

## Act Four: Paradise Regained?

- *A. Spreading parties apart:*

1. Political Entry,
2. Valence issues, and
3. Uncertainty in one dimension.

- *B. Regaining Equilibrium in multiple dimensions:*

1. New solution concepts,
2. Predictive dimension, and
3. Probabilistic spatial models with uncertainty.

## Summary of Results for Entry

	Number of Firms/Candidates		
	One	Two	Three
Space [0,1]; Customers uniform; Customer's buy from closest seller; Sellers may relocate costlessly; Cournot-Nash conjectures; Number of firms variable; (Eaton and Lipsey)	Indeterminate	At median	No equilibrium
Space [0,1]; Customers uniform; Customer's buy from closest seller; Sellers may relocate costlessly; Minimax hypothesis conjecture; Number of firms variable; (Eaton and Lipsey)	Indeterminate	At median if only two; But at: $x = 1/4$ and $x = 3/4$ if third entrant possible.	No equilibrium
Space [0,1]; Customers non-uniform; Customer's buy from closest seller; Sellers may relocate costlessly; Cournot-Nash conjectures; Number of firms variable; (Eaton and Lipsey)	Indeterminate	At median	No equilibrium
Space [0,1]; Customers non-uniform; Customer's buy from closest seller; Sellers may relocate costlessly; Minimax hypothesis conjecture; Number of firms variable; (Eaton and Lipsey)			
Space [0,1]; Customers uniform; Customer's buy from closest seller; Once located, firm can't relocate; Order of move determined (123); Three firms; (Prescott and Vischer)	xxxxxxxxxx	xxxxxxxxxx	Backward Induction:  $x_1 = 1/4$ ; $x_2 = 3/4$ $x_3 = 1/2$
Space [0,1]; Customers symmetric, unimodal; Customers buy from closest seller; Sellers may relocate costlessly Two established vote-max candidates (1,2) who go first together and make Cournot-Nash conjectures about each other and Stackelberg about entrant . One entrant (3) vote-max candidate who goes last; (Palfrey)	xxxxxxxxxx	xxxxxxxxxx	$F(x_1) = 1 - 2 F(1/4 + x_1/2)$ $F(x_2) = 1 - F(x_1)$  If uniform voters: $x_1 = 1/4$ ; $x_2 = 3/4$ ; $x_3 = 1/2$  Established (1,2) candidates never converge; entrant between (1,2) and never wins.

*Cournot-Nash:* Each firm computes the advantage of relocating on the hypothesis that its competitor will hold to its current location.

*Stackelberg hypothesis:* Likely reactions from a competition such as maximin expectations.

*Maximin Expectations* – Firm believes competitor will react to its move by inflicting maximum damage.

# Entry

## - Basic Issue

- \* Standard model with two parties at median
- \* If entry is costless and Nash conjectures hold (that is, that the two other parties will remain) where they are, then an entrant should come in and take votes away from one party.

## - Classic Entry Model

- \* Voters ideal points uniform  $[0,1]$
- \* Voters choose closest party
- \* Parties relocate costlessly
- \* Cournot-Nash conjectures
- \* Result for three parties: No equilibrium.
  
- \* Necessary Conditions for Equilibrium:
  - (i) No party gets less than one-half any other party. (Any party can capture half another party's vote by pairing with it.)
  - (ii) Two peripheral firms are paired

because an unpaired firm can always do better by doing so.

\* But these cannot be satisfied for three parties. (Both peripheral parties cannot pair with the interior party.)

### **- Palfrey Entry Model**

\* Voters ideal points uniform  $[0,1]$

\* Voters choose closest party

\* Parties relocate costlessly

\* Two established vote-max candidates (1,2) go first together and make Cournot-Nash conjectures about each other and Stackelberg about entrant (3) vote-max candidate who goes last.

\* Result:  $x_1 = 1/4$ ;  $x_2 = 3/4$ ;  $x_3 = 1/2$

Established (1,2) candidates never converge; entrant between (1,2) and never wins.

### **- Application - the Canadian Case**

# Uncertainty and Party Motivation

## Three motivations for parties

*Office-seeking* – To seek to win office. Only want to win.

*Policy-seeking* – To implement preferred policies.  
Want to win to implement statement.

*Confessional or Expressive* – To make a statement.  
Only want to make a statement.

## Two information environments:

Certainty about preferences of voters

Uncertainty about preferences of voters

## Two assumptions about uncertainty:

*Common knowledge of distribution* – if not, then perhaps divergence because of different beliefs

*Unbiased distribution* – if not, then perhaps convergence to non-median position from bias

## Results from These Assumptions

*Calvert:* Assume nicely behaved preferences (e.g., one-dimensional single peaked or multi-dimensional symmetrical) and assume that parties are on “opposite” sides of the median.

	Motivations of Parties		
Certainty about Voters	Office seeking (Downsian)	Policy seeking (Wittman-Calvert)	Confessional (Nader-Buchanan)
Certain	Convergence to median	Convergence by winner to median	Locate at Ideal points
Uncertain	Convergence to median	Divergence around median.	Locate at Ideal points

Note: If policy-seeking parties both on one side of median and 1-D then convergence is to party ideal point nearest the median.