Minorities and Democratization[1]

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With apologies to E. E. Schattschneider, the flaw in the democratic heaven is that the heavenly chorus sings with a strong majoritarian accent. Transitions to democracy, in particular, can be painful to smaller ethnic groups, as democratically elected governments have oppressed minorities in, among other places, Burundi, Rwanda, Cyprus, Peru, Algeria, India, Bosnia, Georgia, Azerbaijan, Zambia, South Africa, and the U.S. South under Jim Crow laws, making real the "tyranny of the majority" about which the Federalist Papers warned over two centuries ago.[1] More recently, Fareed Zakaria (2003) has coined the term "illiberal democracies" to describe elected governments who transgress their constitutional limits or deprive their citizens of basic rights. And Snyder (2000) argues that in many cases, it is the transition to democracy itself that fuels violence against minorities.

Of course, there are many democratic transitions, even some in countries with long-standing ethnic tensions, that are not accompanied by anti-minority discrimination. This paper therefore examines the reciprocal links between ethnicity and democratization: what is the impact of ethnic diversity on the likelihood that an autocracy becomes democratic and, conversely, how does democratization affect the ability of minorities to effectively participate in the political process?

Our approach to these issues is to note that democracy has as its defining features open elections and majoritarian rule, which in turn affect the wealth and security of different groups in society. Autocracies do not have elections, but they do have their own sets of institutions for allocating resources and group (property) rights. We therefore analyze a model in which redistribution can take place along class (economic) lines, and/or a cross-cutting ethnic (racial) dimension. The country starts off in autocracy, with the possibility of a peaceful democratic transition by the upper classes or a violent democratic revolution by the lower classes. We then ask when those who have control in autocracy have incentives

[1] As Madison memorably put it in *Federalist* 48, "The concentrating [of legislative, executive, and judiciary powers] in the same hands, is precisely the definition of despotic government. It will be no alleviation, that these powers will be exercised by a plurality of hands, and not by a single one. One hundred and seventy-three despots would surely be as oppressive as one."

to peacefully democratize, and what the distributional impact of this shift would be for minorities: good, bad or indifferent.

We find that the presence of ethnic minorities, in general, makes peaceful democratic transitions less likely, since the opportunity to exploit minorities under autocracy makes the majority faction less willing to voluntarily cede authority. As for policy, minorities suffer the least discrimination in democracies with intermediate levels of inequality; here, they are induced to be part of the ruling coalition by lower levels of ethnic discrimination. Finally, regarding participation, minorities can be incorporated into the political process in three ways: being part of a ruling coalition in autocracy, joining majority factions in a revolutionary movement, or being part of a ruling coalition in democracy. Interestingly, minority policy gains and participation do not perfectly overlap: incorporation does not necessarily imply less discrimination, and minorities can gain higher utility even in discriminatory regimes.

The following section reviews the relevant literature on ethnicity and democratization. We then present the model, describe and analyze the equilibrium, present comparative statics results, and review some variations on the basic model. A final section concludes, while the appendix provides formal proofs of all propositions.

1 Literature: Institutions and Minority Rights

Political systems are not composed of majorities and minorities. They comprise groups divided along any number of dimensions: economic, ethnic, regional, sectoral, religious, linguistic, and so on. It is political institutions that determine who gets to participate in the political process, encourage or discourage certain coalitions from forming, and ultimately allocate power and resources across groups. To say that a society is experiencing ethnic or racial conflict, then, is to say that the institutions within that society have encouraged the different groups in each racial category to put aside their other differences and align along this one dimension. Ethnic conflict is never inevitable, we argue, but it can be an equilibrium outcome given a set of institutional arrangements, or it can be ameliorated by the selection of other institutions.

In majoritarian systems, for example, policy coalitions can be formed either in elections through large, encompassing parties, or in the legislature through bargaining, and it is electoral institutions that can favor one forum over the other. In the United States the 1965 Voting Rights Act (VRA) gave the federal government the power to veto proposed redistricting plans for Southern states.[2] The Justice Department has traditionally used this power to encourage the creation of majority-minority districts, with the aim of electing minority representatives to office and moving the burden of coalition formation to Congress. But recent studies have indicated that, given the decrease in polarized voting in the public and increasing partisan polarization in Congress, it is now more effective to spread minority voters out across districts and form electoral coalitions instead.[3]

The comparative literature on democratic institutions and minority empowerment offers parallel discussions of these issues. One major question involves "consociational democracy": should divided societies be organized so that each faction receives some representation in the national government, or should incentives be offered for groups to enter cross-ethnic coalitions? Lijphart (1977) is the classic advocate of the former approach, while Horowitz (1985) prefers the latter.[4] Similarly, the federalism debate asks to what extent power should be devolved to smaller, more ethnically homogeneous subunits, as opposed to

[2]Previously, so-called "Jim Crow" laws had effectively denied blacks' right to participate in the political process altogether, through a series of anti-minority institutions: poll taxes, at-large voting, full ballot requirements, the slating of candidates, white-only primaries, and so on. The VRA swept all these away and required Southern states to obtain federal approval before changing any law that might affect minorities' ability to effectively participate in the political process. Excellent summaries of this period can be found in Davidson (1992) and Kousser (1999).

[3]Cameron, Epstein and O'Halloran (1996), Lublin (1999), and Epstein and O'Halloran (2000) develop arguments along these lines. Although the Justice Department continued to adhere to its previous strategy, the Supreme Court has recently ruled that it should allow states to decrease minority concentrations if this will allow for greater overall minority influence in the policy making process. The case is *Georgia v. Ashcroft*, 123 S.Ct. 2498 (2003); see Epstein and O'Halloran (2003) and Epstein, Herron, O'Halloran and Park (2004) for a discussion.

[4]This debate goes on, with no clear empirical evidence in favor of one side or the other. See Lardeyret (1991), Quade (1991), and Farrell (1997) for overviews.

the central government.[5] In both cases, the question is whether to allow each ethnic group to control some outcomes itself or, like the U.S. under *Ashcroft*, encourage racial bargaining at each stage of the policy-making process.

The specific issue of ethnicity and democracy has been approached mainly through the lens of democratic stability, where the question is not whether, but to what degree ethnic cleavages reduce the long-term viability of democracies.[6] At one end of the spectrum, Rabushka and Shepsle (1972) argue that the two are simply incompatible, and Kaufman (1996) advocates complete separation of ethnic groups following bouts of violence. The participants in the consociationalism debate discussed above are a bit more sanguine on the topic, although even Horowitz (1994, p. 37) admits that "things can be done .... but there are good systemic reasons why it is difficult to produce institutions conducive to the emergence of multi-ethnic democracy."

The explanations for ethnic violence in new democracies correspond to different theories of ethnic rivalries. For those who see such rivalries as modern-day expressions of primordial ethnic conflicts, democracy just gives ethnic groups the freedom to attack each other.[7] For those who, like us, who see ethnic tensions not as inevitable, but as the result of political processes, the conflict arises from the new incentives given politicians in emerging democracies. Snyder (2000), for instance, argues that leaders in new democracies can gain followers by advocating nationalistic policy programs that exclude others from power.[8] In the arc of democratization, then, things tend to get worse before they get better, and it is often minorities who suffer the most in the fluid, often chaotic environment that characterizes new democracies.

However, ethnic conflict in new democracies is certainly not a foregone conclusion; some

[5]See Tiebout (1956), Riker (1964), Tullock (1969), and Bednar, Eskridge and Ferejohn (2001).

[6]Classics along these lines include Rustow (1970), Dahl (1971), and Przeworski (1991).

[7]See for instance Geertz (1963). For a critique of this view, see Laitin (1998).

[8]Bates (1973) pioneered this "constructivist " approach to ethnicity. See also de Figueiredo and Weingast (1999) for a model of Milosevic's nationalist appeals, and Chandra and Boulet (2003) for a model of the activation of ethnic rivalries amongst many possible dimensions of political conflict.

countries with potential ethnic rivalries do avoid outright hostilities, and understanding when and why discrimination does occur is the first step to preventing it in the future. In addition, less work has been done on the related questions of the relative condition of minorities under autocracy as opposed to democracy, or the impact of ethnicity on the probability of democratic transitions. It is these topics that we seek to explore in the current paper.

2 Model

We present a variant of the Acemoglu and Robinson (2003) model of democratization, adding the possibility that groups are divided along racial as well as economic lines.[9] The state starts out in autocracy, and can transition to democracy either peacefully or via a revolution. Politics in either autocracy or democracy can revolve around an ethnic or economic axis (or neither), depending on the distribution of wealth, violence potential, and the overarching political institutions in place at any given time. Consistent with our approach, then, it is a combination of factors, including political institutions, that activate ethnic rivalries.[10]

2.1 Actors and Timing

2.1.1 Demographics

There is a continuum of risk neutral agents with measure 1. The society is segregated along two dimensions: income and ethnicity. Each agent belongs to the upper class (u) or lower class (l); and belongs to ethnic group 1 or 2. Let $t \in \{u, l\}$ denote an agent's income group, $i \in \{1, 2\}$ denote his ethnic group. Then ti denotes the type of an agent. Let $\lambda_{ti} \in [0, 1]$ be the ratio of ti agents; $\sum\limits_{t,i} \lambda_{ti} = 1$; $\lambda_i = \sum\limits_{t} \lambda_{ti}$ be the ratio of group i agents; and $\lambda_t = \sum\limits_{i} \lambda_{ti}$

[9]This is, in turn, based on the Meltzer and Richards (1981) model of taxation. See Persson and Tabellini (2000) for an excellent summary.

[10]This point is also well made in Chandra (2003).

be the ratio of t-class agents. Without loss of generality, we assume that ethnic group 1 is the majority, i.e. $\lambda_1 > \lambda_2$. We also assume that the upper class is a minority, i.e. $\lambda_l > \lambda_u$. For simplicity, we assume that the ratio of the upper class agents within each ethnic group is the same. Then λ_u represents that ratio, so $\lambda_{ti} = \lambda_t \lambda_i$ for all t and i, and $l1$ is the largest group.

2.1.2 Economy

Let x be the total income. Upper class agents share $x_u = \alpha x$ equally, and lower class agents share $x_l = (1-\alpha)x$ equally, where $\alpha \in [0,1]$. Then an upper class agent's income is $x_{ui} = \frac{\alpha x}{\lambda_u}$, and a lower class agent's income is $x_{li} = \frac{(1-\alpha)x}{\lambda_l}$, $i \in \{1,2\}$. An upper class agent's income is larger than a lower class agent's income, i.e. $x_{ui} > x_{lj}$, which is equivalent to $\alpha > \lambda_u$, so α measures income inequality. The total income of group i agents is $x_i = \lambda_{ui} x_{ui} + \lambda_{li} x_{li} = \lambda_i x$.

We assume that a government can tax group 1, group 2 and upper class agents via proportional income taxes and distribute the tax revenues equally. We will refer to a tax imposed on an ethnic group as an *ethnic tax*, and the tax imposed on the upper class as an *economic tax*.[11] Let τ_i denote the ethnic tax rate imposed on group i, τ_e the economic tax rate imposed on the upper class, and T the per capita transfers. Then disposable incomes of agents are given as follows:

$$\begin{aligned}
y_{u1} &= (1-\tau_e)(1-\tau_1)x_{u1} + T, \\
y_{l1} &= (1-\tau_1)x_{l1} + T, \\
y_{u2} &= (1-\tau_e)(1-\tau_2)x_{u2} + T, \\
y_{l2} &= (1-\tau_2)x_{l2} + T.
\end{aligned}$$

[11] The ethnic tax should be thought of as a set of institutions, both economic and political, that reduce the income of the taxed ethnic group (i) and increase that of the other group (j). Of course this will create economic inefficiencies (as do all taxes), so that the amount of income gained by j will be less than that lost by i. We abstract from such considerations here, but they could be incorporated into model extensions.

We impose a balanced budget, so total transfers must be equal to total tax revenues:

$$T = [1-(1-\tau_e)(1-\tau_1)]\lambda_{u1}x_{u1} + [1-(1-\tau_e)(1-\tau_2)]\lambda_{u2}x_{u2} + \tau_1\lambda_{l1}x_{l1} + \tau_2\lambda_{l2}x_{l2}.$$

2.1.3 Politics

Tax rates are set by the political process, which is either democratic or autocratic, each with its own basis for allocating resources. Initially, the political regime is authoritarian and $u1$ is in power, allowing this group to set policy unilaterally. If power is not ceded voluntarily, then it can only be seized by force. Under democracy, policy must be ratified by a majority. This already gives us some indication of how ethnic minorities will be rewarded in either system: in autocracy, they will succeed in proportion to their violence potential, while in democracy it is their numbers that are important.

Democratization can occur through two routes: peacefully, or via a lower class revolution. As illustrated in Figure 1, the timing of the moves is as follows:

1. $u1$ decides whether to democratize or not.

2. If $u1$ democratizes, the regime switches to democracy.

3. If $u1$ decides not to democratize, lower class agents $l1$ and $l2$ independently decide whether to revolt. If the uprising is successful, the regime switches to democracy. Otherwise, the regime remains autocratic.

4. Under autocracy, $u1$ sets (τ_e, τ_1, τ_2). Note that once tax rates are set, the corresponding transfer is determined by the balanced budget condition.

5. Under democracy, the largest group ($l1$) makes a proposal for (τ_e, τ_1, τ_2). If the proposal is accepted by a majority, then it is implemented. If it is rejected, then a no-tax reversion point $\tau_e = \tau_1 = \tau_2 = T = 0$ is implemented.

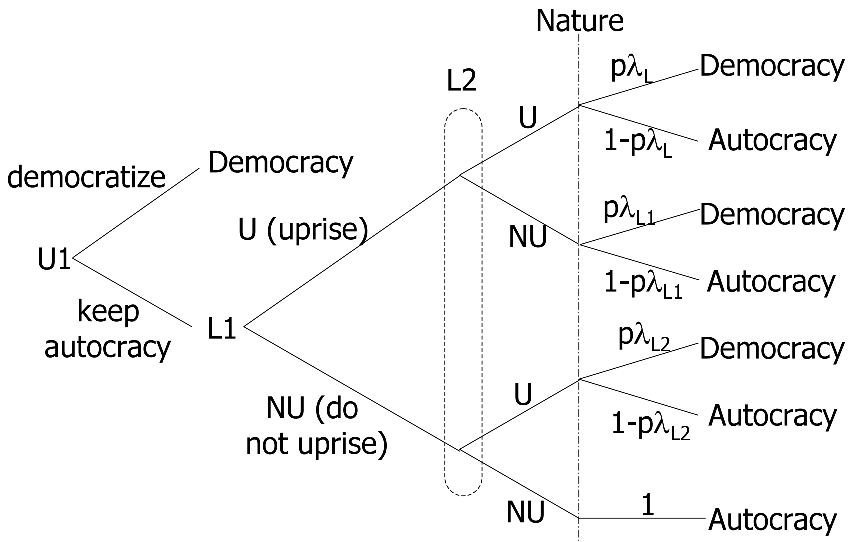

Figure 1: Game Tree

In the revolutionary phase of the game, lower class agents $l1$ and $l2$ independently decide whether to uprise to bring democracy. If the uprising is successful, the regime switches to democracy; otherwise, the regime remains autocratic. The probability of the success of an uprising is proportional to the size of the uprising mass. The per capita cost of uprising (to all members of society) is also proportional to the size of the uprising mass and the size of the economy, capturing the notion that a more widespread rebellion is likely to do more damage to the productive resources of the economy. If only the lower class agents of type li uprise, then the cost is $\lambda_{li}\psi x$; if both groups uprise then the cost is given by $(\lambda_{l1} + \lambda_{l2})\psi x$.

2.2 Equilibrium

We predict the outcome of this game by its symmetric subgame perfect equilibrium, where agents of the same type adopt the same strategy. We discuss the political equilibrium in this section and then examine the impact of a number of model variations.

Let us define the following critical values of income inequality:

$$\alpha^* = \frac{\lambda_2(1-\lambda_{l2})}{1-\lambda_{u1}} < 1, \text{ and } \hat{\alpha} = \frac{1-\lambda_{l2}}{1+\lambda_{l1}} \in (\alpha^*, 1).$$

Then define Region 1 (Low Inequality) as $\alpha \leq \alpha^*$; Region 2 (Intermediate Inequality) as $\alpha^* \leq \alpha \leq \hat{\alpha}$; and Region 3 (High Inequality) as $\alpha \geq \hat{\alpha}$.

Upper Class Actions

Under autocracy, $u1$ always implements $(\tau_e = \tau_1 = 0, \tau_2 = 1)$.[12] The following conditions summarize $u1$'s equilibrium democratization decision:

- **Region 1:** When $\lambda_{l1} < \frac{1}{2}$ and $\lambda_u \leq \alpha < \alpha^*$, $u1$ democratizes if and only if $(\frac{1}{\lambda_l} - p)\lambda_2 \leq \psi \leq p\frac{\lambda_{u1}}{1-\lambda_{u1}}\lambda_2$.

- **Region 2:** When $\lambda_{l1} < \frac{1}{2}$ and $\alpha^* \leq \alpha < \hat{\alpha}$, $u1$ democratizes if and only if $(\frac{1}{\lambda_l} - p)(\lambda_2 + \frac{\lambda_{l1}\alpha}{\lambda_u(1-\lambda_{l2})}) \leq \psi \leq p(\frac{\alpha}{1-\lambda_{l2}} - \lambda_2)$.

- **Region 3:** When $\lambda_{l1} \geq \frac{1}{2}$ or $\alpha \geq \hat{\alpha}$, $u1$ democratizes if and only if $(\frac{1}{\lambda_l} - p)(\frac{1}{\lambda_u} - \lambda_1)\alpha \leq \psi \leq p\alpha\lambda_1$.

Lower Class Actions

The equilibrium behavior of lower class agents, including the decision to uprise or not, and which coalitions to form in democracy, are given as follows:

- **Region 1:** When $\frac{1}{2} > \lambda_{l1}$ and $\lambda_u \leq \alpha < \alpha^*$, $l1$ proposes $(\tau_e = \frac{x_2}{(1-\lambda_{u1})x_{u1}}, \tau_2 = 1)$, and the majority ($l1$ and $u1$) votes for this tax scheme in democracy. When $\psi < (\frac{1}{\lambda_l} - p)\lambda_2$, $u1$ does not democratize, both lower class groups uprise, and the regime switches to democracy with probability $p\lambda_l$. When $\psi > p\frac{\lambda_{u1}}{1-\lambda_{u1}}\lambda_2$ neither group uprises and the regime remains autocratic.

[12] In fact, $\tau_1 = 0$ in all equilibria of the game, so from here on we will omit it from the summary analysis.

- **Region 2:** When $\frac{1}{2} > \lambda_{l1}$ and $\alpha^* \leq \alpha < \hat{\alpha}$, $l1$ proposes $(\tau_e = 1, \tau_2 = \frac{x_u}{(1-\lambda_{l2})x_{l2}})$, and the majority ($l1$ and $l2$) votes for this tax scheme in democracy. When $\psi < (\frac{1}{\lambda_l} - p)(\lambda_2 + \frac{\lambda_{l1}\alpha}{\lambda_u(1-\lambda_{l2})})x$, $u1$ does not democratize, both lower class groups uprise, and the regime switches to democracy with probability $p\lambda_l$. When $p(\frac{\alpha}{1-\lambda_{l2}} - \lambda_2)x < \psi \leq p(x_{l2} - x_2)$, $u1$ does not democratize, only $l2$ uprises, and the regime switches to democracy with probability $p\lambda_{l2}$. When $\psi > p(x_{l2} - x_2)$, neither group uprises, the regime remains autocratic.

- **Region 3:** When $\lambda_{l1} \geq \frac{1}{2}$ or $\alpha \geq \hat{\alpha}$, $l1$ proposes $(\tau_e = 1, \tau_2 = 1)$, and the majority ($l1$ if $\lambda_{l1} > \frac{1}{2}$; $l1$ and $l2$ otherwise) votes for this tax scheme in democracy. When $\psi < (\frac{1}{\lambda_l} - p)(\frac{1}{\lambda_u} - \lambda_1)\alpha$, $u1$ does not democratize, both lower class groups uprise, and the regime switches to democracy with probability $p\lambda_l$. When $\psi > p\alpha\lambda_1$, neither group uprises, the regime remains autocratic. ■

2.3 Discussion

To understand the actors' equilibrium behavior, working from the end of the game forward, let us begin with the fact that in autocracy, the group in power, $u1$, maximizes its revenue by taxing ethnic group 2 ($\tau_2 = 1$), but levying no economic tax ($\tau_e = 0$). Since the tax rates for a given period are set only after the democratization and revolution decisions, $u1$ has no incentives to do anything other than get the highest transfer possible. In particular, $u1$ cannot commit to future redistribution under autocracy; democratization provides the only source of credible commitment. To find out whether $u1$ in fact democratizes, we must look ahead to see what the equilibrium would look like under democracy. The full equilibrium is illustrated in Figure 2, drawn for $\lambda_{l1} < \frac{1}{2}$.

If group $l1$ has over half the population, then democratic politics is essentially a dictatorship by $l1$. This group will set maximal ethnic and economic taxes to get the highest transfer possible. If it has under half the population, though, it must find a coalition

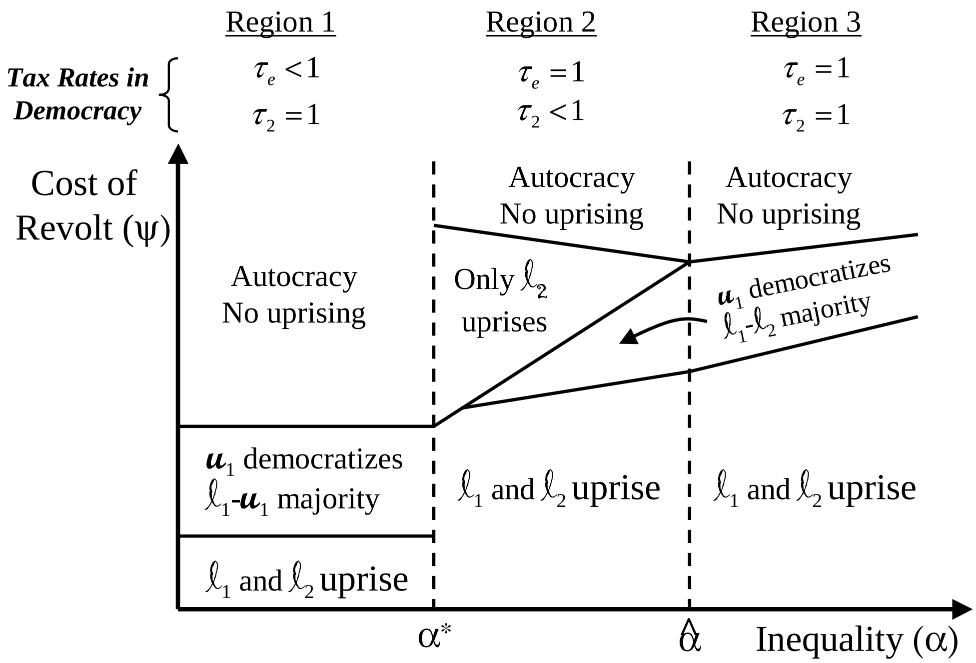

Figure 2: Equilibrium Outcomes

partner, and its natural allies are $l2$ for a lower class coalition, or $u1$ for an ethnic coalition.

When economic inequality (measured by α) is high, the gains to taxing the rich are high as well. This gives $l1$ incentives to attract the support of $l2$ in a democracy. In fact, if inequality is high enough (Region 3), $l1$ can propose a high ethnic tax as well ($\tau_2 = 1$), and $l2$ will agree since the gains from the economic tax are so large. As inequality begins to fall (to Region 2), $l1$ keeps $l2$ as a partner but lowers the ethnic tax to make $l2$ just indifferent. But if inequality is low enough (Region 1), the returns from the economic tax are too small to offset the concessions made to group 2. In this case, $l1$ prefers to team with $u1$, lowers τ_e to less than 1, and returns the ethnic tax to 1. Thus discrimination against minorities in democracies is lowest at *intermediate* levels of income inequality. Table 1 summarizes tax rates, transfers and the disposable income levels in a democracy.

Backing up to the revolution stage, we find that a revolt is most attractive when the probability of success (p) is high and the damage done to the economy (ψ) is low.[13] Beyond

[13]We interpret this latter finding to indicate that economies built on the export of easily extractable natural resources (oil, diamonds, ores, etc.) are most likely to be unstable, a condition known as the "resource curse."

	$\lambda_{l1} < \frac{1}{2}$ and Region 1	$\lambda_{l1} < \frac{1}{2}$ and Region 2	$\lambda_{l1} \geq \frac{1}{2}$ or Region 3
majority	$l1$ and $u1$	$l1$ and $l2$	$l1$ and $l2$
τ_e	$\frac{x_2}{(1-\lambda_{u1})x_{u1}}$	1	1
τ_2	1	$\frac{x_u}{(1-\lambda_{l2})x_{l2}}$	1
Transfer, T_d	$\frac{x_2}{1-\lambda_{u1}}$	$\frac{x_u}{1-\lambda_{l2}}$	$x_2 + \alpha x_1$
y^d_{u1}	x_{u1}	T_d	T_d
y^d_{l1}	$x_{l1} + T_d$	$x_{l1} + T_d$	$x_{l1} + T_d$
y^d_{u2}	T_d	T_d	T_d
y^d_{l2}	T_d	x_{l2}	T_d

Table 1: Equilibrium Outcomes in Democracy

that, groups will rebel when their payoffs in democracy most greatly exceed their payoffs under autocracy. Each of $l1$ and $l2$ benefit equally from an increase in the economic tax, but $l2$ specifically gains from the reduction in the ethnic tax in the intermediate-inequality range discussed above. Thus we have the interesting result that for intermediate values of α, there are conditions under which only the ethnic *minority* revolts.[14]

Finally, $u1$ has no incentives to democratize if neither $l1$ nor $l2$ would revolt, so the question is whether $u1$ will democratize peacefully when credibly threatened with an uprising. Ceding power would avoid a potentially costly revolt, but it makes certain a transition that is only probabilistic otherwise. Group $u1$ has more incentives to go the peaceful route as p rises and as ψ rises, since they will suffer more under the revolution. Combining this with the result in the previous paragraph (that incentives to revolt rise when ψ is low), we conclude that peaceful transitions occur for intermediate values of ψ. Above this range, no transition occurs, and below it transition comes only through revolution. Group $u1$ is also more willing to transition when inequality is low, so that it will be part of the winning coalition in democracy, and less willing when $l1$ is over half the population, in which case $l1$'s strength works against it.

[14]Notice that this holds even though $l2$ knows that $l1$ will make the first offer in democracy and thus obtain all the surplus value in the coalition. The incentives for $l2$ alone to revolt would thus only increase if, upon successfully overthrowing the autocracy, it got to make the first offer to $l1$.

3 Ethnic Divisions & Democratization

Analyzing the effect of income inequality for different sizes of ethnic minorities reveals the role ethnicity plays in democratization.

When $\lambda_{l1} \geq \frac{1}{2}$, the length of the democratization region is

$$D = \left(p - \frac{1-\lambda_{u1}}{\lambda_l}\right)\frac{\alpha}{\lambda_u}.$$

An increase in income inequality increases the size of the democratization region. Also $l1$ makes the political decisions alone in democracy.

However, when $\lambda_{l1} < \frac{1}{2}$, that is, when the ethnic minority group is significantly large, then both the nature of democracy and the effect of income inequality on democratization change dramatically. In particular, when income inequality takes lower values, $\lambda_u \leq \alpha < \alpha^*$, for all levels of income inequality, the length of that region is

$$D = \left(p - \frac{1-\lambda_{u1}}{\lambda_l}\right)\frac{\lambda_2}{1-\lambda_{u1}}.$$

In this case, $l1$ and $u1$ form the majority in democracy, and a change in income inequality does not affect the size of democratization region.

When income inequality takes intermediate values, $\alpha^* \leq \alpha < \hat{\alpha}$, a democratization region may not exist for values of α close to α^*. The length of the democratization region is

$$D = \left(p - \frac{\lambda_1}{1-\lambda_{l2}}\right)\frac{\alpha}{\lambda_u} - \frac{\lambda_2}{\lambda_l}.$$

When $D > 0$, $l1$ and $l2$ form the majority in democracy, and an increase in income inequality increases the size of the democratization region.

Finally, when income inequality is high, $\alpha \geq \hat{\alpha}$, for all levels of income inequality, the length of that region is

$$D = \left(p - \frac{1-\lambda_{u1}}{\lambda_l}\right)\frac{\alpha}{\lambda_u}.$$

In this case $l1$ and $l2$ form the majority in democracy, and an increase in income inequality increases the size of the democratization region.

Note that, when $\lambda_{l1} \geq 1/2$, a democratization region exists as long as $p \geq \frac{1-\lambda_{u1}}{\lambda_l}$. However, this result does not hold anymore when $\lambda_{l1} < 1/2$. In particular, $u1$ may not democratize when income inequality takes intermediate values, i.e. $\alpha^* \leq \alpha < \hat{\alpha}$, and α is close to α^*, whereas a democratization region exists for other values of income inequality.

For the comparative statics analysis, let ψ_h and ψ_l be the upper bound and lower bound of the democratization region, respectively, and let D be the length of democratization region.

Comparative Statics with respect to λ_l :

First, $\frac{\partial\alpha^*}{\partial\lambda_l} < 0$ and $\frac{\partial\hat{\alpha}}{\partial\lambda_l} < 0$. The following table summarizes the comparative statics with respect to λ_l. For example, a plus sign means that the variable increases as λ_l increases.

	Region 1	Region 2	Region 3
ψ_h	$-$	$+$	0
ψ_l	$-$	$-$	$-$
D	$\mp$	$+$ when $D > 0$	$+$

In region 1, D increases as λ_l increases when p is small. In particular, when λ_2 is large or λ_{u1} is small, $\frac{\partial D}{\partial\lambda_l} > 0$ for all $p \leq \frac{1}{\lambda_l}$. If $\lambda_{u1} > \lambda_2$, it is possible that $\frac{\partial D}{\partial\lambda_l} < 0$ for p close to $\frac{1}{\lambda_l}$. So the larger the working class, relative to the upper class, the more likely are peaceful democratic transitions, as they pose more of a credible threat to revolt.

Comparative Statics with respect to λ_1 :

We have $\frac{\partial\alpha^*}{\partial\lambda_1} < 0$ and $\frac{\partial\hat{\alpha}}{\partial\lambda_1} < 0$. The following table summarizes the comparative statics with respect to λ_1.

	Region 1	Region 2	Region 3
ψ_h	$\mp$	$+$	$+$
ψ_l	$-$	$-$	$-$
D	$\mp$	$+$ when $D > 0$	$+$

In region 1, D increases as λ_1 increases when p is small. In particular, when $\lambda_l > (1-\lambda_{u1})^2$, $\frac{\partial D}{\partial \lambda_l} > 0$ for all $p \leq \frac{1}{\lambda_l}$. If $\lambda_l < (1-\lambda_{u1})^2$, then $\frac{\partial D}{\partial \lambda_l} > 0$ for $p \leq (\frac{1-\lambda_{u1}}{\lambda_l})^2$, and $\frac{\partial D}{\partial \lambda_l} < 0$ for $(\frac{1-\lambda_{u1}}{\lambda_l})^2 < p \leq \frac{1}{\lambda_l}$.

The larger the majority group, or the smaller the minority, the more likely are peaceful transitions. In the limit, as λ_2 goes to 0, transitions are more likely than for any positive value of λ_2. This answers one of our basic questions: as long as the equilibrium coalition in democracy is $l1$ and $l2$, ethnic divisions make transitions less likely, as the upper class would lose its discrimination rents after the transition. The only time that this relation fails to hold is when the equilibrium democratic coalition is $l1 - u1$, which is based on exploiting minorities to the maximum extent possible.

Comparative Statics with respect to α :

Finally, the following table summarizes the results of the comparative statics on democratization and transfers (i.e. redistribution) with respect to the level of income inequality.

	Region 1	Region 2	Region 3
D	0	$+$ when $D > 0$	$+$
T_d	0	$+$ when $D > 0$	$+$

If inequality has any impact on transitions, it will make them more likely. The class-based coalition $l1 - l2$ gains more in democracy the greater the degree of inequality. Thus their threat to revolt is more credibly, inducing the upper class to voluntarily democratize in some regions.

4 Extensions

In the base model presented above, the ethnic minority receives its lowest possible payoff in autocracy, where $u1$ institutes an ethnic tax but no economic tax. Consequently, the minority group can only gain from democratization. Often, though, minorities do relatively well in autocracies, since leaders in these countries see ethnic tensions as potential threats to regime stability. In the language of our model, $u1$ may have incentives to form an upper class coalition with $u2$ in autocracy, thus decreasing its revenues but also making a successful revolution less likely. Or, $u1$ may ally itself with $l1$ to preempt a revolution.

In this section, then, we consider three variants on our base model: 1) the aforementioned possibility that $u1$ can attract the support of $u2$ or $l1$ to stay in power; 2) having $u2$ start off in power under autocracy rather than $u1$; and 3) a multi-period game in which individuals (or their offspring) can change social class from one period to the next, but not their ethnic group. The former two are discussed in detail here, while the latter is reviewed briefly, with a full model left for future work.

4.1 Coalition Formation with Power Sharing

We can reinterpret the equilibrium of the base model as follows: In democracy, $l1$ forms a coalition with $u1$ in region 1, and it forms a coalition with $l2$ in regions 2 and 3. When $u1$ decides not to democratize, $l2$ may "support" the autocratic regime by not uprising for certain values of ψ in region 2. One can interpret this as $u1$ and $l1$ forming a coalition under autocracy. In this section, we formally introduce the option of power sharing and analyze coalition formation in autocracy more explicitly.

Before proceeding formally, let us summarize the predictions of this section: $u1$ and $l1$ may share power if cost of uprising is large (e.g. one interpretation is that the economy relies mostly on human capital). $u1$ and $u2$ may share power in equilibrium if inequality is high and cost of uprising is low (i.e. the economy relies mostly on natural resources).

We consider the following variation in the base model: At the very beginning of the game, $u1$ decides to democratize or keep the autocracy. If $u1$ decides to keep the autocracy, then it can offer to share its political power with either $l1$ or $u2$. If a group accepts $u1$'s offer of power sharing, then $u1$ has to get that group's consent in order to implement a tax scheme. That is, $u1$ offers a tax scheme, and these tax rates can be implemented only if the other group does not veto; otherwise, $\tau_e = \tau_1 = \tau_2 = 0$ is implemented. Power sharing changes the odds of a successful uprising as well: If $u1$ gains $l1$'s support, then group 1, a majority, holds the power so that uprising by $l2$ is never successful. If $u1$ gains $u2$'s support, then the upper class, a minority, holds the power, and the marginal probability of a successful uprising, p, falls to $q < p$. If $u1$ decides not to share power with any group, or if no group accepts power sharing with $u1$, then the remaining of the game proceeds as before.

Introduction of power sharing will obviously shrink the democratization region of the base model. Because, in this region, $u1$ may find it optimal to share power and not democratize. However, it is not obvious which coalition $u1$ forms by power sharing. In this section, we will characterize the regions where $u1$ forms a coalition with $l1$ or $u2$.

When ψ is high, there is no uprising, so there is no need to share power. Therefore, we will consider the parameter regions that lead to democratization or uprising in the base model.

If $u1$ power shares with $l1$, then $u1$ can implement his most preferred tax scheme $\tau_e = \tau_1 = 0$, and $\tau_2 = 1$ because $l1$ prefers this tax scheme to the alternative $\tau_e = \tau_1 = \tau_2 = 0$. Therefore, $u1$ prefers to power share with $l1$ as long as $l1$ would accept this arrangement. However, $l1$'s optimal decision depends on the subgame when $l1$ rejects power sharing with $u1$. In this case, $u1$ can either go alone or offer $u2$ power sharing. In the latter case,

Proposition 1: If $u1$ offers $u2$ to power share, $u2$ always accepts power sharing with $u1$ and $\tau_e = \tau_1 = \tau_2 = 0$ is implemented in autocracy.

Note that $u1$'s disposable income in democracy, y^d_{u1}, is equal to x_{u1} in Region 1, and less than x_{u1} in Regions 2 and 3. Therefore, if power-sharing with $u2$ avoids uprising, then $u1$ prefers to share power with $u2$ within the democratization region of the base model, when $l1$ rejects power sharing. Given the equilibrium of this subgame, $l1$ would not reject power sharing with $u1$ at the first place, because, by sharing power with $u1$, $l1$ guarantees $x_{l1} + x_2$, which is greater than x_{l1}, which is $l1$'s disposable income when $u1$ power shares with $u2$. So, we have the following:

Proposition 2: When power sharing with $u2$ avoids uprising within the democratization region of the base model, $u1$ and $l1$ power share in equilibrium, and $(\tau_e = \tau_1 = 0, \tau_2 = 1)$ is implemented. $u1$ and $l1$ may also share power in equilibrium when ψ is smaller than but close to ψ_h.

We give a detailed analysis of power sharing among $u1$ and $l1$ in the proof of Proposition 3 in the Appendix.

In the base model, lower class li uprises when $\psi x < p(y^d_{li} - y^a_{li})$. If $u1$ power shares with $u2$, then li uprise when $\psi x < q(y^d_{li} - x_{li})$. Note that x_{li} is li's disposable income in an autocracy in which $u1$ and $u2$ share power. Noting that $q(y^d_{li} - x_{li}) = q(y^d_{li} - y^a_{li}) + q(y^a_{li} - x_{li})$, $q < p$, $y^a_{l1} - x_{l1} = x_2$ and $y^a_{l2} - x_{l2} = x_2 - x_{l2}$, for higher values of ψ within the democratization region of the base model, for example when $q(y^d_{l1} - x_{l1}) < \psi x < p(y^d_{l1} - y^a_{l1})$, if $l1$ rejects power sharing, then $u1$ will share power with $u2$, since doing so prevents uprising. In this case, $l1$ would not reject power sharing at the first place, and $u1$ and $l1$ will power share in equilibrium.

For lower values of ψ, power sharing with $u2$ does not avoid uprising. In this case, $l1$ may prefer not to share power and uprise, even if $u1$ then power shares with $u2$. In equilibrium, $u1$ may share power with $u2$ and both $l1$ and $l2$ uprise if inequality (α) is large enough and ψ is low. We write this result as a proposition and give the detailed proof in the appendix.

Proposition 3: For large α and low ψ, $u1$ may share power with $u2$ and both $l1$ and $l2$ uprise in equilibrium.

In summary, $u1$ may form a coalition either with $l1$ or with $u2$ in autocracy in equilibrium, depending on the values of the underlying parameters of the world. $u1$ would always prefer to power share with $l1$, since in this case, $u1$ can prevent uprising and implement its most preferred tax rate. For large values of ψ, power sharing with $u2$ may prevent uprising. In this case, if $l1$ rejects power sharing, $u1$ will find it optimal to share power with $u2$. Therefore, $l1$ would prefer to power share with $u1$ at the first place. On the other hand, if ψ is low, then power sharing with $u2$ does not prevent uprising. In turn, if income inequality is high, $l1$ rejects power sharing with $u1$, and $u1$ shares power with $u2$.

The possibility of power sharing shrinks the regions of democratization and revolution, since $u1$ can at times keep power in autocracy by strategic power sharing. In equilibrium, minorities can move from a relatively protected autocracy to an oppressive democracy, so democratization can increase anti-minority discrimination. Interestingly, there are instances in which the minority willingly joins in a revolution to democratize, even though they know that they will be more oppressed as a result, because of the ensuing increase in the economic taxes and therefore available transfers.

4.2 Minority Holds Power in Autocracy

We next consider the variation of the model in which $u2$ starts out in power. So $u2$ decides whether or not to democratize. If the regime remains autocratic, then $u2$ sets the tax rates. Everything else is the same.

In contrast to the base model, $l2$ uprises in autocracy only if inequality is very high. In particular, if $u2$ does not democratize, $l2$ does not uprise in regions 1 and 2. Also, again in contrast to the base model, the democratization region shrinks as income inequality increases, except for a small interval of high income inequality that induces $l2$'s uprising.

The following summarizes the equilibrium outcome.

Upper Class Actions

Under autocracy, $u1$ always implements ($\tau_e = \tau_1 = 0, \tau_2 = 1$). The following conditions summarize $u1$'s equilibrium democratization decision:

- **Region 1:** When $\lambda_{l1} < \frac{1}{2}$ and $\lambda_u \leq \alpha < \alpha^*$, $u2$ democratizes if and only if $(\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} + \lambda_1 - \frac{\lambda_2}{1-\lambda_{u1}}) \leq \psi \leq p(\frac{1-\alpha}{\lambda_l} + \frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1)$.

- **Region 2:** When $\lambda_{l1} < \frac{1}{2}$ and $\alpha^* \leq \alpha < \hat{\alpha}$, $u2$ democratizes if and only if $(\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} + \lambda_1 - \frac{\alpha}{1-\lambda_{l2}}) \leq \psi \leq p(\frac{1-\alpha}{\lambda_l} + \frac{\alpha}{1-\lambda_{l2}} - \lambda_1)$.

- **Region 3:** When $\lambda_{l1} \geq \frac{1}{2}$ or $\alpha \geq \hat{\alpha}$, (i) in region $p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1) < \psi \leq p(\frac{1-\alpha}{\lambda_l} + \frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1)$, $u2$ democratizes if and only if $\psi \geq (\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} - \lambda_2 - (1-\alpha)\lambda_1)$; (ii) in region $\psi < p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1)$, $u2$ democratizes if and only if $\psi \geq (\frac{1}{\lambda_l} - p)(\frac{\alpha}{\lambda_u} - \lambda_2 - (1-\alpha)\lambda_1)$.

Lower Class Actions

First let us note the following: If $u2$ does not democratize, $l2$ does not uprise in regions 1 and 2. $l2$ uprises in region 3 only for high levels of inequality.

The equilibrium behavior of lower class agents, including the decision to uprise or not, and which coalitions to form in democracy, are given as follows:

- **Region 1:** When $\lambda_{l1} < \frac{1}{2}$ and $\lambda_u \leq \alpha < \alpha^*$, $l1$ proposes $(\tau_e = \frac{x_2}{(1-\lambda_{u1})x_{u1}}, \tau_2 = 1)$, and the majority ($l1$ and $u1$) votes for this tax scheme in democracy. When $\psi < (\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} + \lambda_1 - \frac{\lambda_2}{1-\lambda_{u1}})$, $u2$ does not democratize, only $l1$ uprise, and the regime switches to democracy with probability $p\lambda_{l1}$. When $\psi > p(\frac{1-\alpha}{\lambda_l} + \frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1)$ neither group uprises, the regime remains autocratic.

- **Region 2:** When $\lambda_{l1} < \frac{1}{2}$ and $\alpha^* \leq \alpha < \hat{\alpha}$, $l1$ proposes $(\tau_e = 1, \tau_2 = \frac{x_u}{(1-\lambda_{l2})x_{l2}})$, and the majority ($l1$ and $l2$) votes for this tax scheme in democracy. When $\psi < (\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} + \lambda_1 - \frac{\alpha}{1-\lambda_{l2}})$, $u2$ does not democratize, only $l1$ uprise, and the regime switches to democracy with probability $p\lambda_{l1}$. When $\psi > p(\frac{1-\alpha}{\lambda_l} + \frac{\alpha}{1-\lambda_{l2}} - \lambda_1)$, neither group uprises, the regime remains autocratic.

- **Region 3:** When $\lambda_{l1} \geq \frac{1}{2}$ or $\alpha \geq \hat{\alpha}$, $l1$ proposes ($\tau_e = 1, \tau_2 = 1$), and the majority ($l1$ if $\lambda_{l1} > \frac{1}{2}$; $l1$ and $l2$ otherwise) votes for this tax scheme in democracy. (i) When $p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1) < \psi \leq p(\frac{1-\alpha}{\lambda_l} + \frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1)$, $u2$ does not democratize if $\psi \geq (\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} - \lambda_2 - (1-\alpha)\lambda_1)$. In this case, only $l1$ uprise, and the regime switches to democracy with probability $p\lambda_{l1}$. When $\psi > p(\frac{1-\alpha}{\lambda_l} + \frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1)$, neither group uprises, the regime remains autocratic. (ii) When $\psi < p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1)$, $u2$ does not democratize if $\psi < (\frac{1}{\lambda_l} - p)(\frac{\alpha}{\lambda_u} - \lambda_2 - (1-\alpha)\lambda_1)$. In this case, both groups uprise, and the regime switches to democracy with probability $p\lambda_l$. When $\psi > p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1)$, neither group uprises, the regime remains autocratic.

To summarize, $u2$ as the autocratic group will be more reluctant than $u1$ to democratize, since $l1$ never allies with $u2$ in democracy and the ethnic tax τ_2 is always positive. In terms of the equilibrium diagram, both the democratization and the peaceful democratization regions shrink, the latter possibly to zero, indicating that dictatorships by ethnic minorities are usually ended only by violent revolutions. On the other hand, the incentives for power sharing (with $u1$ this time) increase, leading to less ethnic tension under autocracy.

4.3 A Multi-Period Model

Finally, the one defining characteristic of ethnic minorities in the model is that they exist on a non-economic dimension. What distinguishes ethnicity from other non-economic variables such as religion, language, or region is the low rate of mobility across groups over time.[15] We could modify our model to accommodate this possibility by adding a second period to the game, identical to the first, except that with some probability each lower class individual has transitioned to the upper class, and vice-versa, but with no movement between the ethnic groups.

[15] Indeed, this is the basis for treating race as a suspect category in U.S. law under the 14^{th} Amendment's equal protection clause, requiring strict scrutiny. Thus any legal classification based on race must be narrowly tailored to achieve a compelling state interest.

Such multi-period models with inter-generational mobility are examined in Leventoğlu (2003), and have the property of making the classes more sympathetic to each other. In other words, it is as if the utility functions of the upper classes included some positive weight on the utility of the lower classes, and vice-versa. Relative to the base model, this should increase the likelihood of peaceful transitions and reduce economic taxes in equilibrium. But relative to a model with no ethnic divisions at all, the equilibrium could well exhibit fewer peaceful transitions to democracy and more violent revolutions. Thus ethnic conflict could work against the possibility of non-violent transitions.

5 Conclusion

There is a growing recognition among scholars that free and fair elections alone are not enough to ensure domestic tranquility: without such ancillary institutions as a party system, rule of law, property rights enforced by a neutral judiciary, social institutions promoting tolerance and compromise, and a competent, non-corrupt bureaucracy, democracies can be just as internally unstable, dangerous to their neighbors, and oppressive of minorities as can autocracies.

This essay investigated the questions of when the presence of an ethnic minority impacts the likelihood of a democratic transition, and when transitions help or hurt minorities. Democracy, we found, is not uniformly better for minorities; they may be attractive coalition partners in autocracy due to their violence potential, but not in democracies due to their small numbers. One way to encapsulate our results, then, is that small, violent minorities like autocracy, while large, peaceful ones do better under democratic regimes.

Another view of our results is that they address the question of when politics revolves around minority issues. Our model allows for either class-based or ethnically-based coalitions, the former bent on taxing the rich's wealth, the latter based on extracting discrimination rents from the smaller ethnic group. We find that class-based coalitions are more likely the higher is economic inequality, while more equal wealth distributions give rise to ethnically-based discrimination. These themes are important in the comparative analysis of institutional arrangements, and they bear more systematic theoretical and empirical investigation, which we leave to future work.

A Equilibrium Analysis: Base Model

A.1 Democracy

The regime may switch to democracy either if $u1$ decides to democratize, or if an uprising occurs. Let y^d_{ti} denote the disposable income of ti agents, T_d denote the transfers in equilibrium under democracy.

Case 1: $\lambda_{l1} \geq \frac{1}{2}$.

$l1$ can implement any tax-transfer scheme, since $l1$ alone constitutes the majority. Then $l1$ optimally sets $\tau_1 = 0$, that is it does not tax its ethnic group; $\tau_e = \tau_2 = 1$, it taxes the upper class and ethnic minority group (group 2). Then $T_d = x_u + \lambda_{l2}x_{l2} = x_2 + \lambda_{u1}x_{u1} = x_2 + \alpha x_1$. The disposable incomes under democracy are given as follows:

$$y^d_{u1} = y^d_{u2} = y^d_{l2} = T_d,$$
$$y^d_{l1} = x_{l1} + T_d.$$

Case 2: $\frac{1}{2} > \lambda_{l1} \geq \lambda_{l2}$.

$l1$ is the largest group, however, it needs a coalition partner to form a majority. $l1$ can form a majority with any other group of same type of agents.

Lemma 1: $l1$ forms a majority with either $u1$ or $l2$. $l1$ does not include $u2$ in any majority.

Proof: Note that $l1$ prefers to keep $u2$ out of the majority it will form. This is because of the following observations: First, even if $l1$ can form a majority with $u2$ only, it will not prefer to do this, because (i) if $l1$ sets $\tau_u > 0$ then it has to set $\tau_1 > 0$ in order to gain $u2$'s support. In this case, $l1$ would do better by forming a majority with $l2$, since then $l2$ would vote for $\tau_u > 0$ and $\tau_1 = 0$. (ii) If $l1$ sets $\tau_2 > 0$ then it has to set $\tau_1 > 0$ in order to gain $u2$'s support. In this case, $l1$ would do better by forming a majority with $u1$, since then $u1$ would vote for $\tau_2 > 0$ and $\tau_1 = 0$. Second, if $l1$ cannot form a majority with $u2$, then it will prefer to keep $u2$ out of the majority, since adding a new group to a majority constrains $l1$ further. ■

$l1$ will choose its majority coalition partner in order to maximize its disposable income. In order to summarize the equilibrium outcome and payoffs under democracy, first let us define the following critical levels of income inequality: $\breve{\alpha} = \frac{\lambda_{u2}}{1-\lambda_{u1}}$, $\alpha^* = \frac{\lambda_2(1-\lambda_{l2})}{1-\lambda_{u1}}$, and $\hat{\alpha} = \frac{1-\lambda_{l2}}{1+\lambda_{l1}}$. Then

Lemma 2: (i) $\breve{\alpha} < \lambda_u$; (ii) $\lambda_u \leq \alpha^*$ if and only if $\lambda_2 \geq \lambda_u$; (iii) $\alpha^* < \hat{\alpha} < 1$.

The proof follows easily. Then the following proposition summarizes $l1$'s optimal decision in democracy.

Proposition 1: Under democracy:

1. If $\lambda_u \leq \alpha < \alpha^*$ (Region 1), $l1$ forms a majority with $u1$. The optimal tax rates and the corresponding disposable incomes are given as follows: $\tau_2 = 1$, $\tau_e = \frac{x_2}{(1-\lambda_{u1})x_{u1}}$, $T_d = \frac{x_2}{1-\lambda_{u1}}$, and

$$y^d_{u1} = x_{u1},$$
$$y^d_{l1} = x_{l1} + T_d,$$
$$y^d_{l2} = y^d_{u2} = T_d.$$

2. If $\alpha \geq \alpha^*$, $l1$ forms a majority with $l2$. The optimal tax rates and the corresponding disposable incomes are given as follows:

   (a) if $\alpha^* \leq \alpha < \hat{\alpha}$ (Region 2), then $\tau_e = 1$, $\tau_2 = \frac{x_u}{(1-\lambda_{l2})x_{l2}}$, $T_d = \frac{x_u}{1-\lambda_{l2}}$, and

   $$y^d_{u1} = y^d_{u2} = T_d,$$
   $$y^d_{l1} = x_{l1} + T_d,$$
   $$y^d_{l2} = x_{l2}.$$

   (b) if $\alpha \geq \hat{\alpha}$ (Region 3), then $\tau_2 = \tau_e = 1$, $T_d = x_2 + \alpha x_1$, and

   $$y^d_{u1} = y^d_{u2} = y^d_{l2} = T_d,$$
   $$y^d_{l1} = x_{l1} + T_d.$$

Proof of Proposition 1: We will prove the claims of this proposition in the reverse order. If $l1$ forms a majority with $l2$, then $l1$'s optimal tax proposal will be, $\tau_e = 1$ and $\tau_2 = \max \tau$ subject to $T_d(\tau) \geq \tau x_{l2}$, where $T_d(\tau) = x_u + \lambda_{l2}\tau x_{l2}$. That is, $l1$ fully taxes the upper class, and proposes the maximum tax rate τ_2 that $l2$ would accept. Note that $T_d(\tau)$ is the transfer generated by the tax scheme ($\tau_e = 1, \tau_2 = \tau$). $l2$ votes for ($\tau_e = 1, \tau_2 = \tau$) only if the transfer it will receive, $T_d(\tau)$, is greater than or equal to the tax it will pay, τx_{l2}. Otherwise, $l2$ does not vote for the proposal, the status quo tax rates $\tau_e = \tau_2 = 0$ are implemented, and $l2$ avoids paying tax.

So, if $l1$ forms a majority with $l2$, $l1$'s optimal proposal is $\tau_e = 1$ and $\tau_2 = \min\{1, \frac{x_u}{(1-\lambda_{l2})x_{l2}}\}$. Note that $\tau_2 = 1$ if $\alpha \geq \hat{\alpha}$, and $\tau_2 = \frac{x_u}{(1-\lambda_{l2})x_{l2}}$ otherwise. When $\alpha \geq \hat{\alpha}$, $l2$ votes for $\tau_e = \tau_2 = 1$, which is $l1$'s unconstrained optimal. So, $l1$ forms a majority with $l2$ when $\alpha \geq \hat{\alpha}$. This proves part a.

If $\alpha < \hat{\alpha}$ and $l1$ forms a majority with $l2$, then it proposes ($\tau_e = 1, \tau_2 = \frac{x_u}{(1-\lambda_{l2})x_{l2}}$) and $l2$ accepts the proposal. Then the transfer is given by $T_d = \frac{x_u}{1-\lambda_{l2}}$.

If $\alpha < \hat{\alpha}$ and $l1$ forms a majority with $u1$, then $l1$'s optimal tax proposal will be, $\tau_2 = 1$ and $\tau_e = \max \tau$ subject to $T_d(\tau) \geq \tau x_{u1}$, where $T_d(\tau) = x_2 + \lambda_{u1}\tau x_{u1}$. That is, $l1$fully taxes group 2 agents, and proposes the maximum tax rate τ_e that $u1$ would accept. Note that $T_d(\tau)$ is the transfer generated by the tax scheme ($\tau_e = \tau, \tau_2 = 1$). $u1$ votes for ($\tau_e = \tau, \tau_2 = 1$) only if the transfer it will receive, $T_d(\tau)$, is greater than or equal to the tax it will pay, τx_{u1}. Otherwise, $u1$ does not vote for the proposal, the status quo tax rates $\tau_e = \tau_2 = 0$ are implemented, and $u1$ avoids paying tax. So, $l1$ proposes ($\tau_e = \frac{x_2}{(1-\lambda_{u1})x_{u1}}, \tau_2 = 1$) and $u1$ accepts the proposal. Note that $\tau_e < 1$ if and only if $\alpha > \breve{\alpha}$. Since $\alpha > \lambda_u > \breve{\alpha}$ by Lemma 2, $\tau_e < 1$ and the transfer is $T_d = \frac{x_2}{1-\lambda_{u1}}$.

A comparison of these alternative transfers gives $l1$'s optimal decision when $\alpha < \hat{\alpha} : l1$ forms a majority with $l2$ if and only if $\frac{x_u}{1-\lambda_{l2}} \geq \frac{x_2}{1-\lambda_{u1}}$, or equivalently $\alpha \geq \alpha^*$. So, parts b and c follow immediately.■

The following summarizes the tax rates in equilibrium under democracy:

[**Figure 5, Tax rates, *I will add this***]

A.2 Autocracy

If the regime remains autocratic, $u1$ optimally sets the tax rates as follows: $\tau_2 = 1$, $\tau_1 = \tau_e = 0$. Then, the transfer is given by $T_a = x_2$, and the disposable incomes are given as follows:

$$
\begin{aligned}
y^a_{u1} &= x_{u1} + T_a, \\
y^a_{l1} &= x_{l1} + T_a, \\
y^a_{u2} &= T_a, \\
y^a_{l2} &= T_a.
\end{aligned}
$$

A.3 Equilibrium

Given the equilibrium tax rates under democracy and autocracy:

Lower Class Actions

If $u1$ decides not to democratize, then each lower class group decides whether to uprise or not in the following subgame. Consider group li and lj, $i \neq j$. Let $\gamma_j = 0$ if lj does not uprise, $\gamma_j = 1$ if lj uprises. Given lj's decision, agent li uprises if and only if

$$(1-(\gamma_j\lambda_{lj}+\lambda_{li})p)y^a_{li}+(\gamma_j\lambda_{lj}+\lambda_{li})py^d_{li}-(\gamma_j\lambda_{lj}+\lambda_{li})\psi x > (1-\gamma_j\lambda_{lj}p)y^a_{li}+\gamma_j\lambda_{lj}py^d_{li}-\gamma_j\lambda_{lj}\psi x$$

If li uprises, the size of uprising mass becomes $\gamma_j\lambda_{lj} + \lambda_{li}$. Then the uprising fails with probability $1-(\gamma_j\lambda_{lj}+\lambda_{li})p$, in this case li's disposable income is given by y^a_{li}. The uprising is successful with probability $(\gamma_j\lambda_{lj}+\lambda_{li})p$, in this case li's disposable income is y^d_{li}. The per capita cost of uprising is $(\gamma_j\lambda_{lj} + \lambda_{li})p\psi x$. Thus, the left hand side of the above inequality is li's expected payoff from uprising. If li does not uprise, then the size of uprising mass is given by $\gamma_j\lambda_{lj}$, and li's expected payoff can be calculated accordingly as in the right hand side of the above inequality. Equivalently, li uprises if and only if

$$p(y^d_{li} - y^a_{li}) > \psi x.$$

So, li's decision is independent of lj's decision and vice versa.

Upper Class Actions

Let γ_i denote li's equilibrium uprising decision in the subgame when $u1$ does not democratize. Then $u1$ democratizes if and only if

$$y^d_{u1} \geq (1 - (\sum_i \gamma_i\lambda_{li})p)y^a_{u1} + (\sum_i \gamma_i\lambda_{li})py^d_{u1} - (\sum_i \gamma_i\lambda_{li})\psi x$$

If $u1$ democratizes, $u1$'s payoff is given by y^d_{u1}. If $u1$ decides not to democratize, lower class groups decide whether to uprise. The uprising fails with probability $1 - (\sum_i \gamma_i\lambda_{li})p$, in this case $u1$'s disposable income is given by y^a_{u1}. The uprising is successful with probability $(\sum_i \gamma_i\lambda_{li})p$, in this case $u1$'s disposable income is y^d_{u1}. The per capita cost of uprising is $(\sum_i \gamma_i\lambda_{li})\psi x$. Thus, the right hand side of the above inequality is $u1$'s expected payoff from not democratizing. Let $\delta = 1$ if $u1$ democratizes, and $\delta = 0$ otherwise.

$$\delta = 1 \text{ if and only if } (\sum_i \gamma_i \lambda_{li})\psi x \geq (1 - (\sum_i \gamma_i \lambda_{li})p)(y_{u1}^a - y_{u1}^d).$$

Now, we can work out the equilibrium in every case. Suppose that $\lambda_{l1} < 1/2$. The analysis of Region 3 applies for the case $\lambda_{l1} \geq 1/2$ directly.

- **Region 1:** $\lambda_u \leq \alpha < \alpha^*$.

Note that $\tau_2 = 1$, $\tau_e = \frac{x_2}{(1-\lambda_{u1})x_{u1}}$, $T_d = \frac{x_2}{1-\lambda_{u1}}$ in this region. Then $y_{li}^d - y_{li}^a = T_d - T_a = \frac{\lambda_{u1}}{1-\lambda_{u1}}x_2$. Then both $l1$ and $l2$ uprise if and only if $p\frac{\lambda_{u1}}{1-\lambda_{u1}}x_2 < \psi x$. When $p\frac{\lambda_{u1}}{1-\lambda_{u1}}x_2 < \psi x$, $u1$ democratizes if and only if $\lambda_l \psi x \geq (1 - \lambda_l p)(y_{u1}^a - y_{u1}^d) = (1 - \lambda_l p)x_2$, that is

$$\delta = 1 \text{ if and only if } (\frac{1}{\lambda_l} - p)\lambda_2 \leq \psi \leq p\frac{\lambda_{u1}}{1 - \lambda_{u1}}\lambda_2.$$

- **Region 2:** $\alpha^* \leq \alpha < \hat{\alpha}$.

Note that $\tau_e = 1$, $\tau_2 = \frac{x_u}{(1-\lambda_{l2})x_{l2}}$, $T_d = \frac{x_u}{1-\lambda_{l2}}$ in this region. Then $y_{l1}^d - y_{l1}^a = T_d - T_a$ so that $l1$'s uprising decision is given as

$$\gamma_1 = 1 \text{ if and only if } p(T_d - T_a) > \psi x.$$

Similarly, $y_{l2}^d - y_{l2}^a = x_{l2} - T_a > T_d - T_a$. The last inequality follows from $T_d = \tau_2 x_{l2}$ and $\tau_2 < 1$. $l2$'s uprising decision is given as

$$\gamma_2 = 1 \text{ if and only if } p(x_{l2} - T_a) > \psi x.$$

When $\psi x > p(x_{l2} - T_a)$, neither group uprises, so democratization does not occur in this region. When $\psi x \leq p(T_d - T_a) = p(\frac{x_u}{1-\lambda_{l2}} - x_2)$, both $l1$ and $l2$ uprise if $u1$ does not democratize. Then $u1$ democratizes if and only if

$$\lambda_l \psi x \geq (1 - \lambda_l p)(y_{u1}^a - y_{u1}^d) = (1 - \lambda_l p)(x_{u1} + T_a - T_d).$$

When $p(T_d - T_a) < \psi x \leq p(x_{l2} - T_a)$, only $l2$ uprises. Then $u1$ democratizes if and only if

$$\lambda_{l2} \psi x \geq (1 - \lambda_{l2} p)(y_{u1}^a - y_{u1}^d) = (1 - \lambda_{l2} p)(x_{u1} + T_a - T_d).$$

We claim that $(\frac{1}{\lambda_{l2}} - p)(x_{u1} + T_a - T_d) > p(x_{l2} - T_a)$ so that $u1$ does not democratize when $p(T_d - T_a) < \psi x \leq p(x_{l2} - T_a)$. To prove this claim, check that (i) $(\frac{1}{\lambda_{l2}} - p)(x_{u1} + T_a - T_d)$ is increasing in α; (ii) $p(x_{l2} - T_a)$ is decreasing in α; and (iii) $(\frac{1}{\lambda_{l2}} - p)(x_{u1} + T_a - T_d) > p(x_{l2} - T_a)$ holds when $\alpha = \alpha^*$ and $p = \frac{1}{\lambda_l}$, the largest possible value for p.

In summary, when $\alpha^* \leq \alpha < \hat{\alpha}$, $u1$'s democratization decision is given as follows:$\delta = 1$ if and only if

$$(\frac{1}{\lambda_l} - p)(\lambda_2 + \frac{\lambda_{l1}\alpha}{\lambda_u(1 - \lambda_{l2})}) \leq \psi \leq p(\frac{\alpha}{1 - \lambda_{l2}} - \lambda_2).$$

- **Region 3:** $\alpha \geq \hat{\alpha}$

Note that $\tau_e = 1$, $\tau_2 = 1$, $T_d = x_2 + \alpha x_1$. Then $y^d_{li} - y^a_{li} = T_d - T_a = \alpha x_1$, so each lower class uprises if and only if $\psi \leq p\alpha\lambda_1$. If $\psi > p\alpha\lambda_1$, there will be no uprising, so $u1$ will not democratize, i.e. $\delta = 0$. If $\psi \leq p\alpha\lambda_1$ and $u1$ does not democratize, then both lower classes will uprise. Then, $u1$ democratizes if and only if

$$\lambda_l \psi x \geq (1 - \lambda_l p)(y^a_{u1} - y^d_{u1}) = (1 - \lambda_l p)(\frac{1}{\lambda_u} - \lambda_1)\alpha x.$$

That is

$$\delta = 1 \text{ if and only if } (\frac{1}{\lambda_l} - p)(\frac{1}{\lambda_u} - \lambda_1)\alpha \leq \psi \leq p\alpha\lambda_1.$$

This same analysis applies to $\lambda_{l1} \geq \frac{1}{2}$.

B Comparative Statics Analysis

For notational convenience in computations, let us rename the lines that determine the democratization region as follows: Let ψ^i_h and ψ^i_l be the upper bound and lower bound of the democratization region, respectively, in region $i \in \{1, 2, 3\}$. Similarly, D^i be the length of democratization region in region $i \in \{1, 2, 3\}$.

We will use the following observation to derive some of our results: $\psi^1_h = \psi^2_h$ at $\alpha = \alpha^*$, $\psi^2_h = \psi^3_h$ and $\psi^2_l = \psi^3_l$ at $\alpha = \hat{\alpha}$.

Comparative Statics with respect to λ_l:

It is obvious that $\frac{\partial \psi^1_h}{\partial \lambda_l} < 0$, $\frac{\partial \psi^1_l}{\partial \lambda_l} < 0$, $\frac{\partial \psi^2_h}{\partial \lambda_l} > 0$, and $\frac{\partial \psi^3_h}{\partial \lambda_l} = 0$.

Now, we will show that $\frac{\partial \psi^2_l}{\partial \lambda_l} < 0$. First note that D^2 may not be positive for all α in region 2. We will calculate $\frac{\partial \psi^2_l}{\partial \lambda_l}$ when $D^2 > 0$. In particular,

$$\begin{aligned} D^2 &= \psi^2_h - \psi^2_l \\ &= p\frac{\alpha}{\lambda_u} - \frac{1}{\lambda_l}\left(\lambda_2 + \frac{\lambda_{l1}\alpha}{\lambda_u(1 - \lambda_{l2})}\right) \end{aligned}$$

So, $D^2 > 0$ is equivalent to

$$p > \frac{\lambda_u}{\lambda_l \alpha}\left(\lambda_2 + \frac{\lambda_{l1}\alpha}{\lambda_u(1 - \lambda_{l2})}\right)$$

Compute $\frac{\partial \psi^2_l}{\partial \lambda_l}$:

$$\frac{\partial \psi^2_l}{\partial \lambda_l} = (\frac{1}{\lambda_l} - p)\lambda_1 \alpha \frac{1 - \lambda_l \lambda_{l2}}{\lambda_u^2 (1 - \lambda_{l2})^2} - \frac{1}{\lambda_l^2}\left(\lambda_2 + \frac{\lambda_{l1}\alpha}{\lambda_u(1 - \lambda_{l2})}\right)$$

Now $p > \frac{\lambda_u}{\lambda_l \alpha}\left(\lambda_2 + \frac{\lambda_{l1}\alpha}{\lambda_u(1-\lambda_{l2})}\right)$ implies that

$$\frac{1}{\lambda_l} - p < \frac{1}{\lambda_l}\left[1 - \frac{\lambda_u}{\alpha}\left(\lambda_2 + \frac{\lambda_{l1}\alpha}{\lambda_u(1-\lambda_{l2})}\right)\right]$$

so that

$$(\frac{1}{\lambda_l} - p)\lambda_1\alpha < \frac{\lambda_{u1}}{\lambda_l}\left[\frac{\alpha}{1-\lambda_{l2}} - \lambda_2\right]$$

Then

$$\begin{aligned}\frac{\partial \psi_l^2}{\partial \lambda_l} &< \frac{\lambda_{u1}}{\lambda_l}\left[\frac{\alpha}{1-\lambda_{l2}} - \lambda_2\right]\frac{1-\lambda_l\lambda_{l2}}{\lambda_u^2(1-\lambda_{l2})^2} - \frac{1}{\lambda_l^2}\left(\lambda_2 + \frac{\lambda_{l1}\alpha}{\lambda_u(1-\lambda_{l2})}\right)\\ &= \frac{\alpha\lambda_1}{\lambda_l\lambda_u(1-\lambda_{l2})}\frac{\lambda_{l2}(1-\lambda_{l2}+\lambda_u)}{(1-\lambda_{l2})^2} - \frac{\lambda_2\left[\lambda_{l1}(1-\lambda_l\lambda_{l2}) + \lambda_u(1-\lambda_{l2})^2\right]}{\lambda_l^2\lambda_u(1-\lambda_{l2})^2}\\ &\equiv RHS(\alpha)\end{aligned}$$

RHS is an increasing function of α. Now check that $RHS(\hat{\alpha}) < 0$ is equivalent to

$$\frac{\lambda_{l1}}{1+\lambda_{l1}}\lambda_l(1-\lambda_{l2}+\lambda_u) < \lambda_{l1}(1-\lambda_l\lambda_{l2}) + \lambda_u(1-\lambda_{l2})^2.$$

In order to show that this inequality holds, it suffices to show that $\lambda_l(1-\lambda_{l2}+\lambda_u) < (1-\lambda_l\lambda_{l2})$, which is equivalent to $\lambda_l(1+\lambda_u) = \lambda_l(2-\lambda_l) < 1$. Check that $\lambda_l(2-\lambda_l)$ attains its maximum at $\lambda_l = 1$ and its maximum is 1 at $\lambda_l = 1$. Since $\lambda_l < 1$, we have $\lambda_l(2-\lambda_l) < 1$. So, $RHS(\hat{\alpha}) < 0$. This implies that $\frac{\partial \psi_l^2}{\partial \lambda_l} < 0$.

Now consider $\frac{\partial \psi_l^3}{\partial \lambda_l}$:

$$\begin{aligned}\frac{\partial \psi_l^3}{\partial \lambda_l} &= \frac{\partial}{\partial \lambda_l}\left[(\frac{1}{\lambda_l} - p)(\frac{1}{\lambda_u} - \lambda_1)\alpha\right]\\ &= \alpha\left[\frac{1}{\lambda_u^2}(\frac{1}{\lambda_l} - p) - \frac{1}{\lambda_l^2}(\frac{1}{\lambda_u} - \lambda_1)\right]\end{aligned}$$

$D^3 > 0$ implies that $p > \frac{1-\lambda_{u1}}{\lambda_l}$, which in turn implies that $\frac{1}{\lambda_l} - p < \frac{\lambda_{u1}}{\lambda_l}$. Then, $\frac{\partial \psi_l^3}{\partial \lambda_l} < \alpha[\frac{1}{\lambda_u^2}\frac{\lambda_{u1}}{\lambda_l} - \frac{1}{\lambda_l^2}(\frac{1}{\lambda_u} - \lambda_1)] = -\frac{1-\lambda_1}{\lambda_l^2\lambda_u} < 0$.

These results imply that $\frac{\partial D^2}{\partial \lambda_l} > 0$ and $\frac{\partial D^3}{\partial \lambda_l} > 0$. Check that

$$\frac{\partial D^1}{\partial \lambda_l} = \lambda_2\left[\frac{1}{\lambda_l^2} - \frac{p\lambda_1}{(1-\lambda_{u1})^2}\right]$$

Then $\frac{\partial D^1}{\partial \lambda_l} > 0$ if and only if $p < \frac{1}{\lambda_1}(\frac{1-\lambda_{u1}}{\lambda_l})^2$. The last inequality holds for all $p < \frac{1}{\lambda_l}$ if $\lambda_{u1} < \frac{\sqrt{2}-1}{\sqrt{2}}$. Also, $p < \frac{1}{\lambda_l}$ implies that $\frac{\partial D^1}{\partial \lambda_l} > \lambda_2\left[\frac{1}{\lambda_l^2} - \frac{\lambda_1}{\lambda_l(1-\lambda_{u1})^2}\right]$. Now $\lambda_2\left[\frac{1}{\lambda_l^2} - \frac{\lambda_1}{\lambda_l(1-\lambda_{u1})^2}\right] > 0$ is equivalent to $\lambda_2 > \lambda_{u1}$. So, if $\lambda_2 > \lambda_{u1}$, then $\frac{\partial D^1}{\partial \lambda_l} > 0$ for all $p < \frac{1}{\lambda_1}$.

Comparative Statics with respect to λ_1:

It is obvious that $\frac{\partial \psi_l^1}{\partial \lambda_1} < 0$, $\frac{\partial \psi_l^3}{\partial \lambda_1} < 0$, and $\frac{\partial \psi_h^3}{\partial \lambda_1} > 0$.

Now consider $\frac{\partial \psi_h^1}{\partial \lambda_1}$:

$$\frac{\partial \psi_h^1}{\partial \lambda_1} = p\frac{\lambda_u}{1-\lambda_{u1}}\left(\frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1\right)$$

So $\frac{\partial \psi_h^1}{\partial \lambda_1} > 0$ if and only if $\lambda_2 > \lambda_1(1-\lambda_{u1})$ or equivalently $\lambda_l < (\frac{\lambda_2}{\lambda_1})^2$. That is, the sign of $\frac{\partial \psi_h^1}{\partial \lambda_1}$ is indeterminate.

Now consider $\frac{\partial \psi_h^2}{\partial \lambda_1}$:

$$\frac{\partial \psi_h^2}{\partial \lambda_1} = p\left(1 - \frac{\alpha\lambda_l}{(1-\lambda_{l2})^2}\right).$$

Then $\frac{\partial \psi_h^2}{\partial \lambda_1} > 0$ if and only if $\alpha < \frac{(1-\lambda_{l2})^2}{\lambda_l}$. Note that $\hat{\alpha} = \frac{1-\lambda_{l2}}{1+\lambda_{l1}} < \frac{(1-\lambda_{l2})^2}{\lambda_l}$, because the last inequality is equivalent to $\lambda_l = \lambda_{l1} + \lambda_{l2} < (1+\lambda_{l1})(1-\lambda_{l2}) = 1 + \lambda_{l1} - \lambda_{l2} - \lambda_{l1}\lambda_{l2}$. By cancelling out λ_{l1} and rearranging the terms, we obtain $\lambda_l(2+\lambda_{l1}) < \frac{1}{\lambda_2}$, and (i) $\lambda_l < 1$ and $\lambda_{l1} < \frac{1}{2}$ imply $\lambda_l(2+\lambda_{l1}) < \frac{5}{4} < 2$; (ii) $\lambda_2 < \frac{1}{2}$ implies $2 < \frac{1}{\lambda_2}$. So, $\frac{\partial \psi_h^2}{\partial \lambda_1} > 0$ since $\alpha \leq \hat{\alpha} < \frac{(1-\lambda_{l2})^2}{\lambda_l}$.

Now consider $\frac{\partial \psi_l^2}{\partial \lambda_1}$:

$$\frac{\partial \psi_l^2}{\partial \lambda_1} = (\frac{1}{\lambda_l} - p)(-1 + \frac{\alpha\lambda_l}{(1-\lambda_{l2})^2})$$

so that $\frac{\partial \psi_l^2}{\partial \lambda_1} < 0$ because of the same reasoning above.

These results immediately imply that $\frac{\partial D^2}{\partial \lambda_l} > 0$ and $\frac{\partial D^3}{\partial \lambda_l} > 0$. Check that $D^1 = \lambda_2(\frac{p}{1-\lambda_{u1}} - \frac{1}{\lambda_l})$ so that

$$\frac{\partial D^1}{\partial \lambda_1} = \frac{1}{\lambda_l} - \frac{p\lambda_l}{(1-\lambda_{u1})^2}.$$

Then $\frac{\partial D^1}{\partial \lambda_1} > 0$ is equivalent to $p < (\frac{1-\lambda_{u1}}{\lambda_l})^2$. The last inequality holds for all $p < \frac{1}{\lambda_l}$ if and only if $\lambda_l < (1-\lambda_{u1})^2$. For example check that this inequality holds when $\lambda_l = \lambda_1 = 0.51$ and it is violated when $\lambda_l = 0.8$, $\lambda_1 = 0.51$. Check that $\lambda_{l1} < 0.5$ in both cases. So, the sign of $\frac{\partial D^1}{\partial \lambda_1}$ is indeterminate.

C $u2$ starts out in power

In this section, we study the possibility that the upper class ethnic minority, $u2$, starts in power rather than $u1$. We consider the following variant on our base model: If the regime remains autocratic, $u2$ optimally sets the tax rates as follows: $\tau_1 = 1$, $\tau_2 = \tau_e = 0$. Then, the transfer is given by $T_a = x_1$, and the disposable income of each type of agent is given by

$$\begin{aligned}
y_{u2}^a &= x_{u2} + T_a, \\
y_{l2}^a &= x_{l2} + T_a, \\
y_{u1}^a &= T_a, \\
y_{l1}^a &= T_a.
\end{aligned}$$

If the regime transitions to democracy, the same analysis in Section 6.1 applies.

As before, each lower class uprises if and only if

$$p(y_{li}^d - y_{li}^a) > \psi x.$$

Given lower classes' decisions, $u2$ democratizes if and only if

$$y_{u2}^d \geq (1 - (\sum_i \gamma_i \lambda_{li})p)y_{u2}^a + (\sum_i \gamma_i \lambda_{li})p y_{u2}^d - (\sum_i \gamma_i \lambda_{li})\psi x$$

that is

$$(\sum_i \gamma_i \lambda_{li})\psi x \geq (1 - (\sum_i \gamma_i \lambda_{li})p)(y_{u2}^a - y_{u2}^d).$$

Now we can work out the equilibrium in every case.

Region 1:

Consider $\lambda_{l1} < 1/2$ and $\lambda_u \leq \alpha < \alpha^*$.

First note that $\tau_e = \frac{x_2}{(1-\lambda_{u1})x_{u1}}$, $\tau_2 = 1$, $T_d = \frac{x_2}{1-\lambda_{u1}}$ in this region. Then $y_{l1}^d - y_{l1}^a = x_{l1} + \frac{x_2}{1-\lambda_{u1}} - x_1$ so that $l1$ uprises if

$$\psi x < p(x_{l1} + \frac{x_2}{1 - \lambda_{u1}} - x_1)$$

Equivalently,

$$\gamma_1 = 1 \text{ if and only if } \psi < p(\frac{1 - \alpha}{\lambda_l} + \frac{\lambda_2}{1 - \lambda_{u1}} - \lambda_1)$$

Similarly, $y_{l2}^d - y_{l2}^a = \frac{x_2}{1-\lambda_{u1}} - (x_{l2} + x_1)$, so that $l2$ uprises if

$$\psi x < p(\frac{x_2}{1 - \lambda_{u1}} - x_{l2} - x_1) < 0$$

Thus, $l2$ never uprises.

When $\psi > p(\frac{1-\alpha}{\lambda_l} + \frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1)$, neither group uprises, so democratization does not occur in this region.

When $\psi \leq p(\frac{1-\alpha}{\lambda_l} + \frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1)$, only $l1$ uprises. Then $u2$ democratizes if

$$\lambda_{l1}\psi x \geq (1 - \lambda_{l1}p)(y_{u2}^a - y_{u2}^d) = (1 - \lambda_{l1}p)(x_{u2} + x_1 - \frac{x_2}{1 - \lambda_{u1}}).$$

Equivalently,

$$\psi \geq (\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} + \lambda_1 - \frac{\lambda_2}{1-\lambda_{u1}}).$$

In summary, when $\lambda_u \leq \alpha < \alpha^*$, $u2$'s democratization decision is given as follows:

$$\delta = 1 \text{ if and only if } (\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} + \lambda_1 - \frac{\lambda_2}{1-\lambda_{u1}}) \leq \psi \leq p(\frac{1-\alpha}{\lambda_l} + \frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1)$$

Region 2:

Consider $\lambda_{l1} < 1/2$ and $\alpha^* \leq \alpha < \hat{\alpha}$.

First note that $\tau_e = 1$, $\tau_2 = \frac{x_u}{(1-\lambda_{l2})x_{l2}}$, $T_d = \frac{x_u}{1-\lambda_{l2}}$ in this region. Then $y^d_{l1} - y^a_{l1} = x_{l1} + \frac{x_u}{1-\lambda_{l2}} - x_1$ so that $l1$ uprises if

$$\psi x < p(x_{l1} + \frac{x_u}{1-\lambda_{l2}} - x_1)$$

Equivalently,

$$\gamma_1 = 1 \text{ if and only if } \psi < p(\frac{1-\alpha}{\lambda_l} + \frac{\alpha}{1-\lambda_{l2}} - \lambda_1)$$

Similarly, $y^d_{l2} - y^a_{l2} = x_{l2} - (x_{l2} + x_1) = -x_1$, so that $l2$ uprises if $\psi < -p\lambda_1 < 0$. Thus, $l2$ never uprises.

When $\psi > p(\frac{1-\alpha}{\lambda_l} + \frac{\alpha}{1-\lambda_{l2}} - \lambda_1)$, neither group uprises, so democratization does not occur in this region.

When $\psi \leq p(\frac{1-\alpha}{\lambda_l} + \frac{\alpha}{1-\lambda_{l2}} - \lambda_1)$, only $l1$ uprises. Then $u2$ democratizes if

$$\lambda_{l1}\psi x \geq (1 - \lambda_{l1}p)(y^a_{u2} - y^d_{u2}) = (1 - \lambda_{l1}p)(x_{u2} + x_1 - \frac{x_u}{1-\lambda_{l2}}).$$

Equivalently,

$$\psi \geq (\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} + \lambda_1 - \frac{\alpha}{1-\lambda_{l2}}).$$

In summary, when $\alpha^* \leq \alpha < \hat{\alpha}$, $u2$'s democratization decision is given as follows:

$$\delta = 1 \text{ if and only if } (\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} + \lambda_1 - \frac{\alpha}{1-\lambda_{l2}}) \leq \psi \leq p(\frac{1-\alpha}{\lambda_l} + \frac{\alpha}{1-\lambda_{l2}} - \lambda_1)$$

Region 3:

Consider $\hat{\alpha} \leq \alpha$.

First note that $\tau_e = 1$, $\tau_2 = 1$, $T_d = x_2 + \alpha x_1$ in this region. Then $y^d_{l1} - y^a_{l1} = x_{l1} + x_2 + \alpha x_1 - x_1$ so that $l1$ uprises if

$$\psi x < p(x_{l1} + x_2 - (1-\alpha)x_1)$$

Equivalently,

$$\gamma_1 = 1 \text{ if and only if } \psi < p(\frac{1-\alpha}{\lambda_l} + \lambda_2 - (1-\alpha)\lambda_1)$$

Similarly, $y^d_{l2} - y^a_{l2} = x_2 + \alpha x_1 - (x_{l2} + x_1)$, so that $l2$ uprises if

$$\psi x < p(x_2 - x_{l2} - (1-\alpha)x_1)$$

Equivalently,

$$\gamma_2 = 1 \text{ if and only if } \psi < p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1)$$

To see if l_2 uprises, we have to check if $\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1 > 0$ holds. This holds for large α. Since

$$p(\frac{1-\alpha}{\lambda_l} + \lambda_2 - (1-\alpha)\lambda_1) > p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1),$$

for larger values of α, there exists a region $\psi < p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1)$ where both $l1$ and $l2$ uprise, and there exists a region $p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1) < \psi \le p(\frac{1-\alpha}{\lambda_l} + \frac{\lambda_2}{1-\lambda_{u1}} - \lambda_1)$ where only $l1$ uprises.

When $\psi > p(\frac{1-\alpha}{\lambda_l} + \lambda_2 - (1-\alpha)\lambda_1)$, neither group uprises, so democratization does not occur in this region.

When $p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1) < \psi \le p(\frac{1-\alpha}{\lambda_l} + \lambda_2 - (1-\alpha)\lambda_1)$, only $l1$ uprises. Then $u2$ democratizes if

$$\lambda_{l1}\psi x \ge (1-\lambda_{l1}p)(y^a_{u2} - y^d_{u2}) = (1-\lambda_{l1}p)(x_{u2} - x_2 + (1-\alpha)x_1).$$

Equivalently,

$$\psi \ge (\frac{1}{\lambda_{l1}} - p)(\frac{\alpha}{\lambda_u} - \lambda_2 + (1-\alpha)\lambda_1)$$

When $\psi < p(\lambda_2 - \frac{1-\alpha}{\lambda_l} - (1-\alpha)\lambda_1)$, both $l1$ and $l2$ uprise. Then $u2$ democratizes if

$$\lambda_l \psi x \ge (1-\lambda_l p)(y^a_{u2} - y^d_{u2}) = (1-\lambda_l p)(x_{u2} - x_2 + (1-\alpha)x_1)$$

Equivalently,

$$\psi \ge (\frac{1}{\lambda_l} - p)(\frac{\alpha}{\lambda_u} - \lambda_2 + (1-\alpha)\lambda_1)$$

The same analysis applies to $\lambda_{l1} \ge \frac{1}{2}$.

D Coalition Formation with Power Sharing

Proposition 1: $u2$ always accepts power sharing with $u1$.
Proof: If $u1$ offers to share power with $u2$, then by accepting $u1$'s offer, $u2$ can guarantee zero tax rates in autocracy. In order $u1$ to get $u2$'s consent for any tax scheme with $\tau_2 > 0$, $u1$ has to tax set either $\tau_1 > 0$ or $\tau_e > 0$. In both cases, $u2$ would be better off by simply setting all the tax rates to zero. Because any other tax scheme with $\tau_e > 0$ would be transfer from the upper class to the lower class. So, $u1$ prefers $\tau_e = 0$. Now consider a tax scheme such that $\tau_e = 0$ and $\tau_1 x_1 + \tau_2 x_2 = \tau_2 x_{u2}$.The last equality is required for $u2$ not to veto the tax scheme. Such a tax scheme generates a net transfer of $T_1 = \tau_1 x_1 + \tau_2 x_2 - \tau_1 x_{u1}$ to $u1$. by substituting for $\tau_1 x_1 = -\tau_2 x_2 + \tau_2 x_{u2}$, $\tau_2 = \frac{x_1}{x_{u2} - x_2}\tau_1$ and $x_{u1} = x_{u2}$, we obtain

$T_1 = \frac{x - x_{u2}}{x_{u2} - x_2}\tau_1$. Then it follows from $x_{u2} > x$ and $x_{u2} > x_2$ that $T_1 < 0$ for any τ_1, so that $u1$ would offer $\tau_e = \tau_1 = \tau_2 = 0$ if $u1$ power shares with $u2$.

So, if autocracy prevails, $u2$'s disposable income is given by x_{u2}. On the other hand, if $u2$ rejects power sharing and autocracy prevails, $u2$'s disposable income is given by x_2. Since $\alpha > \lambda_u$ implies $x_{u2} > x_2$, $u2$ would be better off by power sharing.

It is possible that the regime may switch to democracy as a result of a successful uprising, even if $u2$ power shares with $u1$. We will show that x_{u2} is larger than $u2$'s disposable income under democracy, so that $u2$ prefers to power share with $u1$. In region 1, $y^d_{u2} = \frac{x_2}{1-\lambda_{u1}}$, and $x_{u2} > \frac{x_2}{1-\lambda_{u1}}$ is equivalent to $\alpha > \lambda_u \frac{\lambda_2}{1-\lambda_{u1}}$. Since $\alpha > \lambda_u > \lambda_u \frac{\lambda_2}{1-\lambda_{u1}}$, we have $x_{u2} > y^d_{u2}$ in region 1. In Region 2, $y^d_{u2} = \frac{x_u}{1-\lambda_{l2}}$. Then, $x_{u2} > y^d_{u2}$ is equivalent to $\frac{1}{\lambda_u} > \frac{1}{1-\lambda_{l2}} = \frac{1}{\lambda_u + \lambda_{l1}}$, which holds trivially. In region 3, $y^d_{u2} = x_2 + \alpha x_1$. Then, $x_{u2} > y^d_{u2}$ is equivalent to $\alpha > \lambda_u \frac{\lambda_2}{1-\lambda_{u1}}$, which holds. So, $u2$ has a higher disposable income under autocracy with power sharing. Moreover, power sharing decreases the likelihood of a successful uprising, and it may even avoid uprising. Therefore, $u2$'s optimal decision is to accept power sharing whenever $u1$ offers to power share. This completes the proof.

Proposition 3: For large α and low ψ, $u1$ may share power with $u2$ and both $l1$ and $l2$ uprise in equilibrium.

Proof: Since the proposition requires high values of α, we will restrict our analysis to region 3. However, the same type of equilibrium may exist in region 2, depending on the parameters, as well.

If $u1$ shares power with $u2$ and autocracy prevails, then the disposable incomes of the lower groups are $y^{a(u1-u2)}_{l1} = x_{l1} = y^a_{l1} - x_2$ and $y^{a(u1-u2)}_{l2} = x_{l1} = y^a_{l2} - (x_2 - x_{l2})$.

In this case, $l1$ uprises when $\psi x < q(y^d_{l1} - y^{a(u1-u2)}_{l1}) = q(y^d_{l1} - y^a_{l1}) + qx_2$ and $l2$ uprises when $\psi x < q(y^d_{l2} - y^{a(u1-u2)}_{l2}) = q(y^d_{l2} - y^{a(u1-u2)}_{l2}) = q(y^d_{l2} - y^a_{l2}) + q(x_2 - x_{l2})$.

So, we will consider the following sub-regions of region 3 ($\lambda_{l1} \geq \frac{1}{2}$ or $\alpha \geq \hat{\alpha}$):

3a. $q(y^d_{l1} - y^a_{l1}) + qx_2 < \psi x \leq p(y^d_{l1} - y^a_{l1})$

3b. $q(y^d_{l1} - y^a_{l1}) + q(x_2 - x_{l2}) < \psi x < q(y^d_{l1} - y^a_{l1}) + qx_2$

3c. $(\frac{1}{\lambda_l} - p)(y^a_{u1} - y^d_{u1}) < \psi x < q(y^d_{l1} - y^a_{l1}) + q(x_2 - x_{l2})$

3d. $\psi x < (\frac{1}{\lambda_l} - p)(y^a_{u1} - y^d_{u1})$

Note that these regions exist for certain parameter values. Since our propositions 2 and 3 state existence results, it is sufficient to assume the existence of these regions in the rest of the proof.

When $\psi x > p(y^d_{l1} - y^a_{l1}) = p(y^d_{l2} - y^a_{l2})$, there is no uprising under autocracy, so there is no power-sharing and autocracy prevails.

Consider $(\frac{1}{\lambda_l} - p)(y^a_{u1} - y^d_{u1}) \leq \psi x < p(y^d_{l1} - y^a_{l1})$. In this region, in the base model, $u1$ democratizes since

$$y^d_{u1} > Ey^a_{u1} = \lambda_l p y^d_{u1} + (1 - \lambda_l p) y^a_{u1} - \lambda_l \psi x$$

Consider Region 3a. Suppose that $l1$ does not share power with $u1$. If $u1$ shares power with $u2$, then there is no uprising so that $Ey_{u1}^{a(u1-u2)} = x_{u1}$. If $u1$ does not share power with $u2$, then both groups uprise so that $u1$'s payoff is $Ey_{u1}^a = \lambda_l p y_{u1}^d + (1-\lambda_l p)y_{u1}^a - \lambda_l \psi x$.

Since $Ey_{u1}^{a(u1-u2)} = x_{u1} > y_{u1}^d > Ey_{u1}^a$, $u1$ shares power with $u2$ when $l1$ rejects power sharing with $u1$. Then, $l1$ would prefer to share power with $u1$ since

$$Ey_{l1}^{a(u1-l1)} = x_{l1} + x_2 > Ey_{l1}^{a(u1-u2)} = x_{l1}$$

Then, $u1$ does not democratize when $\psi x > p(y_{l1}^d - y_{l1}^a) + qx_2$, shares power with $l1$ and there is no uprising.

Now consider *regions 3b, 3c, 3d.* Suppose $l1$ rejects power sharing with $u1$. If $u1$ shares power with $u2$, $l1$ uprises in *region 3b*, and both lower groups uprise in *regions 3c* and *3d.* If $u1$ does not share power with $u2$, then both lower groups uprise in *regions 3b, 3c, 3d.*

Now consider Regions 3c and 3d. Note that $y_{u1}^{a(u1-u2)} = y_{u1}^a - x_2$. If $l1$ rejects power sharing, then $u1$ shares power with $u2$ when

$$\begin{aligned} Ey_{u1}^{a(u1-u2)} = \lambda_l q y_{u1}^d + (1-\lambda_l q)y_{u1}^{a(u1-u2)} - \lambda_l\psi x > Ey_{u1}^a = \lambda_l p y_{u1}^d + (1-\lambda_l p)y_{u1}^a - \lambda_l \psi x \\ \iff (p-q)(y_{u1}^a - y_{u1}^d) > (\frac{1}{\lambda_l} - q)x_2 \\ \iff \alpha > \tilde{\alpha}^3 = \frac{(\frac{1}{\lambda_l} - q)\lambda_{u2}}{(p-q)(1-\lambda_{u1})} \end{aligned}$$

Note that $\tilde{\alpha}^3 < 1$ if, for example, the size of the upper class, λ_u, is small enough. Consider $\alpha > \tilde{\alpha}^3$: If $l1$ shares power with $u1$, then $Ey_{l1}^{a(u1-l1)} = y_{l1}^a$. If $l1$ does not share power with $u1$, then $u1$ shares power with $u2$, and $Ey_{l1}^{a(u1-u2)} = \lambda_l q y_{l1}^d + (1-\lambda_l q)(y_{l1}^a - x_2) - \lambda_l \psi x$. In this case, $l1$ does not power share with $u1$ if

$$\begin{aligned} Ey_{l1}^{a(u1-l1)} = y_{l1}^a < Ey_{l1}^{a(u1-u2)} = \lambda_l q y_{l1}^d + (1-\lambda_l q)(y_{l1}^a - x_2) - \lambda_l \psi x \\ \iff \psi x < q(y_{l1}^d - y_{l1}^a) - (\frac{1}{\lambda_l} - q)x_2 = q\alpha x_1 - (\frac{1}{\lambda_l} - q)x_2. \end{aligned}$$

To complete the proof of the proposition, check that $\tilde{\alpha}^3 < 1$, and $q\alpha x_1 - (\frac{1}{\lambda_l} - q)x_2 > 0$ if $q > \frac{\lambda_2}{\lambda_l}$, α is close to 1, and λ_u is small.

References

[1] Acemoglu, Daron and James Robinson. 2003. *The Political Determinants of Dictatorship and Democracy.* Manuscript: MIT.

[2] Bates, R. H. (1973). *Ethnicity in Contemporary Africa.* Syracuse, NY, Program of Eastern African Studies, Syracuse University.

[3] Bednar, Jenna, William N. Eskridge, Jr., and John Ferejohn. 2001. "A Political Theory of Federalism." In *Constitutional Culture and Democratic Rule*, ed. John Ferejohn, John Riley, and Jack N. Rakove. New York: Cambridge University Press.

[4] Bollen, K. and R. Jackman. 1989. "Democracy, Stability, and Dichotomies." *American Sociological Review* 54: 612-21.

[5] Cameron, Charles, David Epstein and Sharyn O'Halloran. 1996. "Do Majority-Minority Districts Maximize Substantive Black Representation in Congress?" *American Political Science Review* 90:794-812.

[6] Chandra, Kanchan. 2003. "Ethnic Parties and Democratic Stability." Manuscript: MIT.

[7] Chandra, Kanchan and Cilanne Boulet. 2003. "Ethnic Diversity and Democratic Stability." Manuscript: MIT.

[8] Collier, D. and R. Adcock. 1999. "Democracy and Dichotomies: A Pragmatic Approach to Choices about Concepts." In Nelson Polsby, ed. *Annual Review of Political Science.* Palo Alto: Stanford University Press.

[9] Dahl, Robert A. 1971. *Polyarchy: Participation and Opposition.* New Haven: Yale University Press.

[10] Davidson, Chandler. 1992. "The Voting Rights Act: A Brief History." In *Controversies in Minority Voting*, eds. Bernard Grofman and Chandler Davidson. Washington, D.C.: The Brookings Institution.

[11] De Figueiredo, Rui J. P., Jr. and Barry R. Weingast. 1999. "The Rationality of Fear: Political Opportunism and Ethnic Conflict." In *Civil Wars, Insecurity, and Intervention*, ed. Barbara F. Walter and Jack Snyder. New York: Columbia University Press.

[12] Epstein, David, Robert Bates, Jack Goldstone, Ida Kristensen, and Sharyn O'Halloran. 2003. "Democratic Transitions." Manuscript: Columbia University.

[13] Epstein, David, Michael Herron, Sharyn O'Halloran, and David Park. 2003. "Estimating the Impact of Redistricting on Minorities' Policy Influence." Manuscript, Columbia University.

[14] Epstein, David, Bahar Leventoğlu, and Sharyn O'Halloran. 2004. "Minorities and Democratization." Manuscript, Columbia University.

[15] Epstein, David, and Sharyn O'Halloran. 2000. "The Impact of Majority-Minority Districts on Congressional Elections." In Congressional Elections in the 1990's. Edited by David Brady, John Cogan, and John Ferejohn. Stanford: Stanford University Press.

[16] Epstein, David, and Sharyn O'Halloran. 2003. "Do We Still Need §5 Preclearance? Theory and Evidence." Manuscript, Columbia University.

[17] Farrell, David M. 1997. *Comparing Electoral Systems*. London: Prentice Hall.

[18] Geddes, B. 1999. "What Do We Know About Democratization After Twenty Years?" *Annual Review of Political Science* 2:115-44.

[19] Geertz, Clifford. 1963. "Primordial Sentiments and Civil Politics in the New States." In Geertz, ed. *Old Societies and New States*. New York: Free Press of Glencoe.

[20] Goldstone, Jack A., Ted Robert Gurr, Barbara Harff, Marc A. Levy, Monty G. Marshall, Robert H. Bates, David L. Epstein, Colin H. Kahl, Pamela T. Surko, John C. Ulfelder, Jr., and Alan N. Unger, in consultation with Matthew Christenson, Geoffrey D. Dabelko, Daniel C. Esty, and Thomas M. Parris. 2000. *State Failure Task Force Report: Phase III Findings.* McLean, VA: Science Applications International Corporation.

[21] Horowitz, Donald. 1985. *Ethnic Groups in Conflict*. Berkeley: University of California Press.

[22] Horowitz, Donald. 1994. "Democracy in Divided Societies." In *Nationalism, Ethnic Conflict and Democracy*, eds. Larry Diamond and Marc F. Plattner. Baltimore: Johns Hopkins Press.

[23] Huntington, S. P. 1991. *The Third Wave*. Norman, OK: Oklahoma University Press.

[24] Jaggers, K. and T. R. Gurr. 1995. "Tracing Democracy's Third Wave with the Polity III Data." *Journal of Peace Research* 31(4): 469-82.

[25] Kaufman, Chaim. 1996. "Possible and Impossible Solutions to Ethnic Civil Wars." *International Security* 20:136-75.

[26] Kousser, J. Morgan. 1999. *Colorblind Injustice*. Chapel Hill: University of North Carolina Press.

[27] Laitin, David. 1998. *Identity in Formation*. Ithaca: Cornell University Press.

[28] Lardeyret, Guy. 1991. "The Problem with PR." *Journal of Democracy* 2:30-35.

[29] Leventoğlu, Bahar. 2003. "Social Mobility and Regime Transitions." Manuscript, SUNY Stonybrook.

[30] Lijphart, Arend. *Democracy in Plural Societies*. New Haven: Yale University Press, 1977.

[31] Lublin, David. 1997. *The Paradox of Representation*. Princeton, NJ: Princeton UP.

[32] Meltzer, Allan and Scott F. Richards. 1981. "A Rational Theory of the Size of Government." *Journal of Political Economy* 89:914-27.

[33] Persson, Torsten and Guido Tabellini. 2000. *Political Economics: Explaining Economic Policy*. Cambridge, MA: MIT Press.

[34] Przeworski, Adam. 1991. *Democracy and the Market*. New York: Cambridge University Press.

[35] Przeworski, A., M. E. Alvarez, et al. 2000. *Democracy and Development*. New York: Cambridge University Press.

[36] Quade, Quentin L. 1991. "PR and Democratic Statecraft." *Journal of Democracy* 2:36-41.

[37] Rabushka, Alvin and Kenneth A. Shepsle. 1972. *Politics in Plural Societies*. Columbus: Charles E. Merrill.

[38] Riker, William H. 1964. *Federalism: Origin, Operation, Significance*. Boston: Little, Brown and Company.

[39] Rustow, Danwart. 1970. "Transitions to Democracy." *Comparative Politics* 12:337-364.

[40] Snyder, Jack. 2000. *From Voting to Violence*. New York: W. W. Norton.

[41] Tiebout, Charles M. 1956. "A Pure Theory of Local Expenditures." *Journal of Political Economy* 64:416-24.

[42] Tullock, Gordon. 1969. "Federalism: Problems of Scale." *Public Choice* 6:19-29.

[43] Zakaria, Fareed. 2003. *The Future of Freedom*. New York: W. W. Norton.