Literature on Redistribution

Intrasparency

Coate and Morris
Lohmann

Bandwagon Effects

Shepsle and Weingast

Budget Constraints
-and-
Party Loyalties

Lindbeck & Weibull
Cox & McCubbins

Factors Favoring Redistribution

Relatively many moderates

Low salience of position issues

Low income

Surprise; Numbers matter little
With differing attachments
to constituencies, asymetric
strategies emerge.

Voter Preferences

$$U = -\frac{1}{2} d^2 + \frac{K}{1-\varepsilon} c^{1-\varepsilon}$$

$$\left.\frac{dc}{dd}\right|_{U=\bar{U}} = \frac{d c^{\varepsilon}}{K}$$

$$d_{ip} = |x_i - x_p|$$

Income Transfers

$$C_{vp} = y_v + \alpha(p, v, t_{vp})$$

$$\frac{\partial \alpha}{\partial t} > 0 \qquad \alpha > -y_v$$

$$\frac{\partial^2 \alpha}{\partial t^2} < 0 \quad \alpha(p, v, 0) = 0$$

Voters' Choices

$$V_{ip} = -\frac{1}{2}(x_i - x_p)^2 + \frac{K_{v(i)}}{1-\varepsilon}\left[y_v + \alpha\right]^{1-\varepsilon}$$

Voter i prefers party L if and only if

$$V_{iL} > V_{iR}$$

This will be true if

$$x_i < \frac{x_L + x_R}{2} + \frac{K_{v(i)}}{x_R - x_L}\left[\left[y_v + \alpha_L\right]^{1-\varepsilon} - \left[y_v + \alpha_R\right]^{1-\varepsilon}\right]$$

Set $x_R = 1/2$ $\quad x_L = -\frac{1}{2}$

Voter i votes for L if

$$x_i < m_v(t_{vL}, t_{vR})$$

where

$$m_v(t_{vL}, t_{vR}) = \frac{K_v}{1-\varepsilon}\left[\left(y_v + a(L, v, t_{vL})\right)^{1-\varepsilon} - \left(y_v + a(R, v, t_{vR})\right)^{1-\varepsilon}\right]$$

$$V_L = \sum_{v=1}^{V} N_v \Phi_v\left(m_v(t_{vL}, t_{vR})\right)$$

$$V_R = \sum_{v=1}^{V} N_v\left[1 - \Phi_v\left(m_v(t_{vL}, t_{vR})\right)\right]$$

<u>Budget Constraint</u>

$$\sum_{v=1}^{V} N_v t_{vp} = 0$$

$$\mathcal{L}_L = \sum_{v=1}^{N} N_v \Phi\left(m_v(t_{vL}, t_{vR})\right) - \lambda_L \sum_{v=1}^{N} N_v t_{vL}$$

$$\left[\Phi'(m_v)\frac{\partial m_v}{\partial t_{vL}} - \lambda_L\right] N_v = 0$$

$$\sum_{v=1}^{N} N_v t_{vL} = 0$$

but $\dfrac{\partial m_v}{\partial t_{vL}} = K_v (y_v + \alpha)^{-\varepsilon} \dfrac{\partial \alpha}{\partial t_{vL}}$

The Swing Voter Model

$$\alpha(p, v, t_{vp}) = t_{vp} \quad p \in \{L, R\}$$

So the first order conditions become:

$$K_v \Phi_v'(m_v)(y_v + t_{vL})^{-\varepsilon} = \lambda_L$$

$$K_v \Phi_v'(m_v)(y_v + t_{vR})^{-\varepsilon} = \lambda_R$$

so

$$(y_v + t_{vL})\lambda_L^{1/\varepsilon} = (y_v + t_{vR})\lambda_R^{1/\varepsilon}$$

so

$$N_v(y_v + t_{vL})\lambda_L^{1/\varepsilon} = N_v(y_v + t_{vR})\lambda_R^{1/\varepsilon}$$

summing we have

$$\left(\sum_v N_v y_v + \sum_v N_v t_{vL}\right)\lambda_L^{1/\varepsilon} = \left(\sum_v N_v y_v + \sum_v N_v t_{vR}\right)\lambda_R^{1/\varepsilon}$$

$$\left(\sum_v N_v y_v\right) \lambda_L^{1/\varepsilon} = \left(\sum_v N_v y_v\right) \lambda_R^{1/\varepsilon}$$

That is;

$$\lambda_L = \lambda_R$$

The yield in votes per dollar is the same for both parties in equilibrium.

This in turn implies

$$t_{vL} = t_{vR}$$

The parties persue symetric strategies.

Starting with the first order condition from page $\boxed{7}$ we have

$$K_v \Phi_v'(m_v)(y_v + t_{vL})^{-\varepsilon} = \lambda_L$$

this becomes

$$\frac{K_v \Phi_v'(m_v)}{\lambda_L} = (y_v + t_{vL})^{\varepsilon}$$

or $$\left(\frac{K_v \Phi_v'(m_v)}{\lambda_L}\right)^{1/\varepsilon} = y_v + t_{vL}$$

summing across groups we have:

$$\frac{1}{\lambda_L^{1/\varepsilon}} \sum_v [K_v \Phi_v'(m_v)]^{1/\varepsilon} = \sum_v y_v + \sum_v t_{vL}$$

<u>But</u> $\sum_v t_{vL} = 0$ (Budget Balance)

while with matching transfers, so that $t_{vL} = t_{vR}$, we have

$m_v = 0$ for all groups.

This means

$$\frac{1}{\lambda_L^{1/\varepsilon}} \sum_v \{K_v \Phi_v'(0)\}^{1/\varepsilon} = \sum_v y_v$$

so

$$\frac{1}{\lambda_L^{1/\varepsilon}} = \frac{\sum_v y_v}{\sum_v K_v \Phi_v'(0)}$$

substituting back into the first order conditions for t_{vL} we have:

$$\frac{[K_v \Phi'(0)]^{1/\varepsilon} \sum_v y_v}{\sum_v [K_v \Phi_v'(0)]^{1/\varepsilon}} = y_v + t_{vL}$$

that is:

$$\frac{[K_v \Phi'(0)]^{1/\varepsilon}}{\sum_v [K_v \Phi'(0)]^{1/\varepsilon}} = \frac{y_v + t_{vL}}{\sum_v y_v}$$

Letting $\pi_v \equiv [K_v \Phi'(0)]^{1/\varepsilon}$ our first order condition becomes:

$$\frac{\pi_v}{\sum_v \pi_v} = \frac{y_v + tr_v}{\Sigma_v y_v}$$

The π_v parameter measures the "clout" of group v in the redistributive political "game". The higher π_v is relative to the clout of other groups, the greater the share of group v in consumption.

The Π_v parameter depends on three things:

k_v - Groups that place more weight on consumption relative to public policy fare well.

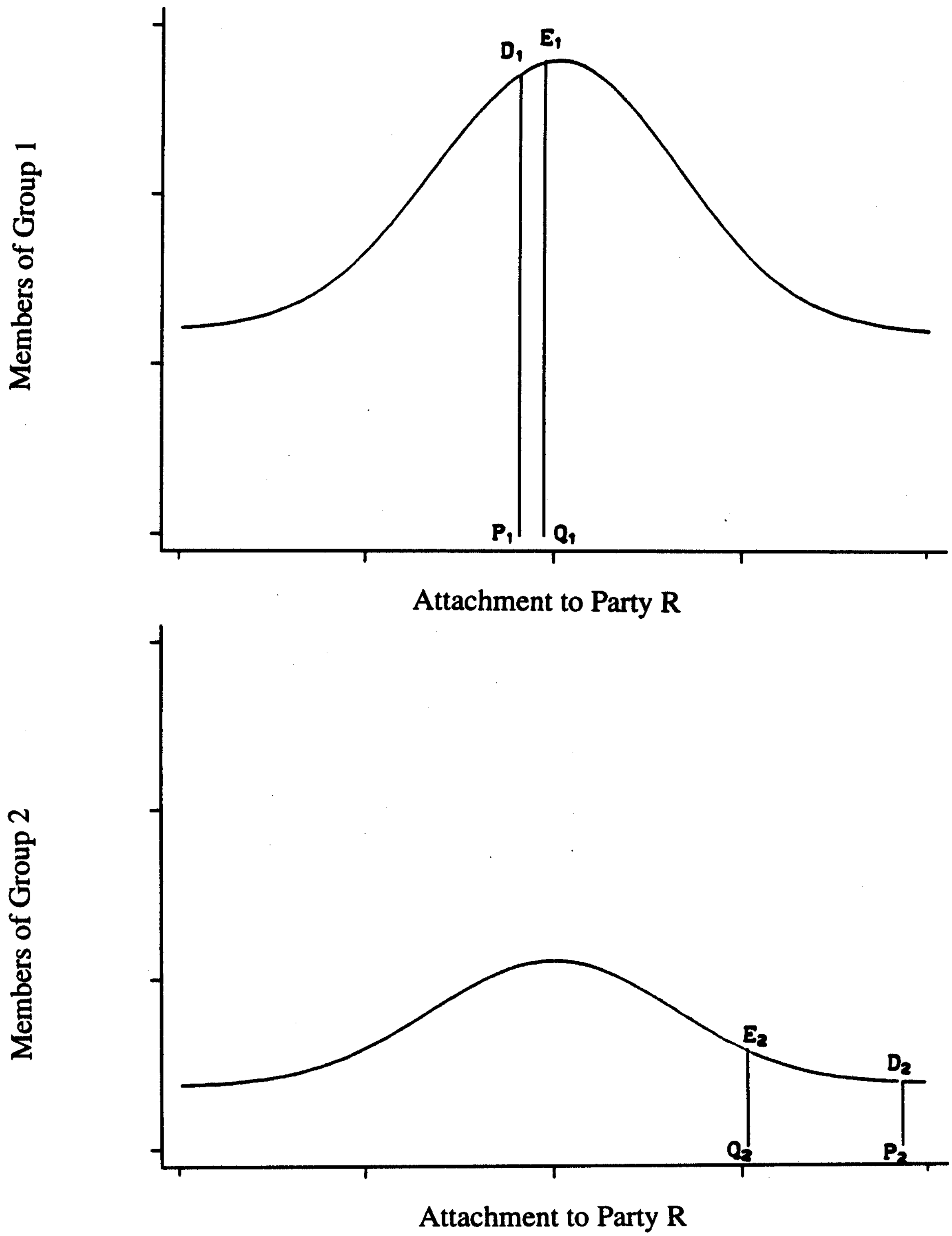
$\Phi'(0)$ - Groups with relatively many "moderates" indifferent between the political parties do well.

$1/\varepsilon$ - As $\varepsilon \to \infty$ so that marginal utility drops off fast, we get egalitarian distribution.

As $\varepsilon \to 0$ we get a "winner tak all" solution with the highest clout group getting virtually all consumption.

FIGURE 1

FAVORING GROUP 1 AT THE EXPENSE OF GROUP 2



$$\Pi_v = \left[K_v \Phi'(0)\right]^{1/\varepsilon}$$

measure's a group's political "clout".

$$S_{v0} = \frac{N_v y_v}{\sum_w N_w y_w}$$

$$S_v = \frac{N_v \Pi_v}{\sum_w N_w \Pi_w}$$

S_{v0} - income share of group v on the basis of productive characteristics

S_v - income share of group v on the basis of political characteristics

$$\frac{\partial\left[\frac{S_v}{S_{v0}}\right]}{\partial N_r} = \frac{-1}{N_r}\frac{S_v}{S_{v0}}(S_v - S_{v0})$$

$$\Downarrow$$

Large Numbers Receive more "average" treatment.

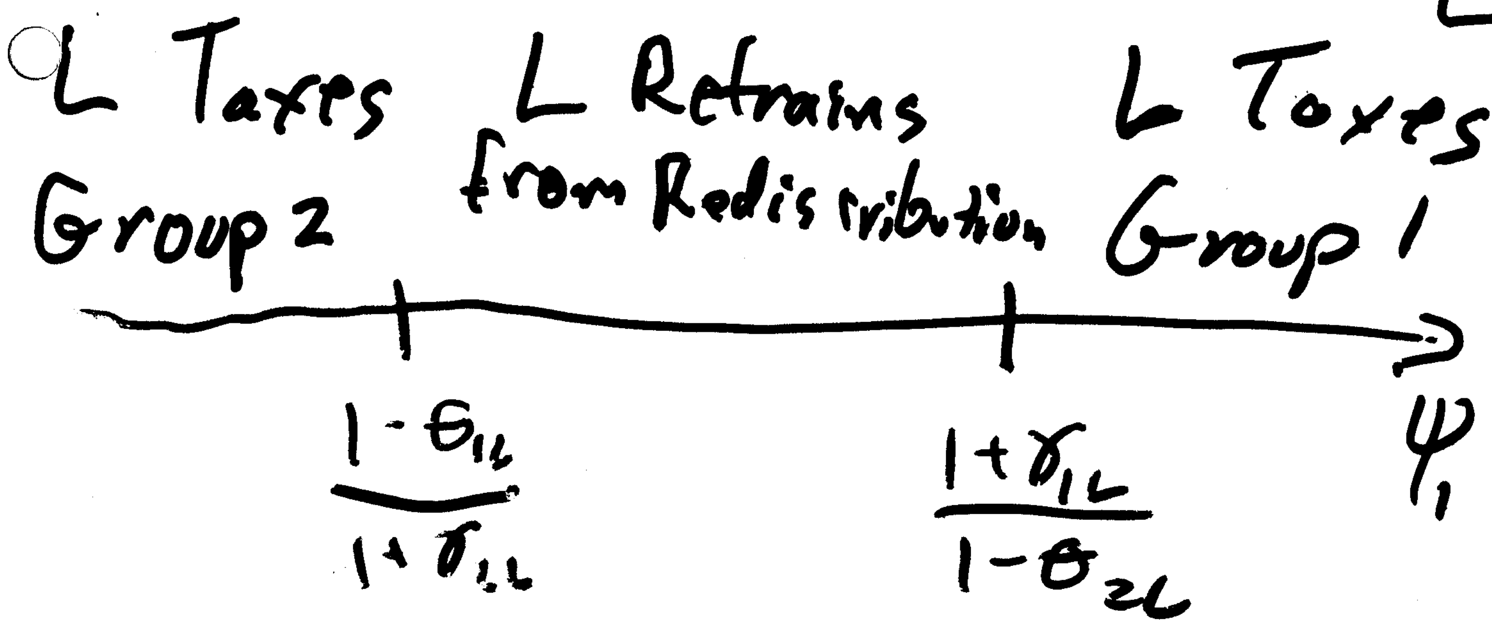
Machine Politics

$$\alpha(p, v, t_{vp}) = \begin{cases} (1-\theta_{vp})t_{vp}, & t_{vp} > 0 \\ (1+\sigma_{vp})t_{vp}, & t_{vp} < 0 \end{cases}$$

$\theta_{vp} \geq 0, \quad \sigma_{vp} > 0$

The smaller are θ_{vp} and σ_{vp} the more "core" group v is for party p.

Suppose we have just two groups. Group 1 is uniformly distributed with density δ_1, Group 2 is likewise with density δ_2.



$$\psi_1 = \left(\frac{y_1}{y_2}\right)^{\varepsilon} \frac{K_2 \delta_2}{K_1 \delta_1}$$

Changes in the degree to which groups 1 and 2 are "core" for party L move the thresholds for taxes and transfers. However, relative "clout" continues to matter as well.

Figure 2

Garment Workers' Concentration and Swing States