Outline

- Juan Chen: Thomas Gilligan and Keith Krehbiel. 1990. “Organization of Informative Committees by a Rational Legislature”
- Abhinay Muthoo and Kenneth A. Shepsle. 2002. “Organizations with Overlapping Generations of Players.”
- Daniel Diermeier and Antonio Merlo. 2000. "Government Turnover in Parliamentary Democracies."
- Arthur Lupia. 1992. “Busy Voters, Agenda Control, and the Power of Information.”

Busy Voters, Agenda Control, and the Power of Information

What would you do?

Model Features

- Monopoly Agenda Control
  - Two players: a voter and a setter.
  - One-dimension, linear spatial utilities with ideal points
- Incompletely Informed Voters
  - The setter's ideal point is drawn from the cdf F, with density f.
- Communication Opportunities
- Sequential equilibrium concept

The Setter

- $X \in [0, 1]$ – the setter's ideal point
- $s(X)$ – the setter's strategy
  - $K \in \Re$, the cost of entry
  - $s_1(X)$ entry decision
  - $s_2(X)$ content decision

The Voter & Endorser

- The voter observes M(s, X).
  - $M_1(s_1)$ – they observe whether the setter contests the election
  - $M_2(s_2)$ – an endorsement. Its quality varies across game types. In this paper, it is exogenous.

Voters always vote as if they are pivotal.

I assume that they adopt a weakly dominated strategy.

Premise Comparison

TABLE 1.

Comparison of Fundamental Setter Model Assumptions

CHARACTERISTIC	ROMER AND ROSENTHAL 1978	DENZAU AND MACKAY 1983	BANKS 1990	LUPIA
Single-shot game	Yes	Yes	Yes	Yes
Single-peaked voter preferences	Yes	Yes	Yes	Yes
Perfectly informed setter	Yes	No	Yes	Yes
Voters always know				
Location of status quo	Yes	Yes	No	Yes
Setter's Preferences	Yes	Yes	Yes	No
Location of Alternative	Yes	Yes	Yes	No

Game Types

- Control case: no endorsement
- Costly entry: no endorsement
- Credible endorsement
- Learn the setter’s ideal point

Preliminary Results

LEMMA 1. *The setter contests an election if and only if the benefit from contesting the election is greater than the cost.*

LEMMA 2. *A weakly dominant location strategy for the setter is $s_2 = X$.*

Control Case Equilibrium

Control Case

PROPOSITION. *The equilibrium for the control case is*

$\forall\ X \in [0, 1]: s = (1, X)$

$\forall\ T_i \in [0, 1]: v_i(T_i, M(s, X))$

$$= \begin{cases} 1 \ \text{if} \int 0_0^1 [U_i(X, T_i) f(X|M(s, X))] \\ \qquad > U_i(SQ, T_i) \text{ and } M_1(s_1) = 1 \\ -1 \quad \text{otherwise.} \end{cases}$$

Beliefs can be characterized by $f(X|M(s, X)) = f(X)$.

Proof. The setter's equilibrium entry strategy is proven by Lemma 1. The setter's location strategy is proven by Lemma 2.

Preliminary Result

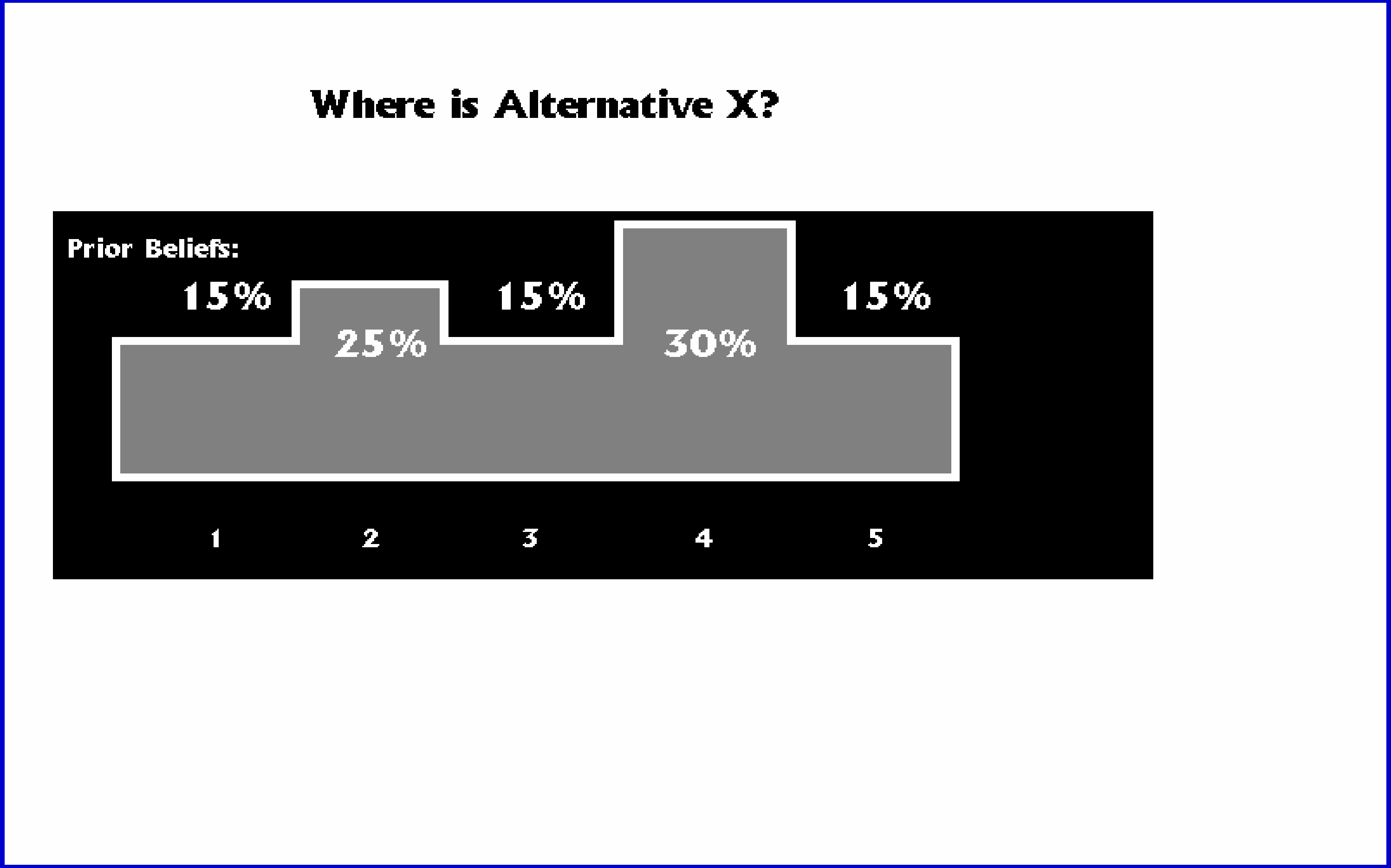
LEMMA 3. *If the setter's ideal point is located in the range of unprofitable alternatives, the setter should not contest the election.*

This updating leads to a revised distribution of setter ideal points $F(X|(1,0))$, which is related to $F(X)$ in the following way:

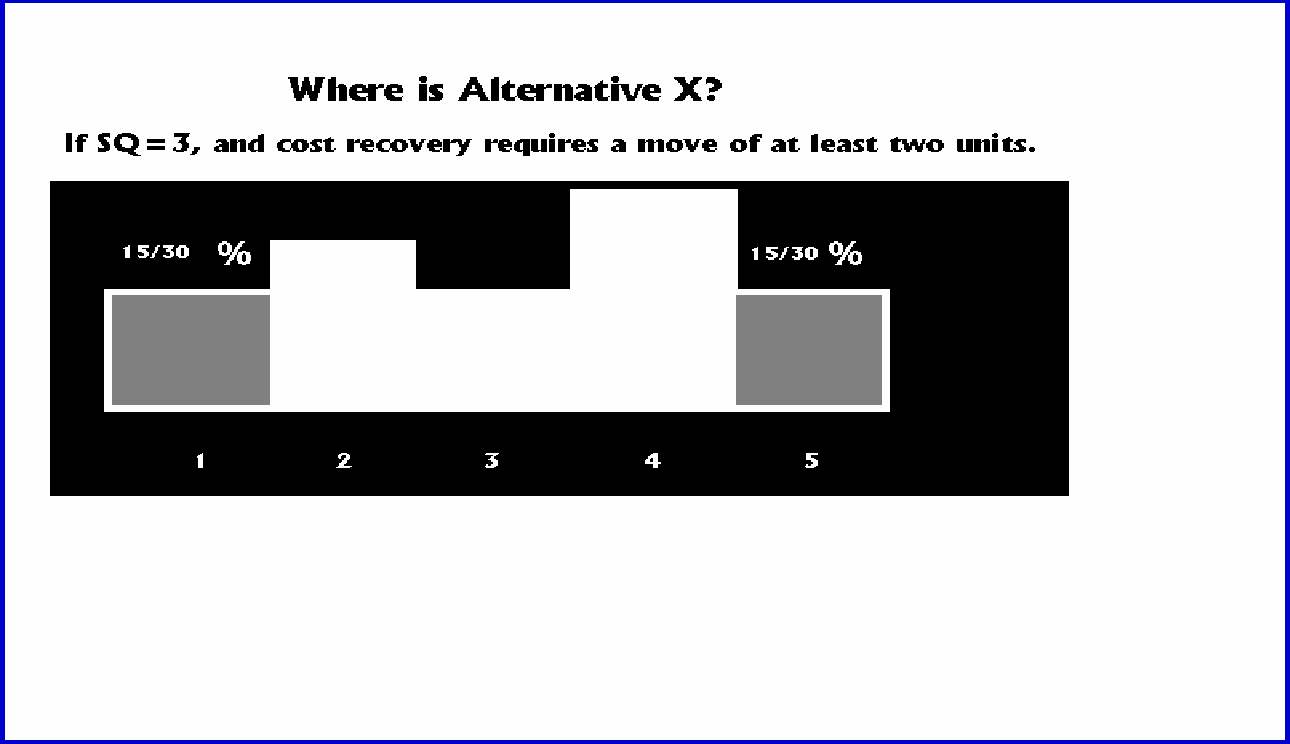
$$f(X|(1,0)) =$$

$$\begin{cases} 0 & \text{if } X \in [SQ-\epsilon, SQ+\epsilon] \\ f(X) \times \dfrac{1}{1-F(SQ+\epsilon)+F(SQ-\epsilon)} & \text{if } X \in [0, SQ-\epsilon), (SQ+\epsilon, 1]. \end{cases}$$

Prior Beliefs



The Effect of Costly Effort



Centrist Voters

- Have utility functions so close to the status quo, that the even the closest feasible alternative is farther from their ideal points
  - $T_i \notin [SQ-\varepsilon/2, SQ+\varepsilon/2]$

LEMMA 4. *"Vote for the status quo" is a dominant strategy for all centrist voters.*

CE Equilibrium

In the equilibrium of the costly entry game type (the formal statement and proof of this equilibrium is included in Appendix C), the setter enters and chooses the personal ideal point as the location of s_2 if and only if the ideal point is not located within the range of unprofitable alternatives *and* updated beliefs will lead to a majority of voters to vote for s_2. Otherwise, she does not contest the election.[20] Cen-

CE Equilibrium

Costly Entry Game Type

PROPOSITION. *The equilibrium for the costly entry game type is*

$\forall\ X \in [SQ - \epsilon, SQ + \epsilon]: s_1 = 0$

$\forall\ X \in [0, SQ - \epsilon), (SQ + \epsilon, 1]: s_1$

$$= \begin{cases} 1 & \text{if } C(SQ, M(s, X)) < \frac{N}{2} \\ 0 & \text{otherwise} \end{cases}$$

$\forall\ X \in [0, 1]: s_2 = X$

$\forall\ T_i \in [0, SQ - \frac{\epsilon}{2}), (SQ + \frac{\epsilon}{2}, 1]:$

$v_i(T_i, M(s, X)) =$

$$1 \quad \text{if} \int_0^1 [U_i(X, T_i) f(X|1, 0))] > U_i(SQ, T_i) \text{ and } M_1(s_1)$$

$$= 1 - 1 \quad \text{otherwise}$$

Beliefs can be characterized by $f(X|(1, 0))$ *or* $f(X|(0, 0)) = SQ$*, depending on the value of* s_1.

Proof. The setter's equilibrium entry strategy is proven by Lemma 1 and Lemma 3. The setter's location strategy is proven by Lemma 2. Centrist voter equilibrium strategies can be characterized by Lemma 4.

Empirical Reinforcement

TABLE 3.

Behavior and Outcomes from Experiments Based on the Model

TYPE OF DIRECT LEGISLATION ENVIRONMENT	CONTROL CASE	COSTLY ENTRY	COMPLETE INFORMATION
consistent votes (ex post)/total votes	164/246 (67)	212/289 (73)	233/246 (95)
CIMPA was the electoral outcome	22/40 (55)	69/80 (86)	37/40 (92.5)

Note: Percentages are in parentheses. CIMPA stands for Complete Information Majority Preferred Alternative.

Endorsement Updating

If $M(s, X) = (1, 1)$, then

$$f(X|(1, 1)) = 0 \in [0, SQ)$$

$$= f(X) \times \frac{1}{1 - F(SQ)} \in (SQ, 1]$$

If $M(s, X) = (1, -1)$, then

$$f(X|(1, -1)) = F(X) \times \frac{1}{F(SQ)} \in [0, SQ)$$

$$= 0 \in (SQ, 1]$$

and $F(X|(1, 0)) = SQ$.

Learning the Setter's Ideal Point Makes the Endorsement Irrelevant in Equilibrium

In the equilibrium to the *learn setter's ideal point* game type, (the formal statement and proof of this equilibrium is included in Appendix C), the setter always enters and chooses $s_2 = X$. Voters never make ex post mistaken inferences because their knowledge of X allows them to infer precisely where s_2 will be.

Result Comparison

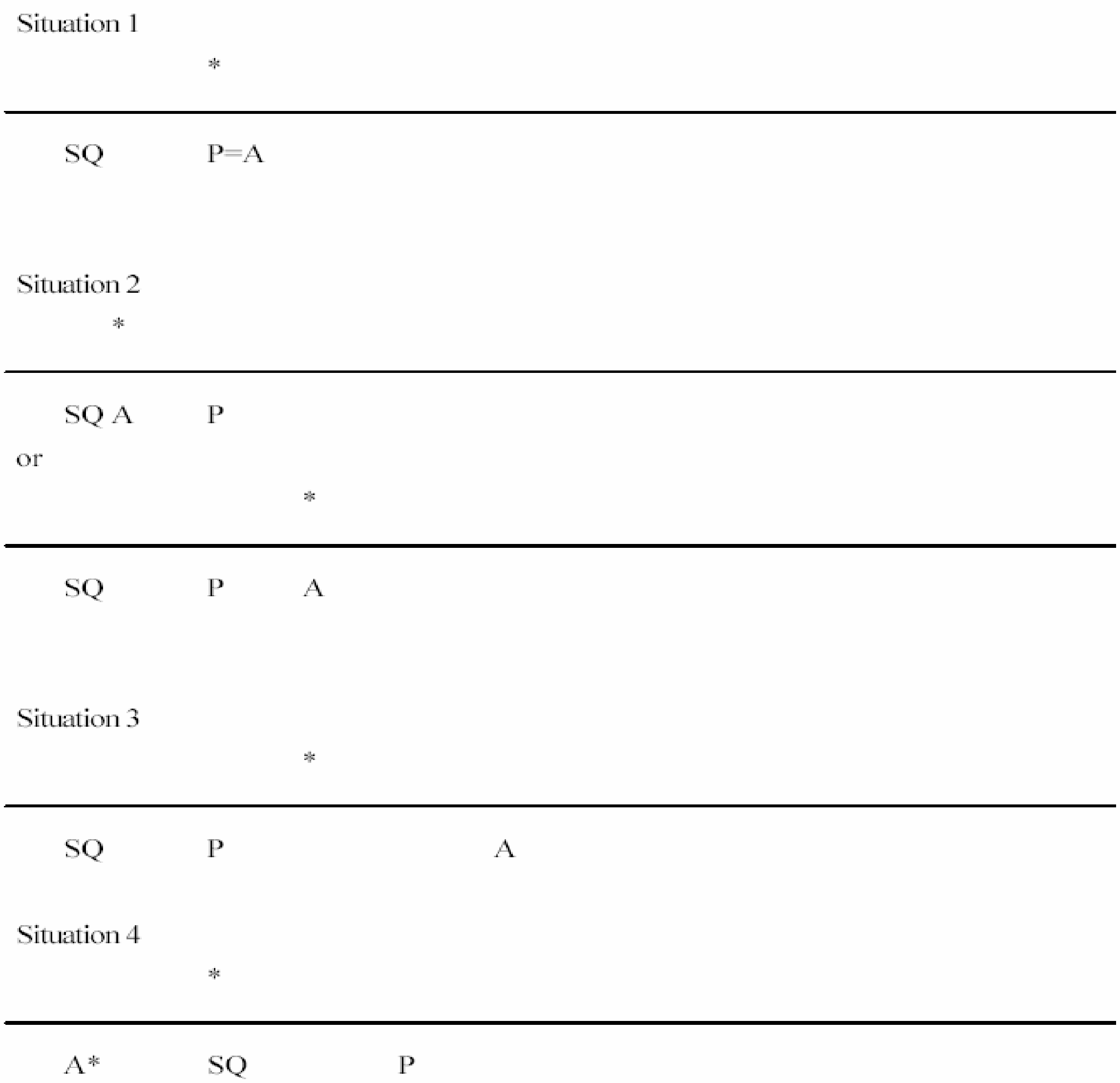
Table 2: How Moral Hazard Potential Affects Agency Loss

	COMPLETE INFORMATION ROMER-ROSENTHAL 1978		INCOMPLETE INFORMATION BEST CASE - LUPIA 1992		INCOMPLETE INFORMATION WORST CASE - LUPIA 1992	
	OUTCOME	AGENCY LOSS	OUTCOME	Δ LOSS VS. COMP. INFO.	OUTCOME	Δ LOSS VS. COMP. INFO.
Situation 1	P	None.	P	0	SQ	|P-SQ|
Situation 2	A	- |A-P|	A	0	SQ	|A-SQ|
Situation 3	ε closer to P than SQ	- |SQ - P| - ε	SQ	ε	A	|A-(|SQ-P|+ε)|
Situation 4	SQ	- |SQ - P|	SQ	0	A*	|A*-SQ|

A* denotes the agent's ideal point in the situation where he and the principal's ideal point are on opposite sides of SQ. In this situation, A* is worse for the principal than SQ. ε denotes a number that is greater than zero, but very small. Note that - |X - P| refers to the utility level of the principal given ideal policy, P, and delegation outcome, X. So, for example, when the outcome of delegation is the principal's ideal policy, as it is in the complete information version of situation 1, then the principal's utility is -|P-P| or 0. When the outcome of delegation is the agent's ideal policy, as it is in several instances in the table, then the principal's utility is -|A-P|.

Figure 2. Graphical Depictions of the Possible Situations.

The star indicates the predicted outcome of delegation in the (complete information) Romer-Rosenthal model.



Key Unresolved Question

What if credibility is endogenous?

Crawford and Sobel Intuition

- If S and R have common interests, then the speaker has an incentive to reveal what he knows and the receiver should believe what she hears.

- If what is good for a speaker is bad for a receiver, and vice versa, then high are the opportunity costs of speaking (as compared to saying nothing) or following a speaker's advice (as opposed to ignoring it).
  - In this case, the speaker has an incentive to reveal nothing and the receiver has an incentive to ignore everything.

a rationale for restrictive arrangements

Gilligan and Krehbiel (1987)

Sequence

- A legislature can choose an open rule or a closed rule.
- A committee chooses to specialize or not. Specialization means paying to learn Nature’s type.
- The committee reports a bill.
- The floor chooses a policy under the rule they chose initially.

One way to model uncertainty

the end results of implementing policies.[5] Uncertainty in legislative choice is characterized by assuming that the relationship between policies and outcomes is subject to random variation. Formally,

$$x = p + \omega \tag{1}$$

where x is an outcome, p is a policy, and ω (omega) is a random variable. For expositional and computational simplicity, ω is assumed to be uniformly distributed in $[0, \omega^+]$, with mean $\overline{\omega}$ and variance σ^2_ω. We further assume that the policy and outcome spaces are unidimensional.

Assumptions:

Policies	• $x = p + \omega$
	• $x, p \in R^1$
	• ω is uniformly distributed in $[0, \omega^+]$.
Ideal points	• $x_\ell = 0$ (legislature)
	• $x_c \geqslant 0$ (committee)
Utilities	• $u_\ell = -x^2 - r$
	• $u_c = -(x - x_c)^2 - sk$, where $k = k_o - k_c x_c - k_r r$
Information	• Distribution of ω is common knowledge
	• Ideal points and utility functions are common knowledge
	• Committee's specialization decision s is common knowledge
	• Value of ω given specialization is committee's private information

conclusions

Gilligan and Krehbiel (1987)

- A closed rule is beneficial to the floor median because it allows her to control outcomes.
  - But it deters persons with preferences different from her own from contributing to the collective effort (e.g., providing information).
- An open rule can be beneficial to the floor median when the informational gains outweigh the distributional losses.
- When is the floor median better off relinquishing some control?
  - For moderate committees, it prefers the restrictive procedure.
  - For more extreme committees, it depends on specialization costs.
  - For very extreme committee, it prefers the restrictive procedure.

Gilligan and Krehbiel (1990)

- M. How is Congressional organization maintained?
- NH. Congressional organization is non-rational or distribution-motivated.
- P. Congress has minimal control over members and faces complex problems. Institutions are endogenous.
- C. Informational efficiency explains congressional organization.

One way to model uncertainty

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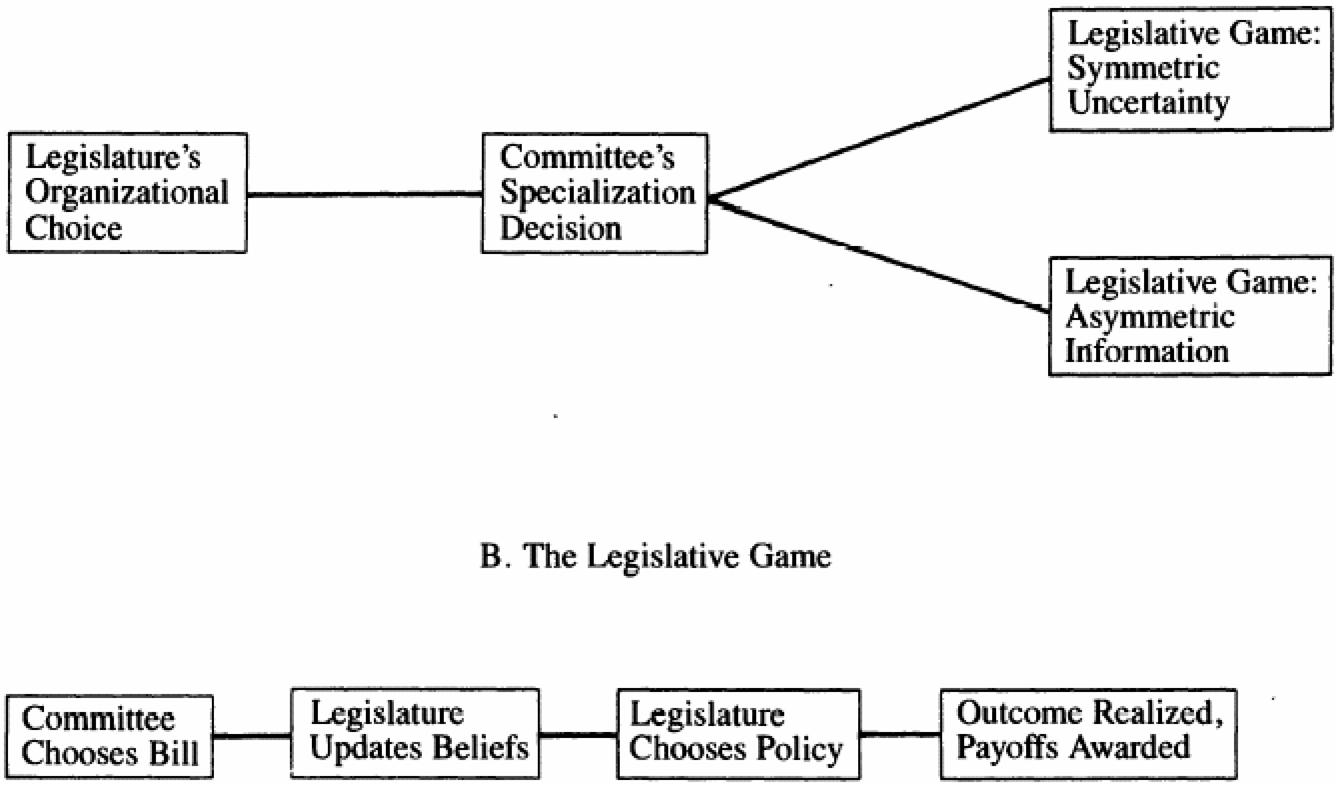
Information	• Distribution of ω is common knowledge
	• Ideal points and utility functions are common knowledge
	• Committee's specialization decision s is common knowledge
	• Value of ω given specialization is committee's private information

Figure 2. Sequence of Decisions

A. The Organizational Maintenance Game



Gilligan and Krehbiel Conclusions

1. The greater is the uncertainty in the policy environment, the greater are the net informational benefits from committee specialization.
2. For moderate to extreme committees ($x_c < 3\sigma_\omega^2$), the more extreme are the committee's preferences, the lower are the net informational benefits from committee specialization.
3. For very extreme committees ($x_c \geqslant 3\sigma_\omega^2$), the net informational benefits from committee specialization are zero.

- As uncertainty grows, committee extremity falls.
- As expertise costs rise, so do optimal transfers.
- For extreme committees, the net benefit from specialization are zero.

Gilligan and Krehbiel Conclusions

1. The greater is the uncertainty in the policy environment (σ_ω^2), the greater are the benefits from committee specialization, hence the greater is the committee's propensity to specialize.
2. The greater is the committee's fixed cost (k_o) of specialization, the greater is the overall cost of specialization and the less is the committee's propensity to specialize.
3. The greater is the committee's preference-induced comparative advantage (k_c) of specializing, the lower is the cost of committee specialization and the greater is the committee's propensity to specialize.
4. The greater is the committee's efficiency in the use of its resources (k_r), the lower is the cost of committee specialization and the greater is the committee's propensity to specialize.

Gilligan and Krehbiel Conclusions

1. The greater is the uncertainty in the policy environment (σ^2_ω), the less extreme are organizationally optimal committee preferences (x^*_c). The

- In this view, when uncertainty is high the parent chamber replicates itself in each committee to the extent possible. When uncertainty is low, it has less to lose and more to gain by delegating to people unlike themselves.

- Legislative majorities defined on the single dimension are *assumed* to be the ultimate source of committee power.

Shepsle and Muthoo (2003)

- M. Do staggered terms affect Senate dynamics?
- NH. Individual-level variations in time before election do not affect Senate bargains.
- P.
  - The Senate contains an "old" player and a "young" player.
  - Each period, they play an ultimatum game.
  - ∃ a "what have you done for me lately" heuristic.
- C. Under broad conditions, most agenda setting power is allocated to the old player.

Shepsle/Muthoo

3.1. **Framework.** We consider a strategic environment which operates over an infinite number of periods with overlapping generations of players. In each period $t \in \{\ldots, -1, 0, 1, \ldots\}$, two players bargain over the partition of a unit-size "cake" (or surplus) according to a procedure specified below, in section 3.3. The two players belong to different generations: one player is "young" while the other is "old". The period-t young player is the period-$(t+1)$ old player.

ShepsleMuthoo

At the end of period t, the period-t old player faces the possibility of "death": if he dies then a new player is immediately born who is the period-$(t+1)$ young player, but if he does not die then he is the period-$(t+1)$ young player.[6] The probability that a period-t old player survives death depends on the amounts of cake he obtained in periods t and $t-1$. More precisely, this probability is $\Pi(x_y, x_o)$, where x_y and

WHYDFML

Assumption 2 (The *WHYDFML* Principle). *For any arbitrary pair* $x = (x_y, x_o)$*, and for an arbitrarily small* $\Delta > 0$, $\Pi(x_y, x_o + \Delta) > \Pi(x_y + \Delta, x_o)$.

The Solution

Lemma 2. *Fix $\theta \in [0,1]$. There exists a unique subgame perfect equilibrium in which in each period all of the unit-size cake is obtained by the player who makes the "take-it-or-leave-it" offer. The equilibrium expected payoff to a young player is*

$$W(\theta) = \frac{b(1+\delta)}{1-\delta^2\pi(\theta)}, \quad \textit{where}$$

$$\pi(\theta) = \theta^2\Pi(1,0) + \theta(1-\theta)\Pi(1,1) + (1-\theta)\theta\Pi(0,0) + (1-\theta)^2\Pi(0,1).$$

Proposition 1. *Define the following inequality:*

$$\frac{1}{2}\Pi(1,1) + \frac{1}{2}\Pi(0,0) > \Pi(0,1). \tag{1}$$

(i) If Π satisfies inequality 1, then there exists a $\theta^* \in (0,1)$ such that $W(.)$ is maximized at $\theta = \theta^*$, where

$$\theta^* = \frac{\Pi(1,1) + \Pi(0,0) - 2\Pi(0,1)}{2[\Pi(1,1) + \Pi(0,0) - \Pi(0,1) - \Pi(1,0)]}.$$

(ii) If Π does not satisfy inequality 1, then $W(.)$ is maximized at $\theta = 0$.

Corollary 2. In case i, the old player still gets more power.

Shepsle, Dickson and VanHouwelling (2003)

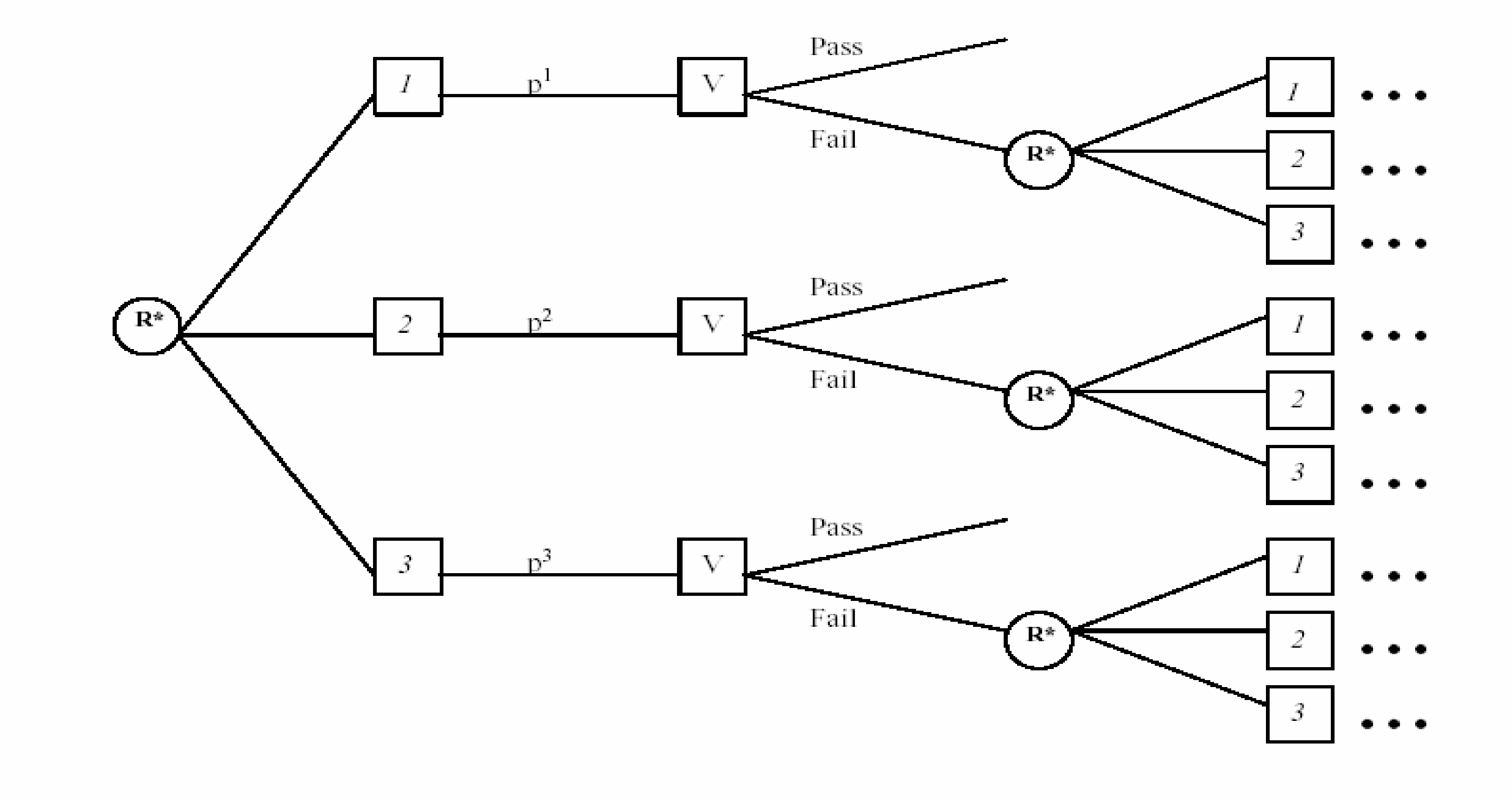
- M. What are the implications of staggered terms?

- NH. Individual-level variations in time before election do not affect Senate bargains.

- P
  - The Senate contains an "old" player and a "young" player.
  - Each period, they play a "divide-the-dollar" game.
  - ∃ a "what have you done for me lately" heuristic.

- C. Under broad – but different -- conditions, most agenda setting power is allocated to the old player.

Baron-Ferejohn format



With common knowledge and symmetric information, the first proposal is accepted in equilibrium.

WHYDFML

WHYDFML Principle. $\lambda_j > \lambda_{j-1} > 0$ (for $j = t, t-1$). Given any complete legislative record, the impact of a further incremental increase in payoff on the probability of reelection is larger for later sessions than for earlier ones.[19]

There are now three generations of legislators in the game.

Initial Conclusions

Proposition 1. The legislative record $(x_t, x_{t-1}, x_{t-2}) = (1,0,0)$ is ex ante optimal among all allocations in which each legislator receives his or her expected value.

Proposition 2. The ex ante optimal outcome, $(x_t, x_{t-1}, x_{t-2}) = (1,0,0)$, is not in general sustainable as a stationary equilibrium.

Ultimate Conclusions

Simple Punishment Regime. (i) If i proposes any distribution other than (1,0,0), then i is "zeroed out" when i is old. (ii) If j ≠ i,3 supports an "off-the-path" proposal, then i's punishment is canceled and j is "zeroed out" when j is old.

Proposition 3. With the simple punishment regime, (1,0,0) is sustainable as a (non-stationary) equilibrium.