

Political Origins of Dictatorship and Democracy. Chapter 6: Democratization

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Abstract

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1 Introduction

In this chapter, we develop our basic approach to democratization. As already discussed, our approach is fundamentally game theoretic in the sense that we stress the economic consequences of different political institutions and strategic interactions between various individuals or social groups in the determination of these institutions. More explicitly, individuals have preferences over different political institutions because they anticipate the different actions that economic and political actors will take under these institutions, and thus the resulting different allocations. In this sense, our analysis will build on our modeling of democracy and nondemocracy in the previous two chapters.

Naturally, emphasizing game theoretic interactions and preferences over political institutions resulting from their economic consequences is not the only possible approach. A different one would have been to stress the importance of ideology and social norms rather than economic motives (e.g., Diamond 1999). We discuss below how such norms can be introduced into our framework, and argue that their prevalence does not affect the major results we derive in this chapter.

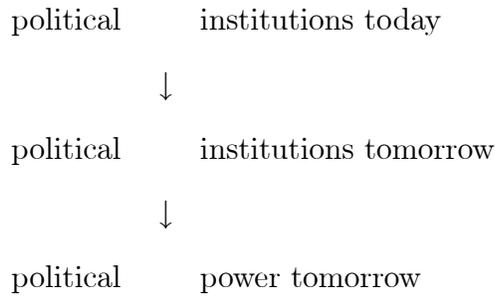
Another feature of our approach, as in Marxist theories of politics, is the emphasis on conflict, especially on conflict between various groups or between different social classes (see, for example, Miliband, 1969, Poulantzas, 1973, Therborn, 1977, Przeworski, 1985, for discussions of the importance of class conflict in politics). We have already emphasized the importance of political conflict in the previous chapters, and our focus on the two-class model in Chapter 4 reflects our belief that one of the most significant dimensions of political conflict is between the poorer and the richer segments of society. As we have already seen, different political institutions, in particular the two broad classifications we refer to as democracy and nondemocracy, imply different balances in the political arena between the rich and the poor. Therefore, our use of the game theoretic approach and our emphasis on conflict between various social groups are natural complements: the prevalence of class conflict implies that the rich and the poor have fundamentally different economic interests, and to the extent that different political institutions favor one group or the other, they will have different preferences over political institutions.

But why do we need to talk about institutions at all? Why not simply say that the

rich and the poor have preferences over different policies, and political conflict between them will result in a set of policies favoring one group or the other? We will argue that there is more to the conflict between various social groups than the conflict over policies. Conflict over policies is static—it is about what happens today. Rational actors also care about the future. This is where political institutions, which are durable and consequently have the capacity to influence political actions and political equilibria in the future, come in. We therefore need to think seriously about political institutions in a dynamic setting, and via this process, we can develop a theory of the emergence, and later consolidation, of democracy. Crucial to this is a notion of what political institutions do.

We emphasize that *political institutions* regulate the allocation of *political power*. Political power is a measure of how influential a particular group (or individual) is in the political arena when there is conflict over which policy should be implemented. If the rich are typically more powerful, we expect lower taxes, lower redistribution, and generally a range of policies favoring the rich rather than the poor. Political power is, therefore, inherent in every discussion of aggregating conflicting preferences. Various models of democracy aggregate these preferences differently, and therefore, as we pointed out in Chapter 4, they naturally allocate different amounts of political power to different groups—for example, the poor have more power when voting is more important than lobbying. Nevertheless, critical to our approach is the assumption that typically the poor will have more political power in a democratic society than a nondemocratic one, and we have already argued that this assumption has considerable empirical merit.

Forward-looking rational economic actors not only care about economic allocations and therefore policies today, but about the economic allocations and policies in the future. Therefore, political power in the future is valuable. This means that each group would like to somehow ensure greater political power for itself in the future. Political institutions can influence the allocation of political power in the future by virtue of being *durable*. Policies, even though they can be difficult to reverse, are on the whole easier to reverse than institutions. After all, when we talk of institutions, we are often talking of rules that are in place and are expected to stay in place in the foreseeable future. Democracy is a case in point. A democratic society is not only one that is determining current policies



Groups that have political power today can introduce or force others to introduce political institutions that favor them. These political institutions will persist, and regulate the allocation of political power in the future. Therefore, democratization enables the poor to guarantee to some extent their political power in the future. But why do the poor need political institutions to ensure their political power tomorrow? After all, they have political power today?

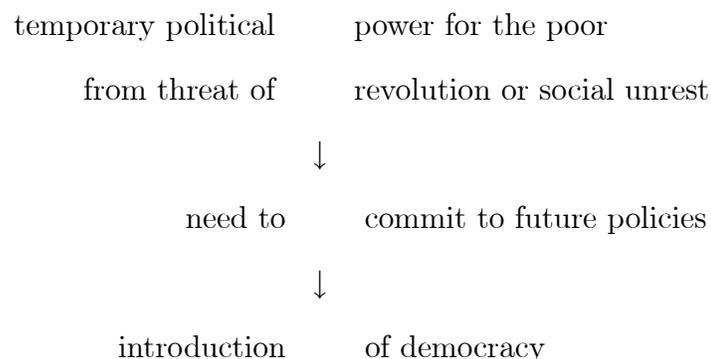
In our theory, political institutions are particularly useful when political power is *transitory*, in the sense that, who has more political power today is generally different from who will have political power tomorrow. This transitory nature might result from a variety of economic, social and political shocks to the system. For example, the poor would constitute an effective revolution threat when they solve the collective action problem (see Chapter 5). But the fact that they have done so today does not guarantee that they will manage to solve it tomorrow and pose an equally effective revolution threat. The rich may be able to buy some politicians today, but this doesn't mean that they will be able to do so again tomorrow. There may be a recession today, creating political instability, giving an advantage to whichever group wants to use extra-legal means to influence political outcomes, but recessions are often transitory, tomorrow there may be a boom.

Now imagine a situation where the poor have political power today, but they expect not to have similar political power tomorrow. In this situation, they would have a great demand for a set of institutions that will *lock in* their political power. This is precisely what democratic institutions may do. The power of the poor that comes from an unusual event, such as the threat of a revolution, or the end of a war, becomes institutionalized and translated to future political power by the introduction of relatively free and fair elections where the votes of the poor count.

There is one final step in our argument. Democratization is a move from nondemocracy to democracy, and in nondemocracy, the elite make the decisions. Therefore, democratization happens when the relatively rich elite decide to “extend the franchise” and include poorer segments of society into the decision-making process. This is not only a theoretical statement. As our discussion in the Introduction and Chapter 2 illustrated, almost all major moves towards democracy in 19th-century Europe and 19th and 20th-century America were extensions of the franchise by the existing political system to previously-excluded segments of society.

Why would they do so? The answer is that the temporary political power of the poor in nondemocracy is typically brute force and comes from actions they can take that are costly to the system, such as revolution or significant social unrest. The elite would like to prevent this, and they are willing to make concessions in order to do so. But the poor care not only about allocations and policies today, but about those in the future. Therefore, typically, the elite have to make promises about future concessions as well as current concessions. But when the revolution threat subsides—the crucial nonstationarity of political power!—these promises may be broken. Consequently, the elite would like to make credible commitments. This is where the commitment value of institutions is relevant. Democratization ensures a credible transfer of political power to the poor, making sure that the promises of the elite will be honored. Therefore, democratization occurs when the elite would like to make a credible commitment to future policies, and they can only do so by relinquishing (part of their) political power to the poor.

Diagrammatically our theory can be summarized as:



↓
more political power
for the poor in the future

The rest of this chapter develops our approach in detail. We will first show how different political institutions will lead to different political outcomes, thus generating preferences over political institutions for various social groups. But we will also show that in a static setting, institutions are to some degree “superficial”. What matters is political power, and we can simply think of a direct mapping from political power to policies. Whether the influence of political power on policies is being mediated by institutions or not is not that important. This picture changes significantly when we look at dynamic settings where political power, especially when it comes from extra-legal channels, is fundamentally transitory. Once we develop these points in detail, we move towards our baseline theory of democratization where a nondemocratic society is shocked by an event that temporarily gives more political power to the poor. Using this framework, we will show how democratic institutions may emerge as an equilibrium outcome, as a way of ensuring political power and redistribution for the poor not only today, but also in the future. We then extend this model to investigate when the rich can buy off the poor using only fiscal means, and how the nature of political power in democracy affects democratization. Throughout this discussion, we do not consider the possibility of military repression by the rich in order to control the poor and the political agenda. This will be the topic of the next chapter, and we will see how this refines and changes some of the predictions of our basic approach. Finally, we will also show that many of our results continue to apply when various social groups have ideological/non-economic preferences over different regimes.

2 Preferences over Political Institutions

2.1 Political Conflict and Political Institutions

In this section, we will illustrate the basic conflict over political institutions, in particular democracy vs. nondemocracy. With this purpose, let us return to the basic two-class

model discussed in Chapter 4. Total population is normalized to 1, a fraction $\lambda > 1/2$ of the agents are poor with income y^p , and the remaining fraction $1 - \lambda$ is rich with income $y^r > y^p$. Mean income is denoted by \bar{y} , and as before, we use the notation θ to parameterize inequality, in particular,

$$y^p = \frac{\theta \bar{y}}{\lambda} \text{ and } y^r = \frac{(1 - \theta) \bar{y}}{1 - \lambda}. \quad (6-1)$$

The political system determines a linear non-negative tax rate $\tau \geq 0$, the proceeds of which are redistributed lump-sum, and there is an aggregate cost of taxation $C(\tau) \bar{y}$, with $C(\cdot)$ strictly increasing, differentiable and strictly convex, and $C(0) = C'(0) = 0$. Therefore, total tax revenues, after the cost of taxation are subtracted, are $T = (\tau - C(\tau)) \bar{y}$, and since this amount will be redistributed lump-sum to all individuals, the post-tax income level of an agent with income y^i when the tax rate is τ is given by

$$\hat{y}^i = (1 - \tau) y^i + (\tau - C(\tau)) \bar{y}. \quad (6-2)$$

Utility is defined over consumption, and the consumption level of an individual is simply equal to this post-tax income level, i.e., $c^i = \hat{y}^i$.

Recall that in this model, the tax rate maximizing the utility (income) of a poor agent is $\tau^p > 0$ satisfying

$$\left(\frac{\lambda - \theta}{\lambda} \right) = C'(\tau^p). \quad (6-3)$$

This tax rate equates the marginal distortion from taxation to the redistributive benefits to a poor agent, resulting from the fact that linear taxes transfer income from the rich to the poor. In contrast, the most preferred tax rate for a rich agent is $\tau^r = 0$, since, in this model, taxation has no efficiency benefits and redistributes money from the rich to the poor.

Recall also that equation (6-3) contains important comparative static results. The most important one for our purposes, which will play a central role in our full model below, is that the preferred tax rate of a poor agent, τ^p , is decreasing in θ , i.e., greater equality leads to lower taxes, or mathematically,

$$\frac{d\tau^p}{d\theta} = -\frac{1}{\lambda C''(\tau^p)} < 0,$$

since $C''(\cdot) > 0$.

We will also use the notation for indirect utility introduced in Chapter 4: $V(y^i | \tau)$ denotes the utility of an agent with income level y^i when policy is given by τ . Now define

$$V^p(D) \equiv V(y^p | \tau^p)$$

as the indirect utility of a poor agent when the tax rate is equal to τ^p . Equivalently, in democracy all poor agents have the same political preferences and they will vote for τ^p , so the equilibrium tax rate in democracy is τ^p . Therefore, $V(y^p | \tau^p)$ is also the indirect utility of a poor agent in democracy, $V^p(D)$ (D is for democracy). Similarly, $V^r(D) \equiv V(y^r | \tau^p)$ is the indirect utility of a rich agent in democracy. In nondemocracy, the most preferred tax rate of a rich agent, $\tau^r = 0$, will result, and so $V^p(N) \equiv V(y^p | \tau^r)$ is the indirect utility of a poor agent in nondemocracy (N is for nondemocracy), where the equilibrium tax rate is $\tau^r = 0$. Finally, $V^r(N) \equiv V(y^r | \tau^r)$ is the indirect utility of a rich agent in nondemocracy.

We have that:

$$V^p(D) > V^p(N) \text{ while } V^r(D) < V^r(N). \quad (6-4)$$

In other words, the poor obtain higher utility and income in democracy, while the rich obtain higher income in nondemocracy. We have already discussed why this is a good approximation to reality, even though certain exceptions can be found.

An immediate implication of this observation is that there is *conflict* over political institutions, i.e., over whether the society should be democratic or nondemocratic. In democracy, the poor get relatively higher benefits, while the richer segments of the society benefit in nondemocracy.

Now imagine the following game between the rich and the poor:

Game 1:

- First, they vote or fight over the political system, democracy versus nondemocracy, D vs. N . At this stage, each poor agent has one vote (or gun), while each rich agent has v votes (guns). This will enable us to “parameterize” the *political power* of the rich. The greater is v , the more powerful the rich are politically at the stage where political institutions are being determined.

- If, in the first stage N wins, then there is nondemocracy with the rich in control, and a rich agent chooses the tax rate τ .
- If, in the first stage, D wins, there is democracy, so the tax rate is determined by majoritarian voting with one-person-one-vote.

Figure 6.1 shows the game tree. In game theory, the usual convention is to put the payoff of the agent who was first, first in the vector at the endnodes of the game tree. For example, the notation (a, b) at an endnode would mean that if the game reaches this point, the first player receives the payoff a and the second receives b . Throughout this book, will use game trees of this form, and sometimes we will have the poor move first, while the rich move first on other occasions. So we will change this convention, and always use the first payoff to refer to the poor, and the second payoff to refer to the rich. So whenever we use (a, b) in games consisting of only the rich and the poor, it means that a is the payoff of the poor, and b is the payoff of the rich.

Before we move to an analysis of this game, a word of interpretation, especially pertaining to the rich having v votes, is necessary. In practice, such a situation could arise in democracy (perhaps an unhealthy democracy) because the rich could lobby or buy votes, as our discussion of “rotten boroughs” in Chapter 2 illustrates. Nevertheless, as our discussion in Chapter 5 emphasized, the distinction between democracy and nondemocracy can be thought to be much more continuous. A democracy where the rich have a lot of power because of their control of the agenda, because they are able to buy votes, or because they have nondemocratic brute force means of influencing policies could be thought to be quite similar to a nondemocracy. In this sense, we can think of the society with $v > 1$ votes for each rich agent also as pertaining to a nondemocratic system, and variations in v correspond to how much political power the poor have in this nondemocratic society. More directly, the setup may be interpreted in terms of the guns model introduced in Chapter 5 where equilibrium policies are determined by the relative military or extra-legal powers of the two groups. In this interpretation, v corresponds to the number of guns that rich agents hold or control for every 1 gun controlled by the poor.

What will happen in this society then? To answer this question, we need to look for

the subgame perfect equilibrium of this game, which is straightforward to characterize. We start at the end of the game, and proceed with backward induction. We know that in a nondemocracy, a rich agent will choose a tax rate equal to $\tau^r = 0$. In democracy, there is one-person-one-vote, so the median voter theorem applies, and the most preferred tax rate of a poor agent, $\tau^p > 0$, results. Now going to the first stage of the game, all agents anticipate that democracy will lead to the tax rate τ^p , while nondemocracy will result in a tax rate of $\tau^r = 0$. Therefore, for a poor agent, the comparison at the first stage of the game is between nondemocracy, which yields value $V^p(N)$, and democracy which gives value $V^p(D)$. Given (6-4), all poor agents will therefore vote (or fight) for democracy. Similarly, for a rich agent the contest is between $V^r(D)$ and $V^r(N)$, and (6-4) ensures that they prefer nondemocracy. These comparisons illustrate the fundamental political conflict over political institutions, which is the first building block of our theory of equilibrium institutions. Different institutions have different economic consequences, and rational economic actors have preferences over these depending on their economic consequences. Here the poor prefer democracy, which is more redistributive, while the rich who bear the cost of redistribution prefer nondemocracy.

Whether democracy or nondemocracy will arise as the equilibrium political institution therefore depends on the value of v . Overall, democracy will get the support of all the poor agents, thus a total of λ votes or guns. Nondemocracy will get v votes or guns from each rich agent, i.e., $(1 - \lambda)v$ in total. If $v < \lambda / (1 - \lambda)$, then there are more votes for democracy and the equilibrium political institutions are democratic. If, on the other hand, $v > \lambda / (1 - \lambda)$, nondemocracy receives more votes and emerges as the equilibrium outcome. This is despite the fact that $\lambda > 1/2$, i.e., despite the fact that there are more poor agents, and it is only possible because v can be greater than 1, giving greater *political power* to the rich than the poor. This illustrates another major building block of our theory: the distribution of political power. Since there is conflict over institutions, not all segments of society will typically agree about which set of institutions should prevail. In the presence of this type of disagreement, the final outcome will be closer to the wishes of the groups that are politically more powerful. We have simplified the environment to its bare bones, so we have only two groups, and the wishes of the group that is more

politically powerful prevail. The parameter v measures the relative political power of the rich, and if this is greater than a critical threshold, here $(1 - \lambda) / \lambda$, their most preferred political institution emerges as the equilibrium.

What we have presented in this section is the simplest model of equilibrium institutions. It features two of the three fundamental building blocks of our theory: conflict over institutions (political conflict) and the importance of the distribution of political power in society. Agents have preferences over political institutions depending on their economic consequences, and these preferences generally disagree: everybody's favorite political institutions do not coincide. Political power then determines how these distinct preferences are aggregated.

2.2 What Are Institutions Doing?

What is missing here, however, is a sense of how institutions are actually fundamentally different from policies. To understand this point, consider the following modified game:

Game 2:

- Rich and poor agents vote or fight over the tax rate, but differently from majoritarian democracy with one-person-one-vote, each rich agent has v votes or guns.

The equilibrium of this game is also straightforward to characterize: all rich agents will support their most preferred tax rate, $\tau^r = 0$, while all the poor agents support their own most preferred policy, τ^p . And exactly the same condition that determined whether equilibrium political institutions were democratic or nondemocratic regulates the tax rate here: if $v < \lambda / (1 - \lambda)$, the equilibrium tax rate is τ^p , and if $v > \lambda / (1 - \lambda)$, equilibrium policy is $\tau^r = 0$. The remarkable thing about this equilibrium is that the economic allocation and economic policies are identical to those in the simple political institutions game. But there are no “equilibrium political institutions” here.

This contrast between the two games in fact illustrates a more general point: why have institutions at all? If institutions are determined by political power and are in turn instrumental in determining economic policies, why not simply have a direct mapping

from political power to policies? This is what the second game encapsulates: the same equilibrium outcome emerges without the intermediate step of determining institutions.

We will argue that there is an important role of political institutions, distinct from political power and policies, and related to the fact that institutions are more “durable”—harder to change, therefore providing commitment. Because of this durability, political institutions can play the role of regulating political power. A set of institutions that give more power (votes, guns) to the poor, e.g., democracy, will ensure that the poor have more political power in the future if the institutions in fact survive to the future. The durability of the institutions means that they are likely to survive. Finally, the commitment role of institutions will come from the fact that sometimes a group might want to commit to give more power to the other group, and changing political institutions will be a credible way of achieving this.

This dynamic role of institutions will be the third major building block of our theory. Before we go there and expose our full theory, the next two sections contain a more detailed discussion of the key distinction between institutions and policies, and of what we mean by political power.

3 Political Power and Institutions

3.1 Institutions vs. Policies

What is the difference between institutions and policies? If there is none, then perhaps the contrast between the two games in the previous section is not problematic. According to this interpretation, one could argue that the first game featured an artificial concept “institutions”, and the second game simplified everything by getting rid of this concept.

However, this perspective would be unsatisfactory. Both in political science and in other social sciences, there is an implicit understanding that institutions and policies are significantly different objects. For example, very few people would think that tax policy is an “institution,” while whether there is a constitution, whether the society is democratic are generally seen as relating to institutions. So what’s the difference?

The Nobel prize winning economic historian Douglass North defines institutions as

“the rules of the game in a society or, more formally,..the humanly devised constraints that shape human interaction” (North, 1990, p3). This definition of institutions is useful when we want to think of the broad set of institutions, encompassing many diverse social and political aspects underlying economic decisions and the organization of economic and social activity. However, for our purposes it might also be too broad. For us, the main difference between policies and institutions is their “durability”, and the ability of institutions to influence the allocation of political power in the future resulting from this durability. Policies are much easier to reverse, whereas institutions are more durable. Moreover, institutions determine how the political preferences of various groups are aggregated into elective decisions. Therefore, introducing a set of institutions today influences how powerful various different social groups will be not only today, but also tomorrow, as long as these institutions are not changed radically.

Their durability and their ability to influence the allocation of power in the future make institutions valuable also as a commitment device. To see this, recall that the commitment problem in politics, already discussed in Chapter 5, arises because the group in power, say the rich, make promises for the future, but later, honoring these promises is not in their interests. They would rather renege, and revert to a different course of action or choose different policies. We refer to this as a commitment problem because the group in power cannot *credibly promise* certain policies. The commitment problem is intimately linked to the fact that political power will be in the hands of a particular group in the future, and they can use this political power to revert to different policies instead of those that they promised. This account also suggests why institutions could be very useful as a *commitment device* because they influence the future allocation of political power. Put simply, if a particular group wants to make a commitment to a course of action, what better way to make this credible than give more power to the party that wants to see this course of action implemented? The commitment problem emerges because there was a “decoupling” between those who had political power and those who benefited from the promised policies. Change the identity of who has political power, and promises become credible

We are not the first ones to emphasize the commitment value of institutions. Although

this theme appears in many writings, it is probably most clearly associated with the seminal paper by North and Weingast (1989), where they argued that the establishment of the constitutional regime in Britain provided commitment that the Crown would not repudiate on its debt, thus increased its borrowing capacity. If a change in institutions was needed to make future commitments by the Monarch credible where did it come from? There are two ideas. First, it could be that the British Monarchy itself had an interest in creating institutions to make future promises credible. Hence after the Glorious Revolution, the new King, William of Orange, accepted the institutional changes. On the other hand, even though institutions may aid commitment they may have other effects which the Monarchy did not like. Hence James II was unwilling to devolve power to Parliament and in fact had to be deposed in 1688.

Before we move to our analysis, it is useful to highlight how the fact that institutions are more durable, more difficult to change, can be useful in strategic interactions, using a simple game formalizing the problem of commitment and the first of these stories about where institutional change comes from inherent in North and Weingast.

Consider the following simple game, depicted in Figure 6.2. The ruler (the elite) has political power, but needs to raise some money in order to finance a war, or some investment, or simply his consumption. He can raise this money only if some other group, say the investors, lends it to him. In the investors move first, and decide whether to lend or not, and then the ruler moves and decides whether to default on the debt or not. The payoffs reflect the fact that the ruler needs the money, but then ex post would like to repudiate his debts. In particular, if the ruler cannot raise any money, his utility is $-b$, for example because he would lose the war. In this case, investors' utility is 0. The investors lend an amount D , then the ruler pays back, and they make a net return of rD where r is the interest rate, and the ruler avoids the bad outcome, so obtains a utility of 0. However, if the ruler reneges on its promise to pay back the debt, investors get $-D$, and the ruler obtains $(1+r)D$, since he keeps all of the money he borrowed from the investors.

The subgame perfect equilibrium is straightforward to characterize by backward induction. In the subgame where investors have lent, the ruler has a choice between 0 and $(1+r)D$, so he chooses to repudiate and obtains $(1+r)D$. Then, going to the earlier

stage of the game, investors anticipate that they have a choice between lending, which will give them utility $-D$, and not lending, which yields 0, so they choose not to lend. This is the worst outcome for the ruler.

The ruler would like to promise that he will not repudiate the debt, but any such promises are noncredible given that in the subgame after their lending, it is in his interests to repudiate. He needs a way to convince investors that he will not repudiate, but in the game of Figure 6.2 such an option is missing.

Now consider the game in Figure 6.3. This is the same as the previous game, but we have added an earlier stage where the ruler decides whether to undertake an institutional change, introducing a constitutional regime. If he chooses not to do so, the game is identical to that in Figure 6.2. If he does, then this affects his payoff from repudiation. In a constitutional regime, the ruler is checked by the assembly. In the case of Britain analyzed by North and Weingast, this assembly, Parliament, represented the interests of the investors, and therefore it would make the life of the ruler much harder if he chose to repudiate. In fact, the Glorious Revolution in Britain in many ways transferred the decision to repudiate on public debt to Parliament which became the ultimate arbiter of fiscal policy, effectively taking the repudiation decision from the hands of the ruler. Therefore, the payoff from repudiation is now $D - a$, where a represents this cost imposed on the ruler by Parliament.

If $a > D$, we have a different subgame perfect equilibrium: the ruler undertakes institutional change, investors lend, and they are repaid by the ruler. What has changed? By undertaking institutional change, the ruler has made a credible commitment to repay the debt. The commitment is credible because $a > D$; it is no longer in the interest of the ruler to repudiate when he takes into account the costs that the assembly will impose in the case of repudiation.

What does this institutional change correspond to in practice? And how is it achieving this commitment? Thinking about these questions clarifies the role of institutions in this specific context, and more generally, their role in our approach to political institutions and to democratization. The first important feature is that institutions are durable. After the Glorious Revolution, the ruler could not revert back to the days without the powerful

constitutional assembly. Second, these institutions constrain the behavior of the ruler. It is no longer in his interest to repudiate the debt. It is this feature of the institutions that makes them a credible commitment to repay the debt.

This intriguing story is the one told by North and Weingast. It is not only elegant and compelling, but it also gives a very good description of the various issues involved in one of the major examples of institutional change in European history. We believe, however, that there is a very important, but implicit, element in their story, and in any story of political institutions. To see this, let us ask: why is it that these new institutions make repayment credible? We believe that a full exploration of the answer to this question will take us to political power. The new institutions are giving political power to the investors, and investors are keen on seeing repayment. Therefore they are willing to use their political power to ensure repayment. In other words, it is not simply the durability of institutions, but the fact that they are allocating political power to a new group, and in fact, a group that would like to see repayment happen is crucial.

Similar issues will also be important in our theory of democratization: the rich elite will be forced to democratize in order to prevent a revolution from the disenfranchised poor. Once established, democracy will create durable changes in the political arena and these changes will constitute a credible commitment to give the poor power and redistribution in the future.

3.2 Political Power

The discussion thus far emphasizes that political power has different facets. Obviously, formal political institutions endow political power on those who control the presidency or the legislature. For example, the Constitution of the United States allocates power to propose and make laws and this gives groups who are successful in elections the power to determine policies in their favor. Yet there is clearly more to political power than this. Consider the case of Venezuela. President Hugo Chavez was elected President by an overwhelming majority and was able to closely control a process of re-writing the Constitution which increased his powers substantially. Chavez therefore has a lot of formal political power. Yet other groups, who neither control the presidency nor had any

impact on the process of re-drafting the Constitution have a lot of political power. Forces that oppose the policies that Chavez prefers, for example the managers of the state oil company, can organize strikes which bring the economy to its knees. Political opponents can also organize street demonstrations to demand that the regime changes its' policies, even if they have no formal political power with which to influence such policies. Such economic actions and collective actions are costly for the regime. In response, Chavez has to make concessions and to change policies in a direction that favors his opponents. If they do not get what they want to some degree, they can create significant social unrest, or even undertake a coup against his regime as has already happened once.

Yet such power to challenge regimes is by its nature transitory. While the striking oil workers can impose heavy costs on the economy and hurt the regime, they simultaneously hurt themselves and their families. Strikes must by necessity be transitory. Moreover, strikes are hard to organize and sustain and their power depends on other factors which change over time such as the world price of oil. The power of the oil workers in Venezuela also depends on the geo-political importance of oil and the fact that the United States imports 15% of its oil from Venezuela. This induces the US administration to intervene in Venezuelan politics to keep the oil flowing. However, the nature of such interventions depends on the character of the US administration which changes over time, again another source of non-stationarity. One could argue that the threat of strikes or demonstrations could be continually present and this would be sufficient to induce Chavez to change his policies. Yet it is clear that Chavez did not make any concessions until these threats actually manifested themselves in strikes and demonstrations. Generally it will be unclear whether threats to organize strikes are really credible since the actions of many people have to be coordinated and the strike may fail because the regime can organize strike breaking activities. Even once a strike or demonstration has occurred there is no guarantee that another one can easily be orchestrated in the future.

In the context of democratization, one of the nicest examples of the relationship between transitory shocks and switches in political power was pointed out by Therborn (1977) who observed that many democratizations took place following wars. This fits well with our theory since a war will be a time when the poor, who make up the armed

forces, will have a lot of temporary power until they are demobilized. This threat can clearly be seen in the democratizations in countries such as Germany after World War I. As we saw in Chapter 2, there is also strong empirical evidence linking shocks and crises, both economic and otherwise, to democratizations.

An important point about political power therefore is that it's not necessarily "stationary"—which group has political power changes over time because of economic and political shocks and social changes. This is particularly true for non-formal, extra-legal power and we have already seen an example of transitory or non-stationary political power in our simple model of dictatorship.

4 Towards Our Theory of Democratization

4.1 Institutions, Regulation of Political Power and Democratization

In this section, we put together the three major building blocks in our theory of institutions; political conflict, the role of political power, and the commitment value of institutions. The result will be a very simple model of the emergence of democracy, which we will substantially enrich in the sections that follow. Before we proceed to the model, it's useful to discuss the basic issues in words.

We have already seen that there is a basic conflict over policies, resulting from the fact that some policies are favored by one group, while hurting others. For example, high taxes help the poor, but are opposed by the rich because they redistribute away from them. We have also emphasized how the distribution of political power determines which policies prevail, and how this could be thought of as political power first determining institutions, and then institutional rules determining how political preferences are aggregated into policies. However, why do we need the intermediate step of institutions?

When we go to a dynamic setup, there is a clear answer to this. Social groups have preferences over policies not only today, but in the future, and it is uncertain who will have political power in the future. Therefore, those with political power today would like to influence how future policies are determined, and one way to achieve this is by *locking in* political institutions that ensure greater political power for themselves in the future,

and thus effectively ensuring that they can oversee the implementation of their preferred policies.

To talk about issues of commitment, which are inherently dynamic, we are now going to imagine an economy that lasts for multiple periods, and to simplify the discussion, we start with a game that lasts for two periods, $t = 0$ and $t = 1$. The economic environment is the same as the one considered above, but is now repeated in both periods. As an introduction to the infinite-horizon models that we will study below, we also assume that individuals discount the future with discount factor β where $0 < \beta < 1$. So at the beginning of period 0, each agent cares about their discounted total income in the two periods. In other words, the utility function of agent i with pre-tax income \hat{y}^i in both periods is

$$U^i = \sum_{t=0}^1 \beta^t \hat{y}_t^i = \sum_{t=0}^1 \beta^t \left[(1 - \tau_t) y^i + (\tau_t - C(\tau_t)) \bar{y} \right], \quad (6-5)$$

where \hat{y}_t^i is his post-tax income at time t , and we have made use of the fact that each individual has the same income in both periods, and hence average income, \bar{y} , is also time invariant. Naturally post-tax incomes can potentially change over time because tax rates may differ between the two periods.

To analyze the determination of taxes, consider the following game, which is a generalization of Game 2 above to a two-period setting:

Game 3:

- The rich and the poor vote or fight over the first-period tax rate, τ_0 ; each rich agent has v_0 votes or guns, while each poor agent has one vote or gun.
- Consumption for period $t = 0$ takes place.
- The rich and the poor determine the second-period tax rate, τ_1 ; each rich agent has v_1 votes or guns, while each poor agent has one vote or gun.
- Consumption for period $t = 1$ takes place.

Figure 6.4 gives the corresponding tree for this game. The subgame perfect equilibrium for this game is very similar to that of Game 2. If $v_1 < \lambda / (1 - \lambda)$, then the rich do

not have enough political power to overturn the wishes of the majority, and $\tau_1 = \tau^p$, and if $v_1 > \lambda/(1 - \lambda)$, then the rich are sufficiently powerful so that $\tau_1 = \tau^r = 0$. Equilibrium policies at time $t = 0$ are also identical: if $v_0 < \lambda/(1 - \lambda)$, then $\tau_0 = \tau^p$, and if $v_0 > \lambda/(1 - \lambda)$, then the rich are sufficiently powerful so that $\tau_0 = \tau^r = 0$. In Figure 6.4 we use the notation $V^i(D)$ for the payoffs when the poor always have power, since this will generate a payoff which is identical to that which would arise if there were democracy, similarly we use the notation, $V^i(N)$ when v_0 and v_1 are greater than $\lambda/(1 - \lambda)$. If $v_0 < \lambda/(1 - \lambda)$ while $v_1 > \lambda/(1 - \lambda)$ then the tax rates are $\tau_0 = \tau^p$ and $\tau_1 = 0$ and we use the notation $V^i(y^i | \tau_0 = \tau^p, \tau_1 = 0)$ for the payoffs of $i = p, r$, while if $v_0 > \lambda/(1 - \lambda)$ while $v_1 < \lambda/(1 - \lambda)$ we use the notation $V^i(y^i | \tau_0 = 0, \tau_1 = \tau^p)$.

Consider now the following scenario: $v_1 > \lambda/(1 - \lambda)$ but $v_0 < \lambda/(1 - \lambda)$. That means, at $t = 0$, the poor are sufficiently powerful that they will prevail and obtain the taxes they prefer. However, they expect the rich to be more powerful at $t = 1$, and the society to revert to low taxation.

What can the poor do about it? Given Game 3, nothing. They realize at time $t = 0$ that in the future policies will go against them, but they have no means of influencing future policies.

This is where institutions, or a potential change in institutions, may be very useful. Imagine that democracy, once established, is very difficult to reverse. And as before, democracy means one-person-one-vote, so in a democracy, the poor will naturally have more political power than in a nondemocracy. Therefore, by introducing democratic institutions, the society will commit itself to giving more political power to the poor. So if there were any way for the poor to lock in democracy at time $t = 0$, they would guarantee their most preferred policy not only at time $t = 0$, but also at time $t = 1$.

To capture these issues, now consider a two-period game similar to Game 1, in that it features institutional change:

Game 4:

- The society starts nondemocratic, and there is a vote or fight over the political system, democracy versus nondemocracy, D vs. N , and the tax rate τ_0 . Again v_0

denotes the relative power of the rich

- Consumption for period $t = 0$ takes place.
- If nondemocracy, N , has won before, then the second-period tax, τ_1 , is determined by voting or fighting where each rich agent has v_1 votes or guns, while each poor agent has one vote or gun. If, on the other hand, democracy has won, then τ_1 is determined by majoritarian voting with one-person-one-vote.
- Consumption for period $t = 1$ takes place.

Figure 6.5 depicts this game.

The initial organization of the society is nondemocratic either because there is voting, but while each poor agent has one vote, each rich agent has v_0 votes, or because equilibrium policies are determined by fighting as in Chapter 5, and v_0 parameterizes the relative power of the rich in this fight. In any case, the rich have potentially more power than in a simple democracy. This initial vote (or fight) determines whether the society will be democratic or nondemocratic in the next period. We can also think of these interactions as determining whether the society is democratic or nondemocratic this period, but this is immaterial, since the first vote already determines the key policy, the tax rate, and in our framework, agents care about institutions because of the differences in the induced economic allocations, so if two different institutions lead to the same tax rate, agents have no preference for one or the other.

However, there will now be distinct preferences over democracy vs. nondemocracy because of their different implications for future economic allocations. The assumption that today's decisions lock in whether the society is democratic or nondemocratic tomorrow captures the notion that institutions are *durable* and can therefore affect the allocation of political power in the future. Once the society becomes democratic, this is hard to reverse, and consequently, the poor are likely to have considerable political power in the future.

Let us now analyze the equilibrium of this game. Although this game is somewhat more involved than the ones we have seen so far, its subgame perfect equilibrium is still

straightforward to characterize. Let us start at the end, in the subgame at $t = 1$ where the society is democratic. It is clear that all the poor agents will vote for τ^p , which becomes the equilibrium policy. Next consider the nondemocracy subgame at $t = 1$. Here, equilibrium policy depends on the value of v_1 . If $v_1 < \lambda/(1 - \lambda)$, then the rich do not have enough political power, and the outcome is similar to that in democracy; $\tau_1 = \tau^p$. If $v_1 > \lambda/(1 - \lambda)$, then the rich are sufficiently powerful so that $\tau_1 = \tau^r = 0$.

The determination of equilibrium economic policy at time $t = 0$ is also straightforward: if $v_0 < \lambda/(1 - \lambda)$, then the outcome is identical to that in democracy; $\tau_0 = \tau^p$. If $v_0 > \lambda/(1 - \lambda)$, then $\tau_0 = \tau^r = 0$.

Now let us look at the vote over political institutions. Suppose first that we are in the parameter region where $v_1 < \lambda/(1 - \lambda)$ and $v_0 < \lambda/(1 - \lambda)$ that is, the rich do not have enough political power to dominate nondemocracy in either time period. Then, both in democracy and nondemocracy the equilibrium tax rate will be τ^p . Therefore,

$$V^p(D) = V^p(N) = [1 + \beta] [(1 - \tau^p) y^p + (\tau^p - C(\tau^p)) \bar{y}],$$

while

$$V^r(D) = V^r(N) = [1 + \beta] [(1 - \tau^p) y^r + (\tau^p - C(\tau^p)) \bar{y}].$$

Therefore, no agent cares about whether the system is democratic or nondemocratic. This is an implication of our setup where agents have preferences over political institutions only for their distinct economic consequences. If two sets of political institutions lead to the same economic outcomes, all agents are indifferent between these. As a result, this configuration of parameters does not give us an interesting theory of equilibrium institutions. The general lesson here is that when the distribution of political power today and tomorrow are similar, there is no role for commitment provided by institutions.

Next consider the case where $v_1 < \lambda/(1 - \lambda)$ and $v_0 > \lambda/(1 - \lambda)$, that is, the rich do not have enough political power to dominate nondemocracy at $t = 1$, but they can do so at $t = 0$. Because $v_0 > \lambda/(1 - \lambda)$, they will also be able to implement τ^r at $t = 0$. Therefore, we have democracy and nondemocracy having the same economic implications again; irrespective of the political system, the wishes of the rich prevail in the first period,

but not in the second period, i.e.,

$$V^p(D) = V^p(N) = y^p + \beta [(1 - \tau^p) y^p + (\tau^p - C(\tau^p)) \bar{y}],$$

while

$$V^r(D) = V^r(N) = y^r + \beta [(1 - \tau^p) y^r + (\tau^p - C(\tau^p)) \bar{y}].$$

Therefore, this configuration does not give us an interesting theory of the equilibrium institutions either.

The more interesting case is the one where $v_1 > \lambda / (1 - \lambda)$ and $v_0 < \lambda / (1 - \lambda)$ that is, the rich do have enough political power to dominate nondemocracy at $t = 1$, but not at $t = 0$. For example, with the fighting interpretation, the poor may have a temporary advantage in their fight, because of some unusual circumstances, at date $t = 0$. The values of democracy and nondemocracy for the two groups now are:

$$V^p(D) = [1 + \beta] [(1 - \tau^p) y^p + (\tau^p - C(\tau^p)) \bar{y}],$$

and

$$V^r(D) = [1 + \beta] [(1 - \tau^p) y^r + (\tau^p - C(\tau^p)) \bar{y}],$$

i.e., with democracy, the most preferred policy of the poor is implemented in both periods. However, with nondemocracy, things are different:

$$V^p(N) = y^p + \beta [(1 - \tau^p) y^p + (\tau^p - C(\tau^p)) \bar{y}],$$

while

$$V^r(N) = y^r + \beta [(1 - \tau^p) y^r + (\tau^p - C(\tau^p)) \bar{y}].$$

In other words, the policies desired by the poor are implemented in the first period, but not in the second period, when political power shifts to the rich. Given this observation, it is clear that we have

$$V^p(D) > V^p(N) \text{ and } V^r(D) < V^r(N),$$

just as in (6-4). As a result, the poor vote for democracy, while the rich vote for non-democracy. But now, these preferences over institutions do not come because they are

an intermediate step to today's policies, but because they are a way of allocating future power, and therefore an influence on future policies.

Since $v_0 < \lambda/(1 - \lambda)$, democracy prevails. We therefore have a simple theory of the emergence of democratic institutions. The issue of commitment is central because the rich might wish to avoid the creation of democracy by promising at $t = 0$ that at $t = 1$ they will agree to whatever tax policy the poor prefer. However, any such promises will not be credible because the rich cannot promise not to use their future power to their advantage when $v_1 > \lambda/(1 - \lambda)$.

Why do the poor prefer democracy to nondemocracy now? It's not for the same reason as in Game 1, where democracy was a way of voting for their preferred policies this period. Here, they can directly vote or fight for τ_0 . Instead, in this game, by choosing democracy, the poor make sure that in the second period they control the political agenda. Therefore, the durability of political institutions enables the poor to shift equilibrium policies in their favor. To support democracy today locks in the one-person-one-vote system, and enables the poor to obtain their most preferred policies at time $t = 1$ as well.

Why didn't this happen when $v_1 < \lambda/(1 - \lambda)$ and $v_0 < \lambda/(1 - \lambda)$? After all, the poor again had political power at time $t = 0$. But now, they do not need to affect the future political equilibrium, because in the future, they naturally have sufficient political power. The emergence of democratic institutions is useful, and is an equilibrium outcome, when $v_1 > \lambda/(1 - \lambda)$ and $v_0 < \lambda/(1 - \lambda)$, because the poor have enough political power to influence institutions today, and they *want to* influence institutions since otherwise the swing in political power to the rich in period $t = 1$ will result in more adverse economic policies for them.

This reasoning highlights the importance of all three of our major building blocks, and a particular configuration of how democracy may emerge. Political conflict is important, because there is a disagreement between the rich and the poor over policies: the rich prefer higher taxes. Political power is important because it determines how these distinct preferences are aggregated. If the rich have more political power, taxes will tend to be lower. More important, political power is now potentially nonstationary: in the most interesting configuration, the poor have more political power today than tomorrow. This creates a

demand for the poor to lock in their political power. This is where the third important major building block comes in: institutions act as a way of allocating future political power. Institutions are durable, in the sense that, once they are introduced today, they also persist to tomorrow. And, they play the role of changing the balance of political power tomorrow: if political institutions are changed and become more democratic, society will have to make its collective decisions with one-person-one-vote, thus giving more political power to the poor. This role of institutions in allocating future political power is what makes them very valuable, and very distinct from policies. Democratization arises as a way of regulating the future allocation of political power.

5 Our Baseline Approach to Democratization

5.1 The Threat of Revolution and Shifts in Political Power

The above game illustrated how democratization can emerge as a way of influencing the future allocation of political power. Two questions are posed by this framework, however:

1. Democratization is a move away from nondemocracy, so it can only happen if those who want democracy, the poor, have political power in nondemocracy. Why do the poor have political power in a nondemocracy?
2. Why do the poor expect this political power not to last?

In addition, democratization does not generally happen by the poor “voting for democracy” in a relatively nondemocratic regime. Instead, democratization results when those who have power in nondemocracy, the relatively rich elite, make a move towards democracy. How can we incorporate this into our framework?

We will make significant progress toward answering these questions once we start thinking about the sources of political power of the poor in a nondemocracy. Where does it come from? The answer has to be through extra-legal channels. By definition, in nondemocracy the poor do not have voting rights, and their opinions are not asked. In other words, they do not have much formal political power. Instead, one might also interpret the models discussed in the previous section, especially with the voting interpretation, as

a temporary Republican majority in the U.S. congress introducing a supermajority rule with respect to future tax increases. This would have the effect of making it harder for future Democratic majorities to increase taxes. This would be an example of changing institutions within the context of democratic politics. But democratization is a much larger change, and one where the poor are originally outside the system, and do not have any votes. Hence, their power is not coming from a temporary majority.

As already indicated, in nondemocracy the poor can have effective political power through extra-legal channels, in other words, because they can disrupt the system by undertaking social unrest, or by posing a real revolutionary threat—they are the outsiders challenging the system from the outside, using extra-legal or brute force. This observation not only answers the first question above, but also suggests why this political power is expected not to last. A range of circumstances need to fall into place for the poor to be able to organize and form a revolutionary threat or threaten the social and economic order of society. Most important, the poor need to solve a collective action problem, which is not a trivial task as discussed already. Moreover, the iron has to be struck when hot. Once riots and protests begin, or the revolution threat becomes real, but nothing is done, it is unlikely that the same threat will recur in the near future. And finally, once a revolutionary threat materializes, but gets halted in its tracks, the system will normally generate more effective defenses, such as a stronger military reaction etc. (a topic we will discuss in greater detail when we talk about the possibility of repression in the next chapter). This discussion implies that political power coming from extra-legal means will be transitory.

This configuration creates a demand for a change in political institutions: the poor have political power today, but they also care about policies tomorrow, and therefore want political power tomorrow. Democratization will guarantee it for them (or at least create a tendency towards greater power for them). So if the poor could choose, they would use their political power to obtain concessions towards democracy. But the rich still control formal political power. So it's the rich who have to choose democracy. Why would they do so?

This is where the *commitment* value of institutions becomes crucial. The rich know that in order to prevent revolution or costly social unrest, they have to make concessions to the poor. But since the poor care not only about what's done today, but about the future, they also need to make promises about the future. For example, they need to promise to the poor that there will be high taxes today and in the future, leading to a significant amount of redistribution. The promises they will make while maintaining formal political power will not be credible because these policies are not subsequently in their interests. Once the threat to revolution subsides, the political power that the poor had temporarily will have disappeared, and with the formal political power in their hands, the rich have no reason to choose policies that will hurt them. Therefore, their promises will not be honored. This implies that the rich have to change political institutions if they want to make a credible commitment to certain policies in the future. The commitment is made credible by transferring political power to the poor who have an interest in seeing these promises implemented.

5.2 A Simple Model of Democratization

We now offer a simple model that features all the essential elements of our baseline approach to democratization. As well as political conflict and the commitment role of institutions, this approach features transitory political power for the disenfranchised poor coming from a revolution threat (more generally, extra-legal means). Under certain circumstances, the rich are induced to democratize as a credible commitment to future redistribution in order to prevent a revolution.

The model we consider is similar to the one above, in particular, there are two groups, the rich and poor, with fractions, $1 - \lambda$ and λ . Moreover, pre-tax incomes are given by (6-1), and individual preferences are defined over post-tax incomes, given by (6-2). Society starts without democracy and in a dictatorship government policy is decided by the rich.

Recall that when the rich have uncontested political power, they will choose zero taxes and no redistribution of income, i.e., $\tau^r = 0$. In contrast, the most preferred tax rate for the poor is $\tau^p > 0$, given by (6-3). The comparative statics of τ^p will also play an

important role. Recall from our discussion above that a greater level of inequality, i.e., a lower level of θ , increases the desired tax rate of the poor, hence $d\tau^p/d\theta < 0$.

Let us now summarize the timing of the extensive form game between the rich and the poor where the sequence of moves is depicted in the game tree in Figure 6.6. The initial choice is made by ‘nature’ which randomly determines the value of a shock which affects how attractive it is to challenge the regime. If the value of the shock is ‘high’ the game moves on the right branch, denoted H while if the value of the shock is ‘low’ the game moves along the left branch, L . We think of the branch H as corresponding to an economic or political crisis, such as during a severe recession or following a war, which will make collective action by the poor easier, more effective or less costly during such a period. Alternatively, we can think that when nature determines H the society is in the midst of an economic or political crisis, it is a relatively attractive time to mount a revolution. We introduced a distinction between the high and low states to enable us to have some states in which the extra-legal powers of the poor are limited, and hence democratization will not take place.

The rich have political power initially and move before the poor. Their first decision, following the move by nature, is whether or not to create democracy. Either they do, the branch labelled D , or they do not, labelled N . If they choose D democracy is established and the median voter, a poor agent, sets the tax rate taking into account the costs and benefits of taxation. If they do not democratize then the tax rate is determined by the rich. Tax rates are always non-negative.

Following this fiscal decision, the poor decide whether or not to initiate a revolution. Following the discussion in the previous chapter we assume that revolutions generate private benefits for individuals who take part in them and that there is therefore no collective action problem. As in the models discussed there, if a revolution is attempted and a number $\xi^p \leq \lambda$ of the poor take part, it always succeeds. After a revolution, poor agents expropriate the income of the rich. However, during a revolution a fraction $1 - \mu^S > 0$ of the income of the economy is destroyed, where $S = H, L$, with $\mu^H > \mu^L$. The low value of μ , μ^L , implies that a revolution is relatively costly, so revolution will be relatively more attractive when $\mu = \mu^H$. Naturally, modeling differences in the attractiveness of

revolution this way is only for simplicity. We could have equivalently modeled different states as affecting the cost or ease with which the collective action problem can be solved, and obtain identical results.

These assumptions imply that after a revolution in state S , each poor agent receives a payoff of

$$V^p(R, \mu^S) = \frac{\mu^S \bar{y}}{\lambda}. \quad (6-6)$$

Since a revolution generates private benefits for a poor agent, there is no collective action problem.

In contrast, the rich are expropriated in a revolution, and here we assume that they receive nothing. This assumption is made only for simplicity, and the important point is that they receive a sufficiently low payoff that they want to avoid revolution.

As in Chapter 5, we say that *the revolution constraint is binding* if the poor obtain more in revolution than they would do when the rich implement their most preferred policy, $\tau^r = 0$. Therefore, the revolution constraint is binding in the state $S = H$ or L if

$$V^p(R, \mu^S) = \frac{\mu^S \bar{y}}{\lambda} > y^p,$$

or if

$$\mu^S > \theta \quad (6-7)$$

Notice an important implication of the functional form in equation (6-6) and the revolution constraint, (6-7): greater inequality, i.e., lower θ , makes the revolution constraint more likely to bind. Naturally, (6-6) is only one of the many possible functional forms that imply this result. Moreover, we believe that this feature, that greater inequality is potentially conducive to greater social instability, and potentially to revolution, is consistent with the empirical results in the literature, e.g., Muller and Seligson (1987) and Alesina and Perotti (1996). Also naturally, a high level of μ^S , i.e., greater income for the poor after a revolution, makes revolution more attractive, and the revolution constraint, (6-7) more likely to bind.

If the poor undertake a revolution, branch R , then the game ends with payoffs to the poor and rich of $(V^p(R, \mu^S), V^r(R, \mu^S))$ respectively with $S = H, L$.

If democracy has been created and there is no revolution, we are along the branch NR . In this case, the game ends with the tax rate preferred by the poor median voter being implemented. In this case the poor and the rich obtain payoffs of $(V^p(D), V^r(D))$ where, as before,

$$\begin{aligned} V^p(D) &= V(y^p | \tau^p) = (1 - \tau^p)y^p + \tau^p\bar{y} - C(\tau^p)\bar{y} \text{ and} & (6-8) \\ V^r(D) &= V(y^r | \tau^p) = (1 - \tau^p)y^r + \tau^p\bar{y} - C(\tau^p)\bar{y}, \end{aligned}$$

which do not depend on the state of nature. Note that we can write indirect utility as $y^i + \tau^p(\bar{y} - y^i) - C(\tau^p)\bar{y}$ where $\tau^p(\bar{y} - y^i) - C(\tau^p)\bar{y}$ is the net amount of redistribution. This amount of net distribution is positive for the poor since $\bar{y} - y^p > 0$, but negative for the rich since $\bar{y} - y^r < 0$.

The alternative is for the rich not to choose democratization and set the tax rate themselves. In this case, the issue is whether the rich can credibly commit to certain concessions. We model this in a simple way by introducing a ‘continuation game’ where the rich may be able to re-set the tax rate. More specifically, with probability $1 - p$ the rich can re-set the tax rate, while with probability p they cannot and the tax rate chosen before the revolution decision is implemented. This allows us to model the idea that in a nondemocratic society the elite may make a promise of high redistribution in the future, but cannot necessarily commit to this—the crucial transitory nature of political power.

This way of modeling lack of commitment to future policies may at first appear rather crude. A more satisfactory approach is to have a repeated game, where the rich elite can deliver the policy they promised today, but can make no promises for the policies in the future, once the threat of revolution disappears. This is precisely the model we will develop in Section 6, and we will see that, the current setup is mathematically very similar, but much simpler, than that dynamic game. Therefore, we prefer to start with this simpler setup to highlight the basic issues, and then return to the more satisfactory framework later.

We denote the tax rate set by the rich in nondemocracy in order to prevent revolution by $\hat{\tau}$. This will be the tax rate that will be effective when the rich do not extend the franchise and are not able to reset the tax. Therefore, if the rich promise redistribution at

the tax rate $\hat{\tau}$, the poor choose not to revolt and nature does not allow the rich to reset the tax, the game and with payoffs, $V(y^p | \hat{\tau})$ and $V(y^r | \hat{\tau})$ for the poor and the rich. In contrast, if nature allows the rich to reset the tax, they will now be unconstrained (the revolution threat was in the past), and set their most preferred tax rate, $\tau^r = 0$. In this case, the payoffs are $V^p(N)$ and $V^r(N)$, where

$$V^p(N) = V(y^p | \tau^r = 0) = y^p \text{ and } V^r(N) = V(y^r | \tau^r = 0) = y^r.$$

Therefore, the expected payoffs from the promise of redistribution can be written as $(V^p(N, \hat{\tau}), V^r(N, \hat{\tau}))$, such that

$$\begin{aligned} V^p(N, \hat{\tau}) &= V(y^p | \hat{\tau}) = y^p + p[\hat{\tau}(\bar{y} - y^p) - C(\hat{\tau})\bar{y}] \text{ and} & (6-9) \\ V^r(N, \hat{\tau}) &= V(y^r | \hat{\tau}) = y^r + p[\hat{\tau}(\bar{y} - y^r) - C(\hat{\tau})\bar{y}], \end{aligned}$$

which take account of the fact that redistribution at the tax rate $\hat{\tau}$ happens only with probability p , while with probability $1 - p$, the rich reset the tax to $\tau^r = 0$. (Notice the difference between the notation $V(N)$ which refers to values when the society is nondemocratic and unconstrained, whereas $V(N, \hat{\tau})$ refers to the case where the society is nondemocratic, but the rich are forced to set a tax rate in order to avoid revolution. We will use this type of notation below as well).

We now analyze the pure strategy subgame perfect equilibria of this game. To do so we start at the end of the tree and apply backwards induction. First consider the situation where the rich do not create democracy, there is no revolution and the rich promise a tax rate of $\hat{\tau}$. The condition for the poor to prefer a revolution over the option of living in nondemocracy with the promised tax rate of $\hat{\tau}$ is naturally:

$$V^p(R, \mu^S) > V^p(N, \hat{\tau}),$$

which, using (6-1) and (6-9), can be expressed as:

$$\mu^S > \theta + p(\hat{\tau}(\lambda - \theta) - \lambda C(\hat{\tau})),$$

for $S = H, L$.

On the other hand, if the rich democratize, so that we are in the subgame following D , a revolution is optimal for the poor if

$$V^p(R, \mu^S) > V^p(D),$$

which, using (6-1) and (6-8), is equivalent to:

$$\mu^S > \theta + \tau^p(\lambda - \theta) - \lambda C(\tau^p).$$

It is naturally the case that $\theta + \tau^p(\lambda - \theta) - \lambda C(\tau^p) > \theta + p(\hat{\tau}(\lambda - \theta) - \lambda C(\hat{\tau}))$, since τ^p is the most preferred tax rate for the poor, and $p < 1$.

Does democratization generate enough redistribution that the poor will not revolt after democracy? Since it is state H that will be of primary interest in the analysis, this would be the case when $V^p(R, \mu^H) \leq V^p(D)$, which is equivalent to:

$$\mu^H \leq \theta + \tau^p(\lambda - \theta) - \lambda C(\tau^p). \quad (6-10)$$

If this condition does not hold, even democracy is not sufficient to stave off a revolution, and there will be an equilibrium revolution in the state $S = H$. Notice that (6-10) will hold as long as the level of inequality is less than a critical threshold, or $\theta \geq \hat{\theta}$, where $\hat{\theta} < \mu^H$, so that when $\theta \in (\hat{\theta}, \mu^H)$, there will be an active revolution threat in the high state, but democratization can prevent revolution.

We simplify the discussion by assuming that revolution is only a threat in the state H where it is relatively attractive. Therefore, we impose:

Assumption 6.1:

$$\mu^L < \theta$$

There are now three distinct cases to consider depending on parameter values:

1. Suppose that $\mu^H < \theta$, i.e., the revolution constraint (6-7) does not bind even in state H . Then the unique equilibrium of the game involves no democratization in either state. The rich set a tax rate of zero, the poor do not revolt, and the final payoffs are $(V^p(N), V^r(N))$.

2. We have $\mu^H > \theta$, i.e., the revolution constraint (6-7) binds, but (6-10) fails to hold. In this case, there will be a revolution in the state $S = H$, since irrespective of what they do the rich can never guarantee the payoff from a revolution to the poor.
3. Finally, and most interesting for us, $\mu^H > \theta$ and (6-10) holds. Then the nature of the equilibrium depends on the value of p . Define a p^* such that at $p = p^*$ we have $V^p(R, \mu^H) = V^p(N, \hat{\tau} = \tau^p)$, that is, the poor get the same payoff from revolution as from the rich promising the best tax rate for them, τ^p (of course, $V^p(N, \hat{\tau} = \tau^p) < V^p(D)$, since in the former case the rich are only promising this tax, and their promise is realized only with probability p^*). This critical value of the probability, p^* , is given by:

$$p^* = \frac{\mu^H - \theta}{\tau^p(\lambda - \theta) - \lambda C(\tau^p)}.$$

Then we have that:

- (a) When $p < p^*$, it is very likely that the rich will be able to re-set the tax rate. Since at $p = p^*$, we have $V^p(R, \mu^H) = V^p(N, \hat{\tau} = \tau^p)$, when $p < p^*$, it must be the case that $V^p(R, \mu^H) > V^p(N, \hat{\tau} = \tau^p)$. Thus, even at the best tax rate, the promises of the rich are not sufficient to prevent revolution in the state $S = H$. The rich must therefore democratize to stop a revolution. So democracy emerges following a crisis ($S = H$), and after democratization the poor do not revolt and tax the rich at their preferred rate. Payoffs are $(V^p(D), V^r(D))$.
- (b) On the other hand, when $p \geq p^*$, then the elite can prevent democratization. In this case they set the tax rate at a level where the poor are just indifferent between revolting or not, i.e. $\hat{\tau}$ satisfies $\mu^H = \theta + p(\hat{\tau}(\lambda - \theta) - \lambda C(\hat{\tau}))$, and they do not democratize. The poor do not revolt, and final payoffs are $(V^p(N, \hat{\tau}), V^r(N, \hat{\tau}))$.

We can now sum up the main implications of this game with the following result.

Proposition 6.1: In the game described above, there exists a unique equilibrium such that:

- There is no democratization when $S = L$, because the threat of revolution is weak, and the rich set their most preferred tax rate $\tau^r = 0$.
- If $\mu^H < \theta$, then even in the state $S = H$, the revolution threat is weak, and the rich set their most preferred tax rate $\tau^r = 0$.
- If $\mu^H > \theta$, and (6-10) fails to hold, then in the state $S = H$, there is a revolution.
- If $\mu^H > \theta$, and (6-10) holds and $p \geq p^*$, then in the state $S = H$, the rich prevent democratization by redistributing (promising to redistribute) by setting the tax rate $\hat{\tau}$.
- Finally, if $\mu^H > \theta$, and (6-10) holds and $p < p^*$, then democratization happens as a credible commitment to future redistribution by the rich.

It is useful to briefly discuss how the equilibrium changes, and whether democratization becomes more likely, when the level of inequality, θ , changes. First, in a very equal society, i.e., θ high, we are likely to be in the case where $\mu^H < \theta$, and thus there is no revolution threat even in the high state. Intuitively, in a very equal society, the poor do sufficiently well under the status quo distribution of assets that they never wish to contest power and democratizations never occur (unless perhaps, as we discuss shortly, the rich have a strong intrinsic preference for democracy which outweighs the loss from redistribution). This observation might help explain why democracy arrived relatively late in a number of relatively equal and rapidly growing economies, such as South Korea and Taiwan and is yet to be fully established in Singapore.

With at higher level of inequality, i.e., smaller θ , we enter the region where (6-7) binds, i.e., $\mu^H > \theta$, so there is a revolution threat in the nondemocratic society when $S = H$ (but inequality is still limited so that $\theta \geq \hat{\theta}$ and (6-10) holds). However, the fact that the revolution constraint (6-7) binds does not guarantee that there will be democratization. Whether democratization will happen or not depends on the value of p . When p is low, in particular below the critical level p^* , the poor realize that the promises made by the rich are non-credible. This makes it unlikely that any tax rate that the rich promise before the revolution move will actually ever be implemented. In this case even when the rich offer

the most desirable possible transfer to the poor, τ^p , the poor prefer to have a revolution. Anticipating this, the elite must democratize to avoid being expropriated in a revolution.

In contrast, when p is high (above p^*), the poor expect that the rich will actually carry through with their promises. Thus there will be no revolution if the elite set a sufficiently high tax rate. In this case, then the elite do not democratize and set a tax rate which is just high enough to make a revolution unattractive for the poor.

The level of inequality in the society also affects p^* . It is straightforward to see that $dp^*/d\theta < 0$, i.e., a greater inequality increases p^* , thus enlarges the region where the rich have to concede democratization to prevent revolution. This is intuitive. Greater inequality means that revolution is more attractive, and when the rich do not democratize but promise high taxes, the poor receive only limited returns. As a result, with greater inequality, revolution becomes more attractive for the poor relative to accepting the promises of redistribution. Consequently, the rich are forced to democratize so as to transfer political power to the poor and thereby make a credible commitment to sufficient future redistribution.

More explicitly, let us define a critical level of inequality for given p , $\theta^*(p)$, such that at this level of inequality the promise of redistribution at the maximum tax rate, τ^p , just stops a revolution. Clearly, this threshold is defined as

$$p = \frac{\mu^H - \theta^*(p)}{\tau^p(\lambda - \theta^*(p)) - \lambda C(\tau^p)},$$

or

$$\theta^*(p) = \frac{\mu^H - p\lambda\tau^p + p\lambda C(\tau^p)}{1 - p\tau^p}.$$

Then the above discussion shows that democratization will only occur if the society is more unequal than this cutoff threshold $\theta^*(p)$, i.e., $\theta < \theta^*(p)$

Finally, if inequality increases even further, we can enter the region where $\theta < \hat{\theta}$ and (6-10) does not hold. In this case, even democratization does not prevent revolution, and there will be an equilibrium revolution in the state $S = H$. Therefore, in this model, greater inequality makes democratization more likely, until it reaches a very high level, where revolutions happen along the equilibrium path. We state this result is a corollary for future reference:

Corollary 6.1: Suppose that $\theta \geq \hat{\theta}$ so that (6-10) holds, then greater inequality makes democracy more likely. In particular, democratization requires that $\theta < \theta^*(p)$.

Comparative statics with respect to μ^H are also straightforward. Low values of μ^H mean that the revolution thread is not binding, and there will be no democratization or even redistribution. As μ^H increases, the rich are forced to promise high taxes to the poor in order to prevent revolution, and as μ^H increases further, even these promises are not enough, a more credible promise, democratization, is necessary. As with inequality, if μ^H increases even further, even democracy may not be sufficient, and equilibrium revolutions take place.

The costs of taxation also affect the form of the equilibrium, and whether democratization will arise. When $C(\cdot)$, especially $C'(\cdot)$ is low, τ^p can be higher, and there will be more redistribution in democracy. Although this makes democracy more attractive for the poor, somewhat paradoxically, it may also make it less likely to arise in equilibrium. This is because p^* is decreasing in τ^p : as the tax that the rich can promise increases, they can prevent revolution without democratization.

Another important feature is that as p declines while remaining above p^* , this has only a second-order effect on the rich. They face higher taxes, i.e., $\hat{\tau}$ increases, but they pay these taxes less often. In fact, in this region, the utility of the poor is constant, in particular, the tax rate, $\hat{\tau}$, is chosen specifically so that $V^p(N, \hat{\tau}) = V^p(R, \mu^H)$. However, as p falls below p^* , there is a discrete fall in the utility of the rich and in the taxes they pay. This is because now they have to concede political power, and in the future, the poor will set the taxes. An important ingredient in this result is that the rich do not have a way of influencing how redistributive future democracies will be. We return to a brief discussion of this issue below.

Also notice that the distinction between the high and low state emphasizes that regime changes happen during unusual periods, perhaps periods of economic crises or recessions. This is also in line with the evidence. For example, in the context of the Latin American experience, Haggard and Kaufman (1995) document that many transitions to democracy in Latin America happened during economic crises. They summarize their findings by writing “in Argentina, Bolivia, Brazil, Peru, Uruguay and the Philippines, democratic

transitions occurred in the context of severe economic difficulties that contributed to opposition movements” (1995, pp. 45).

Finally, notice a potentially paradoxical implication of Proposition 6.1. Democratization is more likely when p is lower. But p can be thought of as a measure of the “formal” political power of the poor in nondemocracy. When p is high, even though they don’t participate in the political system, the poor can prevent the rich from renegeing on their promises. For example, the presence of strong worker organizations would map into high levels of p . The implication of Proposition 6.1 is therefore that democratization is more likely, when the poor have lower formal power, or very few ways of controlling the rich, in nondemocracy. Though at first paradoxical, this result makes sense. When the poor have the power to oversee the promises made to them, then there is less need for the rich to undertake a change in institutions in order to increase the future political power of the poor. This result is not only a theoretical curiosity, but might also be useful in explaining an otherwise puzzling pattern in the nineteenth-century West European democratization experience. Social unrest against the existing system was as strong in Germany as it was in Britain and France. However, there were significant differences between the three countries in terms of the strength of the working class under the existing regime. While there were no strong socialist parties in Britain and France and trade unions were of little importance, the Social Democratic Party in Germany was by far the largest left-wing party in Europe at that time and labor movement was strong (though not allowed to participate effectively in elections because of voting restrictions). For example, Nolan (1986, p. 354) explains the strength of German workers movement as follows: “Although Britain experienced the first industrial revolution and France developed the first significant socialist associations, Germany produced the largest and best-organized workers’ movement in the late nineteenth century.” An alternative theory of democratization based purely on the strength of the working class would predict franchise extension in Germany before those in Britain and France. Propositions 6.1, which constructs a theory of democratization as a transfer of political power, in contrast, predicts that German elites should have had more flexibility in dealing with social unrest by promising future redistribution, which was the pattern in practice. This is also in part consistent with the actual evidence. While Britain

and France democratized, and then increased redistribution towards the poor, Germany undertook redistribution without changing its nondemocratic regime. There is also little doubt that these redistributive measures were taken as a response to the potential revolutionary threat from the working-class. Williamson [1998], for example, writes that “the main aim of [the German] welfare program was to avoid revolution through timely social reform and to reconcile the working classes to the authority of the state.”

Overall, therefore, this model illustrates how a threat of revolution in nondemocracy may force the rich elite to democratize in order to offer a credible commitment to future redistribution and prevent revolution. The model highlights the role of inequality in this process (greater inequality makes democracy more likely), and the role of nonstationarity in the political power of the poor. The political power of the poor comes from the threat of revolution, and promises that the rich make in the face of this threat are not fully credible, because of its transitory nature. Democracy arises as an equilibrium when there is a high degree of nonstationarity in this political power, i.e., when $p < p^*$.

6 A Dynamic Model of Democratization

We now develop an infinite horizon model in discrete time based on our analysis of the previous section. The main motivation for this is that it allows us to model the issue of commitment to future policy in a more satisfactory way. In the one-shot model we had to model this by introducing a rather arbitrary assumption that the rich might be able to re-optimize after they had initially chosen their policy. We will now show that results very similar to those derived with this crude assumption flow naturally from the time structure of a repeated game.

There is again a continuum 1 of agents with rich and poor just as before, with fractions, $1 - \lambda$ and λ . But now we are in a dynamic world, so the production structure outlined previously now applies in every period. In particular, pre-tax incomes are constant, and given by (6-1) at all dates. Individual utility is now defined over the discounted sum of post-tax incomes with discount factor $\beta \in (0, 1)$, so for individual i at time $t = 0$, it is

$$U^i = \sum_{t=0}^{\infty} \beta^t \hat{y}_t^i = \sum_{t=0}^{\infty} \beta^t \left[(1 - \tau_t) y^i + (\tau_t - C(\tau_t)) \bar{y} \right].$$

where the second equality uses the expression for post-tax income (6-2), taking into account that tax rates are potentially time-varying, hence the indexing of τ by t .

Just as before initially there is a nondemocracy but the poor can contest power through collective action, and in a democracy the median voter will be a poor agent.

Moreover, as in the previous section, the λ poor agents have access to extra-legal sources of political power. They can overthrow the existing dictatorship and take over the income of the economy in any period $t \geq 0$. As in there, if a revolution is attempted, it always succeeds but a fraction $1 - \mu_t$ of income is destroyed forever in the process. Therefore, if there is a revolution at time t , each poor agent receives a per period return of $\mu_t \bar{y} / \lambda$ in all future periods: total income in the economy is $\mu_t \bar{y}$ and is shared between λ agents. μ changes between two values: μ^H and $\mu^L = 0$, with $\Pr(\mu_t = \mu^H) = q$ irrespective of whether $\mu_{t-1} = \mu^H$ or μ^L . The fact that μ fluctuates will also enable us to model the idea that a promise to redistribute in the future made today may not materialize due to changes in circumstances tomorrow. A low value of μ means that a revolution is very costly, while a low value of q implies that the threat of revolution is rare, perhaps because the poor are unorganized. Fluctuations in the threat of revolution will be the source of nonstationarity in political power.

Finally, in each period the elite have to decide whether or not to extend the franchise. If it is extended, the economy becomes a democracy, and the median voter, a poor agent, sets the tax rate. We assume that if voting rights are extended, they cannot be rescinded, so the economy always remains a democracy. This is not to deny that coups happen, and the conditions under which a democracy is consolidated is a major subject of this book. Nevertheless, once voting rights are extended and political parties are formed, it is relatively costly for any group to exclude the rest from the political process. Therefore, we start with the case where democracy is totally durable, and return to a detailed analysis of coups and democratic consolidation in Chapter 9.

The timing of events within a period can be summarized as follows.

- The state μ is revealed.
- The elite decide whether or not to extend the franchise, $\phi \in \{0, 1\}$, with $\phi = 0$

corresponding to no franchise extension. If they decide not to extend the franchise, they set the tax rate.

- The poor decide whether or not to initiate a revolution $\rho \in \{0, 1\}$, with $\rho = 0$ corresponding to no revolution. If there is a revolution, they share the remaining income. If there is no revolution and the franchise has been extended, the tax rate is set by the median voter (a poor agent).
- Incomes are realized, taxation and consumption take place.

As in the two-period game analyzed in the previous section, all members of the elite have identical preferences, so we can treat them as one player. Also, all poor agents have the same preferences, and when it comes to whether or not to participate in a revolution, there is no “free-rider problem” because if an agent does not take part in the revolution, he can be excluded from the resulting redistribution. So, we can treat all poor agents as one player. This economy can therefore be represented as a dynamic game between two players, the elite and the poor.

In the text of this chapter, we characterize the pure strategy Markov Perfect Equilibria of this game. Recall that in a Markov Perfect Equilibrium strategies only depend on the current state of the world and not on the entire history of the game (see the game theory appendix). Although the focus on Markovian equilibria is natural in this setting, for completeness, we discuss non-Markovian equilibria in the Appendix to this chapter and show that they do not change our general results. The state of the system consists of the current opportunity for revolution, represented by either μ^L or μ^H , and the political state (democracy or elite control). More formally, let $\sigma^r(P, \mu)$ be the actions taken by the elite when the state is $\mu = \mu^H$ or μ^L , and $P = N$ (nondemocracy) or D (democracy). This consists of a decision to extend the franchise ϕ when $P = N$, and a tax rate τ^r when $\phi = 0$ (i.e. when franchise is not extended). Clearly, if $\phi = 0$, P remains at N , and if $\phi = 1$, P switches to D forever. Similarly, $\sigma^p(P, \mu | \phi, \tau^r)$ are the actions of the poor which consist of a decision to initiate a revolution, ρ ($\rho = 1$ representing a revolution), and possibly a tax rate τ^p when the political state is $P = D$. These actions are conditioned on the current actions of the elite who move before the poor agents according to the timing of events

above. Then, a (pure strategy Markov Perfect) equilibrium is a strategy combination, $\{\sigma^r(P, \mu), \sigma^p(P, \mu | \phi, \tau^r)\}$ such that σ^p and σ^r are best-responses to each other for all μ and P .

We can characterize the equilibria of this game by writing the appropriate Bellman equations. Define $V^p(R, \mu)$ as the return to poor agents if there is a revolution starting in state μ , which is naturally given by

$$V^p(R, \mu) = \frac{\mu \bar{y}}{\lambda(1 - \beta)}, \quad (6-11)$$

which is the per-period return from revolution for the infinite future discounted to the present. Also, because the rich lose everything, $V^r(R, \mu) = 0$. Moreover, recall that we have assume $\mu^L = 0$, so $V^p(R, \mu^L) = 0$, and the poor would never attempt a revolution when $\mu = \mu^L$.

In the state (N, μ^L) the elite are in power and there is no threat of revolution, so in any Markov Perfect Equilibrium, $\phi = 0$ and $\tau^r = 0$. This just says that when the rich are in power and the poor cannot threaten them, the rich will set their preferred tax rate which is zero. Therefore, the values of poor and rich agents, $i = p$ or r , are given by:

$$V^i(N, \mu^L) = y^i + \beta \left[(1 - q)V^i(N, \mu^L) + qV^i(N, \mu^H) \right]. \quad (6-12)$$

Now (6-12) says that the value to an agent of type i in a dictatorship when there is no threat of a revolution is equal to a payoff of y^i today, plus the expected continuation value discounted back to today (which is why it is multiplied by β). The payoff today is simply y^i because taxes are set at zero and each person simply consumes their income. The continuation value is made up of two terms, the first, $(1 - q)V^i(N, \mu^L)$ is the probability that μ^L arises tomorrow, times the value of being in that state $V^i(N, \mu^L)$. In this case tomorrow is the same as today and this is why the same value ‘recurs’. The second term, $qV^i(N, \mu^H)$, is the probability that μ^H arises tomorrow, multiplied by the value of that state, $V^i(N, \mu^H)$. This value is different because now there is a potential threat to the regime. To see how this will play out we need to understand what the value $V^i(N, \mu^H)$ looks like.

Therefore, consider the state (N, μ^H) , where there is a dictatorship but it is relatively attractive to mount a revolution. Suppose that the elite play $\phi = 0$ and $\tau^r = 0$, that is,

they neither extend the franchise nor redistribute to the poor. Then, we would have

$$\tilde{V}^p(N, \mu^H) = \frac{y^p}{1 - \beta}.$$

The *revolution constraint* is equivalent to: $V^p(R, \mu^H) > \tilde{V}^p(N, \mu^H)$, so that without any redistribution or franchise extension, the poor prefer to initiate a revolution when $\mu = \mu^H$. This is equivalent to $\theta < \mu^H$, which is identical to (6-7) in the previous section, and says that revolution becomes attractive when θ is sufficiently low, which happens when inequality is sufficiently high.

Since the revolution is the worst outcome for the elite, they will attempt to prevent it. They can do this in two different ways. First, the elite can choose to maintain political power, $\phi = 0$, but redistribute through taxation. In this case, the poor obtain $V^p(N, \mu^H, \hat{\tau})$ where $\hat{\tau}$ is the tax rate chosen by the rich. With either action by the elite, the poor may still prefer a revolution, thus:

$$V^p(N, \mu^H) = \max \left\{ V^p(R); \phi V^p(D) + (1 - \phi) V^p(N, \mu^H, \hat{\tau}) \right\},$$

where $V^p(D)$ is the return to the poor in democracy. The return to the poor when the elite choose the redistribution strategy is:

$$V^p(N, \mu^H, \hat{\tau}) = (1 - \hat{\tau})y^p + (\hat{\tau} - C(\hat{\tau}))\bar{y} + \beta \left[qV^p(N, \mu^H, \hat{\tau}) + (1 - q)V^p(N, \mu^L) \right]. \quad (6-13)$$

The rich redistribute to the poor, taxing all income at the rate $\hat{\tau}$. The poor therefore receive net income $(1 - \hat{\tau})y^p$ from their own earnings and a transfer of $\hat{\tau}\bar{y} - C(\hat{\tau})\bar{y}$. If in the next period we are still in state $\mu = \mu^H$, redistribution continues. But, if the state switches to $\mu = \mu^L$, redistribution stops and the poor receive $V^p(N, \mu^L)$. This captures our intuitive ideas that the elite cannot commit to future redistribution, unless the future also poses an effective revolution threat.

The second strategy to prevent the revolution is to extend the franchise, $\phi = 1$. Since $\lambda > 1/2$, in a democracy the median voter is a poor agent and the equilibrium tax rate is τ^p and $\tau = \tau^p\bar{y} - C(\tau^p)\bar{y}$. The returns to poor and rich agents in democracy are therefore:

$$V^p(D) = \frac{y^p + \tau^p(\bar{y} - y^p) - C(\tau^p)\bar{y}}{1 - \beta} \quad \text{and} \quad V^r(D) = \frac{y^r + \tau^p(\bar{y} - y^r) - C(\tau^p)\bar{y}}{1 - \beta}. \quad (6-14)$$

Will democratization prevent a revolution? The answer is not obvious. It might be that revolution in the state $\mu = \mu^H$ is so attractive that even democratization is not sufficient to prevent revolution. It is straightforward to see that the condition for democratization to prevent revolution is $V^p(D) \geq V^p(R, \mu^H)$, or

$$\theta + \tau^p(\lambda - \theta) - \lambda C(\tau^p) \geq \mu^H. \quad (6-15)$$

To determine whether the elite can prevent the revolution with the redistribution strategy, let $\hat{V}^p(N, \mu^H|q)$ be the maximum utility (as a function of the parameter q) that can be given to the poor without extending the franchise. This maximum utility is achieved by setting $\tau^p = \hat{\tau}$ in (6-13). Therefore, combining (6-12) and (6-13), we obtain:

$$\hat{V}^p(N, \mu^H|q) = V^p(N, \mu^H, \hat{\tau} = \tau^p) = \frac{y^p + (1 - \beta(1 - q))(\tau^p(\bar{y} - y^p) - C(\tau^p)\bar{y})}{1 - \beta}. \quad (6-16)$$

(6-16) has a nice interpretation. It says that $\hat{V}^p(N, \mu^H|q)$ is equal to the present discounted value of y^p , the pre-tax income of poor agents, plus the expected present value of net redistribution from rich to poor. Net redistribution is $(\tau^p(\bar{y} - y^p) - C(\tau^p)\bar{y})$ but this only occurs today, and a proportion q of the time in the future when the state is μ^H .

If $\hat{V}^p(N, \mu^H|q) < V^p(R, \mu^H)$, then the maximum transfer that can be made when $\mu = \mu^H$ is not sufficient to prevent a revolution. Notice that as long as (6-15) holds, we have that $V^p(D) > V^p(R, \mu^H)$. Moreover, $\hat{V}^p(N, \mu^H|q = 1) = V^p(D)$ by the fact that when $q = 1$, there is no nonstationarity in political power and the rich will be forced to redistribute every period since $\mu = \mu^H$ all the time. So as long as (6-15) holds, we have $\hat{V}^p(N, \mu^H|q = 1) > V^p(R, \mu^H)$. Also suppose that

$$\hat{V}^p(N, \mu^H|q = 0) = \frac{y^p}{1 - \beta} + \tau^p(\bar{y} - y^p) - C(\tau^p)\bar{y} < V^p(R, \mu^H) \quad (6-17)$$

Since $\hat{V}^p(N, \mu^H|q)$ is monotonically and continuously increasing in q , as long as (6-17) holds there exists a unique $q^* \in (0, 1)$ such that

$$\hat{V}^p(N, \mu^H|q^*) = V^p(R, \mu^H). \quad (6-18)$$

If, on the other hand, (6-17) does not hold, $q^* = 0$.

Finally, note that $V^r(N, \mu^H, \hat{\tau})$ is decreasing in $\hat{\tau}$, and for all $\hat{\tau}$, it is greater than $V^r(D)$. The latter fact follows because when there is a democracy, $\tau^p = \hat{\tau}$ in all periods,

whereas with the power in the hand of the elites, $\hat{\tau} \in (0, \tau^p]$ whenever $\mu = \mu^H$, but $\tau = 0$ when $\mu = \mu^L$. From this discussion, the following characterization of the equilibrium follows immediately:

Proposition 6.2: • If $\theta \geq \mu^H$, there is never any threat of revolution, the rich never redistribute and the society remains nondemocratic.

• If $\theta < \mu^H$, and (6-15) holds, then for all $q \neq q^*$ where q^* is defined by (6-18), there exists a unique pure strategy Markov Perfect Equilibrium such that:

1. If $q < q^*$, then the revolution threat in the state $\mu = \mu^H$ will be met by franchise extension. More formally, the equilibrium is $\sigma^r(N, \mu^L) = (\phi = 0, \tau = 0)$, $\sigma^r(N, \mu^H) = (\phi = 1, \cdot)$. $\sigma^p(N, \mu^H | \phi = 0, \tau) = (\rho = 1)$, $\sigma^p(N, \mu^H | \phi = 1, \cdot) = (\rho = 0, \tau = \tau^p)$ and $\sigma^p(D, \mu^H) = (\tau = \tau^p)$.

2. If $q > q^*$, then the revolution threat in the state $\mu = \mu^H$ will be met by temporary redistribution. More formally, $\sigma^r(N, \mu^L) = (\phi = 0, \tau = 0)$, $\sigma^r(N, \mu^H) = (\phi = 0, \hat{\tau})$ where $\hat{\tau} \in (0, \tau^p)$ is defined by $V^p(R, \mu^H) = V^p(N, \mu^H, \hat{\tau})$, and $\sigma^p(N, \mu^H | \phi = 0, \tau) = (\rho = 0)$ for all $\tau \geq \hat{\tau}$. Also, off the equilibrium path, $\sigma^p(N, \mu^H | \phi = 0, \tau) = (\rho = 1)$ for all $\tau < \hat{\tau}$, $\sigma^p(N, \mu^H | \phi = 1, \cdot) = (\rho = 0, \tau = \tau^p)$ and $\sigma^p(D, \mu^H) = (\tau = \tau^p)$.

• If (6-15) does not hold, then there exists a unique pure strategy Markov Perfect Equilibrium where there is a revolution in the state $\mu = \mu^H$.

Suppose that (6-15) holds, so that democratization is sufficient to prevent the revolution. Then, starting with the elite in power, if $q < q^*$, the rich set a zero tax rate when $\mu = \mu^L$, and extend the franchise when the state switches to $\mu = \mu^H$. The poor play the optimal strategy of initiating a revolution if the state is $\mu = \mu^H$ and the franchise has not been extended. After the franchise extension, the median voter is a poor agent and sets the tax rate $\tau = \tau^p$. In this case, the threat of revolution is sufficiently transitory that there is a high degree of nonstationarity of political power. Therefore, any promises made by the rich within the given set of political institutions are not credible. So, the only way they can avoid revolution is by making a credible commitments to future policies,

which is only possible by transferring political power to the poor so that they are sure to implement the policies they like.

In contrast, when $q > q^*$, the rich can prevent a revolution by redistributing. So in the state $\mu = \mu^L$, they set $\tau = 0$, and when $\mu = \mu^H$, they set a tax rate, $\hat{\tau}$, just high enough to prevent the revolution. This strategy combination is the unique pure strategy (Markov Perfect) equilibrium of the game. In this case, the poor have sufficiently high political power in the future (think of the limiting case where $q = 1$ so that the threat of revolution is always present). Then without the nonstationarity of political power, the rich do not need to change institutions to transfer political power to the poor, and the society remains nondemocratic.

In the Appendix to this chapter, we show that even without the restriction to Markov Perfect equilibria, similar results obtain: revolution can be stopped with temporary redistribution when $q > q^{**}$ where $q^{**} < q^*$. So franchise extension can be prevented for a larger set of parameter values, but if $q < q^{**}$, the elite can prevent a revolution only by extending the franchise.

Finally, when (6-15) fails to hold, even democracy is not redistributive enough, and in state H , the poor will undertake a revolution.

There are a number of important implications of this analysis:

First, even though the elite face a lower future tax burden with redistribution than under democracy, they may prefer to extend the franchise. This is because when $q < q^*$, redistribution is not sufficient to prevent a revolution. With q low, the revolution threat is transitory, so the poor realize that they will only receive transfers for a short while. Redistribution when $\mu = \mu^H$ can therefore be viewed as a non-credible promise of future redistribution by the elite. Unconvinced by this promise, the poor would attempt a revolution. The revolution is only prevented by franchise extension.

Second, perhaps paradoxically, a high q makes franchise extension less likely. A high q corresponds to an economy in which the poor are well organized, so they frequently pose a revolutionary threat. Alternatively, if μ^L is sufficiently greater than zero, then even in this state, the elite have to redistribute to the poor. In this case, a high value of μ^L would also lead to the same result. A naive intuition may have been that in this case franchise

extension would be more likely. This is not the case, however, because with a frequent revolutionary threat, future redistribution becomes *credible*. This result may explain why in the nineteenth century, Germany, the country with the most developed socialist party at the time, instituted the welfare state without franchise extension, while Britain and France extended the franchise. We return to this issue below.

The comparative statics with respect to inequality, μ^H , and the cost of taxation also deserve a brief discussion.

As the condition $\theta < \mu^H$, shows, a certain level of inequality is necessary for the revolution constraint to bind. So a very equal society may never democratize, or democratize with considerable delay because there is relatively little social unrest. More interestingly, in a more unequal society, it is also more difficult to stave off the revolution without democratization. To discuss these issues, first suppose that condition (6-15) holds. Then, take the equation $\hat{V}^p(N, \mu^H|q^*) = V^p(R, \mu^H)$, and totally differentiate. This gives $dq^*/d\theta < 0$, so when inequality increases, q^* also increases. Equivalently, fix q , and this equation defines a critical level of inequality, $\bar{\theta}$. Since $V^p(R, \mu^H)$ increases faster in the level of inequality than $\hat{V}^p(N, \mu^H|q^*)$, with inequality greater than $\bar{\theta}$, revolution cannot be prevented by temporary redistribution. Specifically, there exists a threshold level of inequality, $\bar{\theta}$ for given q , such that if $\theta > \bar{\theta}$, then the revolution can be prevented by temporary redistribution, but if $\theta < \bar{\theta}$, the only way to prevent a revolution is democratization.

Next, however, notice that θ , the extent of inequality, also affects condition (6-15), i.e., whether democracy can prevent revolution. In particular, notice that condition (6-15) holds as equality for

$$\tilde{\theta} = \frac{\mu^H - \lambda(\tau^p - C(\tau^p))}{1 - \tau^p}.$$

Inequality is greater than this amount, i.e., if $\theta < \tilde{\theta}$, then (6-15) will be violated (it is straightforward to check that $\tilde{\theta} < \bar{\theta}$, so that for $\theta \in (\tilde{\theta}, \bar{\theta})$ the comparative static results discussed above apply).

An increase in μ^H also tightens the revolution constraint. When $q < q^*$, this has no effect at first, since the threat of revolution already ensured democratization. However, if μ^H increases further, condition (6-15) would be violated, so that revolution could not

be prevented even with democratization. In contrast, if $q > q^*$, a higher level of μ^H affects fiscal policy by forcing the elite to choose a more redistributive policy to prevent revolution. If it increases further, it may induce democratization. An increase in the costs of taxation limits the taxes that can be set on the rich. So if these costs increase, it becomes harder to prevent a revolution with temporary redistribution because the level of taxes that can be set during this period are lower. Moreover, condition (6-15) could be violated once again, leading to a revolution along the equilibrium path. The general principle that follows from this discussion is that revolutions are harder to prevent in societies where democracy creates only limited gains for the poor. This issue comes up again shortly when we consider how this analysis differs when we use different models of democracy.

7 Extensions

We now discuss a number of extensions of our basic approach to democratization. To simplify the analysis and the discussion, we will be using the two-period model of Section 5.

7.1 Power in Democracy and Democratization

The model of democracy we used so far was the basic model from Chapter 4, which equated political power with numbers. As discussed in Chapter 4, there is a variety of reasons for why there may be other sources of political power in democracy. Most notably, different groups may have different sensitivities to transfers, because of heterogeneity or ideological beliefs (as in the probabilistic voting model) or different groups may have more effective ways of lobbying politicians (as in the lobbying model). Perhaps even more important, the rich can influence policy in democracy by capturing the platforms of the major parties.

We showed there that a variety of approaches map into a framework where political competition in democracy between parties maximizes a weighted sum of different groups' utilities. In the context of our two-class model, this amounts to democracies choosing

policies so as to:

$$\max_{\tau} \chi \lambda ((1 - \tau) y^p + (\tau - C(\tau)) \bar{y}) + (1 - \chi) (1 - \lambda) ((1 - \tau) y^r + (\tau - C(\tau)) \bar{y}). \quad (6-19)$$

Let the solution to this problem be $\tau(\chi)$, and note that when $\chi = 1$, we have our basic model of democracy, where the poor agent is the median voter and chooses his most preferred tax rate, so $\tau(\chi = 1) = \tau^p$. The most important feature here is that

$$\frac{d\tau(\chi)}{d\chi} > 0,$$

since $y^p < y^r$. That is, as the power of the poor in democracy declines, so does the equilibrium tax rate and the amount of redistribution to the poor. An immediate implication of this is also:

$$\frac{dV^p(D)}{d\chi} > 0,$$

that is, the value of democracy declines for the poor as their power in democracy declines.

It is straightforward to see that the analysis from Section 5 continues to apply more or less unchanged. The only new result is that a decrease in χ now makes equilibrium revolution more likely. In other words, as χ declines, (6-10) becomes less likely to hold. We are going to see that the effect of political power in democracies very different when the rich have the open to the user prescient. For this comparison, we state:

Proposition 6.3: In the model with variable power, a decrease in χ makes (6-15) less likely to hold, and therefore makes equilibrium revolution more likely and democratization less likely.

7.2 Manipulating the Form of Democracy

So far we have limited our analysis to the decision of the rich whether to extend the franchise to the poor or not, without any decision on their part on how to structure the form of democracy. A large literature argues that form of democracy, for example, proportional versus majoritarian elections, matters for policies in general, and the amount of taxation in particular. For instance, Rokkan (1970) famously argued that proportional representation was a way of the rich elite to limit the power of the poor in the newly emerging democracies of Western Europe at the turn of the 20th century.

Our model in the previous subsection where χ parameterizes the power of the poor gives us a way of briefly discussing these issues. Suppose that in terms of Proposition 6.1 we are in that part of the parameter space where $\mu^H > \theta$, (6-10) and $p < p^*$, so that there will be equilibrium democracy as a way of preventing revolution. But as already noted above, democracy will create a lot of redistribution, in fact more redistribution than the rich need to give to the poor in order to prevent a revolution. Now suppose that they can also manipulate χ . Then, they will choose χ such that the poor receive exactly the payoff that makes them indifferent between democracy and revolution. More specifically, the rich will set χ exactly such that:

$$V^p(D) = V^p(R, \mu^H)$$

or such that

$$\mu^H = \tau(\chi)(\lambda - \theta) - \lambda C(\tau(\chi)).$$

It is straightforward to see that χ is increasing in μ^H . Therefore, the rich will give more power to the poor in democracy when revolution is more attractive for them.

This discussion illustrates how the rich may want to manipulate the form of democracy in order to limit the extent to future redistribution. In practice, there may be some ways of achieving this, for example, the choice between proportional representation and majoritarian systems. However, our belief is that in general the rich elite will have only limited ways to fine-tune the form of democracy, and our baseline model in Section 5 and also Section 6 is a good approximation to most instances of democratization.

7.3 Ideological Preferences over Regimes

In our analysis so far, the only reason why agents care about political institutions is because of their different economic consequences. An alternative, and complementary, perspective is to recognize that individuals may also have ideological preferences over regimes. For example, after the Enlightenment in Europe, it may have been the case that the rich preferred democracy to dictatorship or autocracy for purely ideological reasons. How does incorporating such ideological concerns change our analysis?

At some level a lot, at some other level not that much. Of course, if ideological preferences are the main thing, much of our analysis is not very relevant. However, if

ideological preferences are present, but not large enough so that individuals have relevant economic concerns as well, much of our analysis and many of the insights developed so far continue to apply.

To see this, let us introduce ideological concerns in our baseline model of Section 5. In particular, imagine that people's utility functions are additive in consumption and a term which captures an intrinsic preference for democracy. Utilities of a poor and rich agent who consume incomes y^p and y^r are $y^p + B^p$ and $y^r + B^r$. Here $B^p > 0$ and $B^r > 0$ capture the positive utility from living under democratic institutions. If society is a non-democracy then agents do not get these extra utility 'benefits.' All agents aim to maximize their expected utility.

In this model the threat of revolution is not the only way democratization may arise. If B^r is relative large, then the rich prefer to democratize even though they could avoid doing so by redistributing income themselves. This would correspond to a "purely ideological" democratization, driven by the social values of the elite. Interestingly, note that given B^r , greater inequality leads to greater transfers from the rich to the poor in a democracy. Therefore when inequality is greater, the rich lose more under democracy and they will be less likely to democratize. Therefore, our model nests both conflict-based and purely ideological modes of transition, and highlights that they lead to the opposite comparative static results with respect to economic inequality. When democratization is the outcome of class-conflict, greater inequality makes revolution more attractive, and forces democratization. When democratization is not won by the masses, but given by the elite, greater inequality increases the cost of democratization to the elite, and hence may make them less willing to give democracy to the masses. We will see that the same intuition will arise, through a class conflict related mechanism, when we consider repression in the next chapter. These results and the fact that inequality was rising in Britain, Germany, France and Sweden (see Morrisson, 2000) in the late nineteenth century prior to democratization add plausibility to our emphasis on class conflict as a driving force.

In this extended model with ideological preferences, democratization can either happen because of its intrinsic value to the rich, i.e., the rich have an ideological preferences for democracy, or because of the same reasons emphasized before. The crucial issue is whether

the rich have a strong enough preference for democracy. For this, we need to define two cutoff levels: \bar{B} is the cutoff level such that when $B^r \geq \bar{B}$, even in state $S = L$, the rich democratize. This is clearly given by

$$\bar{B} = \tau^p (y^r - \bar{y}) + C(\tau^p) \bar{y}$$

where the right hand side is the net transfers away from the rich when the tax rate is the one that will be chosen in a democracy, τ^p . This is what the rich will pay in democracy as net transfers away from them, but in return they will obtain the ideological benefit of having established democracy, B^r .

However, in the state $S = H$, and especially when $\mu^H > \theta$, the comparison is not between no taxation and democracy, but between limited taxation and democracy. Therefore, the relevant threshold is

$$\tilde{B} = \tau^p (y^r - \bar{y}) + C(\tau^p) \bar{y} - p [\hat{\tau} (y^r - \bar{y}) + C(\hat{\tau}) \bar{y}],$$

which takes into account that even without democracy there will be net redistribution away from the rich equal to $[\hat{\tau} (y^r - \bar{y}) + C(\hat{\tau}) \bar{y}]$ with probability p . Clearly, we have that

$$\tilde{B} < \bar{B}.$$

Moreover, inspection of these equations shows that both \tilde{B} and \bar{B} are decreasing in θ , or increasing in y^r / \bar{y} : in other words, the higher is inequality, the higher are \tilde{B} and \bar{B} . This is because with greater inequality, democracy is more costly for the rich (as it redistributes more away from them), and as a result, their ideological preferences have to be stronger for them to prefer democracy to nondemocracy.

Now we can state:

Proposition 6.4: Suppose that (6-10) holds. Then:

If $B^r \leq \tilde{B}$, then Proposition 6.1 applies.

If $B^r > \bar{B}$, there will always be democratization.

If $B^r \in (\tilde{B}, \bar{B})$, there will be democratization in the state $S = H$ if $\mu^H > \theta$.

There are a couple of interesting points to note here: first, if ideological considerations are not very important, our previous analysis applies identically. Second, ideological considerations may be very important and dominate transitions to democracy. But even in this case, economic incentives are potentially important. For example, notice that both $B^r > \bar{B}$ and $B^r > \tilde{B}$ are more likely when inequality is low. As inequality increases, the redistribution away from the rich in democracy becomes larger, and for a given ideological benefit of democracy, these two conditions are less likely to hold. Therefore, inequality will again affect democratization, and interestingly, it will affect it in a way similar to the models of repression analyzed in the next chapter.

8 Historical Perspective

In this section, we return to the historical discussion of the emergence of democracy in 19th-century Europe and 20th-century in America to link the historical events to the theory developed in this chapter.

8.1 The Threat of Revolution and Franchise Extension in 19th-century Europe

Britain: In Britain, the franchise was extended in 1832, and then again in 1867 and 1884 (and later in 1919 and 1928 when all women were finally allowed to vote—see Chapter 8 for gradual extensions of the franchise). When introducing the electoral reform to the British parliament in 1831, the prime minister Earl Grey said “There is no-one more decided against annual parliaments, universal suffrage and the ballot, than am I... The Principal of my reform is to prevent the necessity of revolution... I am reforming to preserve, not to overthrow.” [quoted in Evans, 1983]. This view of political reform is shared by modern historians such as Briggs [1959] and Lee [1994]. For example, Darvall [1934] writes: “the major change of the first three decades of the nineteenth century was the reform of Parliament by the 1832 Reform Act... introduced by the Whigs... as a measure to stave off any further threat of revolution by extending the franchise to the middle classes.” In fact, the years preceding the electoral reform were characterized by unprecedented political unrest, including the Luddite Riots from 1811-1816, the Spa Fields

Riots of 1816, the Peterloo Massacre in 1819, and the Swing Riots of 1830 [see Stevenson, 1979, for an overview]. The reforms that extended political power from a narrow elite to larger sections of the society were immediately viewed as a success not because of some ideal of enlightenment or democracy, but because the threat of revolution and further unrest were avoided [see Lee, 1994].

Although the 1832 Reform Act reduced property and wealth restrictions on voting and increased the total electorate to 813,000, the majority of British people (the remaining 23 million) could not vote, and the elite still had considerable scope for patronage, since 123 constituencies, the ‘rotten-boroughs’, contained less than 1,000 voters. There is also evidence of continued corruption and intimidation of voters until the Ballot Act of 1872 and the Corrupt and Illegal Practices Act of 1883. These practices were reversed later in the process of increased representation, which gained momentum with the Chartist movement during the 1830’s and 1840’s [see Briggs, 1959]. The response of the elite to the Chartist movement was again one of preventing further unrest. For example, during the 1850’s Lord John Russell made several attempts to introduce reform arguing that it was necessary to extend the franchise to the upper levels of the working classes as a means of preventing the revival of political radicalism. But as Lee [1994, p.137] notes “The House of Commons was largely hostile to reform because, at this stage, it saw no need for it.”

This had changed by 1867, largely due to a sharp business cycle downturn that caused significant economic hardship and increased the threat of violence. Lee writes “as with the first Reform Act, the threat of violence has been seen as a significant factor in forcing the pace [of the 1867 Reform Act]; history was repeating itself.” This interpretation is supported by many other historians, for example Trevelyan [1937] and Harrison [1965]. The Act was preceded by the founding of the National Reform Union in 1864 and the Reform League in 1865, and the Hyde Park riots of July 1866 provided the most immediate catalyst. Searle [1993, p. 225] argues that “reform agitation in the country clearly did much to persuade the Derby ministry that a Reform Bill, any Reform Bill, should be placed on the statute book with a minimum of delay.” As a result of these reforms, the total electorate was expanded from 1.4 million to 2.52 million, and working class voters

became the majority in all urban constituencies. The electorate was doubled again by the Reform Act of 1884, and the Redistribution Act of 1885 removed many remaining inequalities in the distribution of seats [see Wright, 1970]. Once again social disorder appears to have been an important factor behind the 1884 act, as put by Hayes [1982], “At the bottom the course of events in mid-November reflected the importance of the battle out of doors”.

Other European Countries: In France, the 1830 revolution led to a highly restricted democratic regime where property restrictions limited the electorate to about 0.75 percent of the population [see Cole and Campbell, 1989]. The collapse of the Orleanist monarchy in the 1848 revolution led to the Second Republic with the introduction of universal male suffrage in 1849 [see Collier, 1999, Ch.2, p. 10]. The effect of this was cut short, however, first by restrictions on voting rights introduced in 1850, disenfranchising 2.8 million men, and then by the coup of Louis Napoleon in 1851. Historians split this period into two phases: the ‘authoritarian’ phase from 1852 to 1860 and the ‘liberal’ phase from 1860 until the defeat of the French armies in the Franco-Prussian war of 1870. The defeat in the war led to further unrest (in particular, the Paris Commune) and to the collapse of the regime, making way to the Third Republic [see Zeldin [1958], Plessis [1985], and Price [1995]].

The history of modern democracy in Germany starts with the 1848 revolution when nearly all German states significantly increased popular participation in government, again in the face of revolutionary pressures [see Blackbourn, 1998, Chapter 3]. The effects of this democratization were strongly mitigated by institutional restrictions, however. This regime featured a three class voting system and was controlled initially by Junker landlords, and after the 1870’s by the coalition of “iron and rye”; the parliament could not appoint ministers or discuss foreign policy, and voting was oral. Although after 1870 all adult males over the age of 25 had the right to vote, voting was controlled in rural areas by the landlords (see Gosnell [1930]; and Goldstein [1983]). As Abrams [1995, p. 10] puts it, during this period “the German Empire was, in theory, a constitutional monarchy, yet in practice it was governed by a Prussian oligarchy.” The final emergence of German democracy, the Weimar Republic, in 1919, was in response to the very severe

threat of social disorder and revolution triggered by the collapse of the German armies on the Western Front in August 1918 (see, for example, the classic account in Gerschenkron [1943]; and also Mommsen [1981]).

In Sweden, democracy arrived via a series of gradual franchise extensions, starting in 1866 with the creation of a bicameral parliament with First and Second Chambers. Universal male suffrage was introduced in 1909 in the First Chamber, but true parliamentary government arrived only in 1918, when the political power of the Conservative Party and the monarchy were limited, once again an outcome of unusual turbulence spurred by the end of the First World War and by the severe economic crisis (see Rustow [1955]; and Verney [1957]). Tilton [1974, p. 567] argues that “neither [of the first two reform acts] passed without strong popular pressure; in 1866 crowds thronged around the chamber while the final vote was taken, and the 1909 reform was stimulated by a broad suffrage movement [and] a demonstration strike.” The reform in 1909 had been preceded by strikes and demonstrations, and even though Sweden was not a participant in the First World War, the revolution in Russia and the situation in Germany forced the concession of democratic rights. In 1917, the Liberals and Social Democrats formed a coalition government and proposed full male suffrage, but this was defeated by the Conservative dominated Second Chamber. Collier [1999, Ch.3, p. 9] explains that “it was only after the economic crisis of 1918 and ensuing worker protests for democracy led by the Social Democrats that the Reform Act was passed. Indeed, in November 1918, labor protests reached such a point as to be perceived as a revolutionary threat by Sweden’s Conservative party and upper classes.” Tilton [1974, p. 568] summarizes the consensus view of historians succinctly; “Swedish democracy had triumphed without a revolution - but not without the *threat* of a revolution” (italics in original).

8.2 Why Was the Franchise Extended in the 19th-century?

Our approach so far explains the emergence of democracy, but in the European context, it doesn’t provide an answer to the question of why the wave of franchise extensions started in the 19th century?

In the context of our model, an obvious answer is that inequality was more limited

before the 19th century. Recall that when inequality is low, the revolution threat is not binding, or even if it binds, the rich can prevent revolution by promises of redistribution. Only with that sufficiently high level of inequality does democratization become a necessity. Perhaps more important, before the 19th century, the poor segments of the society were scattered in rural areas, and therefore, we may think of the threat of revolution as less severe. Therefore, the combination of increased urbanization and increase inequality may have been a key factor in kick starting the wave of democratization in 19th century Europe.

The limited data that there exist on 19th-century inequalities consistent with the notion that inequality was rising until the extension of the franchise (and then it started declining because of the redistribution following democratization documented below).

Data on income inequality for the nineteenth century are not extremely reliable. Nevertheless, a number of studies using different data sources on Britain reach the same conclusion: inequality increased substantially during the first half of the nineteenth century, then started falling in the second half. The turning point appears to be sometime after 1870 [Williamson, 1985, Table 4.2]. This picture is also consistent with the findings of Crafts [1989], and of Lindert [1986] on wealth inequality, but is not completely uncontroversial [Feinstein, 1988]. A similar pattern also emerges from earnings inequality data reported in Williamson [1985] Table 4.2 where the Gini coefficient increases from 0.4 in 1823 to 0.627 in 1871 and falls to 0.55 in 1981 and 0.443 in 1901. It appears therefore that inequality peaked approximately at the time of the major political reforms, and fell sharply after the extension of the franchise.

Data for other countries is even more scarce. Morrisson [1997] surveys the existing evidence and argues that Germany, France and Sweden all went through a Kuznets curve. In Germany, inequality rose during the nineteenth century and most researchers place the peak around 1900. For example, Kuznets [1963] finds that the income share of the top 5 per cent went from 28 percent in 1873-1880 to 32 percent in 1891-1900, stayed at 32 percent during 1901-1910, declining to 31 percent in 1911-13. Dumke [1991] finds the same income share to be 28.4 percent in 1880, rising to 32.6 percent in 1900, and falling to 30.6 percent in 1913. During the Weimar Republic, inequality fell rapidly. Kraus [1981]

records that by 1926 the income share of the top 5 percent had fallen by 6.2 percent. Overall, Morrisson [1997] argues that the Kuznets curve in Germany peaked in 1900, went flat and started to fall in the 1920's. This date corresponds closely to the major democratization of 1918-1919.

For France, Morrisson [1991, 1997] argues that inequality rose until 1870, with the income share of the top 10 percent peaking at around 50 percent. Inequality started to fall, however, in the 1870's, and in 1890 the income share of the top 10 percent was down to 45 percent, falling further to 36 percent by 1929. The major political reforms of 1860-1877 in France are therefore approximately around the peak of the Kuznets curve. Finally, Söderberg [1987, 1991] records that income inequality grew in Sweden, peaking just before the First World War, levelling off or falling slightly during the 1920's, and then falling rapidly thereafter. Once again, there is a close correspondence between the decline in inequality and the extension of the franchise. Overall, therefore, in Britain, France, Germany and Sweden, the peak of the Kuznets curve appears to have followed democratization, which is in line with the mechanism proposed in this paper.

8.3 The Latin American Experience

The evidence from Latin American experience with democratization also supports the notion that the threat of revolution and social unrest were important. In Argentina universal male suffrage was effectively institutionalized in 1912 by Sáenz Peña when the secret ballot was introduced and fraudulent electoral practices outlawed. The Radical party was elected in 1916 with Yrigoyen as president. Before this, the political situation had become increasingly unstable with revolts during the 1890's depression and then in 1905 led by Yrigoyen. As Rock (1987, p. 188) puts it "Radicals, socialists, and indirectly the anarchists helped fuel the movement for reform during the early years of the century. Progressives amongst the elite feared the growing popular support for the Radicals, wondering where their next revolt would come from."

The presence or threat of social conflict also played an important role in re-democratizations in Argentina, particularly the withdrawal of the military regime of Lanusse and the return of Perón in 1973 (Rock, 1987, Ch 8).

In Venezuela, the long period of *caudillismo* was ended by the dictatorship of Juan Gómez between 1908 and 1935. His military successors ruled until the first modern democracy was created in 1945. Levine (1978, p. 89) describes the events leading up to democratization as follows: “after several days of fighting, a provisional revolutionary government was formed, with four members from Acción Democrática, two military officers, and one independent civilian. The three years that followed marked the introduction of a party system into Venezuela, abruptly ushering in an experiment with mass political democracy.” Democracy fell to a coup in 1948, but was re-instated in 1958 when the regime of General Pérez Jiménez collapsed in the midst of a widespread uprising. Levine (1989, p.256) argues that redemocratization was in response to the unrest following economic depression and writes “underground political forces, now united in a Junta Patriótica, mounted a wave of demonstrations and street fighting.” Kolb (1974, p. 175) recounts “in dramatic intensity and popular violence, the events on January 21 and 22 in Caracas...was a true popular revolution of Venezuelan citizens...armed with rocks, clubs, home-made grenades, and Molotov Cocktails, against a ferocious and well-trained Police force.”

Collier (1998) has recently argued for the importance of social pressure from the masses as a driving force behind many of the most recent re-democratizations. She argues that (1998, Ch 4 p. 4) “In...Peru, Argentina and Spain, massive labor protests destabilized authoritarianism and opened the way for the establishment of a democratically elected government.” She further argues for an important role for labor activism in inducing democratic transition in Bolivia, Uruguay and Brazil. Even in Chile, apparently a case where the military withdrew without being pushed too hard, many scholars emphasize the re-emergence of civil society during the 1980's. Drake (1998, p. 89) argues that the reason that Pinochet accepted the results of the plebiscite that ended the military regime was that “the foreseeable costs of maintaining the dictatorship probably would have included massive social and political disorder, class conflict, economic disruptions, radicalization of the left, draconian repression, escalating violence.”

As in South America, in Central America the threat of social conflict and outright revolution has been a significant factor in inducing political elites to accede to democracy.

For example, in Guatemala, General Jorge Ubico's 13 year dictatorship ended in 1944 when he was replaced by a junta led by General Federico Ponce. He was deposed the same year by an upsurge of pro-democratic sentiment and a student revolt, leading to the election of Juan Arévalo as president in 1945. He was followed by Jacobo Arbenz in 1950 who was ousted by the Coup of 1954. Re-democratization in Guatemala followed a similar pattern and was a direct response to the eruption of conflict. Starting in 1982, the military acceded to a gradual redemocratization: Marco Cerezo was elected in 1985 followed by Jorge Serrano in 1990. This process continued after Serrano's attempted coup was foiled in 1993. While these regimes were closely constrained by the military the political liberalization was due to massive social unrest (Trudeau, 1993, Jonas, 1995).

In El Salvador the picture is similar except without the brief early period of democracy (see Baloyra, 1982, 1995, and Paige, 1997). Rule was ceded by the coffee oligarchs to the military after the *matanza* insurrection of 1932. After 1962, democratic elections began but were closely controlled by the military, and were subject to massive fraud. After a brief military interlude re-democratization occurred in 1982, but in the midst of an extensive civil war which only ended in 1992. 1994 was the first election in which the main left wing group, the FML contested power.

In the context of the Latin American experience, there are also many examples where democracies have started important redistributive programs.

In Costa Rica, despite its heritage of relatively equal land distribution and democratic politics, full democratization after 1948 was followed by further significant attempts to reduce asset inequality, and Yashar (1997) has specifically argued that these played a role in consolidating democracy there. The Land and Settlement Law of 1961 established an agency to aid settlement and colonization projects on public lands. Dorner (1992, p34) shows that 7.1% of agricultural land was redistributed. Costa Rica also engaged in a significant expansion of education. Deininger and Squire report that in Costa Rica the Gini fell from 0.50 in 1961 to 0.44 in 1971 after which it fluctuated around this level with the final observation being 0.46 in 1989. Vilas (1995, p.101) shows that the Gini coefficient for land distribution fell by 10% between 1950 and 1973, while Chalker (1995) argues that "the most remarkable egalitarian measure in Costa Rica occurred in the 1960s

and 1970's when the concentration in income distribution was reduced. Interestingly this was an outcome, rather than a cause of, democratic politics.

8.4 Democratization and Redistribution

Our approach also predicts that after franchise extension, there should be increased redistribution. We now briefly discuss the evidence related to the relationship between democratization and redistribution.

As already discussed in Chapter 2, there is some systematic evidence on this from Rodrik, who shows that democracies have more equal distributions of income and higher share of income going to labor than to capital. Case studies, especially the developments in the democratization experiences we discussed above, are consistent with this.

In Britain, the Reform Acts of 1867-1884 were a turning point in the history of the British state. In 1871 Gladstone reformed the civil service, opening it to public examination thus making it meritocratic. Liberal and Conservative governments introduced a considerable amount of labor market legislation, fundamentally changing the nature of industrial relations in favor of workers. During 1906-1914, the Liberal Party, under the leadership of Asquith and Lloyd George, introduced the modern redistributive state into Britain, including health and unemployment insurance, government financed pensions, minimum wages, and a commitment to redistributive taxation. As a result of the fiscal changes, taxes as a proportion of National Product more than doubled in the 30 years following 1870, and then doubled again. In the meantime, the progressivity of the tax system also increased [Lindert, 1989].

Meanwhile, the education system, which was either primarily for the elite or run by religious denominations during most of the nineteenth century, was opened up to the masses; the Education Act of 1870 committed the government to the systematic provision of universal education for the first time and this was made free in 1891. The school leaving age was set at 11 in 1893, then in 1899, it increased to 12 and special provisions for the children of needy families were introduced [Mitch, 1993]. As a result of these changes, the proportion of 10-year olds enrolled in school that stood at a disappointing 40 percent in 1870 increased to 100 percent in 1900 [Ringer, 1979, p. 207]. Finally, the reform act

of 1902 led to a large expansion in the resources for schools and introduced the grammar schools which subsequently became the foundation of secondary education in Britain.

In France, as in Britain, democratization coincided with important educational reforms. During the Second Empire, there was a significant expansion of government support for education; illiteracy fell from 39 percent to 29 percent of adults, and the primary school enrollment rate increased from 51 percent to 68 percent [Plessis, 1985, Table 14, p.100]. In 1881 the government abolished fees in public primary schools, and in 1882, it introduced 7 years of compulsory education for children. The primary enrollment rate increased from 66 percent in 1863 to 82 percent in 1886. The ‘liberal’ phase of the Second Empire saw significant labor market legislation with strikes legalized in 1863, and unions finally officially tolerated in 1868. Moreover, central government expenditure as a percentage of GDP increased by one third from 9.4 percent in 1872 (a figure itself inflated by the war) to 12.4 percent in 1880 [Flora, 1983].

In Germany, the large increase in redistribution in the 1920s was initiated by the Weimar state [Flora, 1983]. Also in Sweden, major redistribution appears to have started only after democratization. Lindert’s [1994] data show that before 1920 there was no redistribution at all in Sweden, while after this date it jumped up sharply.

Overall, we can summarize our discussion, especially the part about the relationship between democratization and educational reforms, by quoting Easterlin [1981]: “to judge from the historical experience of the world’s 25 largest nations, the establishment and expansion of formal schooling has depended in large part on political conditions and ideological influences” and “a major commitment to mass education is frequently symptomatic of a major shift in political power and associated ideology in a direction conducive to greater upward mobility for a wider segment of the population.”

9 Conclusion

In this chapter we have built our basic model of democratization. We have done so under the working assumption that once created democracy consolidates. We derived some basic predictions about the factors that lead to democracy. We showed that democracy arises when inequality is sufficiently high that the disenfranchised want to contest power.

Consider a cross-section of societies. With low inequality we would tend not to observe democracy. At higher levels of inequality we would still not observe democracy because dictatorships can maintain their power by engaging in temporary redistribution to defuse potential challenges. However, as inequality gets even higher we will observe democracy. Even though the rich elite in a dictatorship would like to use redistribution to stay in power, current redistribution in the absence of promised future redistribution is not sufficient to stave off revolution. However, if the rich maintain their monopoly of power they cannot credibly promise such future redistribution and thus they have to give away their power - democratize - to avoid revolution.

So when do democratizations occur? One important factor would be increasing inequality. As we discussed in detail in chapter 2, most of the evidence that we have suggested that 19th century industrialization created rising inequality. This would be our basic explanation for why such societies democratized. However, as we develop our analysis many others factors will begin to come into this picture. There will be important roles for the form that the elite holds their wealth, there will be roles for the extent of globalization and the evolution of the international economy, and there will be a key role for the middle class. Before moving to these ideas however, in the next chapter we give the elite in a nondemocracy more instruments and allow them to maintain power by using repression rather than concessions. We shall see that introducing repression considerable enriches the empirical predictions of the model.

10 Appendix: Non-Markovian Equilibria¹

We now analyze our basic dynamic model of democratization without the restriction to Markovian strategies. More specifically, we look for subgame perfect equilibria. We will find that there exists a cutoff probability of state μ^H , $q^{**} < q^*$ such that when $q > q^{**}$, there will be redistribution without democratization which prevents a revolution. In contrast when $q < q^{**}$, the only equilibrium will feature the extension of the franchise when $\mu_t = \mu^H$.

First, note that if the poor initiate a revolution at time τ , then effectively the game ends with $V^p(R, \mu^H) = \mu_t \bar{y} / \lambda(1 - \beta)$. Therefore, in any subgame perfect equilibrium, $\sigma_t^p(N, \mu^H | \cdot, \cdot) = (\rho = 1)$ only if $V^p(R, \mu^H) > \bar{V}_t^p$ where \bar{V}_t^p is the payoff of the poor in the continuation game at time τ without a revolution.² This immediately implies that $\sigma_t^p(N, \mu^L | \cdot, \cdot) = (\rho = 0)$. Next, note that after $\phi_t = 1$, and ignoring revolution, the elite are down to their minimum payoff, since $\tau = \tau^p$ in all future periods. Therefore, $\sigma_t^p(N, \mu^H | \phi = 1, \cdot) = (\rho = 1)$ only if $V_t^p(R, \mu^H) > V_t^p(D)$. (6-15) ensures that this inequality never holds, thus in any subgame perfect equilibrium, $\sigma_t^p(N, \mu^H | \phi = 1, \cdot) = (\rho = 0)$ irrespective of the history of the game up to this point. So we have pinned down all of the strategies by the poor other than $\sigma_t^p(N, \mu^H | \phi = 0, \tau^r)$. Now consider this.

Let $\bar{V}_t^p(N, \mu^H | \phi = 0, \tau^r)$ be the continuation payoff of the poor, conditional on $\phi = 0$ and τ^r , when they play $\rho_t = 0$. Then, in any subgame perfect equilibrium, $\sigma_t^p(N, \mu^H | \phi = 0, \tau^r)$ will only put positive probability on $\rho = 1$ if $V^p(R, \mu^H) \geq \bar{V}_t^p(N, \mu^H | \phi = 0, \tau^r)$ and will play $\rho = 1$ with probability 1 if $V^p(R, \mu^H) > \bar{V}_t^p(N, \mu^H | \phi = 0, \tau^r)$.

Suppose $q < q^*$. Recall from Proposition 6.2 that in this case, there were no Markov Perfect Equilibria with redistribution and no democratization. Let $\tau^r(\mu_t)$ be the tax rate chosen by the elite in state μ_t at time τ . Consider the following candidate equilibrium strategy combination. For the elite: $\sigma_t^r(N, \mu^H) = (\phi_t = 0, \tau_t^r = \tau^p)$ and $\sigma_t^r(N, \mu^L) = (\phi_t = 0, \tau_t^r = \bar{\tau})$ where $\bar{\tau} \leq \tau^p$. For the poor, $\sigma_t^p(N, \mu_x | \phi_t = 0, \tau_t^r) = (\rho = 0)$ if $\tau^r(\mu_x) \geq \tau^p$ if

¹The material in this section is somewhat more advanced, and can be skipped without affecting the rest of the argument.

²We are now using σ_t instead of σ , which stands for σ conditional on the public history of the game up to time t . The public history includes all past actions (but not mixing probabilities when these are used).

$\mu_x = \mu^H$ and $\tau^r(\mu_x) \geq \bar{\tau}$ if $\mu_x = \mu^L$, for all $x \leq \tau$, and ($\rho = 1$) otherwise. Then, the payoffs in this candidate equilibrium are given by:

$$\bar{V}^i(N, \mu^H) = (1 - \tau^p)y^i + \tau^p\bar{y} - C(\tau^p)\bar{y} + \beta [q\bar{V}^i(N, \mu^H) + (1 - q)\bar{V}^i(N, \mu^L)] \quad (6-20)$$

$$\bar{V}^i(N, \mu^L) = (1 - \bar{\tau})y^i + \bar{\tau}\bar{y} - C(\bar{\tau})\bar{y} + \beta [q\bar{V}^i(N, \mu^H) + (1 - q)\bar{V}^i(N, \mu^L)] \quad (6-21)$$

for $i = p$ and r . Now define $\bar{\tau}$ such that $\bar{V}^p(N, \mu^H) = V^p(R)$. $\bar{\tau} < \tau^p$ exists by Assumption 2. Therefore, the above strategies are best response for the poor in all subgames. Next, we need to check whether they are best response for the elite. Clearly, if the elite reduce the tax rate in state (N, μ^H) , this will immediately cause a revolution, thus $\sigma_t^r(N, \mu^H) = (\phi_t = 0, \tau_t^r = \tau^p)$ is optimal conditional on the history up to time τ characterized by $\tau^r(\mu_x) \geq \tau^p$ if $\mu_x = \mu^H$ and $\tau^r(\mu_x) \geq \bar{\tau}$ if $\mu_x = \mu^L$, for all $x \leq \tau$. In contrast, if the elite deviate from $\sigma_t^r(N, \mu^L) = (\phi_t = 0, \tau_t^r = \bar{\tau})$ to $\sigma_t^r(N, \mu^L) = (\phi_t = 0, \tau_t^r = 0)$, this will not cause a revolution immediately. It will only do so when the state changes to (N, μ^H) . But in this case, the elite can play $\sigma_t^r(N, \mu^H) = (\phi_t = 1)$ and as we saw above, the best-response of the masses is always $\sigma_t^p(N, \mu^H | \phi = 1, \cdot) = (\rho = 0)$ irrespective of the history of the game up to this point. The payoff to the elite from following this deviant strategy starting in the state (N, μ^L) is:

$$V_d^r(N, \mu^L) = y^r + \beta [qV^r(D) + (1 - q)V_d^r(N, \mu^L)]$$

Therefore, the above candidate equilibrium strategy combination is a subgame perfect equilibrium if and only if $\bar{V}^r(N, \mu^L)$ given by (6-20) and (6-21) is greater than or equal to

$$V_d^r(N, \mu^L) = \frac{y^r + \beta q V^r(D)}{1 - \beta(1 - q)}.$$

It is straightforward that if $q = q^*$, $\bar{V}^r(N, \mu^L) > V_d^r(N, \mu^L)$ and at $q = 0$, $\bar{V}^r(N, \mu^L) < V_d^r(N, \mu^L)$. Also, $\bar{V}^r(N, \mu^L)$ falls faster in q than $V_d^r(N, \mu^L)$. So there exists q^{**} , such that for all $q < q^{**}$, $\bar{V}^r(N, \mu^L) < V_d^r(N, \mu^L)$, and there exists no equilibrium with redistribution and democratization.

Finally, when $q > q^*$, the Markov Perfect Equilibrium with redistribution and no democratization continues to be a subgame perfect equilibrium, and with a similar reasoning to the above, we can construct others which feature some redistribution both in

state $\mu_t = \mu^H$ and $\mu_t = \mu^L$, but all these equilibria have the same structure of keeping the poor just indifferent between revolution and no revolution in the state (N, μ^H) , thus give the same payoffs to the elite and the poor.

Figure 6.1: Game 1

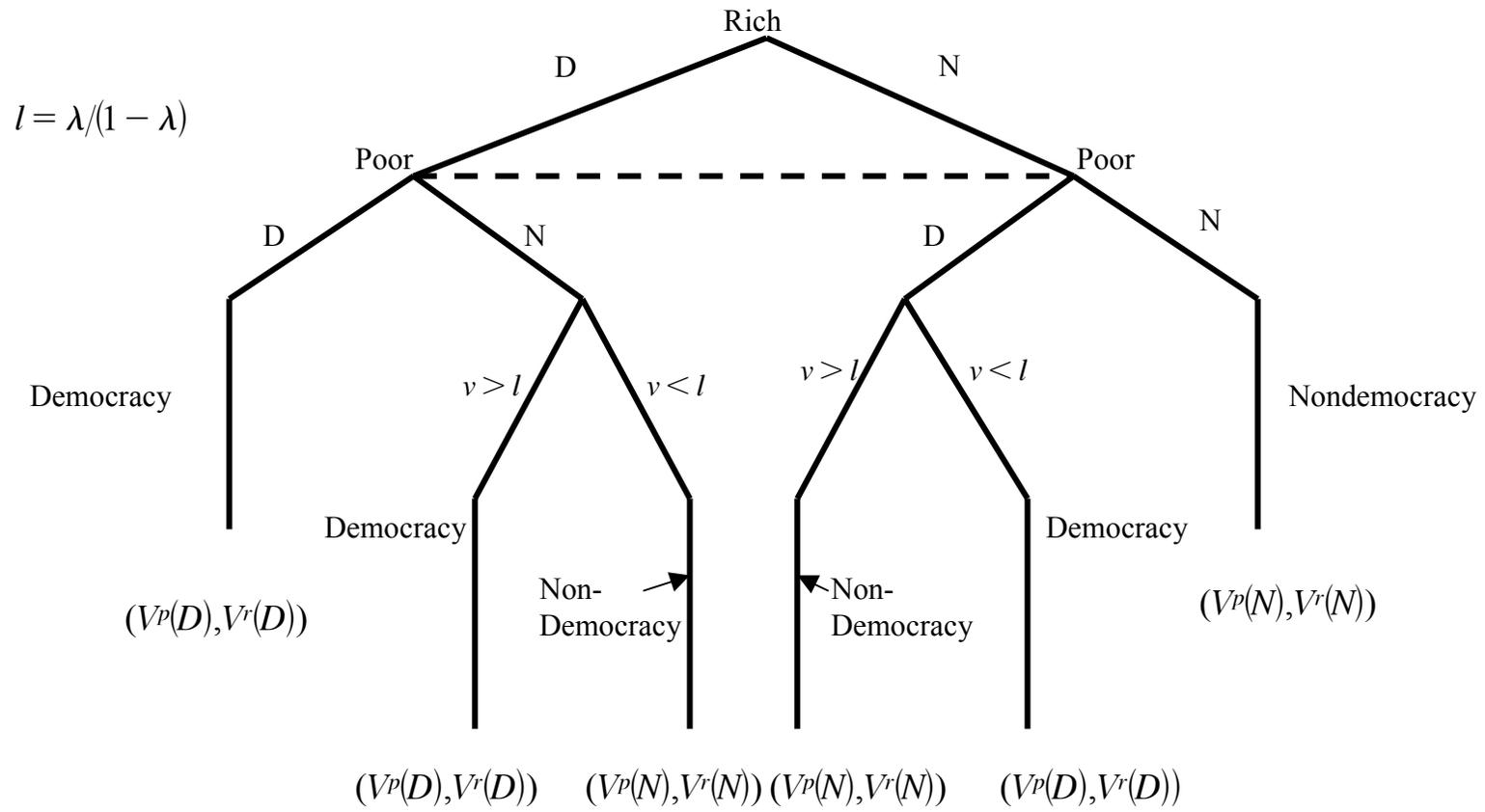


Figure 6.2. Commitment and Default

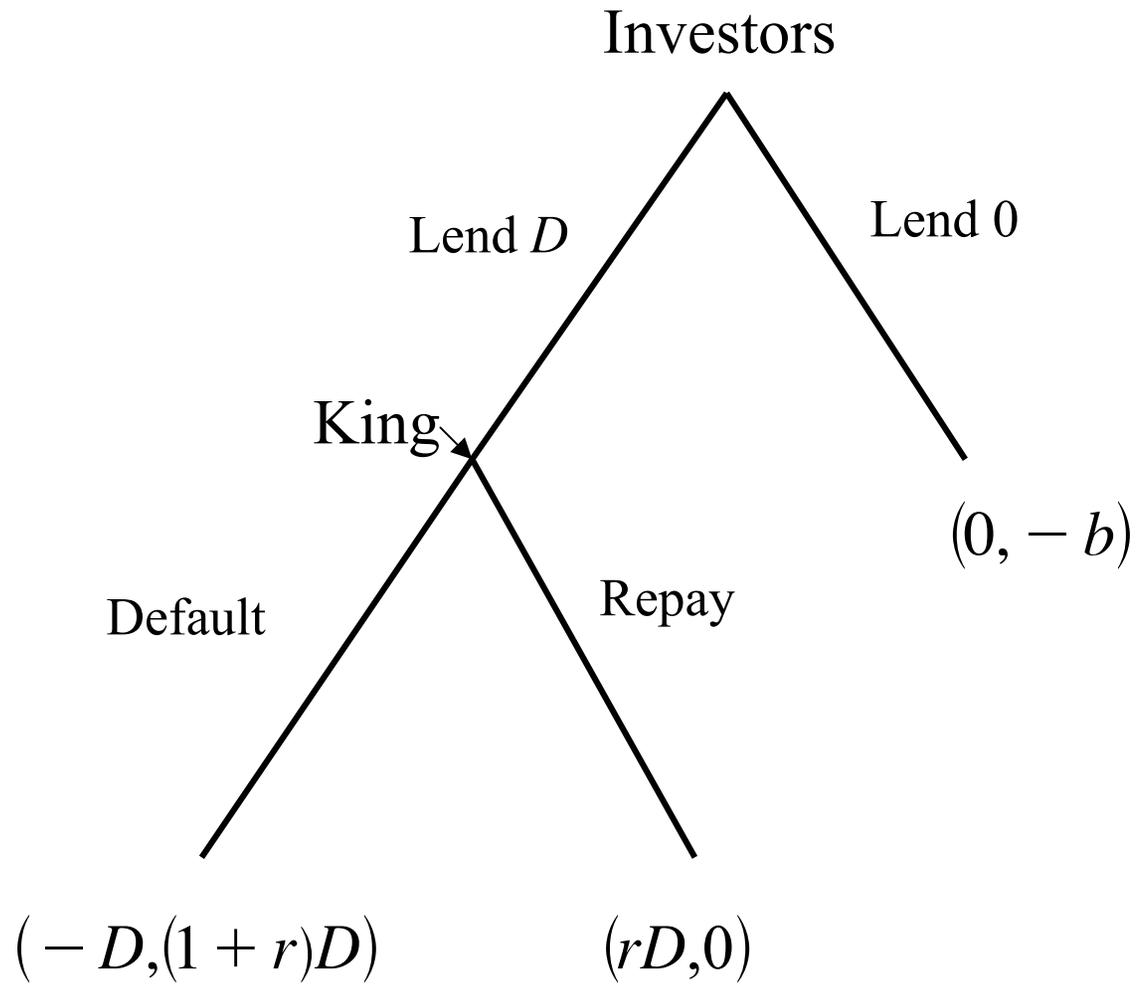


Figure 6.3. Institutional Change and Commitment

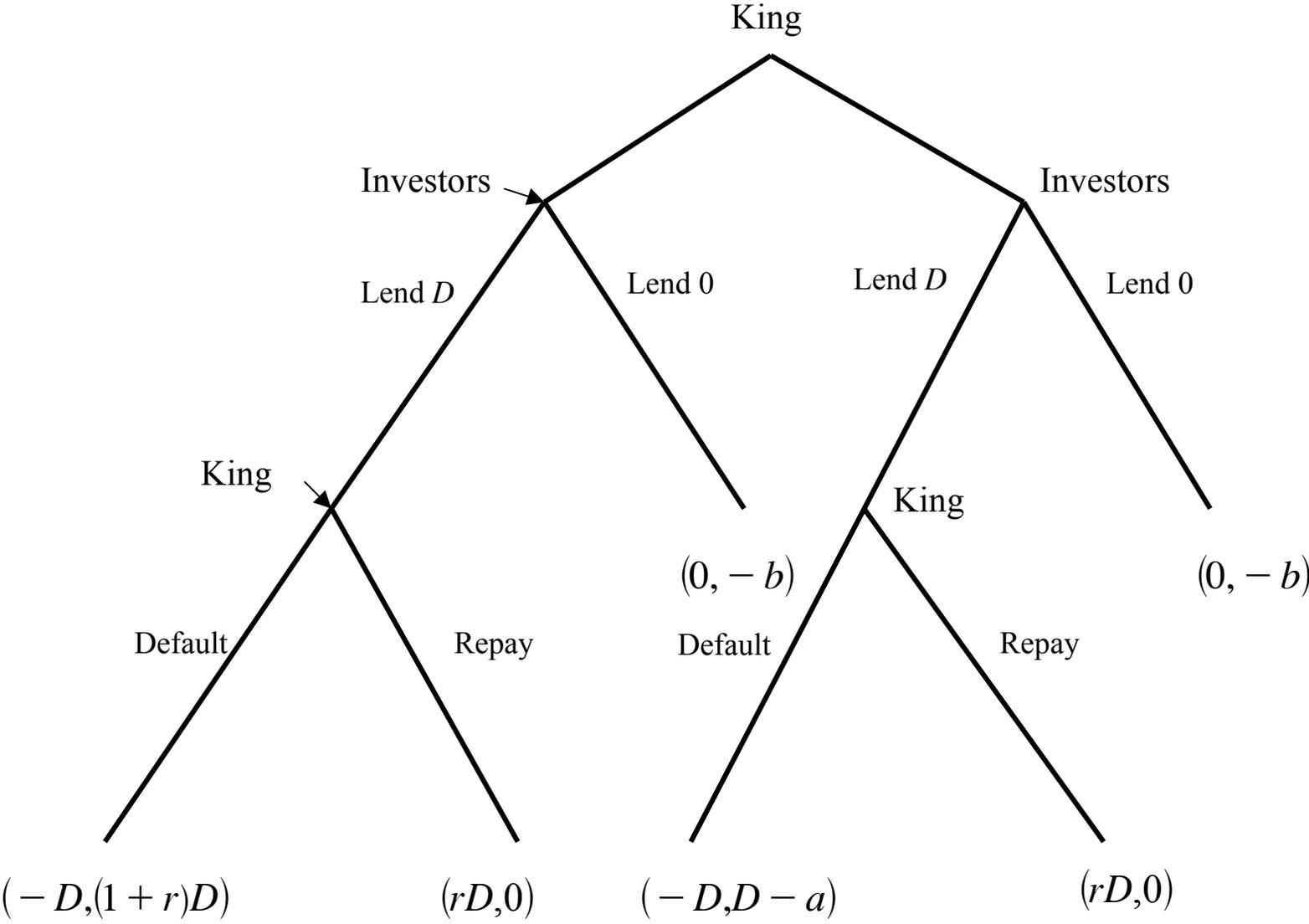


Figure 6.4: Game 3

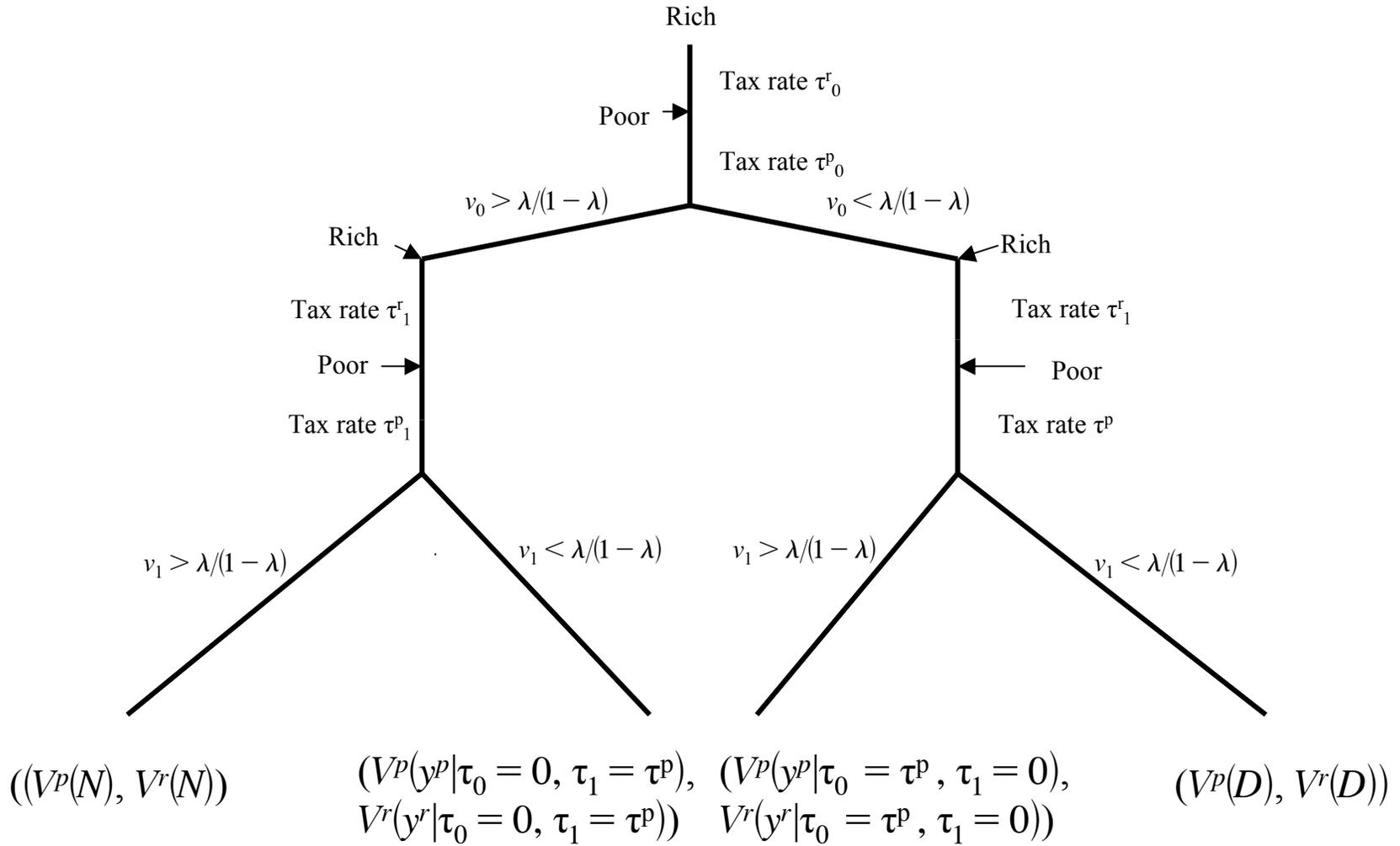


Figure 6.5: Game 4

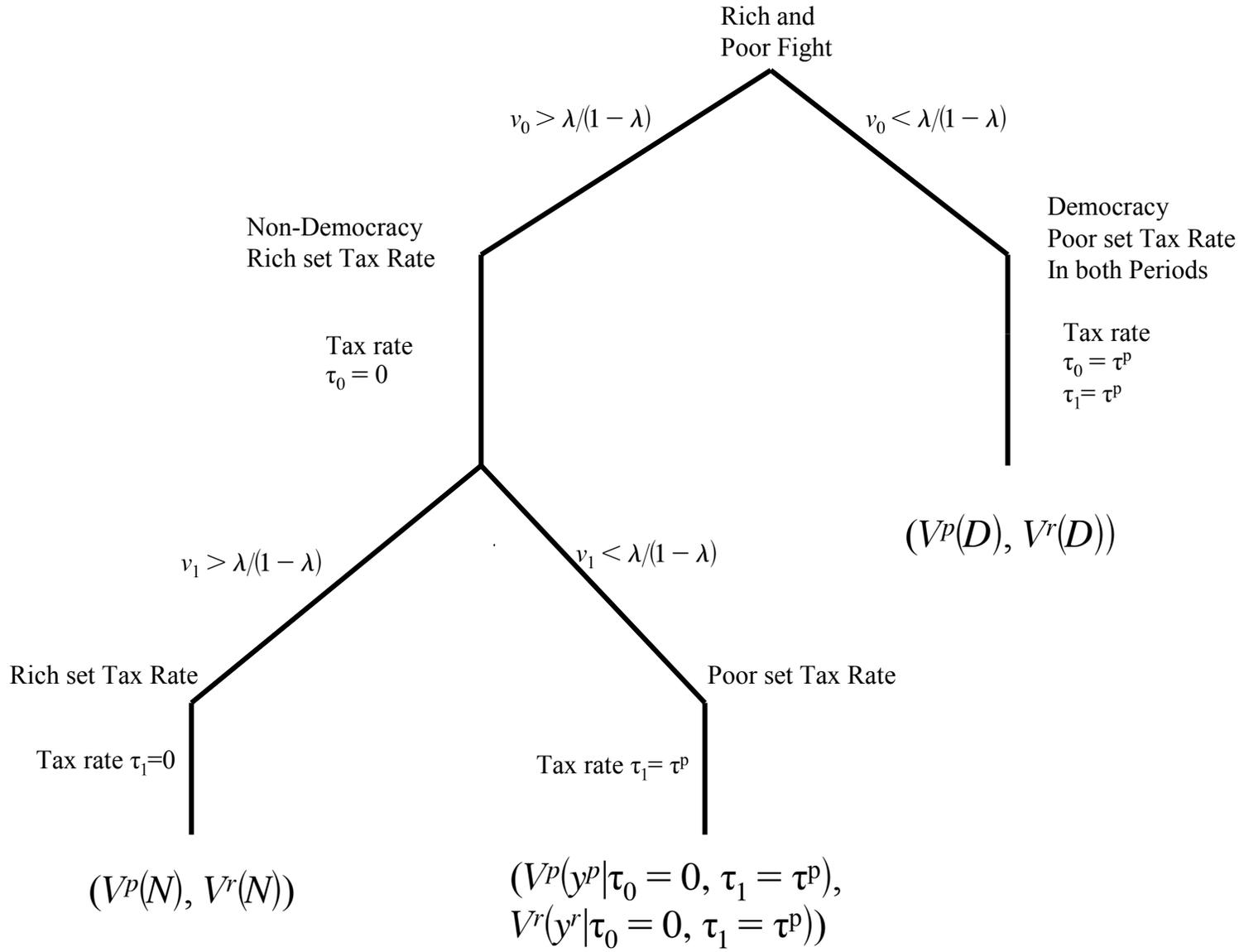


Figure 6.5: Game 4

