Political Origins of Dictatorship and Democracy. Chapter 7: Repression and Transition to Democracy

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This Version: January 2003.

Abstract

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1 Introduction

In the last chapter we studied the circumstances under which democracy would be created by a dictatorship. We viewed democracy as a method of avoiding social conflict and in the limit revolution. Our main focus was in examining why democracy would result rather than some other concession, particularly income redistribution. We have many real world examples where dictatorships responded to threats to their power by using income and asset redistribution to placate opposed groups, rather than giving away their political power. Moreover, rather than make any type of concession, dictatorships often respond with force to block political change. There are many examples of this. For example in Romania in December 1989, the Ceaucescu regime attempted to block democratization by using the military. This tactic backfired when the army decided to side with the demonstrators leaving only the secret police loyal to the regime. Similarly in Tiananmen square in June 1989 in China the Communist party used tanks to crush the Pro-democracy movement rather than make any type of concession. Another important example is in Indonesia in 1965.

A satisfactory theory of democratization is therefore going to necessitate understanding why democracy emerges when both other concessions and repression are potentially available. In this chapter we move towards such an understanding by introducing repression into our models of Chapter 6. Following the blueprint of the last chapter, we do this initially in a simple extensive form game. We then develop the full repeated game model. We then consider extensions by discussing alternative models of democracy, and models were repression might lead to revolution.

There are two contributions in this chapter which refine the analysis of the previous chapter. The first that this chapter introduces relates to the relationship between inequality and democratization. Recall that the analysis in Chapter 6 suggests that more unequal societies are more likely to democratize. However, there are many examples of highly unequal societies, like those in Central America, which are highly nondemocratic, and in fact, in many ways extreme examples of repressive dictatorships until very recently. The prediction that more unequal societies are more likely to democratize is not only empirically questionable, but could also be criticized theoretically for only looking at one side of the trade-off. Greater inequality increases the demand for democracy coming from the poor. But at the same time it increases the cost of democracy for the rich, who will have to pay considerably higher taxes. This latter consideration did not matter in the analysis of the last chapter, however, because the rich were for the most part "passive". Once we give the rich an option to use repression rather than democratize (or promise fiscal redistribution), this changes the relationship between inequality and democratization considerably. Now, when inequality is very high, democracy is very costly for the rich, and repression becomes attractive.

This extended model, therefore, implies a non-monotonic relationship between inequality and democratization. The most equal societies do not democratize because the poor already fare well and do not pose an effective revolutionary threat. The most unequal societies are also unlikely to democratize, because there the rich typically prefer repression to living under democracy, even though repression is costly for them. It is therefore societies with intermediate levels of inequality that experience social unrest and democratization.

The second main contribution is that, once we take repression into account, we show that the ability of the rich to manipulate institutions so as to maintain some power in a democracy may be crucial for the creation of democracy. In Chapter 6 we showed that if the rich have power in a democracy then the main effect of this was to make revolution more likely. However, once there is repression we shall show that, in situations where concessions are not credible, the rich may prefer to repress instead of democratize. They do this because democracy is very bad for them. In such a situation, increasing the power of the rich in a democracy makes it less threatening and may lead to a switch from repression to democratization. The model therefore predicts that in some circumstances the ability of the rich to manipulate democratic institutions, for example by writing a Constitution that favors themselves, may help to create democracy.

2 A Simple Model of Repression

In the extensive form game of Section 5 of Chapter 6, the rich could respond to the threat of revolution by either redistributing income or creating democracy. We now show that repression can be introduced into the game in a simple way, but some of the important implications of the framework will be modified. In particular, with a similar intuition to that of the effect of inequality on purely ideological democratizations, we will see that greater inequality may now make democratization less likely.

To analyze these issues, recall that we are working with a model where 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 we use the notation θ to parameterize inequality, in particular,

$$y^p = \frac{\theta \bar{y}}{\lambda} \text{ and } y^r = \frac{(1-\theta)\bar{y}}{1-\lambda}. \tag{7-1}$$

Agents care about their post-tax incomes, which are the same as in Chapter 6, except that now there can also be costs due to repression. In particular, we have

$$\hat{y}^i = (1-\tau)\, y^i + \Big(\tau - C(\tau) - \Delta^i(\omega)\Big)\, \bar{y}, \tag{7-2}$$

where $\Delta^i(\omega)$ is the cost due to repression for agent i, with $\omega = 0$ denoting no repression and $\omega = 1$ denoting repression. We assume that there are no costs if there is no repression, thus $\Delta^i(\omega = 0) = 0$. The relevant variable will be the value of $\Delta^i(\omega = 1)$ for the rich, $\Delta^r(\omega = 1) = \kappa$, which makes the effective cost of repression equal to $\kappa\bar{y}$, with the term $\bar{y}$ included as a normalization. Since the poor are not the ones that take the repression decision, without loss of any generality, we assume that $\Delta^p(\omega = 1) = 0$.

As with the normalization that we adopted for the cost of taxation, the assumption that the cost of repression is multiplied by $\bar{y}$ is motivated by the desire to make the decision to repress independent of the level of income. Later, in Chapter 11 when we discuss political development, we shall return to the question of the impact of the level of income on the decision to repress. However, we do not want at this stage to build into the model effects or mechanisms which we do not believe.

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

$$\left(\frac{\lambda-\theta}{\lambda}\right) = C'(\tau^p), \tag{7-3}$$

while the most preferred tax rate for the rich is $\tau^r = 0$.

Figure 7.1 draws the game tree for this game. Nature again moves first and determines whether the state is $S = L$ or H. We assume that if the rich choose to repress, this succeeds with certainty, and they remain in power and get to set the tax rate. Therefore, after the repression decision, the game tree ends with payoffs $(V^p(O), V^r(O \mid \kappa))$, where we use the letter O for reference to "oppression" (since R is already taken for revolution), and explicitly condition on κ to emphasize that the values for the rich depend on this cost. Since the rich maintain power and can set their most preferred tax rate, we have that

$$V^p(O) = y^p \text{ and } V^r(O \mid \kappa) = y^r - \kappa\bar{y}.$$

We assume that $\kappa < (1-\theta)/(1-\lambda)$ so that $y^r - \kappa\bar{y} > 0$. The rest of the game tree is identical to that in Figure 6.6. The rich could also decide to extend the franchise, or promise redistribution, and after this, the poor decide whether to undertake a revolution. Notice that the poor do not have an option to undertake a revolution after repression, since we are assuming that repression is effective (this assumption is relaxed below). If the rich promise redistribution at some rate, $\hat{\tau}$, just as in Figure 6.6, they are able to reset the tax with probability p.

Much of the analysis from Chapter 6 applies. The new feature is the repression decision, so the analysis will focus on the conditions under which the rich find it profitable to use repression rather than promise redistribution or democratization. Moreover, to simplify the analysis, we assume that democratization prevents revolution as well, or in other words:

$$\mu^H \leq \theta + \tau^p(\lambda - \theta) - \lambda C(\tau^p). \tag{7-4}$$

As before, the rich would like to prevent a revolution. Now they have three options:

1. Democratization, which gives them a payoff of

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

2. Promise redistribution at some tax rate $\hat{\tau}$, which gives them a payoff of

$$V^r(N, \hat{\tau}) = y^r + p\left[\hat{\tau}\left(\bar{y} - y^r\right) - C(\hat{\tau})\bar{y}\right],$$

where $\hat{\tau}$ is such that $V^p(N, \widehat{\tau}) = V^p(R, \mu^H) = \mu^H \bar{y}/\lambda$. But this option only works if the probability that the tax will not be reset is high enough, i.e., $p \geq p^*$, where p^* as defined in Chapter 6:

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

3. Use repression, which gives them the payoff of

$$V^r(O \mid \kappa) = y^r - \kappa \bar{y}.$$

Which of these three options will they choose? First, note that when $p \geq p^*$, they prefer to promise redistribution to democratization, therefore the contest is between promised redistribution and repression, i.e. between $V^r(N, \widehat{\tau})$ and $V^r(O \mid \kappa)$. Next, when $p < p^*$, they do not have the option to promise redistribution, since this would trigger a revolution (because the promise of redistribution is not sufficient to stave off the revolution). Hence, the contest is between $V^r(D)$ and $V^r(O \mid \kappa)$.

Now bearing this in mind, we can define two threshold levels for the cost of repression, $\hat{\kappa}$ and $\tilde{\kappa}$ such that the rich are indifferent between their various options at these threshold levels. More specifically, let $\hat{\kappa}$ be such that

$$V^r(O \mid \hat{\kappa}) = V^r(N, \widehat{\tau}),$$

or in other words,

$$\hat{\kappa} = p\left[\widehat{\tau}\left(\frac{\lambda - \theta}{1 - \lambda}\right) + C(\widehat{\tau})\right]. \tag{7-5}$$

Therefore, at $\hat{\kappa}$, the rich are indifferent between redistribution and repression. As a result, for all $\kappa < \hat{\kappa}$, they prefer repression to promising redistribution. This implies that one set of parameter configurations where repression will emerge is when $p \geq p^*$ and $\kappa < \hat{\kappa}$

Next, define the other threshold such that

$$V^r(O \mid \tilde{\kappa}) = V^r(D),$$

or more explicitly,

$$\tilde{\kappa} = \left[\tau^p\left(\frac{\lambda - \theta}{1 - \lambda}\right) + C(\tau^p)\right]. \tag{7-6}$$

At $\tilde{\kappa}$, the rich are indifferent between democratization and repression. As a result, for all $\kappa < \tilde{\kappa}$, they prefer repression to democratization. Therefore, another set of parameter values where repression will be an equilibrium outcome is when $p < p^*$ and $\kappa < \tilde{\kappa}$.

Notice that both threshold levels $\hat{\kappa}$ and $\tilde{\kappa}$ are increasing in inequality, i.e., decreasing in θ. For example, totally differentiating (7-6), we have

$$\begin{aligned}\frac{d\tilde{\kappa}}{d\theta} &= -\frac{\tau^p}{1-\lambda} + \left[\left(\frac{\lambda-\theta}{1-\lambda}\right) + C'(\tau^p)\right]\frac{d\tau^p}{d\theta} \\ &= -\frac{\tau^p}{1-\lambda} + \frac{C'(\tau^p)}{1-\lambda}\frac{d\tau^p}{d\theta} < 0,\end{aligned}$$

where the second line uses (7-3) to simplify the term within the square brackets, and the fact that $d\tau^p/d\theta < 0$. That greater inequality increases $\hat{\kappa}$ and $\tilde{\kappa}$ is intuitive. Greater inequality makes redistribution more costly for the rich, and all else equal, makes repression more attractive relative to democracy and relative to the promise of redistribution.

Given this discussion, we can now state:

Proposition 7.1: Assume that (7-4) holds. Then we have 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 $\mu^H > \theta$, $p \geq p^*$ and $\kappa > \hat{\kappa}$, then in the state $S = H$, the rich prevent democratization by redistributing (promising to redistribute) by setting the tax rate $\hat{\tau}$.
- If $\mu^H > \theta$, $p < p^*$ and $\kappa > \tilde{\kappa}$, then democratization happens as a credible commitment to future redistribution by the rich.
- If $\mu^H > \theta$, $p < p^*$ and $\kappa < \tilde{\kappa}$ or if $p \geq p^*$ and $\kappa < \hat{\kappa}$, then in the state $S = H$ the rich use repression to prevent revolution.

This proposition immediately shows that repression will arise as an equilibrium phenomenon as long as it is not too costly for the rich. Clearly, the results of Proposition 6.1 are a special case of those of Proposition 7.1 as $\kappa \to \infty$.

Most important, however, this proposition also shows that the relationship between inequality and democratization is now more complicated than that in Chapter 6. Recall that in Chapter 6, greater inequality led to a higher likelihood of democratization (as long as it did not violate the equivalent of (7-4), thus leading to a revolution along the equilibrium path). Now, for very low levels of inequality, democratization never occurs, since the threat of revolution is not binding. Therefore, an increase in inequality starting from very low levels makes democratization more likely as in Proposition 6.1. However, when inequality is very high, $\hat{\kappa}$ and $\tilde{\kappa}$ are relatively low, and the rich will prefer repression rather than suffer high levels of redistribution. Therefore, democratization only occurs for intermediate levels of inequality.

The important theoretical point here is that the poor prefer democracy to nondemocracy because it is more redistributive, and this preference becomes stronger as inequality increases. By the same token, the rich prefer nondemocracy, and they do so more intensely when inequality is higher and they expect more redistribution away from them in democracy. In the analysis of Chapter 6, only the preferences of the poor mattered, since democracy emerged when promises of redistribution under the existing regime were insufficient for the poor. In a highly unequal society, the revolution was attractive enough for the poor that democracy had to emerge to dissuade them from pursuing the revolution. Now, the rich also have an option to use extra-legal means, in particular, repression. The higher is inequality, the more attractive nondemocracy is relative to democracy for the rich. Therefore, in a highly unequal society, the rich will use their resources to garner extra-legal force and prevent revolution without democratizing.

Returning to the analysis of the relationship between inequality and repression, for a given cost of repression, κ, we can define a critical threshold of inequality, $\tilde{\theta}(\kappa)$, such that

$$\kappa = \left[\tau^p \left(\frac{\lambda - \tilde{\theta}(\kappa)}{1-\lambda}\right) + C(\tau^p)\right],$$

or

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

Then democratization requires that inequality is less than this threshold, or $\theta \geq \tilde{\theta}(\kappa)$.

Recall also from the previous chapter that democratization also requires that the society to be sufficiently unequal so that temporary redistribution is not enough to stave off the revolutionary threat, in particular, $\theta < \theta^*(p)$ where

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

To compare the results of this discussion to those in the previous chapter, especially Corollary 6.1, we now state:

Corollary 7.1: There is now a non-monotonic relationship between inequality and democratization. In particular, when $\theta > \theta^*(p)$, the society remains nondemocratic and there is temporary redistribution; when $\theta < \tilde{\theta}(\kappa)$, the society remains nondemocratic with repression. Democratization occurs when $\theta \in \left(\tilde{\theta}(\kappa), \theta^*(p)\right)$.

The results in Propositions 7.1, especially those in Corollary 7.1, may help us understand the comparative patterns of democratization, already discussed briefly in Chapter 2. While all European countries democratized by the early twentieth century, in parts of Latin America, such as those in Paraguay, Nicaragua and El Salvador, dictatorial regimes survived practically the whole century by using repression to avoid democratizations. This was also the case in African countries such as Zimbabwe (Rhodesia) until 1980 and South Africa until 1991. In our model this is because the extent of inequality in these societies made democratization very costly to the elites, leading them to prefer repression. It may also be the case that repression was relatively cheap in these countries, for example in Central America because the disenfranchised were Amerindians who were ethnically distinct from the rich elite. Similarly, in Rhodesia and South Africa the enfranchised were white while the disenfranchised and repressed were black Africans.

3 A Dynamic Model of Democratization and Repression

The analysis in the previous section, like the corresponding analysis in Chapter 6, contains most of the insights we want to communicate, but the game was a reduced form, especially with respect to the possibility that the rich can reset the tax. We saw in Chapter 6 that the important results follow more naturally in an infinite-horizon model, albeit with some more analysis. In this section, we incorporate repression into that infinite-horizon framework.

The basic set-up and notation are identical to those in the previous chapter, and as in the previous section, we allow dictatorships to remain in power by using repression. As a result, utilities are now given by

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

where, as in the previous section, incomes are given by (7-1), and $\Delta^i(\omega)$ is the cost due to repression for agent i, with $\omega = 0$ denoting no repression and $\omega = 1$ denoting repression, with $\Delta^r(\omega = 1) = \kappa$, and $\Delta^p(\omega = 1) = 0$.

The timing of moves in the stage game is now as follows.

- The state μ is revealed.

- The elite decide whether or not to use repression, $\omega \in \{0, 1\}$ with $\omega = 0$ denoting or repression.

- The elite decide whether or not to extend the franchise, $\phi \in \{0, 1\}$. If they decide not to extend the franchise or use repression, they set the tax rate.

- If $\omega = 0$, the poor decide whether or not to initiate a revolution, $\rho \in \{0, 1\}$. If $\omega = 1$, the poor cannot undertake a 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).

We again restrict attention to pure strategy Markov Perfect Equilibria of this game where the state can be described exactly as in Chapter 6. In addition to the notation for strategies introduced in the last chapter we allow for a decision variable $\omega \in \{0, 1\}$ where $\omega = 1$ means that the rich have decided to repress the opposition while $\omega = 0$ means no repression. By analogy to before a (pure strategy Markov Perfect) equilibrium is a strategy combination, $\{\sigma^r(P, \mu), \sigma^p(P, \mu|\omega, \phi, \tau^r)\}$ such that σ^p and σ^r are best-responses to each other for all μ and P. Now, $\sigma^r(P, \mu)$ includes the decision to repress, ω, as well, and the strategy of the poor σ^p is conditioned on this decision, since the poor can only undertaken revolution if $\omega = 0$, i.e., if the rich have decided not to repress.

We can again characterize the equilibria of this game by writing the appropriate Bellman equations as in the similar analysis of the previous chapter. In particular, the value revolution to poor agent in the state μ is given by:

$$V^p(R, \mu) = \frac{\mu \bar{y}}{\lambda(1-\beta)}, \tag{7-7}$$

since after revolution a fraction $1-\mu$ of the productive capacity of the economy is destroyed, and from then on, the λ poor agents share all income in the economy. As in the previous chapter, we assume that μ changes between two values: μ^H and $\mu^L = 0$, with $\Pr(\mu_t = \mu^H) = q$.

The values to the poor and the rich agents in democracy are given by

$$V^p(D) = \frac{y^p + \tau^p(\bar{y} - y^p) - C(\tau^p)\bar{y}}{1-\beta} \text{ and } V^r(D) = \frac{y^r + \tau^p(\bar{y} - y^r) - C(\tau^p)\bar{y}}{1-\beta}, \tag{7-8}$$

where τ^p is the most preferred tax rate of poor agents, given by (7-3).

Also the values for poor and rich agents when the rich promise redistribution at the tax rate $\hat{\tau}$ starting in the state μ^H, while holding on to power are:

$$\begin{aligned} V^p(N, \mu^H, \hat{\tau}) &= \frac{y^p + (1-\beta(1-q))\left(\hat{\tau}(\bar{y} - y^p) - C(\hat{\tau})\bar{y}\right)}{1-\beta} \text{ and} \\ V^r(N, \mu^H, \hat{\tau}) &= \frac{y^r + (1-\beta(1-q))\left(\hat{\tau}(\bar{y} - y^r) - C(\hat{\tau})\bar{y}\right)}{1-\beta}, \end{aligned}$$

where $\hat{\tau}$ is chosen such that $V^p(N, \mu^H, \hat{\tau}) = V^p(R, \mu^H)$, so that the poor are indifferent between living under promised redistribution and undertaking a revolution.

Finally, let $V^i(O, \mu)$ be the value function of agent $i = p, r$ in state μ when the rich pursue the strategy of repression (where, using the stationarity of the game, we are limiting our attention to strategy of always repressing, rather than more complicated strategies of repressing sometimes and using redistribution some other time). By standard arguments, these values are:

$$\begin{aligned} V^i(O, \mu^H) &= y^i - \Delta^i(\omega)\bar{y} + \beta\left[(1-q)V^i(O, \mu^L) + qV^i(O, \mu^H)\right] \\ V^i(O, \mu^L) &= y^i + \beta\left[(1-q)V^i(O, \mu^L) + qV^i(O, \mu^H)\right], \end{aligned}$$

which take into account that the cost of repression will only be incurred in the state where the revolution threat is active, i.e., when $\mu = \mu^H$.

Together with the definition for $\Delta^i(\omega)$, these Bellman equations can be solved simultaneously to derive the vales to the rich and poor from repression,

$$V^r(O, \mu^H \mid \kappa) = \frac{y^r - (1 - \beta(1 - q))\kappa\bar{y}}{1 - \beta} \text{ and } V^p(O, \mu^H) = \frac{y^p}{1 - \beta},$$

where we condition the value to the rich explicitly on κ to emphasize the importance of the cost of repression, and to simplify notation when we define threshold values below.

Ignoring repression for a second, recall from Proposition 6.2 that when $q < q^*$, the rich are forced to extend the franchise and democratize, whereas when $q \geq q^*$, they can prevent revolution by temporary redistribution, and they in fact prefer to do so rather than democratize, where q^* is, as in Chapter 6, defined by:

$$V^p(N, \mu^H, \hat{\tau} = \tau^p | q^*) = V^p(R, \mu^H). \tag{7-9}$$

Therefore, the relevant options (payoffs for the rich) to compare to repression are: democratization, i.e., $V^r(D)$ when $q < q^*$; and $V^r(N, \mu^H, \hat{\tau})$ when $q \geq q^*$. Moreover, to simplify the discussion, let us impose that $V^p(D) \geq V^p(R, \mu^H)$, so that democratization prevents revolution, or more explicitly:

$$\theta + \tau^p(\lambda - \theta) - \lambda C(\tau^p) \geq \mu^H. \tag{7-10}$$

As in the simple extensive form game of the previous section, we will now determine two threshold values for the cost of repression, this time called κ^* and $\bar{\kappa}$, such that the rich are indifferent between their various options at these threshold levels. More specifically, let κ^* be such that the rich are indifferent between promising redistribution at the tax rate $\hat{\tau}$ and repression:

$$V^r(O \mid \kappa^*) = V^r(N, \mu^H, \hat{\tau}).$$

This equality implies that

$$\kappa^* = \hat{\tau}\left(\frac{\lambda - \theta}{1 - \lambda}\right) + C(\hat{\tau})$$

Similarly, let $\bar{\kappa}$ be such that at this cost of repression, the rich are indifferent between democratization and repression, i.e.,

$$V^r(O \mid \bar{\kappa}) = V^r(D),$$

which implies that

$$\bar{\kappa} = \frac{\tau^p \left(\frac{\lambda-\theta}{1-\lambda}\right) + C(\tau^p)}{1-\beta(1-q)}$$

Next recall that the relevant option is temporary redistribution when $q \geq q^*$, and democratization when $q < q^*$. Therefore, in addition to Proposition 6.2, we have that the rich will prefer repression when $q \geq q^*$ and $\kappa < \kappa^*$, and also when $q < q^*$ and $\kappa < \bar{\kappa}$. Therefore, we have:

Proposition 7.2:

- If $\theta \geq \mu^H$, there is never any threat of revolution, the rich never redistribute and the society remains nondemocratic.
- If $\theta < \mu^H$, for all $q \neq q^*$ where q^* is defined by (7-9), there exists a unique pure strategy Markov Perfect Equilibrium such that:

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

Democracy arises only if $q < q^*$ *and* if repression is relatively costly, i.e., $\kappa \geq \bar{\kappa}$. Notice that this critical threshold for the cost of repression, $\bar{\kappa}$, is increasing in inequality (decreasing in θ), more specifically, again using the first-order condition determining τ^p, (7-3), as we did in obtaining equation (7-5), we have that:

$$\frac{d\bar{\kappa}}{d\theta} = \frac{-\tau^p + C(\tau^p)\, d\tau^p/d\theta}{(1-\beta(1-q))(1-\lambda)} < 0$$

Intuitively, when inequality is higher, democracy is more redistributive, i.e., τ^p is higher, and hence more costly to the rich. They are therefore more likely to use repression.

As a result, and as in the simpler game of repression of the previous section, democracy emerges as an equilibrium outcome only in societies with intermediate levels of inequality. In very equal or very unequal societies, democracy does not arise as an equilibrium phenomenon. In very equal societies, there is little incentive for the disenfranchised to contest power and the rich do not have to make concessions, particularly democracy. In very unequal societies the rich cannot use redistribution to hang onto power, but since democracy is very bad for the rich they use repression rather than having to relinquish power. It therefore tends to be in societies with intermediate levels of inequality that democracy emerges. Here inequality is sufficiently high for challenges to the political status quo to emerge, but not high enough that the elite find repression attractive.

4 Alternative Assumptions about Democracy

Let us now return to the class of models whether we can talk about various different types of democracies, giving different amounts of power to the poor. Recall from our discussion in Chapter 4 that either because of differences in the ideological sensitivities of different groups of voters or because of differences in their abilities to lobby or perhaps most important, because rich segments of society might capture the agendas of the major political parties, democracy may deviate from maximizing the utility of the median voter, or in our two-class framework, the utility of the most numerous group.

More specifically, recall that in a fairly generic model of democratic politics, 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:

$$\max_{\tau} \chi\lambda\left(\left(1-\tau\right)y^p+\left(\tau-C\left(\tau\right)\right)\bar{y}\right)+\left(1-\chi\right)\left(1-\lambda\right)\left(\left(1-\tau\right)y^r+\left(\tau-C\left(\tau\right)\right)\bar{y}\right). \quad \text{(7-11)}$$

Let the solution to this problem be $\tau\left(\chi\right)$, 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 $\tau\left(\chi=1\right)=\tau^p$. The most important feature for our present purposes is that

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

that is, as the power of the poor in democracy declines, so does the equilibrium tax rate and the degree to which a democracy redistributes income to the poor. The important implication of this model and the analysis of Chapter 6 was that as χ decreases, the power of the poor in democratic politics declines, and the value they obtain in democracy is lower. Here, as discussed before, what matters is not only the value of democracy to the poor, but also to the rich. So note that we now have

$$\frac{dV^p(D)}{d\chi} > 0 \text{ and } \frac{dV^r(D)}{d\chi} < 0. \tag{7-12}$$

The values of revolution and repression to the rich and the poor are not affected by this modification in the modeling of democratic politics.

To study some of the implications of this model let us return to the simple static model of section 2 of the chapter. Note first that the trade-off between repression and temporary redistribution when $p \geq p^*$ is not altered by this new model of democracy. Therefore we can concentrate on investigating the implications of χ for $\tilde{\kappa}$, the critical level of the cost of repression at which the rich are just indifferent between repression and democracy.

Now recalling that the critical threshold for the cost of repression, $\tilde{\kappa}(\chi)$, which we now index by χ, is defined such that

$$V^r(O \mid \tilde{\kappa}) = V^r(D),$$

we have that

$$\tilde{\kappa}(\chi) = \left[\tau(\chi)\left(\frac{\lambda-\theta}{1-\lambda}\right) + C(\tau(\chi))\right], \tag{7-13}$$

which is similar to (7-6) above, except that the equilibrium tax rate resulting from political competition with variable political power, $\tau(\chi)$, replaces the most preferred tax rate of the poor, $\tau(\chi)$. Notice that

$$\begin{aligned}\frac{d\tilde{\kappa}(\chi)}{d\chi} &= \left[\left(\frac{\lambda-\theta}{1-\lambda}\right) + C'(\tau(\chi))\right]\frac{d\tau(\chi)}{d\chi} \\ &= \chi\left(\frac{1-\theta}{1-\lambda} - \frac{\theta}{\lambda}\right)\frac{d\tau(\chi)}{d\chi}\end{aligned}$$

where the second line uses the first-order condition for the determination of $\tau(\chi)$, (**??**). Since $\frac{1-\theta}{1-\lambda} - \frac{\theta}{\lambda} > 0$ by the fact that the rich have higher incomes than the poor, and that $d\tau(\chi)/d\chi > 0$, we have that $d\tilde{\kappa}(\chi)/d\chi > 0$. This implies that the relationship between the political power of the poor and the circumstances under which democratization occurs is now different. On the one hand, greater political power for the poor (higher χ) makes democracy more redistributive, and therefore more attractive for the poor (that is, what equation (7-12) states). This makes it easier to stave off a revolution. On the other hand, greater power for the poor makes repression more attractive for the rich since it makes democracy more redistributive. Therefore the relationship between the political power of the poor in democracy and likelihood of democratization is also non-monotonic, which again contrasts with the results in Chapter 6.

To summarize this discussion:

Proposition 7.3: In the model with variable power, an increase in χ starting from low values makes (7-10) more likely to hold, and therefore makes equilibrium revolution less likely and democratization more likely. Further increases in χ, however, make democracy more redistributive, repression increasingly attractive for the rich, and democracy less likely.

This proposition contrasts with Proposition 6.3 for the previous chapter where the only effect of changes in the power of the poor in democracy was to affect whether the condition for democracy to be preferable to revolution for the poor, (7-10), held or not. Now, it has an additional effect of making repression more attractive for the rich, and for χ sufficiently large, this effect might dominate, and make democracy less likely.

There are many interesting examples which suggest the importance of Proposition 7.3 For example, the inability of the rich to compete successfully in democratic politics often leads to coups. For example, the inability of Conservative parties to compete with the Radicals in Argentina after the implementation of the Saenz Peña Law appears to be one of the factors behind the coup in 1930. Traditional elites were willing to grant full democracy, partially because they thought they would command a great deal of power under the new institutions. The failure of Conservative parties then shows that χ was greater than had been thought at the time of democratization. In contrast, traditional political elites in Colombia have very successfully manipulated political institutions to sustain their power, even after full democracy emerged in 1936. In particular, by structuring the electoral rules in a way which discouraged entry by third parties, particularly socialists, they were able to keep dissident factions within the parties and limit demands for radical redistributive policies (see Mazzuca and Robinson, 2002). As we noted earlier, other factors facilitated this strategy in Colombia, particularly the fact that the distribution of land was more egalitarian than in other Latin American countries and there was thus a substantial middle class with much less interest in redistribution (see Bergquist, 2002 on this issue).

5 Manipulating Democracy

The results of this section have particularly interesting implications for the manipulation of democracy by the rich. We saw in Chapter 6 that the rich would like to manipulate democracy so as to minimize the losses from redistributive taxation, subject to the constraint that democracy was sufficiently redistributive to avoid revolution. However, in this previous analysis the ability of the rich to manipulate democracy never influenced whether or not democracy was created. Once repression becomes available as a strategy to the rich then allowing the rich to manipulate democracy can induce democratization in situations where when $\chi = 1$ they would have preferred repression. Imagine for example that $p < p^*$ and $\kappa < \tilde{\kappa}(\chi = 1)$ so that the rich cannot stay in power by using temporary redistribution and that repression is sufficiently cheap to be attractive when the tax rate in democracy is set by the median voter (recall that $\tau(\chi = 1) = \tau^p$). Let $V^i(D \mid \chi)$ now denote the value to agent $i = p, r$ of democracy where we specifically acknowledge the dependence of this value on the power parameter χ. Now we can define a χ^* such that, $V^p(D \mid \chi^*) = V^p(R, \mu^H)$, or,

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

Here, χ^* is the level of power for the poor such that for all $\chi < \chi^*$ the rich have so much power in democracy that it redistributes little and the poor prefer a revolution. The threat of revolution clearly imposes a constraint on the ability of elites to manipulate democracy. If they give themselves too much power (reducing χ a lot) they may precipitate a revolution. Finally, since $\chi^* < 1$ we have that $\tilde{\kappa}(\chi = \chi^*) < \tilde{\kappa}(\chi = 1)$. Thus we have the following result.

Proposition 7.4: In the model with variable power, if $\kappa \in (\tilde{\kappa}(\chi = \chi^*), \tilde{\kappa}(\chi = 1))$ then the ability of the rich to manipulate democracy, for example by the design of democratic institutions, by the capture of democratic parties, or by organizing effective lobbies, reduces χ and by making democracy less redistributive can induce democratization where otherwise repression would have occurred.

A fascinating example of an apparently successful manipulation of democracy is Pinochet's 1989 Constitution. Pinochet lost a plebiscite which he hoped would further extend the military government. He was faced with the decision about whether to actually democratize or instead ignore the results of the vote and stay in power by using force. In the end he decided that democracy was the better option but his preferences were clearly influenced by his success at 'designing democracy.' In particular, he managed to write into the electoral rules a systemic gerrymander that over represented Conservative groups (see Londregan, 2000), in our model this reduces χ and makes repression less attractive.

Another potentially important example is due to Rokkan (1970) (see also the extension of his ideas by Boix, 1999) who argued that proportional representation was introduced in many Western European countries at the time of mass democratization by conservative parties trying to protect their power. In our framework, if Rokkan is right, then this switch in electoral rules may have played an important role in preserving democracy in such countries as Sweden, Belgium and Norway.

The results in this section also throw some interesting light on the claims made in the comparative politics literature about how political elites try to 'manage' transitions (e.g. Linz and Stepan, 1997). For example, it is often argued that because the dictatorship in Argentina collapsed after the Falkland's War in 1983, it had little ability to influence the design of democratic institutions. On the other hand, because the Brazilian dictatorship managed to organize a relatively orderly transition to democracy in 1985 it was able to significantly influence the form of political institutions and the outcomes in the nascent democracy. The typical claim in the political science literature is that this suggests that democracy is more stable in Argentina than Brazil. Our analysis suggests the opposite.

6 Equilibrium Revolutions

We have so far assumed that repression works for sure and prevents the threat of revolution. History is full of heavy-handed repression strengthening the threat of revolution, and ultimately leading to revolution or significant disruption. In this section, we briefly discuss the possibility that repression works stochastically, and in particular, assume that following repression, the poor may actually revolt with probability r. Thus we allow repression to fail. To do this we again develop the simple model of section 2 rather than the full dynamic model. The game tree in Figure 7.2 grows this extended game. This modification, naturally, does not affect the payoffs from democracy and nondemocracy without repression, but changes the payoffs from repression. In particular, the value functions from repression are now given by

$$V^p(O) = (1-r)\, y^p + r\frac{\mu^H \bar{y}}{\lambda} \text{ and } V^r(O \mid \kappa) = (1-r)\,(y^r - \kappa \bar{y})\,.$$

that is, with probability r, repression in the state $\mu = \mu^H$ fails and there will be revolution. In this case both parties receive their payoffs from revolution.

This changes the cutoff values for the cost of repression in an obvious way. More specifically,

$$\hat{\kappa}(r) = \frac{1}{1-r}\left[p\left(\hat{\tau}\left(\frac{\lambda-\theta}{1-\lambda}\right) + C(\hat{\tau})\right) - r\left(\frac{1-\theta}{1-\lambda}\right)\right]. \tag{7-14}$$

and

$$\tilde{\kappa}(r) = \frac{1}{1-r}\left[\left(\tau^p\left(\frac{\lambda-\theta}{1-\lambda}\right) + C(\tau^p)\right) - r\left(\frac{1-\theta}{1-\lambda}\right)\right]. \tag{7-15}$$

where we index the threshold values by r. Clearly, $\hat{\kappa}(r) < \hat{\kappa}$ and $\tilde{\kappa}(r) < \tilde{\kappa}$ where $\hat{\kappa}$ and $\tilde{\kappa}$ are defined by (7-5) and (7-6). When there is the possibility that repression will fail, it has to be even cheaper for it to be optimal for the rich.

The fact that these cut-off values depend on the probability that repression will fail does not radically change the analysis however. In particular, we can characterize the equilibria in this game with the following Proposition which is very similar to Proposition

7.1. The main difference is that in the cases where the rich choose to repress there is a revolution with probability r.

Proposition 7.5: Assume that (7-4) holds. Then we have 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 $\mu^H > \theta$, $p \geq p^*$ and $\kappa > \hat{\kappa}(r)$, then in the state $S = H$, the rich prevent democratization by redistributing (promising to redistribute) by setting the tax rate $\hat{\tau}$.
- If $\mu^H > \theta$, $p < p^*$ and $\kappa > \tilde{\kappa}(r)$, then democratization happens as a credible commitment to future redistribution by the rich.
- If $\mu^H > \theta$, $p < p^*$ and $\kappa < \tilde{\kappa}(r)$ or if $\mu^H > \theta$, $p \geq p^*$ and $\kappa < \hat{\kappa}(r)$, then in the state $S = H$ the rich use repression to prevent revolution.

The introduction of the possibility that revolution will fail does have interesting implications for the comparative statics of the model. In particular, the effect of inequality on the incentive to repress depends on r. To see this note that,

$$\frac{d\tilde{\kappa}(r)}{d\theta} = \frac{1}{(1-\lambda)(1-r)}\left[r - \tau^p + C'(\tau^p)\frac{d\tau^p}{d\theta}\right].$$

There is now a new term in this derivative, $\frac{r}{(1-\lambda)(1-r)} > 0$. This term tends to make $\frac{d\tilde{\kappa}(r)}{d\theta} > 0$ so that greater inequality. In fact we can define a value

$$r^* = \tau^p - C'(\tau^p)\frac{d\tau^p}{d\theta}$$

such that if $r < r^*$ we have $\frac{d\tilde{\kappa}(r)}{d\theta} < 0$ and greater inequality increases the incentive to repress, while for $r > r^*$ we have $\frac{d\tilde{\kappa}(r)}{d\theta} > 0$. In this second case higher inequality has the opposite effect and actually reduces the incentive to repress. This occurs because the rich have too much to lose.

This extension shows how equilibrium revolutions can emerge as a calculated risk by the rich to avoid democratization.

7 Back to the Latin American Experience

The extension of our basic model of democratization in this chapter goes a long way to explaining some of the facts about democracy we discussed in Chapter 2. For example, it helps us to explain why democratization was long delayed in many Latin American countries (see also Chapter 11 on this). This follows from the fact that if we look across countries, Latin American countries are startlingly more unequal than most other countries in the world. The roots of this inequality lie back in the colonial period and the types of post-colonial societies that emerged in the nineteenth century (Coatsworth, 1994, Engerman and Sokoloff, 1997, Nugent and Robinson, 1998, Acemoglu Johnson and Robinson, 2001,2002). It meant that the distribution of land ownership was highly egalitarian in most countries (with a few exceptions, such as Costa Rica and Colombia that we have discussed) and the elite were very threatened by democracy. As a result they preferred to use repression to stay in power while elites in similar positions in Western European countries or in North America instead chose to democratize. Hence democracy arrived later in Latin America. Moreover, the countries in which it first arrived, such as Argentina and Uruguay, were more urbanized, more egalitarian and richer than those where it arrived much later (such as Bolivia, Nicaragua and Guatemala).

Of course this relationship between inequality and democratization is a ceteris paribus statement. For instance, many African countries have quite equal distributions of income (one reason being that land is often held communally) but are not very democratic. We would argue that this is because other forces come into play. For one thing, it may be the case that our dichotomy between the rich and the poor works least well in explaining political cleavages in African politics. Imagine instead that our two groups were two ethnic groups (say the Hutu and the Tutsi in Rwanda, or the Shona and Ndebele in Zimbabwe). These two groups may not coincide with the rich and the poor. In this case democracy, since it redistributes vertically between rich and poor, is unattractive as an equilibrium concession to defuse revolution by one group against the other. Democracy redistributes *within* groups in this case but what is needed is a concession that redistributes *between* groups. Also important in the African case may be the fact that, as we discuss in Chapter 11, they are much less modernized than Latin America countries and so it is easy and cheap for elites to repress.

Figure 7.1: The Repression Game

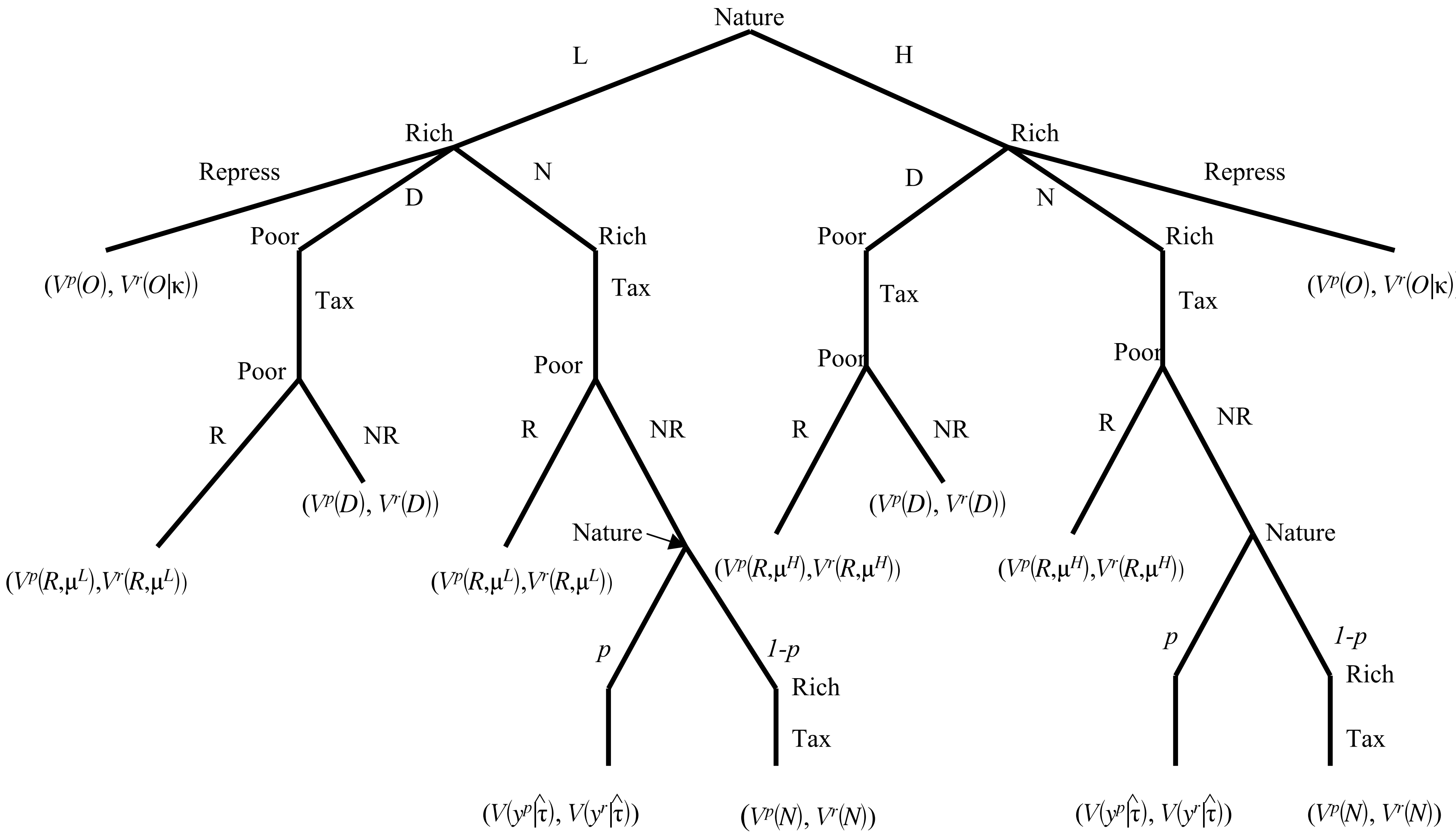

Figure 7.2: Repression and Revolution