



Economic Development and Democracy: Does Industrialization Lead to Universal Suffrage?

Roger D. Congleton

Center for Study of Public Choice, George Mason University, Fairfax, Virginia, USA
(e-mail: congleto@gmu.edu)

Abstract Economic development is widely believed to stimulate the development of democratic institutions. This paper supports that argument, but suggests that the connection between industrialization and democracy is quite indirect.

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The first half of the paper uses rational choice models to demonstrate that economic development does not necessarily induce major changes in a nation's suffrage laws. Changes in the magnitude and distribution of wealth only induce institutional reforms if they also change the constitutional interests of those controlling the government. This is not necessarily the case, even in parliamentary systems whose members are chosen in competitive elections. Both the median member of parliament and the median person eligible to vote tend to be well served by the existing institutional arrangements.

However, in favorable circumstances industrialization can induce major reforms in suffrage law. The second half of the paper explores mechanisms through which industrialization can lead to democratization. One neglected consequence of industrialization is that the cost of organizing political interest groups is reduced by the same technological changes that increase the efficient scale of manufacturing and distribution, while the demand for such organizations is increased. This paper demonstrates that industrialization can generate major suffrage reform when it empowers the "right" economic and ideological interest groups. The experience of nineteenth century northern Europe is used to illustrate the relevance of the analysis.

1. Introduction

Two revolutions occurred gradually in Northern Europe during the nineteenth century and first part of the twentieth century. First, there was a shift of political authority from kings to parliaments. Second, parliaments became more broadly grounded in popular suffrage. This century-long shift in the locus of political power was a major historical event, although the individual shifts of power or expansions of suffrage were often themselves relatively small events. Nor were these two shifts of policymaking power entirely connected. European parliaments had occasionally gained power in previous centuries without broadening their electoral bases, which prior to the 1850's were generally limited to well-organized and wealthy elites in those countries that had elections. The democratic parliaments that emerged by 1925 were radically different from the governments that Europe or most of the world had known in previous recorded history. These new European governments were revolutionary, although not products of war or sudden breaks with the past.

Something new happened in nineteenth-century Europe, which gave rise to radical changes in governance in the course of a century or so.

It has often been suggested that industrialization played a role in these amazing and largely peaceful reforms (Hirschman 1994). However, to the best of my knowledge, no one has provided a mechanism through which industrialization, which is itself largely a peaceful economic activity, may induce major political reforms. A large literature suggests that revolution or the threat of revolution can induce changes in suffrage laws (Acemoglu and Robinson 2000, or Tilly 2004), but little evidence exists to support the contention that revolutions were in the offing in all the countries that did, in fact, expand suffrage gradually, nor is there an obvious connection between civil war and industrialization (Tullock 1974). Indeed, there are extremely few historical cases in which civil wars lead to universal suffrage. The English revolution of the seventeenth century led to Cromwell's republic and dictatorship. The French revolutions of the eighteenth and nineteenth centuries two times led to dictatorship (Napoleon I and III), as did the Russian and Chinese civil wars in the twentieth century. Public demonstrations in favor of universal suffrage have existed in Europe at least since the days of the English Levelers in the mid-seventeenth century. However, demonstrations are not revolutions, nor are they evidence of broad support for civil war or class consciousness. They are organized efforts to affect public policies by putting pressure on government officials and their supporters, as may be created by persuasive rhetoric and demonstrations of support or opposition.¹

¹ The basic facts of these violent revolutions are available from any thorough volume on world history. See, for example, Palmer and Colton (1965). A copy of the Leveler's surprisingly liberal 1647

Whether economic development itself can induce liberal constitutional reform is not obvious. After all, it is political decisions that define the formal property rights and liability laws under which industrialization takes place, and it is political decisions that largely determine how those rights and obligations will be enforced. Economics implies that such political decisions can have large effects on a nation's path of economic development by affecting transactions costs, competition, and rates of innovation. Consequently, one can more easily argue that liberal economic policies encouraged industrialization than that industrialization encouraged democratization, even in a fairly complete model of political economy.

Economics implies that rapid industrialization most likely occurred in the West in large part *because of changes* in public policies adopted by Western governments. Here, economists may point to reductions in international and domestic trade restrictions and other policies that reduced monopoly power and secured property rights within much of northern Europe during the nineteenth century. However, it also seems clear that causality is not unidirectional.

The public choice literature clearly demonstrates that economic interests can induce political policies in the "small", as when individual pieces of legislation or administrative rulings are influenced by the testimony and lobbying efforts of organized economic interest groups. Olson (1965), Becker (1985), and Mueller (1995) argue that many small changes in regulatory and tax policies reflect the relative influence of organized interest groups, which may well be generated by industrialization. The present analysis suggests that organized interest groups may also affect policies in the large, insofar as major constitutional reforms may be induced by politically active groups whose economic or ideological interests may be advanced by those constitutional reforms.

This paper uses the rational choice methodology to analyze alternative mechanisms through which industrialization might have induced major suffrage reforms. The theoretical results suggest that *industrialization has only indirect effects* on the political process by which parliaments become more representative. Democratization is not a necessary consequence of increased income or wealth. That is to say, democracy is not, as is often argued, a "superior good" that becomes affordable as income increases. However, industrialization can be a catalyst for political reform because changes in technology and wealth associated with industrialization may energize political and economic interest groups with interests in suffrage reform.

The analysis suggests that ideas, as well as economic interests, may have played a role in the gradual expansion of suffrage in nineteenth-century Europe.

proposal for a social contract, which predates both Hobbes and Locke, can be found at http://www.constitution.org/lev/eng_lev_07.htm.

The transition to democracy is evidently not produced by economic growth alone, but can be aided by it insofar as industrialization increases the effectiveness of politically active groups with an interest in more liberal forms of political decision making. The relevance of the analysis is supported by the experience of the North European kingdoms during the nineteenth century, although it is not limited to that experience insofar as parliamentary political structures have been widely used by industrializing societies outside Europe. Industrialization in northern Europe appears to have energized the liberal and labor movements' efforts to secure suffrage reform and, thereby, generated more liberal political institutions and public policies.

The results apply to any country in which the control of suffrage laws – the rules that determine who selects those who govern – is initially vested in a subset of the citizenry based largely on wealth and in which interest groups are free to form and elicit policy reforms. (Similar mechanisms may have also affected the transfer of power from the king to the parliament, although the present paper does not analyze the political relationships between kings and their parliaments. See Congleton 2001.)

2. Economic growth and the stability of suffrage laws

In 1825 most European governments consisted of a parliament and a king. The various national parliaments were not always elected, nor were they representative in the modern sense. These long-standing parliaments represented the interests of a small subset of the population – essentially the most wealthy and best organized members of their respective countries (nobles, successful businessmen, prosperous farmers, and Church elites). In some cases, the groups entitled to seats in parliament chose a few men to represent them in parliament, and these members of parliament (MPs) were often chosen via elections of various kinds. National elections were usually organized for this purpose, although the privilege of voting for representatives was limited to the wealthiest 5 or 10 percent of the adult male population. These election laws were broadly used and often very stable. For example, the wealth-based rules defining who could vote for county representatives of the British House of Commons remained largely unchanged from the early fifteenth century until the early nineteenth century. Similar wealth-based or tax-based suffrage laws were widely used throughout Europe in the early to mid-nineteenth century as in the Netherlands (1815), Belgium (1830), Denmark (1849) and Sweden (1866).²

² See Field (2002), Kossman (1978), Jacobsen (2000), and Congleton (2003).

The point of departure for the present analysis is consequently one in which the privilege of voting for representatives is defined by wealth or income tax payments. Although not all members of national assemblies were directly elected by counting votes in 1825 nor are they at present, it is the elected portion of the parliament that is most directly affected by nongovernmental interests, and it is this part of government that is most likely to be directly or indirectly influenced by industrialization. The role of the king and nobility, which were not unimportant historically, is neglected in the present analysis to focus on the effects of industrialization on those who were directly or indirectly elected to parliament.

Consider the following highly simplified model of parliamentary decision making by elected members and its implications for the determination of voting rights. Suppose that citizens have preferences defined over private consumption, X_i , and a bundle of public services, G , that is uniformly available to all within the community, $U_i = u(X_i, G)$. Suppose further that each citizen has an endowment of labor, L_i , and capital, K_i , and that national income Y is produced via constant returns to scale using labor and capital under technology Z . This implies that national income can be represented as $Y = f(\sum L_i, \sum K_i, Z)$ and that each citizen i 's income can be represented as $Y_i = wL_i + rK_i$, with $w = df/dL$, $r = df/dK$, and $Y = \sum Y_i$. Let $c = C(G, Z)$ be the rate of transformation between private consumption good X and government service G . This implies that private consumption, X , can be characterized as $X = Y - C(G)$.

Assume that government services are funded with a proportional tax on income just sufficient to fund the service level demanded, $tY = C(G)$. In this case, the citizen-voter will prefer the service level that maximizes:

$$U = u\left(\left[\frac{1 - C(G, Z)}{Y}\right]Y_i, G\right) \quad (1)$$

which requires service level G to be such that:

$$U_x\left(\frac{-C_G}{Y}\right)Y_i + U_G = 0 \quad (2)$$

(Subscripted variable names denote partial derivatives with respect to the variable subscripted.) The implicit function theorem implies equation 2 can be used to characterize the typical citizen's demand for government services:

$$G^* = g(wL_i + rK_i, Y, Z) \quad (3)$$

Each citizen demands services based on his or her endowment of labor and

capital, the marginal product of those inputs, and national income. Because only the initial endowments of productive inputs vary by person in this model, it is the variation in the initial endowments that determines the distribution of citizen demands for government services.

Suppose further that the frequency distributions of labor and capital are approximately independent and skewed in a manner that can be approximated with triangular distributions, with labor endowments distributed between 0 and maximal labor endowment, L^M , where $l(0) = 2/L^M$ and $l(L^M) = 0$, and capital endowments distributed between 0 and maximal capital endowment K^M with $k(0) = 2/K^M$ and $k(K^M) = 0$. Figure 1 depicts the assumed distribution of labor endowments and, thus, labor incomes. The triangular assumption is not crucial for the present analysis, but it does assure that voter interests differ somewhat and that median income is below average income, as tends to be the case in most observed income distributions. The distribution of income, Y_i , can be written as $Y_i \sim wL_i + rK_i$ within the domain of realized incomes.³ It can be shown that the mean of the income distribution is $Y = (wL^M + rK^M)/3$ and its median is $Y = (wL^M + rK^M)(2 - \sqrt{2})/2$.⁴

³ The sum of two linear monotonic decreasing functions is also linear and monotone decreasing.

⁴ The two triangular density distributions can be written as $F_L = (2/L^M - 2L/L^{M2})$ and $F_K = (2/K^M - 2K/K^{M2})$. Average income is denoted Y^A and can be characterized with:

$$Y^A = \int_0^{L^M} wL \left(\frac{2}{L^M} - \frac{2L}{L^{M2}} \right) dL + \int_0^{K^M} rK \left(\frac{2}{K^M} - \frac{2K}{K^{M2}} \right) dK$$

or

$$Y^A = \frac{(wL^M + rK^M)}{3}.$$

Median income can be found at the labor capital combination that equates the cumulative income below the median with that above the median. Because of the assumed independence in factor endowments, one such combination is found at the medians of the labor and capital distributions. The median of the income distribution can be characterized as the voter with median holdings of labor, L^V , and capital, K^V , and median income as:

$$\int_0^{L^V} wL \left(\frac{2}{L^M} - \frac{L}{L^{M2}} \right) + \int_0^{K^V} rK \left(\frac{2}{K^M} - \frac{K}{K^{M2}} \right) dK = \int_{L^V}^{L^M} wL \left(\frac{2}{L^M} - \frac{L}{L^{M2}} \right) dL + \int_{K^V}^{K^M} rK \left(\frac{2}{K^M} - \frac{K}{K^{M2}} \right) dK$$

The medians of labor and capital distributions are $L^V = L^M(2 - \sqrt{2})/2$ and $K^V = K^M(2 - \sqrt{2})/2$, respectively, given the assumed triangular distributions. Median citizen income is, consequently, $Y^V = (wL^M + rK^M)(2 - \sqrt{2})/2$, where w and r again reflect the marginal product of labor and capital for the total employment of labor and capital. Note that $(2 - \sqrt{2})/2 = 0.2929 < 1/3$, consequently, median income is less than average income. Triangular distributions are, of course, skewed distributions with different modes, means, and medians.

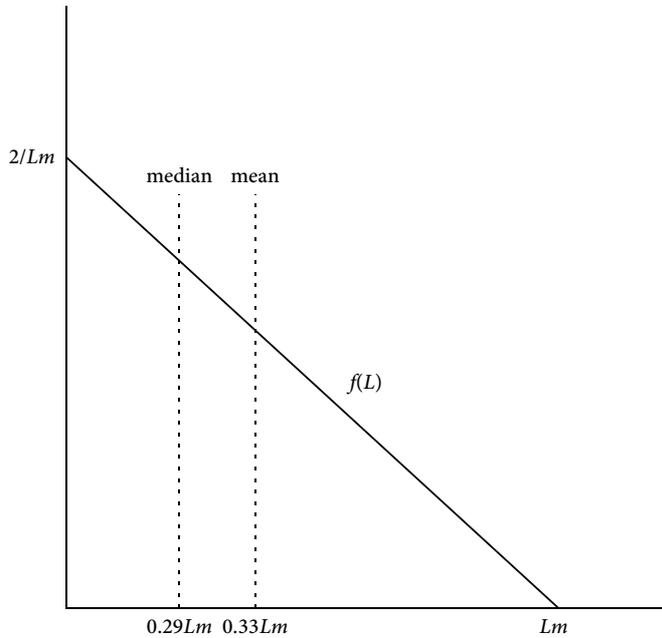


Figure 1 Distribution of citizen labor endowments

2.1 Stable suffrage restrictions under majority rule

In a polity where all citizens are eligible to vote and a median voter exists, two-candidate or two-party competition for office tends to cause the policy preferences of the median voter to be adopted as law. In the present model, the median voter is the voter with the median endowment of capital and labor. Note, however, that the median voter is not generally the citizen with median income. For much of the history of parliamentary systems, eligibility to vote was determined by tax payments on income and wealth, and consequently, the median voter has often had substantially more income and wealth than that of the nation's median citizen.

Such suffrage restrictions can easily be incorporated into the model. Suppose that citizens are allowed to vote whenever their labor income tax payment is greater than T^L or their capital income tax is greater than T^K . Given the assumed distribution of productive resources, this implies that only citizens whose labor endowment is such that $twL_i > T^L$ or whose capital endowment is such that $trK_i > T^K$ are entitled to vote, where tax rate $t = c(G^*, Z)/Y$. Only citizens with a labor endowment such that $L_i > T^L/tw$ or with a capital endowment such that

$K_i > T^K/tw$ are able to vote. Eligibility to vote in such systems is partly based on endowments, partly on productivity (insofar as productivity is reflected in wage rates and the return on capital), and partly on the general price level. For the present, assume that these economywide variables are stable. This would tend to be the case in economic steady states and for short-run analysis in which it is normally assumed that a constant supply of capital and labor is employed using a particular production technology.

Now consider the political economy of suffrage reform. As a point of departure, assume that sufficient competition for elective office exists to assure that median voter outcomes emerge within parliament. This is not to say that the members of parliament are necessarily persons with a median outlook, nor that parties are unimportant, but rather that parties and office holders are sufficiently interested in office and elections are sufficiently competitive that the majority party or coalition adopts the policies of most interest to the median voter of the current electorate.

For a given technology, the endowments, L^V and K^V , of the voters with median income in the case of tax payment-based suffrage will satisfy:

$$\int_{T^L/tw}^{L^V} w \left(\frac{2L}{L^M} - \frac{L^2}{L^{M^2}} \right) dL + \int_{T^K/tw}^{K^V} r \left(\frac{2K}{K^M} - \frac{K^2}{K^{M^2}} \right) dK = \int_{L^V}^{L^M} w \left(\frac{2L}{L^M} - \frac{L^2}{L^{M^2}} \right) dL + \int_{K^V}^{K^M} r \left(\frac{2K}{K^M} - \frac{K^2}{K^{M^2}} \right) dK \tag{4}$$

in which case the median voter's income is:

$$Y^V = \left(w \left(L^M - \frac{T^L}{tw} \right) + r \left(K^M - \frac{T^K}{tw} \right) \right) \frac{2 - \sqrt{2}}{2} \tag{5}$$

and he or she will demand service level:

$$G^* = g(Y^V, Y, Z) \tag{6a}$$

or

$$G^* = \gamma(L^V, K^V, T^L, T^K, Y, Z) \tag{6b}$$

Note that the preexisting suffrage rules indirectly determine government policies by determining the identity of the median voter.

This allows the present median voter's preferences over election law to be

characterized with the indirect utility function:

$$U^{V^*} = u\left(\frac{1 - c(\gamma(L^V, K^V, T^L, T^K, Y, Z), Z)}{Y}, Y^V, \gamma(L^V, K^V, T^L, T^K, Y, Z)\right) \quad (7)$$

Differentiating equation 7 with respect to T^L and T^K and applying the envelope theorem yields first-order conditions for suffrage laws. Recall that the envelope theorem implies that derivatives with respect to the already optimized variables can be ignored, because they net out to zero. Consequently, the partial derivatives of equation 7 with respect to T^L and T^K both equal zero, which implies that *the existing election laws already maximize the welfare of the present median voter.*

G^* maximizes the median voter's welfare under the present electoral laws (and assumed tax constitution⁵); thus, the median voter will be completely satisfied with the pre-existing suffrage constraints. No other combination of wealth requirements for suffrage will generate a better service-tax combination for the pivotal voter.

This result has a very important implication for the purposes of this paper. *In a stable economic and political environment, there will be no effective electoral pressure for electoral reform.* The present median voter is content to be the median voter and has no interest in enacting laws that will create a new median. The use of majority rule does not by itself generate a political impulse for universal suffrage. There is no slippery slope for democratic reform.

2.2 *Economic growth and the expansion of suffrage without suffrage reform*

Economic growth takes place as capital is accumulated, which tends to increase the marginal productivity and thereby the wage rates of labor and through technological advances that improve the productivity of both labor and capital. As income rises throughout the income distribution, more and more citizens become qualified to vote, even if tax rates are unaffected by income growth. Tax-based rules for suffrage thus imply that a somewhat larger electorate with a new

⁵ Brennan and Buchanan (1980) discuss the constitutional appeal of a tax constitution for Leviathan. Tax constitutions are often informal arrangements in modern polities, although they were often formalized within medieval Europe. The most famous of these was the Magna Carta, which gave a council of barons veto power of the English king's tax policy. Similar institutional arrangements were present in Sweden, Denmark, Spain, and France. The stabilizing value of a uniform tax code under majority rule is discussed by Buchanan and Congleton (1998). Other negotiations on significant reforms are discussed by Voigt (1999).

median voter emerges during periods of economic growth and/or rising taxes.⁶

A stable set of income- or tax-based suffrage rules do not yield a stable electorate nor a stable median voter in a setting in which economic growth or decline takes place. Wealth- and tax-based suffrage laws become less restrictive through time as economic growth takes place or as taxes are increased. They become more restrictive as economic decline takes place.

The direct effect of economic growth on suffrage under stable tax- or income-based suffrage rules clearly tends to make the present median voter somewhat *worse off*. After all, it is only by being the median voter that a particular citizen can realize his or her most preferred government service levels. A forward-looking median voter would, thus, be inclined to *tighten* the eligibility rules for suffrage by increasing the wealth or income requirements for electoral qualification so that he or she remains the median voter in periods of economic growth, but would be inclined to *loosen* them during periods of economic contraction. That is to say, if the present median voter had his or her way on suffrage reform, successful economic development would tend to be associated with electoral rules that gradually became *more demanding* rather than less demanding through time.

However, in most political settings, the constitutional or quasi-constitutional rules that determine voter qualifications are more difficult to change than ordinary policies are. Even in polities where qualifications for suffrage are not formally constitutional, it is clear to all that changes in the rules governing suffrage are major policy decisions. Debate on suffrage issues, consequently, tends to be extensive and normally runs through several electoral cycles. A single parliament, thus, cannot normally modify the prerequisites for suffrage in a single session of the legislature.

The stability of rules governing suffrage is partly a consequence of the somewhat lengthy process through which most constitutional laws and major policies come to be adopted. Essentially all proposed changes in suffrage law will be reviewed by subsequent parliaments that are beholden to new median voters. And, the new median voter(s) will veto suffrage reforms designed to assure that the previous median voter retains elective control of parliament. In this manner, the lengthy formal and informal process of changing constitutional laws, together with the immediate interests of successive median voters, tends to increase the stability of all qualifications for suffrage, even during periods when other policy interests of “the” median voter change through time.

⁶ This economic route to suffrage expansion can be nearly as important as suffrage reform. This method of obtaining suffrage was historically important in both the United Kingdom and Sweden where suffrage rates approximately doubled in the 1870 to 1900 period largely as a consequence of income increases rather than suffrage reform.

3. Tax revenue and the median voter's interest in suffrage reform

Suppose that instead of tax payments defining suffrage, suffrage defines tax payments. It is often argued that there should be no taxation without representation, and suffrage laws did, in effect, largely implement this principle with respect to direct taxes. Moreover, this suffrage-based tax constitution is clearly relevant for settings where territorial boundaries limit both tax base and electorate. When groups petition to be included in a polity, they normally negotiate for representation or suffrage rights before agreeing to enter the union and be liable for taxes.

In such cases, suffrage rules not only determine the identity of the median voter, but may also determine the tax base available to the polity. (This may seem to be a somewhat unlikely fiscal setting for the nineteenth century, but the modeling exercise will be helpful in later sections of the paper and it is directly relevant for "club" or confederal models of government finance and international organizations.)

When the polity's tax base is affected by the scope of suffrage, the present median voter may have a fiscal interest in suffrage reform. The median voter's fiscal interest in expanding suffrage can be characterized by modifying equation 7 to take into account the effect of changes in suffrage on tax base Y . It remains the case that changes in suffrage laws will generate a new median voter who will have different demands for public services and also for suffrage laws, but now the present median voter may, nonetheless, favor suffrage reform. And moreover, the subsequent median voter *will not veto* the reforms that have made him or her the pivotal voter.

Let Y be redefined as the size of the income tax base, which under the assumed tax constitution is a decreasing function of the wealth or income tax qualifications for suffrage, that is, $Y = \gamma(T^L, T^K)$. The fiscal effects of a new median voter can be accounted for in the implicit function describing G^* and in the cost-sharing rule through effects on the ratio of median income to national income Y^V/Y . The present median voter's own income, Y^V , is not affected by changes in suffrage although his future tax price for government services is affected. The present median voter's preferred suffrage eligibility rules, given the tax constitution, now maximize:

$$U^V = u\left(\frac{1 - c(G^*, Z)}{\gamma(T^L, T^K)Y^V}, G^*\right) \quad (8)$$

$$\text{with } G^* = \gamma(L^V, K^V, T^L, T^K, \gamma(T^L, T^K), Z),$$

which requires:

$$U_{TL}^V = \left[U_x \left(-\frac{C_G}{Y} \right) Y^V + U_G \right] G^*_{TL} U_x \left[\frac{Y_{TL} C(G^*) Y^V}{Y^2} \right] \quad (9a)$$

and

$$U_{TK}^V = \left[U_x \left(-\frac{C_G}{Y} \right) Y^V + U_G \right] G^*_{TK} + U_x \left[\frac{Y_{TK} Y^V}{C(G^*) Y^2} \right] = 0 \quad (9b)$$

The first set of bracketed terms are the effects of increased suffrage restrictions on government services and the costs of those services, the second set of bracketed terms characterize the effect of suffrage restrictions on the overall tax base.

In cases in which the income of the new median voter is the same as that of the present one, the envelope theorem allows the marginal effects of suffrage rules on G^* to be neglected, because $U_x(-C_G/Y)Y^V + U_G = 0$. In that case, equations 9.1 and 9.2 imply that the median voter will expand suffrage up to the point where the tax base is maximized, which occurs at the point where $Y_{TL} = Y_{TK} = 0$. Essentially all taxpayers would be allowed to vote in this instance, although non-taxpayers would not be allowed to vote.

If the income of the new median voter is expected to differ from the present one, equations 9.1 and 9.2 imply that the present median voter will trade off marginal losses from changes in government services against marginal savings from an expanded tax base. It is clearly possible that no reform of suffrage laws will be adopted in this case, because the marginal losses from new service and tax levels are larger than the median voter's marginal tax savings from a somewhat broader tax base.

Only in cases in which the anticipated tax savings more than offset marginal losses from "suboptimal" service and tax costs would the present median voter cause suffrage to be expanded.

Note, however, that if reforms are adopted, the new suffrage laws would be stable only if the new median voter is opposed to further changes in suffrage. The above analysis implies that this may not be the case. It is clearly possible that the new median voter will, facing somewhat different fiscal tradeoffs, also be interested in expanding suffrage. In limiting cases, an initially limited suffrage might be gradually expanded to include all taxpayers as a series of suffrage expansions are adopted and ratified by successive median voters. It is clear that economic growth can play a role in this tax-base-driven process of suffrage reform. Economic development that increases the relative wealth and tax worthiness of non-voters induces suffrage expansion as a method of expanding the polity's tax base.

More generally, a significant increase in the taxable income or wealth of the unfranchised can induce substantial changes in election law in settings in

which it is more difficult to tax the unenfranchised than the enfranchised. However, a forward-looking median voter would be less inclined to expand the franchise if he thought that it would be further extended by the next median voter.

4. Ideological change and electoral pressures for constitutional reform

The fact that the median voter is content with the existing qualifications for suffrage in equilibrium does not, of course, imply that all voters are pleased with existing suffrage law. The policy effects of suffrage reform make it a contentious issue. Differences in individual circumstances, tastes, and ideology imply that *substantial subsets of the citizenry are always dissatisfied with the present rules governing suffrage*, including many who are entitled to vote. In the model above, those with relatively large input endowments tend to prefer more restrictive rules and those with relatively small endowments tend to prefer less restrictive rules, because such suffrage reforms would generate a new median voter whose preferred policies are closer to their own policy interests. The question addressed in the remainder of the paper is whether these electorally irrelevant demands for suffrage reform might affect the composition of the electorate through legal, although nonelectoral, means.

The analysis to this point suggests that changes in income or distribution of income are unlikely to motivate suffrage reforms by elected officials, except in cases in which tax revenue (or personal income) are linked to suffrage. Even in such cases, the median voter would rather change the tax constitution than suffrage laws, unless the tax code is far more difficult to modify than are suffrage requirements. If industrialization leads to democracy, it is not likely to come through changes in median voter income or his or her potential tax base. Two other possibilities are analyzed below: suffrage norms and interest group activities.

4.1 *Suffrage norms and the demand for suffrage reform*

Suppose that the median voter's evaluation of suffrage law is not entirely based on its indirect effects on fiscal policy as assumed above, but also on his ideology or conception of the "good society". For example, it may be widely felt that all property owners, or all gainfully employed adults, or all competent adults, or all adults should be entitled to vote. In such cases, the proper breadth of suffrage is partly an "end" as well as a "means", and the electoral demand for suffrage reform would include consideration of both its normative and fiscal effects. If the current rules are more restrictive than consistent with a polity's suffrage norms,

suffrage expansion would be widely considered a praiseworthy policy and, consequently, would attract public expressions of support, even by those who might privately be opposed (Kuran 1989, or Brennan and Hamlin 2000). In such cases, citizens would maximize a somewhat more complex utility function than assumed to this point.

Equation 7 can easily be modified to analyze the effect of a suffrage preference or suffrage norm on the median voter's optimal suffrage law. For example, the median voter's direct interest in suffrage reform can be represented as:

$$U^V = u \left(\left(\frac{1 - C(\gamma(L^V, K^V, T^L, T^K, Y, Z), Z)}{Y} \right) Y^V, \gamma(L^V, K^V, T^L, T^K, Y, Z), s(T^L, T^K) \right) \quad (10)$$

and his ideal suffrage law will satisfy the following first-order conditions:

$$U_{TL} = \left[\frac{U_X(-C_G)Y^V}{Y} + U_G \right] G^*_{TL} + U_S S_{TL} = 0 \quad (11.1)$$

$$U_{TK} = \left[\frac{U_X(-C_G)Y^V}{Y} + U_G \right] G^*_{TK} + U_S S_{TK} = 0 \quad (11.2)$$

where $S = s(T^L, T^K)$ refers to the percentage of adults eligible to vote given thresholds T^L and T^K .

Recall that in the absence of a normative interest in suffrage, the existing suffrage thresholds are optimal for the median voter. In that case, $U_S S_{TL} = 0$ and $U_S S_{TK} = 0$, and the first two terms in the first-order conditions are always satisfied at the median voter's ideal, G^* . The same result, as noted above, also suggests that changes in median voter tastes with respect to private and public services or changes in the median voter's income will *not* cause the present median voter to change the existing suffrage laws.

However, the suffrage norms used by the median voter will clearly influence suffrage law if $U_S S_{TL} \leq 0$ or $U_S S_{TK} \leq 0$ and may also induce suffrage reform as the norms of pivotal voters change through time.

i. Direct preferences for suffrage: suffrage as a good

Equations 11.1 and 11.2 imply that present suffrage laws will be changed whenever $U_S S_{TL} \neq 0$ and $U_S S_{TK} \neq 0$. Applying the implicit function theorem to equations 11.1 and 11.2 allows the typical citizen's ideal suffrage rules to be

characterized as:

$$T^{L^*} = l(Li, Ki, T^L, T^K, Y, Z) \quad (12a)$$

$$T^{K^*} = k(Li, Ki, T^L, T^K, Y, Z), \quad (12b)$$

where T^L, T^K are the existing suffrage laws that produced the present median voter and T^{L^*}, T^{K^*} are the new suffrage laws preferred by the present median voter.

For the triangular distributions assumed here, the next median voter will have endowments of labor and capital within the new electorate equal to $L^V - T^{L^*}/tw$ and $K^V - T^{K^*}/tw$, respectively, and income:

$$Y^V = \left(w \left(\frac{L^V - T^{L^*}}{tw} \right) \right) + r \left(\frac{K^V - T^{K^*}}{tw} \right) \frac{(2 - \sqrt{2})}{2} \quad (13)$$

which are somewhat below those of the present median voter when suffrage is expanded, which will be the case if $U_s S_{TL} < 0$ and $U_s S_{TK} < 0$. In this case, the capital and labor electoral thresholds are “bads”, and the median voter will reduce his “consumption” of them at the margin.

In cases in which interior solutions exist, the new rules imply a new median voter, but not universal suffrage. That is to say, the present median voter is no longer necessarily content with the existing suffrage law, even though it allows him or her to obtain his or her ideal fiscal package. Moreover, the median that emerges under the new suffrage rules will not veto the proposed reform. The new median voter is clearly fiscally better off under the new rules, because he or she is now able to obtain his or her ideal pattern of public policies and would also find the new law normatively more attractive if he or she also regarded suffrage to be a good.

However, if the next median voter has the same tastes as the present median voter, the successor will also be interested in suffrage reform. At the new median voter's ideal policy (the new G^*), the marginal utility of suffrage expansion is positive as before. Consequently, the new median will further liberalize the franchise by further reducing the wealth and/or income requirements for voting. In the limit, a series of myopic suffrage reforms would generate universal suffrage, as successive median voters extend suffrage entitlements.⁷

⁷ Note that a forward-looking median voter who anticipated myopic policies from his successors might simply keep the present policies in place. He might well be better off under a somewhat too

In this case, democratic reform takes place on a slippery slope. If suffrage is an ordinary good in the sense that it always has positive marginal utility, $U_s > 0$, only the corner solution of universal suffrage can be locally stable, although intermediate suffrage rules may be observed during the process of transition. Note, however, that changes in income that might be induced by industrialization *do not* play a role in this process of reform.

ii. Ideology, merit-based suffrage norms, and suffrage reform

Restrictive suffrage laws are less robust when the median voter has a direct interest in suffrage law, because the existence of suffrage norms implies a tradeoff between the median voter's interest in obtaining his or her ideal combination of private and public services and obtaining his or her ideal suffrage rule. This tradeoff is present whether the median voter's suffrage norm implies that suffrage rules should be less restrictive or more restrictive than the current rules. Voters may prefer universal suffrage to all other levels, or voters may widely believe that suffrage should be based on "merit", however defined. In either case, suffrage laws tend to be less stable than in a narrow economic model of the demand for suffrage.

Merit-based theories of suffrage imply that "deserving" citizens *should be* entitled to vote, but no others. In such cases, the direct utility of suffrage would be judged relative to each citizen's particular suffrage ideal, S_i^* – as with $U_i = u(X_i, G, n(|S_i^* - s(T^L, T^K)|))$, rather than relative to universal suffrage. A voter who accepts a merit-based theory of suffrage still faces tradeoffs between advancing electoral norms and maintaining control over public policies. However, in this case, the sequence of myopic suffrage adjustments would stop when a median voter is reached who considers the present suffrage rules to be ideal or is himself or herself disinterested in suffrage as an end in its own right. At the median voter's ideal suffrage level, S^v , the marginal utility of further suffrage reform falls to zero, $U_{sT^L} = 0$ and $U_{sT^K} = 0$, and a stable equilibrium obtains.

restrictive suffrage law than under universal suffrage. However, if the median voter anticipated such foresight on the part of his successor, modest expansion might well be adopted. Yet, holding the line would be problematic for his successor as well! The successor might also imagine that his own successor would hold the line, and so enact his own preferred reforms, and so on.

In the case in which suffrage is a "bad," as might be true under some elitist or hierarchical social theories, the marginal utility of suffrage expansion is negative, and the same process would lead to dictatorship — an electorate composed of a single voter.

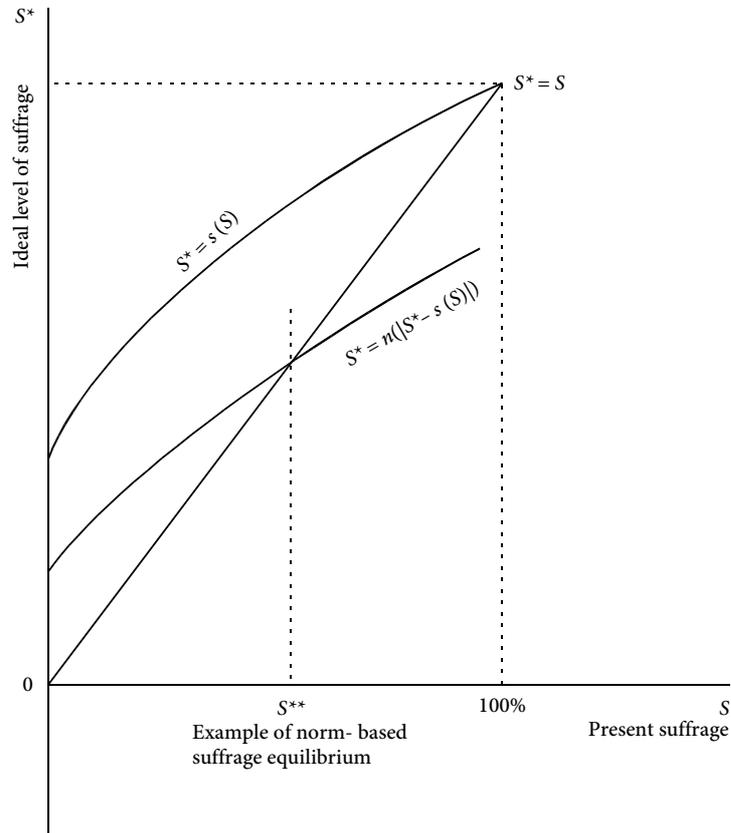


Figure 2 Preferred suffrage standard of the median voter as a function of the current suffrage rules

After reaching equilibrium suffrage levels, it is clear that changes in the median voter's income will *not* induce further expansions of suffrage unless income directly affects the median voter's suffrage norms. At equilibrium, the median voter is completely satisfied with both his fiscal package and the laws governing suffrage, and the marginal utility of changing suffrage laws is zero for the median voter. Thus, changes in the marginal utility of other goods and services do not affect the marginal rate of substitution between other goods and suffrage. (Recall that marginal rates of substitution can be expressed as a ratio of marginal utilities and that zero over any other number still equals zero.)

Broad changes in economic growth and taste changes can affect the rules governing suffrage by affecting the marginal rate of substitution between suffrage and other desired services, but *only at points away from the normative equilib-*

rium where the marginal utility of suffrage reform differs from zero. If the identity of the median voter is not affected by economy-wide patterns of growth and the present median voter's suffrage ideal is already codified in election law, the median voter remains content with suffrage law even if economic growth changes his or her preferred fiscal package.

Figure 2 illustrates the equilibrium patterns of suffrage that may emerge under universal and merit-based suffrage norms. Two suffrage demand functions are depicted. The first, $s(S)$, depicts an equilibrium at universal suffrage, as tends to be the case when suffrage is an ordinary good or universal suffrage is the norm. The second, $n(|S^* - S|)$, depicts an interior solution of the sort associated with a merit-based theory of suffrage. The equilibrium suffrage laws are the fixed points of the suffrage demand equations. Other functional forms are, of course, possible according to the normative theories employed and the distribution of those theories. There may be, for example, more than one equilibrium (fixed point) set of qualifications for suffrage.⁸

5. Technological change, interest groups, and the expansion of suffrage

The analysis to this point implies that industrialization will not generate a parliamentary interest in suffrage reform unless industrialization itself generates a change in suffrage norms or the tax base can only be expanded by expanding suffrage. Insofar as new suffrage norms are not obvious products of industrialization and suffrage-based tax constraints are not widely observed, the analysis to this point has failed to find a direct causal link between economic growth and suffrage reform. Democracy is not a superior good! And, although changes in suffrage norms can induce suffrage reform, insofar as the new norms imply that $U_S S_{TL}$ and $U_S S_{TK}$ no longer equal zero, new suffrage norms are unlikely to be induced by changes in income or in the distribution of wealth alone.

Economic growth of the sort generated by rapid industrialization, however, does more than simply change the distribution of wealth and income. It also alters the manner in which economic resources are employed throughout the economy being transformed. By doing so, industrialization *changes the relative cost, effectiveness, and demand for politically active interest groups* as well as the distribution of income.

Many of the technological advances that allow large industrial firms to be cre-

⁸ The extent of suffrage as a percent of the citizenry is always bounded at 100%. Consequently, the continuity of functions s and n are sufficient to assure the existence of a fixed point. However, the fixed point theorems do not assure intermediate solutions. In some cases, as noted above, equilibrium suffrage levels will lie along the upper or lower bounds of S .

ated and managed successfully also reduce the costs of forming and managing large politically active interest groups. The same improvements in communication and transport that allow economic entrepreneurs to assemble and manage large numbers of employees in the pursuit of profit also allow political entrepreneurs to assemble and coordinate the political activities of large numbers of individuals who share ideological or economic interests. The costs of organizing interest groups are further reduced by the successful creation of large industrial enterprises that place large numbers of individuals with more or less common economic interests in close proximity to one another and within a well-functioning network of communication. Population densities are also increased by specialization, which also induces firms to locate close to one another in order to reduce the cost of transporting intermediate goods between firms and providing specialized services to large enterprises and the employees of those firms.

Industrialization increases the effectiveness of both ideological and economic interest groups. Reduced printing and transport costs make it easier for interest groups to “get their message out” by subsidizing books, journals, newspapers, and other mass media. Increased specialization makes it easier for a well-organized economic interest group to disrupt or threaten to reduce the incomes of those outside the group simply by temporarily withholding resources from the market—as, for example, through boycotts, strikes, and strike threats.

Demand for politically active groups also tends to increase. Contributions to interest groups tend to increase with personal income and with the effectiveness of interest group efforts (Becker, 1985, and Congleton, 1991). Increased population densities tend to be associated with greater externalities, and specialization tends to make the income of individual laborers and firms less secure, whereas higher income increases desired levels of public goods and income security.

Industrialization, consequently, tends to increase the number of interest groups and their overall memberships by reducing organization costs, increasing their effectiveness, and increasing the demand for interest group services. The previous analysis suggests that both mass communication and boycotts may allow ideological and economic interest groups to influence suffrage laws if they can influence suffrage norms or tax revenue.⁹

⁹ It bears noting that support for suffrage movements does not come exclusively from those who are currently disenfranchised. All those whose norms or endowments lead them to favor more liberal election laws have an interest in the constitutional agenda of suffrage groups. Contributions to such groups, whether in kind or in cash, provide constitutionally dissatisfied individuals with a method of increasing their (expected) utility by increasing somewhat the probability that the suffrage movement is successful.

5.1 *Ideological interest groups and suffrage reform*

The relationship between industrialization, contributions to suffrage groups, and suffrage reform can be analyzed with a minor extension of the model developed above. Suppose that a direct interest in suffrage exists and is sufficiently widespread that the pivotal voter is partly motivated by norm S^{V^*} . At the suffrage laws equilibrium, the current pivotal voter is completely satisfied with the existing suffrage laws, so that $S^{V^*} = s(T^{L^*}, T^{K^*})$, where the ideal labor and capital thresholds for voting are determined, as in the “norm” version of equation 10, for example, the result of maximizing $U^V = u(X^V, G^V, n(|S^{V^*} - S|))$. At this equilibrium, the pivotal voter has no interest in supporting suffrage groups, because he or she is completely satisfied with the status quo, although many other voters would prefer suffrage reform.

Consider the case in which new suffrage level $\hat{S} > S^{V^*}$ is supported by a well-organized suffrage group. Let $P = p(\sum D_j)$ be the probabilistic success function of the suffrage group’s effort to change the suffrage norms of moderate voters. Let D_i denote citizen i ’s donation to this interest group and $\sum D_j$ the total of all individual donations. P is the probability that moderate voters, including the median voter, are persuaded by the suffrage group to adopt \hat{S} as their suffrage norm rather than S^{V^*} .

A citizen’s donation, D_i , to the suffrage movement in such circumstances will maximize his expected utility:

$$u_i^e = \left(1 - p(\sum D_j)\right) u\left(X^V - D_i, G^V, n(|S_i^* - S^{V^*}|)\right) + p(\sum D_j) u\left(X^V - D_i, G^V, n(|S_i^* - \hat{S}|)\right) \tag{14}$$

Under the usual Nash assumptions, the expected utility-maximizing donation satisfies:

$$-P_D U^{V^*} + (1 - P)(-U^V_x) + P_D \hat{U} + P(-\hat{U}_x) = 0$$

If suffrage groups are even slightly effective, contributions to suffrage groups increase the probability that \hat{S} will obtain. The above implies that D_i^* approximately satisfies:

$$P_D(\hat{U} - U^{V^*}) - U_x = 0 \tag{15}$$

Equation 15 implies that an individual’s contributions to the suffrage group can be written as:

$$D_i^* = d(Y_i, \hat{S}, S^{V^*}, \sum D_j, Y, Z) \quad (16)$$

with

$$D_{i^*Y_i} = -\frac{[P_D(1-t)(\hat{U}_X - U^{V^*}_X) - (1-t)U_{XX}]}{[(P_{DD}(\hat{U} - U^{V^*}) + P_D(U^{V^*}_X - \hat{U}_X) + U_{XX})]} > 0 \quad (17.1)$$

(given $U^{\wedge}_X - U^{V^*}_X \geq 0$)

and

$$D_{i^*\sum D_j} = \frac{[P_{DD}(\hat{U} - U^{V^*})]}{-[(P_{DD}(\hat{U} - U^{V^*}) + P_D(U^{V^*}_X - \hat{U}_X) + U_{XX})]} > 0 \quad (17.2)$$

(given $P_{DD} > 0$)

Individual contributions increase as personal income increases (17.1). If persuasive campaigns exhibit constant or increasing returns, individual contributions also increase as the overall level of contributions increases (17.2).

Insofar as persuasion and lobbying activities become more effective as more resources are devoted to them, economic development tends to increase prospects for suffrage expansion by indirectly providing suffrage organizations with new resources for use in their persuasive campaigns. However, industrialization increases the probability that suffrage-expanding reforms will be adopted only if the resources flowing to suffrage movements increase relative to those flowing to antisuffrage movements.¹⁰

5.2 *Economic Interest Groups and Suffrage Reform*

The last to be enfranchised under wealth-based suffrage laws are working class

¹⁰ Suffrage movements organized throughout Europe during the nineteenth century became increasingly effective during the course of the century. These groups were often supported by the liberal and labor movements, and each attempted to have suffrage extended to their own memberships. In this manner, both ideology and narrow self-interests motivated politically active suffrage groups. However, their success was entirely dependent on "ideological" effects on those with the power to reform suffrage laws, as implied from the previous analysis.

and poor men. Economic growth empowers those groups both economically and politically. Industrialization increases the marginal productivity and income of all factors of production by taking advantage more fully of available resources. Industrialization also simplified the organization of working men's associations, including labor unions and labor-based political parties, and provided them with more powerful tools for influencing ordinary public policies and constitutional law. By deepening the process of production and making greater use of specialization, industrialization increases factor incomes, but also increases the economic interdependence of all agents within the economy, both at and within the margins.

Specialization has political as well as economic effects. Boycotts, strikes, and strike threats become increasingly powerful tools for bargaining on political policy, and these tools may be more cost-effective for organized labor than persuasive campaigns. Increased interdependence allows economic interest groups to reduce national income and tax revenue throughout an economy by removing critical inputs from the chain of production or in some cases by simply threatening to do so. Other factor owners may be willing to trade income or political power to avoid such reductions in income or to reduce uncertainty about future income and services.¹¹

A strike threat confronts the struck party with two alternatives: it may accept the economic losses associated with being struck or a less desirable contract than would have existed had the bargaining taken place in another way. Neither of these alternatives is as attractive as a no-threat setting. In this respect, bargaining with a strike threat appears to differ from ordinary economic representations of exchange. However, conflict over terms of trade is a normal feature of bargaining. Just as a consumer may choose to buy a product or not at given price, firms will accept a proposed labor contract only if they anticipate being better off with the contract in the long run.¹²

Strikes and strike threats can also be used to obtain changes in legislation favored by those striking and to induce changes in political institutions favorable to the striking group.

Consider the following model of bargaining between the present median voter

¹¹ Historically, the disenfranchised also sought changes in specific labor and property regulations as well as changes in suffrage laws. The present analysis focuses on constitutional issues rather than ordinary public policies. The "rent-seeking" aspect of strike threats has been analyzed in previous research.

¹² There are, of course, mistaken cases where the bargains struck make both parties worse off. A new labor contract may generate higher wage rates for the striking employees and lower profits for the resource owners, as intended, but may make the firm far less robust to changing economic circumstances. In such cases, both the firms and the high-paying jobs may disappear in the near future.

and an economic interest group using a strike threat. In the absence of a strike threat, the median voter under a given electoral set of rules (T^L, T^K) realizes after-tax consumption level C^* and government service level G^* , which vary with factor holdings and suffrage laws, as noted above. At this political equilibrium, the suffrage laws will maximize the welfare of the pivotal voter.

In a purely neoclassical economy, production exhibits constant returns to scale and each factor is paid its full marginal product. In such an economy, a strike threat can have fiscal effects only. A group that temporarily withholds its factors of production from the economy suffers a loss in income, and enfranchised nonstrikers suffer a reduction in the national tax base. The fiscal effect of a strike causes tax payments to rise for nonstrikers, public services to fall, or some combination of the two.¹³ (Recall that Y is an argument in G^* .)

In a classical economy, in which substantial specialization or increasing returns to scale exist, a group that withholds its factors of production from the economy may also *reduce the incomes* of nonstrikers by reducing the marginal product of their productive resources. It is difficult to make automobiles without steel, steel without coal, and any of these without labor or transport.

In either case, it is clear that a strike or strike threat makes many nonstrikers worse off than they would have been without the strike or threat. Under the assumed suffrage laws, those worse off would normally include the present median voter. The use of more or less peaceful strike threats, however, is a technological change that affects relative bargaining power rather than a revolutionary threat. In effect, a “suffrage strike threat” places the median voter in a situation analogous to the setting analyzed above in which the tax base was partly determined by suffrage levels. The present pivotal voter will, in the absence of electoral reforms, face higher taxes, lower government services, and reduced private consumption. The present median voter will be willing to expand suffrage only if the expected losses from anticipated future strikes exceed the fiscal losses associated with extending the franchise. That is to say, he will trade constitutional reforms for a sufficiently larger and more stable tax base or more stable path of future personal income.¹⁴

¹³ It bears noting that tax strikes have long been used as a method of bargaining for political power. For example, the Magna Carta was obtained from King John partly as a consequence of a strike threat made by an organized group of English barons. Industrialization made similar threats possible for larger groups that lacked their own private armies, whereas the liberal ideology of the nineteenth century helped to legitimize the electoral aspirations of the unenfranchised groups.

¹⁴ Although most political settlements will make the median voter better off, mistakes can be made. Just as firms may accept wage contracts that eventually cause them to become bankrupt or workers may pay a higher price in lost wages during any strikes than are recovered in the subsequent wages, new legislation may cost more in deadweight losses to the economy than it generates in overall benefits for labor in both the short and long run. And new constitutional reforms may lead to

The extent to which suffrage expansion may be obtained by strikes and strike threats depends in part on the bargaining process assumed. If the present median voter's tradeoff between suffrage and fiscal stability is known to labor beforehand, organized labor can select the probability of strikes that elicits the desired constitutional response from the present median voter – for example extending the vote to union members – but perhaps not to peasants, persons on relief, women, or children.¹⁵ However, if the median voter knows the menu of strike probabilities (as within a Grossman and Helpman (1996) model), the present median voter will propose the suffrage reform that equates his or her expected marginal gains from increased income and tax-base security with the marginal cost of the less appealing combination of government services that will be adopted by the new median voter generated by the revised suffrage law.¹⁶

In practice, however, such knowledge is rarely available to either side and the constitutional bargain reached depends on the particular sequence of offers and counteroffers that takes place, as well as the personalities directly involved in negotiation. Although the details of negotiation will vary, the constitutional reforms adopted are analogous to bargains reached in the private sector when collective bargaining exists. Such constitutional reforms may be adopted through ordinary processes of amendment without significant military threat, although a

unanticipated changes in political equilibrium that threaten fundamental property law or increase rather than diminish political conflict. As in a rent-seeking game, the losses generated by conflict can easily make all parties worse off, especially if conflict intensifies—as within civil wars.

Fortunately, in the usual case, the strike-induced bargains make all parties better off for the same reason that voluntary exchange does. A change in relative bargaining power produces new terms of trade that make the relatively disadvantaged party worse off than in the previous bargaining setting, but the final bargain still has to be mutually beneficial if it is voluntarily accepted.

Moreover, if the mere threat of a strike is sufficient to induce a new bargain, the result tends to make both parties better off relative to the scenario in which strikes are in fact implemented. A new constitutional contract can make both parties better off relative to the pre-existing state of affairs. For example, strikes may fall to historically low levels following a major labor agreement, which allows all parties to benefit from greater certainty and productivity. Moreover, there are far more costly methods of negotiation. Strikes are far less costly than civil wars.

¹⁵ Working class suffrage is often equated with universal suffrage, because in most cases the working class is the last sizable group of males enfranchised. However, enfranchisement of women usually took place a decade or so after that of working class men, and enfranchisement of the very poor often occurred decades later and without large-scale demonstrations. For example, all male taxpayers were enfranchised in Sweden in 1909 and women in 1920, but persons on poor relief were not enfranchised until 1945 (Congleton, 2003, p. 33). A similar pattern can be found in England and the Netherlands.

¹⁶ Promises to reduce the probability of striking in the future are somewhat more creditable for radical suffrage reforms than for minor reforms. Once universal suffrage is obtained, no further increase in suffrage can clearly be achieved via strike threat. However, working class interest groups may not be interested in universal suffrage per se, but rather in obtaining working class suffrage.

sequence of such lawful reforms may create a revolutionary shift of governance.

It bears noting that the present analysis is not class based, but rather election law, interest group, and technology based. Many economic groups can be organized within a polity that do not have similar incomes or occupations, yet jointly exercise considerable bargaining power. A non-class-based economic interest group that currently exercises considerable political power worldwide is the Organization of Petroleum Exporting Countries (OPEC). Historically, farmers and guilds have been well organized and influential, although income and wealth varied significantly within these groups. In the case of interest here, however, the constitutional interests of the unenfranchised were largely based on their similar incomes, *because the electoral rules that limited suffrage were explicitly income or wealth based*. In the case of suffrage reform, election law rather than industrialization may have induced “class consciousness.”

6. Conclusion: economic growth and the revolutionary reform of suffrage laws

This paper has explored several mechanisms through which political institutions might be liberalized in response to economic development. The analysis suggests that the association among majority rule, economic growth, and the emergence of liberal democracy is not causal in the usual sense. Economic developments that increase voter income do not necessarily induce new more inclusive rules for suffrage, even in cases in which the median voter has a direct ideological interest in suffrage and parliament responds perfectly to median voter demands. Democratization does not take place on a “slippery slope”; nor does it arise because suffrage is a “superior” good in the usual economic sense. The current median voter is normally very content with the election laws that have made him or her decisive.

Rather, the analysis suggests *that democracy is indirectly produced by economic development* when the “right” interest groups are empowered by industrialization. Individuals and groups always have an interest in greater control over public policy, because public policies affect the current and future distributions of wealth and welfare. However, relatively few economic groups have interests that are advanced by broader suffrage rules. Similarly, all ideological groups have an interest in affecting public policy, but not all such groups support broader suffrage rules. For example, the revolutionary ideologies of the twentieth century were clearly antidemocratic in practice. In nineteenth-century Europe, however, liberal groups opposed the special privileges of the hereditary elites and they nearly always favored suffrage expansion, although they did not always favor universal suffrage. Labor organizations also favored such reforms, because their

memberships are so large, although even these groups did not always favor universal suffrage.

The industrial revolution of the nineteenth century favored both liberal and labor groups. Their success demonstrates that it is possible to induce radical reforms of suffrage laws through entirely legal and nonviolent means and to do so without a credible revolutionary threat.¹⁷

The continuous domain of election law implies that revolutionary breaks with the past are not necessary for democratic polities to emerge, nor are class consciousness per se or civil warfare necessary prerequisites, as suggested by Grossman (1991). The analysis of this paper demonstrates that radical reform of suffrage laws can take place gradually through a series of moderate constitutional bargains (compromises) undertaken over many decades. No clarion calls of “give me liberty or give me death” or “workers of the world unite” are necessary, although interest group activists may well be motivated in part by such ideological slogans and romantic sentiments. A series of minor reforms can have revolutionary consequences.¹⁸

This theoretical possibility is clearly evident in the constitutional histories of Northern Europe. Lawful constitutional reforms of suffrage laws were widely adopted throughout Europe in the second half of the 19th century and in the early 20th century on the heels of suffrage campaigns, trade liberalization, and labor movements. For example, suffrage in Great Britain was extended in 1830, 1867, 1884, 1918, and 1928. In the Netherlands, suffrage was extended in 1848, 1884, 1887, 1894, 1917, and 1922. In Sweden, suffrage was extended in 1866, 1909, and 1920. In Italy, suffrage was extended in 1861, 1882, 1912, and 1919. Moreover, in the periods between electoral reforms, suffrage steadily increased as a consequence of economic growth and rising taxes. (The skeptic should note how few of these reforms took place at times of wide revolutionary fervor.)

¹⁷ This is not to argue that revolutionary possibilities never exist. However, in the countries discussed above, no creditable revolutionary threats existed in the short run. As noted above, most places where revolutions actually took place did not witness great democratic transformations. Even in the United States where a revolution arguably established democracy at the national level, decision-making procedures at the colony (state) level had been broadly democratic during the period prior to the revolutionary war, and most of the elected representatives at the state level remained in place after the war.

¹⁸ Threats to withhold valuable inputs (labor and capital) also evidently played a role in the emergence of democratic institutions in the British colonies that eventually became the United States of America. In the seventeenth century, both labor and capital were scarce and mobile (literally on boats), so they could choose among colonies. Both capital and labor preferred colonies with more democratic institutions, evidently because it was believed that democracy would protect them against confiscatory policies by the colonial governors. In most cases, the popularly elected chamber had veto power over new policies, including new taxes, much to the lament of colonial governors (Palmer and Colton, 1965).

Ordinary politics explains most of these constitutional reforms. Liberals within parliament proposed, supported, and occasionally passed suffrage-expanding rules, partly because of ideological interests and partly because of political interests. Outside of parliament, suffrage movements and unions organized petition drives, public demonstrations, strike threats, and occasionally strikes that influenced elections and the suffrage norms of voters and elites.¹⁹ The liberal arguments against special privilege and in favor of open competition, equal protection of the law, and (eventually) popular sovereignty were broadly persuasive. And sufficient electoral competition evidently existed under the old electoral rules to nudge politicians along the path of reform. The latter is perhaps most strongly indicated in the speeches by conservatives and kings who gradually accepted the rhetoric of electoral sovereignty and the new suffrage norms, while continuing to warn against further reform.²⁰

Overall, the analysis suggests that both industrialization and the collection of ideas that came to be known as liberalism contributed to the gradual democratization of European politics, but that neither would have been sufficient by itself. Without liberal ideas and the suffrage reform movement, industrialization would have made many investors rich, but would not have profoundly affected national governance. Without the resources, support, and technologies of the industrial revolution, a broad suffrage movement would have been far more difficult to organize and less influential. There have been commercial boons in previous periods without suffrage expansion, and there have been liberal ideas without economic or suffrage reform. The emergence of parliamentary democracy in the nineteenth and early twentieth century can, thus, be attributed to a fortunate interplay between ideological and economic developments. In these fortunate cir-

¹⁹ This is not to say that every strike or even most strikes concerned suffrage reform. Most strikes, of course, focused narrowly on wage contracts. However, working class support for suffrage expansion during the nineteenth century was essentially universal. Thus, support for universal suffrage was evident in national labor organizations. Examples include the Trade Union Congress and Triple Alliance in the United Kingdom (Pugh, 1999, pp. 125–8 and 145–9), the Workers Alliance (Newton, 1978, pp. 88–93) and Sociaal-Democratische Bond in the Netherlands (Kossman, 1978, pp. 345–47), and the Worker's Party in Belgium (Kossman, 1978, pp. 342–44). The Social Democratic parties of Denmark and Sweden were organized by their respective national labor organizations and also strongly supported universal suffrage.

Demonstrations, election support, petition drives, and strikes were organized for the purposes of supporting universal suffrage. For example, the Belgian Worker's Party organized a national strike for suffrage reform in 1886. Moreover, it was common for labor unions to support liberal parties, at least until their members got the right to vote.

²⁰ Clearly, the democratization of parliament will not affect public policy unless the parliament itself has the power to make significant policy choices. The other half of the story of liberal reform in northern Europe in the nineteenth century involves a shift of political authority from the king to the parliament. (See Congleton, 2001 and 2003.)

cumstances, “ordinary politics” produced a series of electoral reforms that over the course of a century revolutionized governance throughout much of Europe.

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