Impact of reform on “old corruption.”** The term “old corruption” was introduced by the radicals between the end of the eighteenth century and the beginning of the nineteenth century. It refers to what Harling [1996] calls “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.” These diversions represented the reward to the ability to procure votes. There is a lot of anecdotal evidence on the pervasiveness of this type of corruption during eighteenth century England. A considerable fraction of the energies of the radical movement was focused on exposing and decrying various instances of patronage and sinecures that fell under the rubric of old corruption. For instance, in 1816 (and again in following editions) the radicals published a *Black Book* and a *Red Book* detailing names and takings of thousands of placemen and pensioners [Rubinstein 1983]. Buying off parliamentary 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].<sup>33</sup>

Getting rid of corruption required changing the political system.<sup>34</sup> Rubinstein [1983] presents evidence that the numbers of

33. We could not find detailed data on the size and importance of old corruption. However, there is some evidence that its existence and importance were not simply a propaganda exercise by the radicals. For instance, Rubinstein [1983] writes that “A sizable proportion of those who flourished during the early nineteenth 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 nineteenth 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” [pp. 74–75].

34. For instance, Rubinstein [1983, pp. 74–75] 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.”

rent-seekers and the size of the pie that they appropriated declined dramatically by the middle of the nineteenth century. This process of transformation of the public sector culminates with the Northcote-Trevelyan report of 1854 which spurred a substantial reform of the civil service. At the end of this process, civil service jobs were no longer subject to patronage.

If we accept the notion that extensive rent-seeking by the political elite is a reflection of a political system that is essentially redistributive in nature (i.e., one where politics is more about gaining a share of pork-barrel spending than about efficient ways of providing public goods), then the observed decrease in rent-seeking connected to the reform process is consistent with the predictions from our model, in which extending the franchise reduces the amount of wasteful redistribution.

#### *V.F. Franchise Reform Associated with Increased Spending on Public Health*

As described in the introduction, the size and composition of local public spending changed dramatically through the nineteenth century. At the beginning of the century, the major function of local government was the organization and provision of poor relief. By 1890 local expenditure had increased to five times the 1820 level, and poor relief was only 12 percent of local expenditure in 1890.<sup>35</sup> We now discuss evidence that most of the increase in local public spending was devoted to public health infrastructures.

Capital formation in social overheads and infrastructure was the most rapidly growing sector of the British economy between 1850 and 1910 [Daunton 2001]. Consistent with this statement, Figure II shows a large increase in the fraction of government spending that was local. Education, a big item in local government spending after 1890, was much less important before that date and thus cannot account for the shift in the composition of public spending. A large fraction of the increase in local spending that took place before 1890 is investment in public health infrastructure. As an indication of this

35. See Lindert [1994b] for a discussion of the evolution of welfare spending in nineteenth century Britain; for an informational rationale for the changes in the law, see Besley, Coate, and Guinnane [1992].

TABLE II

	1790	1840	1890
Administration and other	17%	16%	27%
National debt	39%	42%	15%
Defense	26%	23%	28%
Social services	9%	9%	20%
Economic and environmental services	9%	9%	15%

Composition of public spending. Source: Veverka [1963].

fact, 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] and Wohl [1983]). Bell and Millward [1998] inform us that “together, water and public-health schemes constitute between  $\frac{1}{2}$  and  $\frac{3}{4}$  of all local annual capital expenditure on non-trading services.”

The same phenomenon emerges from a different angle, when we look at the breakdown of government expenditure by destination, as a percentage of total expenditure; see Table II. The total of “social” and “economic and environmental” services almost doubles between 1840 and 1890. Most of the increase in these two items are public goods, since, as we saw in Figure I, Poor-Law spending decreased after 1834.

The precise timing of the increase in investment in public health is debated; some historians place it right after the 1867 reform act, and see that act as instrumental in diluting the power of the “shopocracy” that resisted the provision of public goods by borough councils on grounds of economy (see Szreter [1997]). There is also anecdotal evidence of attempts to improve the local infrastructure which failed in the 1840s and 1850s and finally succeeded in the 1870s. As predicted by our model, after the 1867–1869 acts extending the franchise, investment in local infrastructure starts to increase.

The impact on mortality of these expenditures is hard to quantify rigorously, but is substantial. Even conservative estimates such as McKeown and Record [1962] calculate that in the period of 1850–1900, improvements in public health infrastructures account for 25 percent of the decline in mortality.



Szreter [1988] and Bell and Millward [1995] suggest a greater impact of public health.<sup>36</sup>

### *V.G. Franchise Reform and Education*

We conclude our historical analysis by outlining a complementary but different rationale for voluntary franchise expansion, besides the increase in the value of local public goods. Some historians have linked the franchise expansions in the latter part of the nineteenth century with the sharp increase in educational achievement (see, e.g., Simon [1974]). In 1870 the so-called Forster Act was the first of a series of major legislative and administrative changes through which government took over an education sector that until then had largely relied on private initiative. The Act established School Boards that had the right to compel children to attend school and were supposed to build primary schools in areas that did not have a sufficient number of them. Subsequently, in 1880 School Boards lost discretion, and education became compulsory up to the age of ten, then raised to twelve in 1899. In 1891 primary education was made free in all Board schools. In 1902 the Education Act (Balfour Act) provided for the funding of secondary schools out of local rates with the help of grants from central government.<sup>37</sup>

This legislative activity had considerable impact. Total spending on education by local authorities increased eightfold between 1881 and 1905 [Millward and Sheard 1995]. In terms of educational output, the percentage of 10, 14, and 17 year olds attending school full time was 40, 2, and 1 in 1870; these numbers had grown to 100, 9, and 2 by 1900.<sup>38</sup>

Some scholars (see Williamson [1985] and Abramovitz [1993]) have argued that in the second phase of the industrial revolution (starting in the second half of the nineteenth century), skilled labor intensity in production increased sharply. Galor and Moav [2002] argue that the increased requirements for a skilled

36. See, however, Bell and Millward [1998] for a cautionary note on the relationship between investments in public health infrastructure and the reduction in mortality in pre-1880 England.

37. For an outline of the legislative history in this period, see, e.g., Redlich and Hirst [1970] and Mitch [1992].

38. See Ringer [1979]. Some caution should be used in interpreting these numbers as resulting exclusively from public intervention. Indeed, West [1975] argues that the increase in public spending created a big displacement of private education. See also West [1978] concerning the timing of the effects of reform. However, the last three decades of the nineteenth century did see a major change in education and in the role of the state in its financing and provision.



labor force made it rational for capitalists to lobby for expanded public education. According to this view, public education is a program whose benefits cut across classes and that is implemented in connection with the franchise reforms; this view has some points of contact with the theory advanced in this paper.<sup>39</sup> Specifically, insofar as the alternative to financing public education is targeted transfers within the capitalist elite, public education could play the role of the public good in our model. This view is somewhat distinct from the alternative view which is to consider public education as a transfer from the rich to the poor to avoid a revolution (see, e.g., Justman and Gradstein [1999] and Acemoglu and Robinson [2000]). It is possible that education might be viewed as an additional alternative, besides local public goods, to redistributive politics. If that is the case, public education would constitute an additional source of impetus for the franchise reforms in the second half of the nineteenth century.

## VI. CONCLUSIONS

We have presented a model of voluntary franchise extension that is based on divisions within the elite. In our model these divisions arise endogenously through the political process: groups within the elite benefit differently from the status quo. We have shown that it is possible that a majority within the elite may favor expanding the franchise. Focusing on divisions within the elite is important from a historical perspective, because they seem an important part of how peaceful extensions of the franchise come about. In England, substantial subgroups within the elite championed franchise expansion. Our analysis can account for some of the changes in the scope of public sector intervention during the British age of reform, notably the increased provision of public goods and the decline of special interest politics. In our model, these changes are a consequence of the reform process; reform takes place when increased needs for public goods lead a majority of the elite to demand a redirection of the role of government away from special interest politics toward increased provision of the public goods. In nineteenth century England, rapid urbanization created a strain on urban infrastructures and

39. We are grateful to an anonymous referee for pointing out this connection. Also see Galor, Moav, and Vollrath [2003].

made necessary a large program of spending on local public goods.

Our paper is also about the end of “clientelism.” In our model, an extension of the franchise reduces the incentives for clientelism. The connection between electoral reform, the end of clientelism, and the rise of political parties, has previously been discussed in Cox [1987] and Shefter [1994]. While our approach is similar in spirit to Cox’s, Shefter’s approach to the question of why parties engage in patronage is quite different. Shefter focuses on the historical circumstances that prevailed at the time of party formation. He argues that if a party is formed by elites that control patronage, then that party is likely to rely on patronage for political support. In contrast a party that is formed by outsiders or disenfranchised who do not have access to patronage is more likely to rely on broad-based political platforms.

Our analysis can also be seen as going back to an older tradition in the analysis of the extension of the franchise in England, especially the 1867 Reform Act (see Collier [1999], pp. 61–66 and Himmelfarb [1966]). This view emphasized the peaceful political competition between the conservatives under Disraeli and the liberals under Gladstone: according to Himmelfarb [1966], “The Tories were democratic . . . because they assumed the demos was Tory.” This literature focuses on partisan motives for reform. However, it views the electorate as an almost passive collection of Tory or Liberal voters.<sup>40</sup> Our analysis shares with this literature its emphasis on political competition. In contrast with this literature, however, we focus more explicitly on the voters’ instrumental motives in supporting parties that favor reform. In our view, support for reform becomes irresistible once the value of public projects becomes sufficiently large.

We emphasize again that we do not see our thesis as alternative to other views of reform. In particular, we believe that the “threat of revolution” thesis of Acemoglu and Robinson is also important in accounting for franchise reform. Both theses can help explain why the franchise was expanded peacefully in nineteenth century England, and in our view, neither explanation by itself constitutes a complete account of the elite’s incentives to introduce reform.

40. As emphasized by Acemoglu and Robinson [2000], this view is not very plausible, especially because it seems that those who promoted reform in 1867 and 1884 managed to lose the subsequent elections.

APPENDIX

*Proof of Proposition 1*

The Lagrangean for party  $L$  can be written as

$$\mathcal{L}_L = \sum_{i=0}^s n_i \left[ F_i \left( U \left( c_{i,L} + g \left( \omega - \sum_{j=0}^s n_j c_{j,L}, V \right) \right) - U(c_{i,R} + g(I_R, V)) \right) \right] + \sum_{i=0}^s \mu_i n_i c_{i,L}.$$

The first-order conditions for party  $L$  at the symmetric equilibrium require

$$(6) \quad f_k(0)U'(c_{k,L}^* + g(I_L^*, V)) \leq g_I(I_L^*, V) \sum_{i=0}^s [n_i f_i(0)U'(c_{i,L}^* + g(I_L^*, V))] \text{ for } k = 0, \dots, s,$$

and equality holds whenever  $c_{k,L}^* > 0$ .

Part (i). When all groups are identical, it is clear that all voters receive the same transfers. With respect to the provision of the public good, note that, when all  $f$ 's are identical, they drop out from equation (6), and so that equation reduces to the first-order conditions from the welfare maximization problem solved in subsection IV.B. This observation yields part (i).

Part (ii). Suppose that group  $k$  receives positive transfers in equilibrium. If group  $k' < k$  received zero transfers, i.e.,  $c_{k',L}^* = 0$ , then we would have

$$f_{k'}(0)U'(g(I_L^*, V)) > f_k(0)U'(c_{k,L}^* + g(I_L^*, V)).$$

But this equation contradicts the necessary conditions spelled out in equation (6) because for group  $k$  equation (6) holds with equality. This shows that if group  $k$  receives positive transfers then all groups  $k' < k$  also receive positive transfers. Thus, there is an  $H$  such that for  $k \geq H$  the nonnegativity constraints are binding and for  $k < H$ , the nonnegativity constraints are nonbinding. (We allow for the possibility that  $H = s + 1$ , in which case all groups receive positive transfers).

Let us now show that transfers are greater for group  $k'$  than

for group  $k$ . Since both groups receive positive transfers, equation (6) holds with equality for both groups and thus, since the right-hand side is the same for both groups, we must have

$$(7) \quad f_{k'}(0)U'(c_{k',L}^* + g(I_L^*, V)) = f_k(0)U'(c_{k,L}^* + g(I_L^*, V)).$$

But  $f_{k'}(0) > f_k(0)$ , and so to preserve equality it must be  $c_{k',L}^* > c_{k,L}^*$ .

This establishes part (ii).

Part (iii). Suppose that such a  $\underline{V}$  exists, and consider a  $V < \underline{V}$ . Since, for such a  $V$ , all groups receive positive transfers, equation (7) holds for all groups  $k'$ ,  $k \leq s$ . Making use of this relationship, equation (6) simplifies to equation (3). This shows that the equilibrium level of investment  $I_L^*$  is equal to  $I^{SM}$  for all  $V \leq \underline{V}$ . We now prove the existence of a  $\underline{V} > 0$  such that, if  $V < \underline{V}$ , all groups receive positive transfers. To this end, note first that as  $V$  becomes sufficiently small, for any  $I$ ,  $g_I$  approaches 0 and therefore some resources are not devoted to the production of the public good. Thus, at least group 0 receives positive transfers as  $V$  becomes negligible. We can then use equation (6) to get that, for all groups  $i = 0, \dots, H - 1$

$$(8) \quad f_i(0)U'(c_{i,L}^* + g(I_L^*, V)) = f_0(0)U'(c_{0,L}^* + g(I_L^*, V)).$$

We can therefore rewrite equation (6) as

$$(9) \quad f_0(0)U'(c_{0,L}^* + g(I_L^*, V)) \left[ 1 - g_I(I_L^*, V) \sum_{i=0}^{H-1} n_i \right] \\ = g_I(I_L^*, V)U'(g(I_L^*, V)) \left\{ \sum_{j=H}^s n_j f_j(0) \right\}.$$

Suppose by way of contradiction that there exists a sequence  $\{V_j\}_{j=0}^{\infty}$  converging to 0 such that when  $V = V_j$  some voters receive zero transfers. Since  $\lim_{V \rightarrow 0} g_I(I, V) = 0$ , equation (6) requires that equilibrium investment converges to 0 as  $j$  grows. But then the right-hand side of equation (9) converges to infinity; in order to preserve equality with the left-hand side,  $c_{0,L}^*$  must converge to 0. This implies that transfers to all groups also converge to zero (see part ii). But all transfers and the investment level cannot simultaneously converge to zero in equilibrium, and so we have obtained a contradiction.

Part (iv). Define  $V_{MAX}$  by

$$f_0(0) = g_I(\omega, V_{MAX}) \sum_{i=0}^s n_i f_i(0).$$

If  $V > V_{MAX}$ , the inequality in equation (6) holds strictly for  $k = 0, \dots, s$  and for  $I_L^* = \omega$ , which means that it is an equilibrium for both parties to invest all the resources in the public good. If  $V < V_{MAX}$ , by similar reasoning, it cannot be an equilibrium for all the resources to be invested in the public good. We now establish that there is a  $\bar{V} < V_{MAX}$  such that for  $\bar{V} < V < V_{MAX}$  groups  $m, \dots, s$  receive zero transfers. We proceed by contradiction. Suppose that there is no such  $\bar{V}$ . Then there exists an increasing sequence  $\{V_t\}_{t=0}^\infty$  converging to  $V_{MAX}$  such that for each  $t$  at least one group among  $m, \dots, s$  receives positive transfers. In light of part (ii), this implies that, along this sequence, groups  $0, \dots, m$  receive positive transfers for every  $t$ . Thus, equation (8) requires that for every  $t$  we have

$$\frac{f_m(0)}{f_0(0)} = \frac{U'(c_{0,L}^* + g(I_L^*, V_t))}{U'(c_{m,L}^* + g(I_L^*, V_t))}.$$

Note that the left-hand side is independent of  $V$  and  $c$ , and is a number strictly smaller than 1. The right-hand side converges to 1 as  $t \rightarrow \infty$ , since then  $I_L^* \rightarrow \omega$ . This is a contradiction.

Comparing equation (6) with equation (3) then shows that, whenever some groups in the elite receive zero transfers, the public good is underprovided relative to  $I^{SM}$ . This observation concludes the proof for the case  $V < V_{MAX}$ .

When  $V > V_{MAX}$ , all resources are invested in the public good, and this maximizes the elite's surplus. ■

*Proof of Proposition 2*

We will use the following strategy of proof. We consider a marginal extension of the franchise to include a mass  $\eta \in (0, n_{s+1})$  of group  $s + 1$  citizens. We proceed under the assumption that parties can target transfers to citizens in  $\eta$  without offering transfers to those who are not in  $\eta$ . We show that a marginal increase in  $\eta$  results in greater spending on the public good. Since this is true for all  $\eta \in (0, n_{s+1})$ , it follows that extending the franchise to the entire group  $s + 1$  results in greater spending on the public good. Given this result, it follows

immediately that extending the franchise to groups  $s + 2, \dots, s + K$  increases public good provision. We divide the proof into three cases.

Case A. This is the case in which all groups  $0, \dots, s$  as well as citizens in  $\eta$  receive positive transfers. In this case part (iii) of Proposition 1 yields that investment in the public good maximizes the elite's welfare, and therefore the equilibrium level of investment  $I_L^*$  solves  $g'(I_L^*) = 1/(\eta + \sum_{k=0}^s n_k)$ . Since  $g'' < 0$ , this means that  $I_L^*$  is increasing in  $\eta$ .

Case B. This is the case in which at least citizens in  $\eta$ , and possibly some other groups too, receive no transfers. In this case, groups  $0, \dots, H - 1$  (with  $1 \leq H \leq s + 1$ ) receive positive transfers at the equilibrium, but no one in group  $H, \dots, s + 1$  receives any transfers. We now show that in this case increasing  $\eta$  increases investment in the public good.

The argument is developed here for the generic case in which a small expansion of the franchise does not change the set of binding nonnegativity constraints, i.e., the groups  $H, \dots, s + 1$  which receive no transfers. It is clear that this argument extends to cover the measure 0 cases in which a small expansion of the franchise drives the transfers of one more group to zero.

Rewrite equation (9) taking into account the presence of the mass  $\eta$  of group  $s + 1$  omitting the variable  $V$ :

$$f_k(0)U'(c_{k,L}^* + g(I_L^*)) \left[ 1 - g'(I_L^*) \sum_{i=0}^{H-1} n_i \right] \\ = g'(I_L^*)U'(g(I_L^*)) \left\{ \eta f_{s+1}(0) + \sum_{j=H}^s n_j f_j(0) \right\}.$$

Rearranging,

$$(10) \quad f_k(0) \frac{U'(c_{k,L}^* + g(I_L^*))}{U'(g(I_L^*))} \\ = \frac{g'(I_L^*)}{[1 - g'(I_L^*) \sum_{i=0}^{H-1} n_i]} \left\{ \eta f_{s+1}(0) + \sum_{j=H}^s n_j f_j(0) \right\}.$$

Consider now an increase in  $\eta$ . The direct effect is to increase the right-hand side. To restore equality in equation (10), we claim

that  $I_L^*$  must increase. Suppose by way of contradiction that  $I_L^*$  decreases. Observe first that the right-hand side increases further as  $I_L^*$  decreases (recall that  $g'' < 0$ ). We now show that there is a  $k$  such that the left-hand side decreases when  $I_L^*$  decreases, which yields the contradiction. To verify the latter claim, we will show that there is a  $k$  such that  $c_{k,L}^* + g(I_L^*, V)$  increases with a decrease in  $I_L^*$ . From the budget constraint,

$$\sum_{i=0}^{H-1} n_i \frac{\partial c_{i,L}^*}{\partial I_L^*} = -1.$$

Thus, there must be a  $k$  such that

$$\frac{\partial c_{k,L}^*}{\partial I_L^*} \leq -\frac{1}{\sum_{i=0}^{H-1} n_i},$$

or equivalently

$$\frac{\partial c_{k,L}^*}{\partial I_L^*} + g'(I_L^*) \leq -\left(\frac{1 - g'(I_L^*) \sum_{i=0}^{H-1} n_i}{\sum_{i=0}^{H-1} n_i}\right) < 0.$$

The last inequality follows because the term in parentheses is positive (by equation (10)). The left-hand side represents the change in the allocation received by group  $k$  as  $I_L^*$  increases. The inequality guarantees that this change is negative. It follows that the left-hand side of equation (10) decreases as  $I_L^*$  decreases.

Case C. This is the case in which all resources are devoted to production of the public good. If investment in the public good were to decline with an extension of the franchise, after the extension some groups would receive positive transfers. But then case B has shown that investment in the public good is increasing in  $\eta$ , which results in a contradiction. Therefore, in case C investment cannot decrease as  $\eta$  increases. ■

*Proof of Theorem 2*

Part i. By part (iv) of Proposition 1, for any  $m$ , there is a  $\bar{V}$  such that for  $V > \bar{V}$ , groups  $i = m, \dots, s$  only receive the public good (no transfers). Let us pick  $m$  sufficiently small so that groups  $m, \dots, s$  form a majority of the elite. Extending the franchise increases the welfare of all groups  $i = m, \dots, s$  because the provision of the public good increases (Proposition 2). Larger extensions lead to larger public good provision; hence groups  $i =$

$m, \dots, s$  prefer larger extensions to smaller ones. This proves part (i).

Part ii. By part (iii) of Proposition 1 a  $\bar{V} > 0$  exists such that for  $V < \bar{V}$ , in equilibrium, all members of the elite receive positive transfers. Extending the franchise makes all these voters worse off. (To see this, observe that condition (8) in the Appendix holds as an equality for these voters.) This guarantees that the utility change of these voters as a result of the increased provision of the public good has the same sign. Hence, if one of these voters prefers the change, then all of them would. Thus, if any of these voters were made better off following an extension of the franchise, then the elite would be unanimously in favor of higher provision of the public good before the extension. This cannot be part of an equilibrium with the restricted franchise.

Part iii. When  $V > V_{MAX}$ , all the resources are devoted to public good production. Extending the franchise will therefore not change the equilibrium outcome. ■

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