The Political Economy of Public Policy

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Lecture 5: Majority Voting & Electoral Competition

It is in the intention of democracy to give decision power of some sort to citizens

Can distinguish:

- direct democracy: citizens vote directly on issues (e.g. referenda)
- representative democracy: power is delegated to decision-makers, citizens only retain control of the decision-maker through elections but do not take decisions on issues

Either way **elections constitute the central feature of any democratic system**

To understand elections we need

- a theory of voting behaviour
- for representative democracy, we also need a theory of candidates' behaviour (party competition)

NORMATIVE PREMISE: WHAT SPECIAL ABOUT MAJORITY VOTING?

MAJORITY RULE AND MAY'S THEOREM

- Anonymity (A): Social preferences depend only on the collection of individual preferences, not on who has which preference
- Neutrality (N): if alternatives a and b are exchanged in the preference ordering of all individuals then the group also changes its ranking of a and b.
- Monotonicity (M): if $a \succeq_C b$ and for individual i we go from $a \prec_i b$ to $a \succeq_i b$, then also collective preferences will change to $a \succ_C b$
- **May's Theorem**: A method of preference aggregation over a and b satisfies U, A, N, M IF AND ONLY IF it is the method of majority rule

BASIC INGREDIENTS: DIRECT DEMOCRACY

- A polity composed of N citizens;
- a space $\mathcal{A}$ of feasible public policies with at least three elements;
- a policy is defined as an element x of the set $\mathcal{A}$.
- preferences over policies are represented by a utility function $V^i(x), i = 1...N$.
- decisions are taken by majority rule;

Consider two elements of $\mathcal{A}$, x and $x^{'}$: individual i will prefer x to $x^{'}$' if and only if $V^i(x) > V^i(x^{'})$, and will be indifferent if $V^i(x) = V^i(x^{'})$. Then if x is preferred to $x^{'}$ by the majority of the population in pairwise comparison we say $x \succ x^{'}$.

Definition 1: $x_i \in A$ *is a Condorcet Winner in the set* $\mathcal{A}$ *if and only if* x_i beats all other alternatives in $\mathcal{A}$ in pairwise comparison.

Def 1 [Formal] $x_i \in A$ *is a Condorcet Winner in the set* $\mathcal{A}$ *if and only if* $x \neq x_i$ *and* $x \in \mathcal{A} \Rightarrow x_i \succ x$.*Indicate the Condorcet winner with* x_c.

Definition 2 $x_i^* \in \mathcal{A}$ is the ideal policy for agent i if and only if x_i^* gives more utility that any other feasible alternative

Def 2 [Formal] $x_i^* \in \mathcal{A}$ is the ideal policy for agent i if and only if $V_i(x_i^*) > V_i(x) \; \forall \; x \neq x_i$, $x \in \mathcal{A}$.

Definition 3 Voter's i preferences are single-peaked if and only if the utility function has a single peak (one global maximum and no other local maxima), i.e. it is monotonically decreasing from the maximum.

Def 3 [Formal] Voter's i preferences are single-peaked if and only if, $\forall \{y, z\} \in \mathcal{A}$ s.t. either $y, z > x_i^*$ or $y, z < x_i^*$, we have that $V_i(y) > V_i(z) \iff \left|y - x_i^*\right| < \left|z - x_i^*\right|$.

Definition 4 Consider N voters with $\left\{x_1^*, x_2^*, ..., x_N^*\right\}$. x_m is median if it leaves 50% of the alternatives on either side

Def 4 [Formal] Consider N voters with $\left\{x_1^*, x_2^*, ..., x_N^*\right\}$. Let N_R be the number of voters s.t. $x_i^* \geq x_m$ and N_L the number of voters s.t. $x_i^* \leq x_m$. Then x_m is median if and only if $N_R \geq N/2$ and $N_L \geq N/2$.

Proposition 1 (Black): *If all citizens preferences are single peaked on a single dimension, then the median ideal preference is a Condorcet winner (it has empty winset) and the social preference order under simple majority rule is transitive, with the median standing highest in the order.*

In other terms, the policy chosen by majority rule is that of the citizen (median voter) whose preferred option is median in the community.

Three hidden assumptions in Black's Theorem:

- Number of voters is odd (easy to deal with) - No abstention (turnout and collective action problem)- Sincere voting (what is this?)
- *Sincere Voting*: a citizen votes for the feasible policy that maximizes her utility $V(x)$
- *Strategic Voting* is a best response to other agents actions
- **Important:** *Sincere and strategic voting yields the same winner with only two alternatives (the best response is voting sincerely). With more than two alternatives, however, strategic voting can be different from sincere voting and the winner can be different too.*

BIG PROBLEM: what happens when the policy space is multi-dimensional?

Imagine a policy-maker having to decide on fiscal policy and the Iraq war, or on immigration policy and gay marriage

Remember: the median voter theorem relies on voters having single-peaked preferences on a uni-dimensional issue (e.g. left-right). This is a sufficient but not necessary condition as proved by the following theorem:

Proposition 3 (Plott) *A vector policy $\underline{x} \in A$ is a Condorcet winner if and only if it is median with respect to all dimensions (radial symmetry).*

This is, however, a very restrictive requirement (McKelvey's chaos theorem).

REPRESENTATIVE DEMOCRACY: PARTY COMPETITION

Now add the following ingredients:

- assume there are two parties L and R each proposing a policy $x \in \mathcal{A}$ (respectively x_L and x_R).
- parties maximize the number of votes and can *precommit* to announced platforms.

Crucial Downsian idea: candidates present policies in order to win elections, do not win elections in order to implement policies.

Proposition (Downs): *Suppose that a Condorcet winner exists. Then the unique Nash equilibrium in platforms has* $x_L^* = x_R^* = x_c$.

Two parties $\Rightarrow$ *sincere voting (*vote for the option that is ranked higher in the preference ordering*)*

More than two parties $\Rightarrow$ sincere voting is not guaranteed.

Example: voting or not for the LibDem in Britain? Evidence suggests there is plenty of strategic voting in British elections

Notice:

- to apply the Downsian logic you don't need uni-dimensionality, single-peakness etc. (remember: sufficient but not necessary conditions for having a Condorcet-winner).
- However, using the median voter theorem and the Downsian logic gives us more substance, i.e. real-world predictions

Let's combine Downsian parties and the median voter theorem

- majority rule
- citizens: utility maximizers over a *unidimensional* policy space A.
- 2 parties: maximize number of votes$\Rightarrow$office seeking
- citizens have *single-peaked* preferences
- parties can *pre-commit* to announced policies

$\Rightarrow$ Electoral platforms converge to the median voter

Thus, Downs predicts that electoral competition will bring candidates to target the middle classes.

Does the distribution of preferences matter?

Benchmark: uniform distribution. However, preferences are unlikely to be uniformly distributed in practice.

Downs considers distributions that are not uniform [EXAMPLES].

If all citizens vote (*no abstention*) and there is *no possibility of entry for new parties* then any distribution would deliver the median voter result.

Assume now **ABSTENTION** is possible. In particular, citizens might be less prone to vote for platforms which are distant from their preferred one (**alienation**). The outcome changes: citizens' distribution matters.

Also, abstention can be rational for extremist voters who care about future electoral outcomes.

THE ORIGIN OF NEW PARTIES

In Down's model, this can be due to:

1) desire to win the election

2) desire to influence policy outcomes even not winning the election

However, formal investigation of party competition with more than 2 parties is rather complex and reveals a number of problems related to voting behaviour (possibility of strategic voting) and the existence of Nash equilibria.

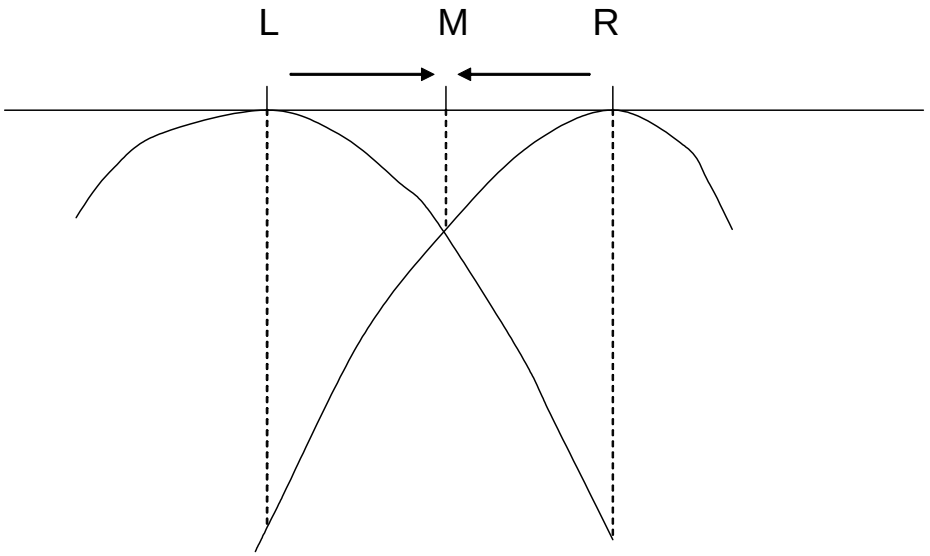
MAIN HYPOTHESES OF THE DOWNSIAN MODEL

- Office-seeking politicians
- Full commitment to platforms
- Perfect Information.
- Unidimensional policy space over which voters have single-peaked preferences

POLICY-ORIENTATED (PARTISAN) CANDIDATES

- **Calvert** (1985): if politicians can credibly pre-commit to any platform, again full convergence on the policy preferred by the median voter. Same as Downs!
- At the other extreme of no commitment at all, only the candidates' ideal points are credible
- Commitment can be a problem in a one-shot game. But repeated interactions can increase credibility.
- **Alesina** (1987) shows that convergence can still be achieved with partisan candidates if elections are repeated.
- Lesson: **credibility** is crucial. Role of parties could be that of increasing the credibility of candidates, establishing long term relationships with voters.

Alesina’s model



INFORMATION

- Voters usually imperfectly informed on candidates and platforms
- Candidates are also imperfectly informed about (the distribution of the) voters' preferences $\Rightarrow$ **probabilistic voting models**

  deterministic $\rightarrow$ vote for candidate 1 if $U(x_1) > U(x_2)$

  probabilistic $\rightarrow$ vote for candidate 1 with prob. $\pi = f[U(x_1) - U(x_2)]$
- Then candidates maximize $\sum_{i=1}^{N} \pi_i$
- Result: if the candidates agree on the function $f(.)$, i.e. they have the same information, then again convergence (non necessarily on median voter)
- On the technical side: probabilistic models allow us to find equilibria with multiple dimensions and non-single peaked preferences

VOTERS VS POLITICIANS

- Commitment problems at the heart of political life: how to ensure that politicians are responsive to voters' preferences?
- Elections as a discipline device: can kick out politicians if they do not behave. This is the essence of representative democracy. Parties can ensure long-term perspective even when individual politicians have short term incentives.
- In fact, here we encounter both a commitment and an information problem
- Uncertain politician **type** (e.g. honesty, competence, ideology, policy issue stands) and **actions** (implemented policies)
- Sources of asymmetric information: 1) Rational Ignorance (Downs); 2) Voters might not know what is the best policy for them; 3) Some variables are hardly observable or verifiable (e.g. how much rent-seeking? how much corruption?).

- Typical timing: 1) Incumbent's policy-making; 2) Election; 3) Final policy-making.
- Voters use period one outcome (or policy choice if observable) to decide about re-election (retrospective voting).

  $\Rightarrow$ Incumbents have an incentive to manipulate policy choices to influence what voters think and therefore be re-elected. $\Rightarrow$ election as discipline device (moral hazard) and selection mechanism (adverse selection)
- However, when both adverse selection and moral hazard are considered within the same model, a potential trade off emerges between better policies in the short run and better politicians in the long run.
- Evidence on the US: Besley and Case (1995) exploit the fact that at each given time some governors face re-election and some are "lame ducks".