Showing Restraint, Signaling Resolve

Coalitions, Cooperation, and Crisis Bargaining

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Book Project

Question (general). How does military cooperation (coalitions) affect patterns of war and peace?

- Costly cooperation requires costly compensation
  - Side payments, spoils, **bargaining strategies**
- Choice of coalition partner affects
  - Threats, signaling, and war
    - Today (model forthcoming at *AJPS*, empirics new)
  - Conflict expansion
    - Forthcoming at *ISQ* (2014)
  - Peace (or not) among victors
    - Last chapter of ms

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Research Question

Question (specific). How do coalition partners affect the probability of war?

(Possible) answer: Maybe they affect signaling.

- Skittish partners often blamed for "weak" signals...
  - Fearon 1997, Russett 1963, Lake 2011
  - Christensen 2011, Byman & Waxman 2002
- But not all "weak" threats are dangerous:
  - Kosovo 1999
  - Berlin 1961

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Defining Concepts

What *are* military coalitions?

- ≥ 2 states that make a joint threat of war *in a crisis*
- Not necessarily (indeed rarely) formal allies
- Coding rules
  - ICB "triggering entity" + military involvement + prior to war
  - Subjective review can remove, not add

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Coalitions and crisis escalation, 1946-2000

	Escalates to war			
Coalition	No	Yes	Total	Pr(war)
No	268	48	316	≈ 0.15
Yes	34	22	56	≈ 0.39
Total	302	70	372	

$\chi^2_{(1)} = 18.0800,\ p = 0.000$

Decomposition Analysis

Pr(War) = 1	**Probit**	**Decomposition**
Coalition_1	0.836 (0.222)***	—
CINC_1	-1.109 (1.489)	-0.013 (0.033)
CINC_2	-0.892 (1.529)	-0.007 (0.012)
Relative Capabilities	-0.121 (0.328)	0.001 (0.016)

Significance levels: $*$: 10%, $**$: 5%, and $***$: 1%

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What's missing?

Divergent preferences: "skittish" partners

- Costs of war fall differently across coalition members
  - Domestic politics
  - Geography
  - Valuation of stakes
- Divergent preferences over mobilization/escalation
  - Partner's willingness to cooperate
  - Costs leader pays to secure cooperation

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A Theory of Coalitions and Crisis Bargaining

Threats (signals), bargaining, military cooperation

- Leader, (potential) Partner, Target
- T uncertain over L's resolve (valuation of stakes)
- Mobilization (high, low) affects military balance
  - Costly up front for L
  - Direct impact on P's costs for war
- Partner can refuse cooperation in event of war
  - (endogenous coalition formation)

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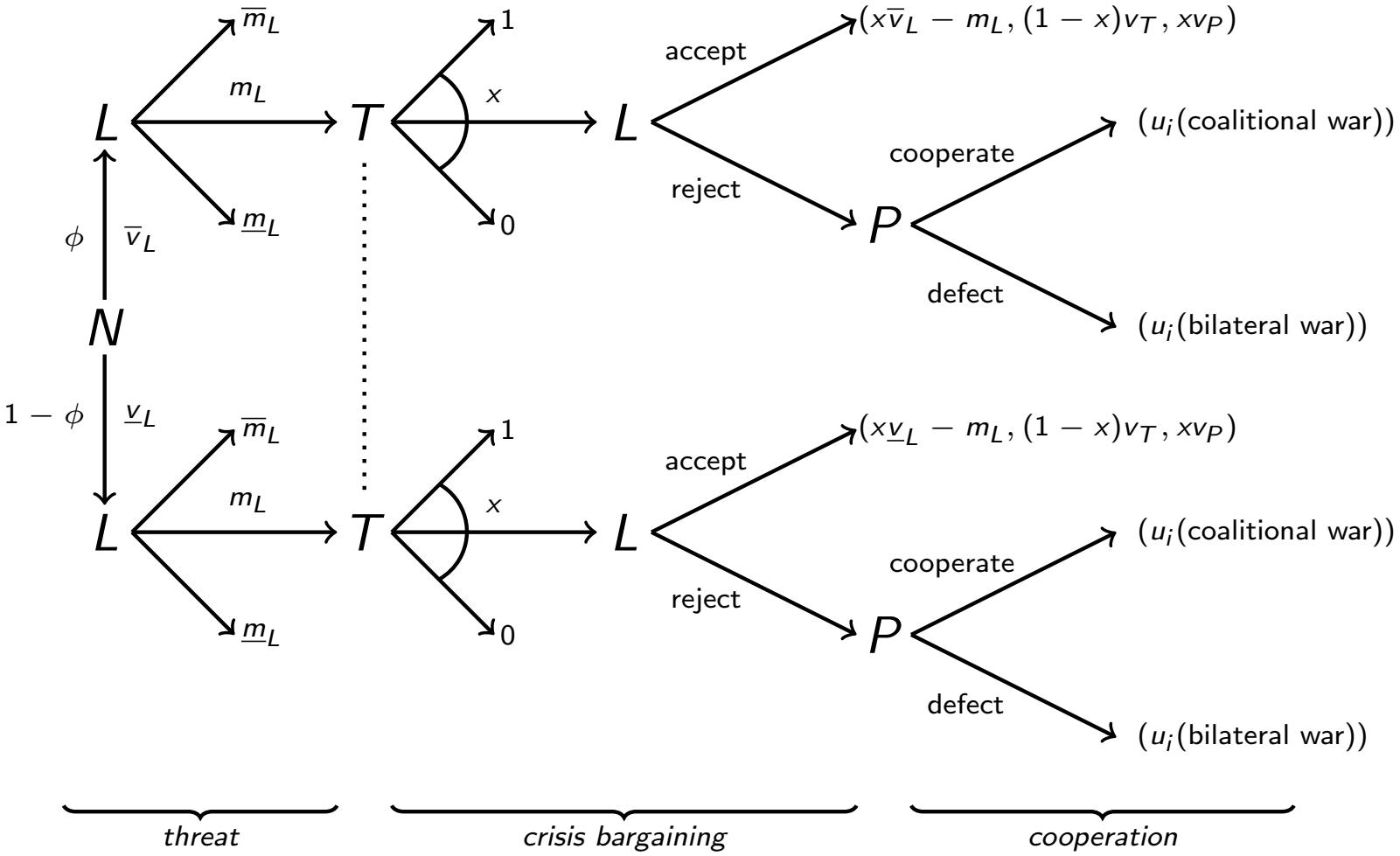
Game Tree


$\overline{m}_L$
m_L
$\underline{m}_L$
L
ϕ
$\overline{v}_L$
N
$1-\phi$
$\underline{v}_L$
T
1
x
0
accept
reject
$(x\overline{v}_L - m_L, (1-x)v_T, xv_P)$
P
cooperate
defect
$(u_i(\text{coalitional war}))$
$(u_i(\text{bilateral war}))$
$(x\underline{v}_L - m_L, (1-x)v_T, xv_P)$
threat
crisis bargaining
cooperation

Sets of Equilibria

Mobilization levels (high, low) may signal resolve

Three cases:

- Two players
  - No partner available
- Committed (i.e. non-skittish) partner
  - P cooperates for all mobilization levels
- Skittish partner
  - P cooperates iff low mobilization

Two Player & Committed Partner Equilibria

- Separating
  - Resolute L mobilizes high, irresolute low
  - Target does not risk war
- Semi-separating
  - Irresolute may bluff (high)
  - Target may risk war

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Skittish Partner Equilibria

- Separating
  - Resolute L mobilizes high, irresolute low
  - Target does not risk war
- Semi-separating
  - Irresolute may bluff (high)
  - Target may risk war
- Pooling
  - Both types choose *low* mobilization
  - Target risks war

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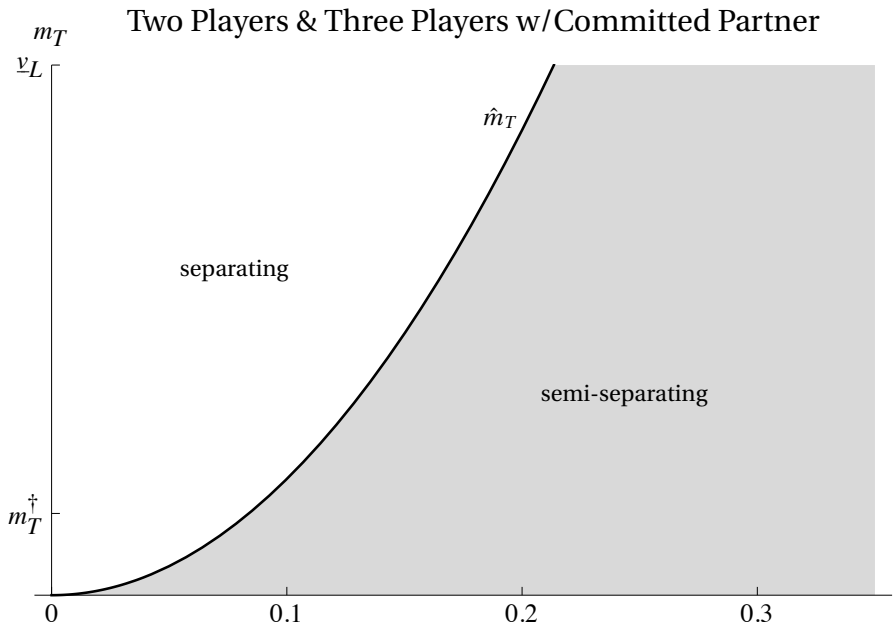
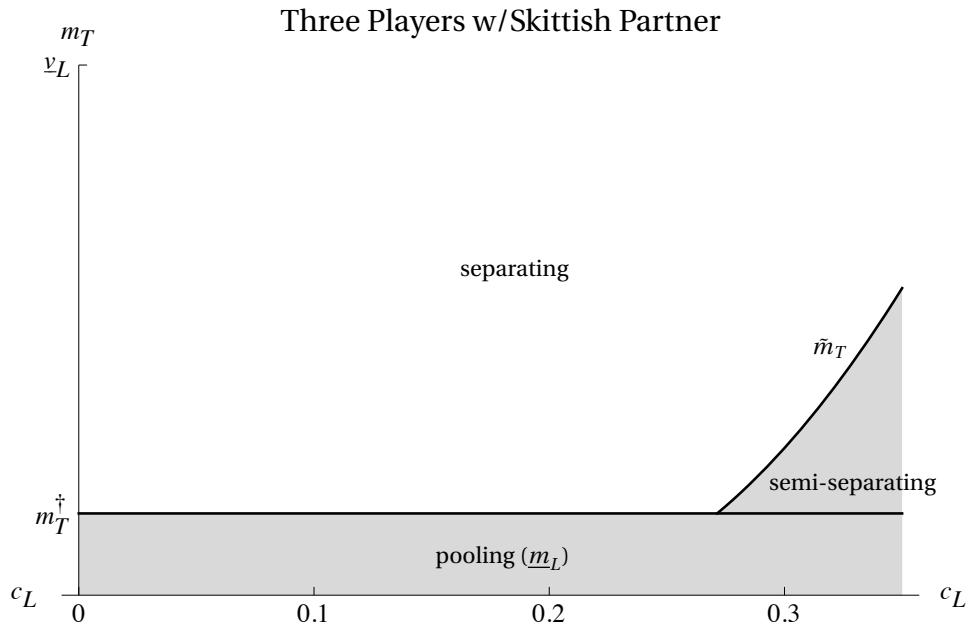
The Equilibrium Space





Equilibrium Summary

When P is skittish...

- Coalitions form around moderated threats
- When target is strong (bluffing expensive),
  - preserving cooperation is disincentive to bluff
  - partner's presence *reduces* probability of war
- When target is weak (bluffing cheap),
  - preserving cooperation is disincentive to separate
  - partner's presence *increases* probability of war

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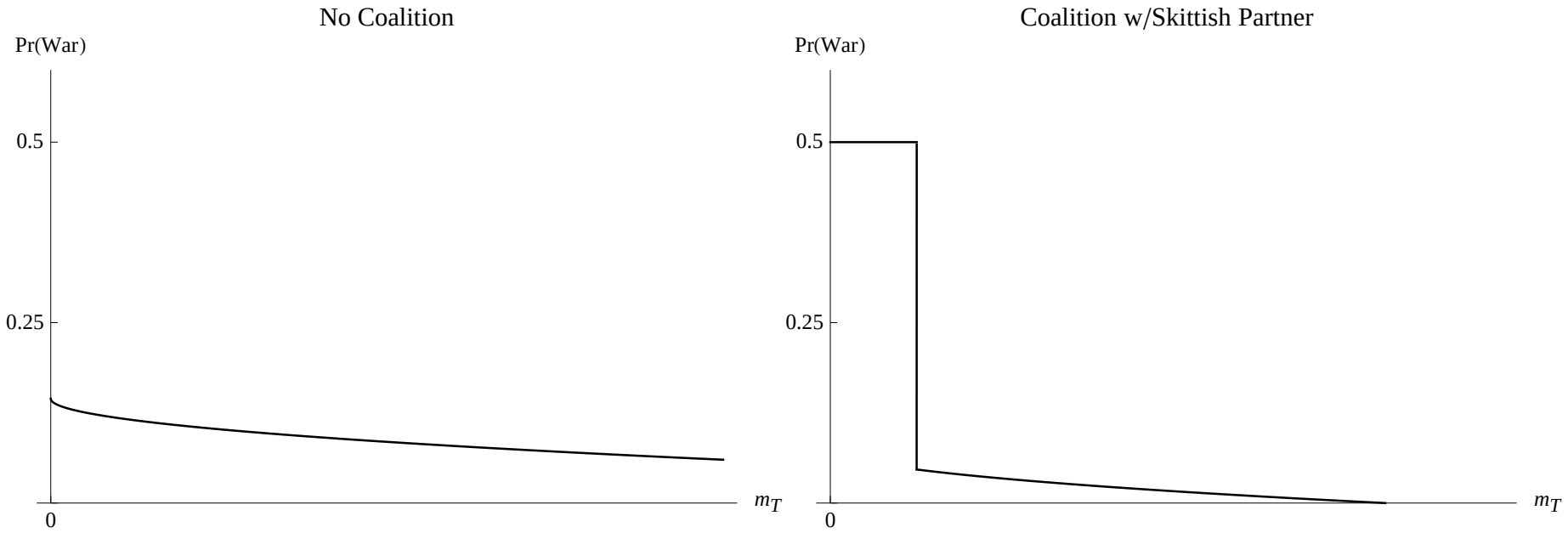
Empirical Implications

Probability of war by partner presence and target strength



(Simulation based on equilibrium constraints and mixing probabilities)

Expectations

Assuming skittish partner in the coalition:

H.1 In bilateral crises, the probability of war decreases slightly (if at all) in target military capabilities.

H.2 In coalitional crises, the probability war decreases sharply in target military capabilities.

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Empirical Model

- Sample: Directed crisis-side dyads (ICB), 1 v. 2
- DV: Escalation to war
- IVs: Coalition_1, CINC_T
- Controls: CINC_1, number_1, min distance_1, % allied_1, min polity_1, UNSC support_1, USA_1, Cold War
- Errors: SEs clustered by crisis

$$\begin{aligned}\Pr(\text{War} = 1) = &\Phi(\alpha + \beta_1 \text{Coalition}_1 + \beta_2 \text{CINC}_T + \\ &\beta_3 (\text{Coalition}_1 \times \text{CINC}_T) + \beta \mathbf{X}_i + \varepsilon_i)\end{aligned}$$

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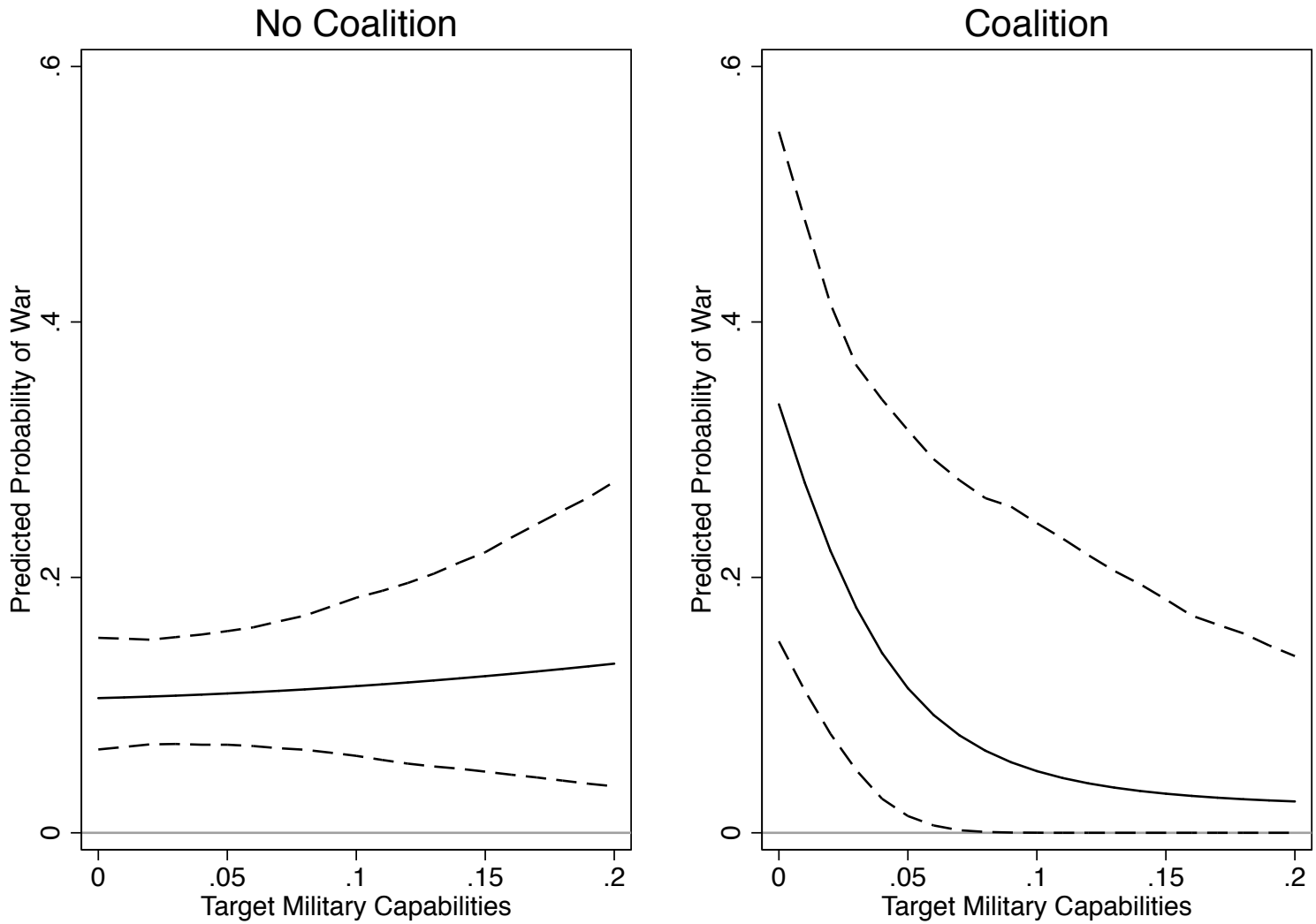
Empirical Results

	Pr(War = 1)	
Variable	**Model 1** *No Interaction*	**Model 2** *With Interaction*
Coalition_1	0.62 (0.32)*	0.83 (0.33)**
CINC_T	-.57 (1.97)	0.40 (1.88)
$\text{Coalition}_1 \times \text{CINC}_T$	—	-19.03 (9.69)**
N	309	309
$\chi^2_{(\text{d.f.})}$	$22.28^{**}_{(10)}$	$26.96^{***}_{(11)}$

Significance levels: $*$: 10%, $**$: 5%, and $***$: 1%

Predicted Probabilities of War



Conclusion

The tradeoff: signaling resolve, showing restraint

- Coalitional politics affect the probability of war
  - Intra-coalitional politics $\times$ target characteristics
- Clarifies (abundant) conjectures about third parties
  - Neither always "bad"... nor always "good"
- Logic behind coalition formation
  - "Weak" threats can tie hands against risky bluffing

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Conclusion

Questions?

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Book Outline

1. Introduction
2. Why Coalitions?
   - Coalitions are unique phenomena, and I've got data!
3. Coalition Formation
   - Prefer Ps w/similar prefs, less selective as Ps ↑ powerful
4. Coalitions, Signaling, and War
   - Coalition partners ↑ war w/weak targets, ↓ w/strong targets
5. Coalitional Durability and Conflict Expansion
   - Diversity ↓ balancing vs strong coalitions, ↑ vs weak ones
6. Conclusion
   - Diversity hastens breakdown of victorious coalitions

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Payoffs: Coalitional War

$$EU_L(\text{coalitional war}) = -m_L + \left(\frac{m_L + m_P}{m_L + m_P + m_T}\right) v_L - c_L$$

$$EU_P(\text{coalitional war}) = \left(\frac{m_L + m_P}{m_L + m_P + m_T}\right) v_P - c_P m_L$$

$$EU_T(\text{coalitional war}) = \left(\frac{m_T}{m_L + m_P + m_T}\right) v_T - c_T$$

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Payoffs: Bilateral War

$$EU_L(\text{bilateral war}) = -m_L + \left(\frac{m_L}{m_L + m_T}\right) v_L - c_L$$

$$EU_P(\text{bilateral war}) = \left(\frac{m_L}{m_L + m_T}\right) v_P$$

$$EU_T(\text{bilateral war}) = \left(\frac{m_T}{m_L + m_T}\right) v_T - c_T$$

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Defining skittishness

Cooperate if $m_L^* = \underline{m}_L$, or

$$\left(\frac{\underline{m}_L + m_P}{\underline{m}_L + m_P + m_T}\right) v_P - c_P \underline{m}_L \geq \left(\frac{\underline{m}_L}{\underline{m}_L + m_T}\right) v_P,$$

and defect if $m_L^* = \overline{m}_L$, or

$$\left(\frac{\overline{m}_L}{\overline{m}_L + m_T}\right) v_P > \left(\frac{\overline{m}_L + m_P}{\overline{m}_L + m_P + m_T}\right) v_P - c_P \overline{m}_L.$$

True when

$$c_P^l \leq c_P < c_P^h.$$

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Equilibrium probabilities of war

Where $v_L = \overline{v}_L$ w/prob ϕ, h is prob that $\underline{v}_L$ bluffs, and r is prob that T risks war given $m_L^* = \overline{m}_L$,

- No coalition (or committed partner):
  - $\Pr(\text{war}) = \phi hr$ when $m_T < \hat{m}_T$.
  - $\Pr(\text{war}) = 0$ when $m_T \geq \hat{m}_T$.
- Coalition w/skittish partner:
  - $\Pr(\text{war}) = \phi$ when $m_T < m_T^\dagger$.
  - $\Pr(\text{war}) = \phi hr$ when $m_T^\dagger \leq m_T < \tilde{m}_T$.
  - $\Pr(\text{war}) = 0$ when $m_T \geq \tilde{m}_T$.

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Full Empirical Results

Table 4.1: Probit models of crisis escalation, 1946-2000

Pr(War = 1)		
Variable	**Model 1** *No Interaction*	**Model 2** *With Interaction*
— *Theoretical variables* —		
Coalition_1	0.62 (0.32)*	0.83 (0.33)**
CINC_T	-.57 (1.97)	0.40 (1.88)
$\text{Coalition}_1 \times \text{CINC}_T$	—	-19.03 (9.69)**
— *Control variables* —		
CINC_1	1.91 (1.98)	2.95 (2.05)
Number_1	0.18 (0.10)*	0.17 (0.11)
$\text{Minimum Distance}_1$	0.00 (0.00)	0.00 (0.00)
Percent Allied_1	-0.48 (0.62)	-0.57 (0.62)
Low Democracy	-0.02 (0.02)	-0.02 (0.02)
UNSC Support_1	0.26 (0.34)	0.24 (0.33)
United States_1	-1.10 (0.54)**	-1.12 (0.52)**
Cold War	0.43 (0.29)	0.43 (0.29)
Intercept	-1.83 (0.30)***	-1.88 (0.31)***
Model Statistics		
N	309	309
Log-likelihood	-117.62	-115.87
$\chi^2_{(\text{d.f.})}$	$22.28^{**}_{(10)}$	$26.96^{***}_{(11)}$

Significance levels: $*$: 10%, $**$: 5%, and $***$: 1%

Decomposition Analysis

Pr(War) = 1	**Probit**	**Decomposition**
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CINC_1	-1.109 (1.489)	-0.013 (0.033)
CINC_2	-0.892 (1.529)	-0.007 (0.012)
Relative Capabilities	-0.121 (0.328)	0.001 (0.016)
Number_2	0.251 (0.115)**	-0.028 (0.016)
Intercept	-1.247 (0.227)***	—
Pr(War|No Coalition)		0.153
Pr(War|Coalition)		0.392
Difference		-0.2399
Total Explained		-0.0306

Significance levels: $*$: 10%, $**$: 5%, and $***$: 1%

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