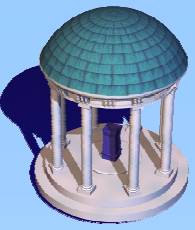


# Learning and Reputation in International Conflict

---

*Mark J.C. Crescenzi*

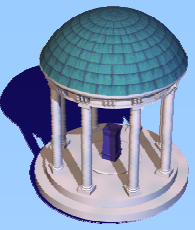
November 4, 2005  
Peace Science Society  
Iowa City



## **The Question:**

Do States Use Reputations to Learn about their Opponents?

1. How do states process this kind of information?
2. Does this information impact the decision to use force?



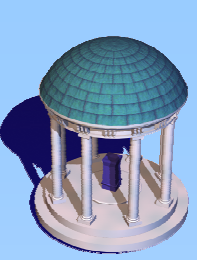
# 1. The Information Process: Foundations

Schrodtt & Mintz (1988); Lee, Muncaster & Zinnes (1994),  
Goldstein & Freeman (1990)

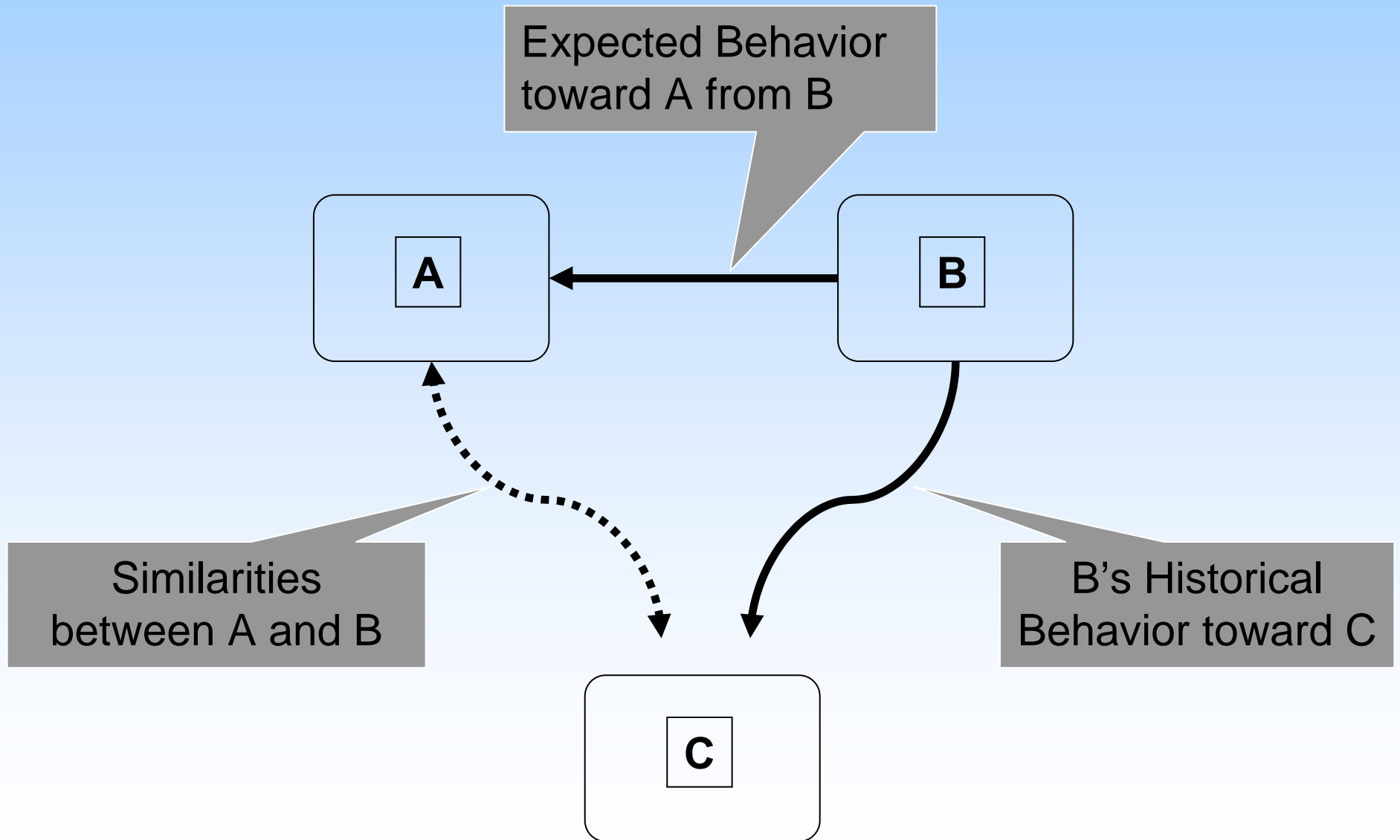
Heider (1946)

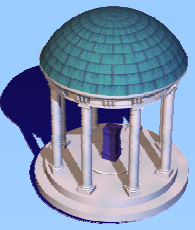
*The friend of my friend is my friend,  
the friend of my enemy is my enemy,  
the enemy of my enemy is my friend,  
the enemy of my friend is my enemy*

Cognitive Balance Theory  
(Newcomb 1953, 1961)



# Modeling the Information Process





# Modeling the Information Process

$$RI_{abN} = \frac{\sum_{c \neq a, b}^N bc_{ac} ac_{ac}}{N - 2}$$

where

$N$  is the size of the system

$bc_{ac}$  is the relationship between B and C,

$ac_{ac}$  is the policy similarity between A and C,

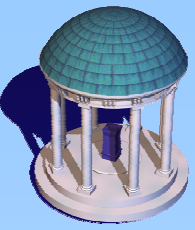
$ac_{ac}$  is the power similarity between A and C,

$\in \mathbb{R}$

$bc_{ac} \in (-1, 1)$ ,

$ac_{ac} \in (0, 1)$ ,

$ac_{ac} \in (0, 1)$ .



## 2. Does this information influence the onset of conflict?

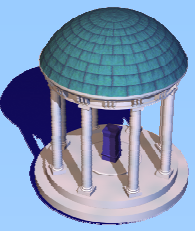
- Leng's ELR Model (1988, 1993, 2000)
- Rivalry (Diehl & Goertz 2001)
- Interstate Interaction Model (Crescenzi & Enterline 2001)

*Conflict begets Conflict, Peace begets Peace*

**Hypothesis:** A reputation for conflict makes a dyad more likely to experience militarized conflict

**Analysis:** Hazard Models (Cox)

**Dependent Variable:** MID Onset



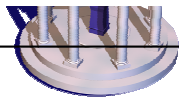
# Measuring Reputation: RISC

$$RISC_{abN} = \frac{\sum_{c \neq a, b}^N IIS_{bc} S_{ac} C_{ac}}{N - 2}$$

where

- $N$  is the size of the system
- $IIS_{bc}$  is the Interstate Interaction Score between B and C
- $S_{ac}$  is the S Similarity Score between A and C
- $C_{ac}$  is the Capability Similarity Score between A and C

Table 1: Cox Survival Analysis of Dispute Onset

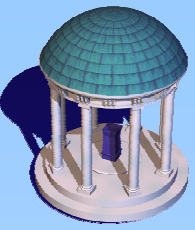


	<b>1</b>	<b>2</b>	<b>3</b>
<b>Variable</b>	1817-2000	1817-2000	1817-2000
RISc <sub>abN</sub>		-13.01*** (0.82)	-13.23*** (1.46)
IIS <sub>ab</sub>	-2.61*** (0.20)		-3.15*** (0.22)
RISc*IIS			-30.62*** (4.31)
Contiguous <sub>ab</sub>	2.83*** (0.14)		2.78*** (0.14)
Capability Ratio <sub>ab</sub> (logged)	-0.11** (0.03)		-0.12*** (0.03)
Minor Powers <sub>ab</sub>	-1.33*** (0.13)		-1.29*** (0.13)
Regime Score <sub>ab</sub> (weak link)	-0.004*** (0.001)		-0.003*** (0.001)
S-Score <sub>ab</sub>	0.30 (0.31)		0.21 (0.31)
N (failures)	586,673 (1,998)	660,830 (2,386)	586,673 (1,998)
Log likelihood	-13,279	-19,665	-13,139.5
<sup>2</sup> (Wald)	2028.4***	248.9***	2,483.6***

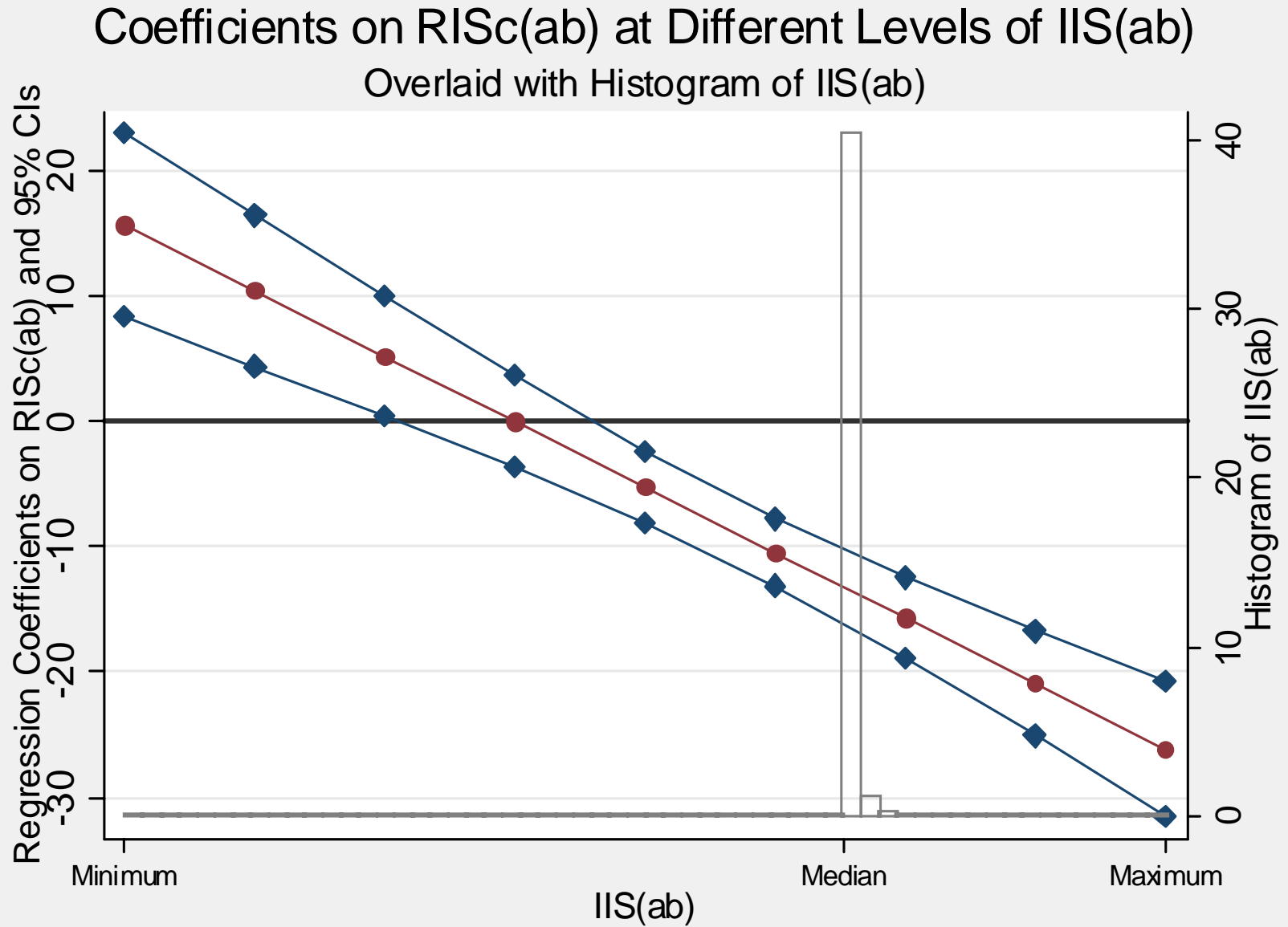
Coefficients are presented in log-relative hazard format.

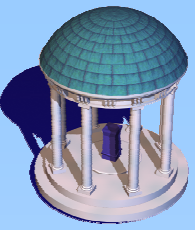
Robust std. errors adjusted for clustering on dyad in ( ).

\*\*\*=significant at the .001 level, \*\*=.01, \*=.05., one-tailed



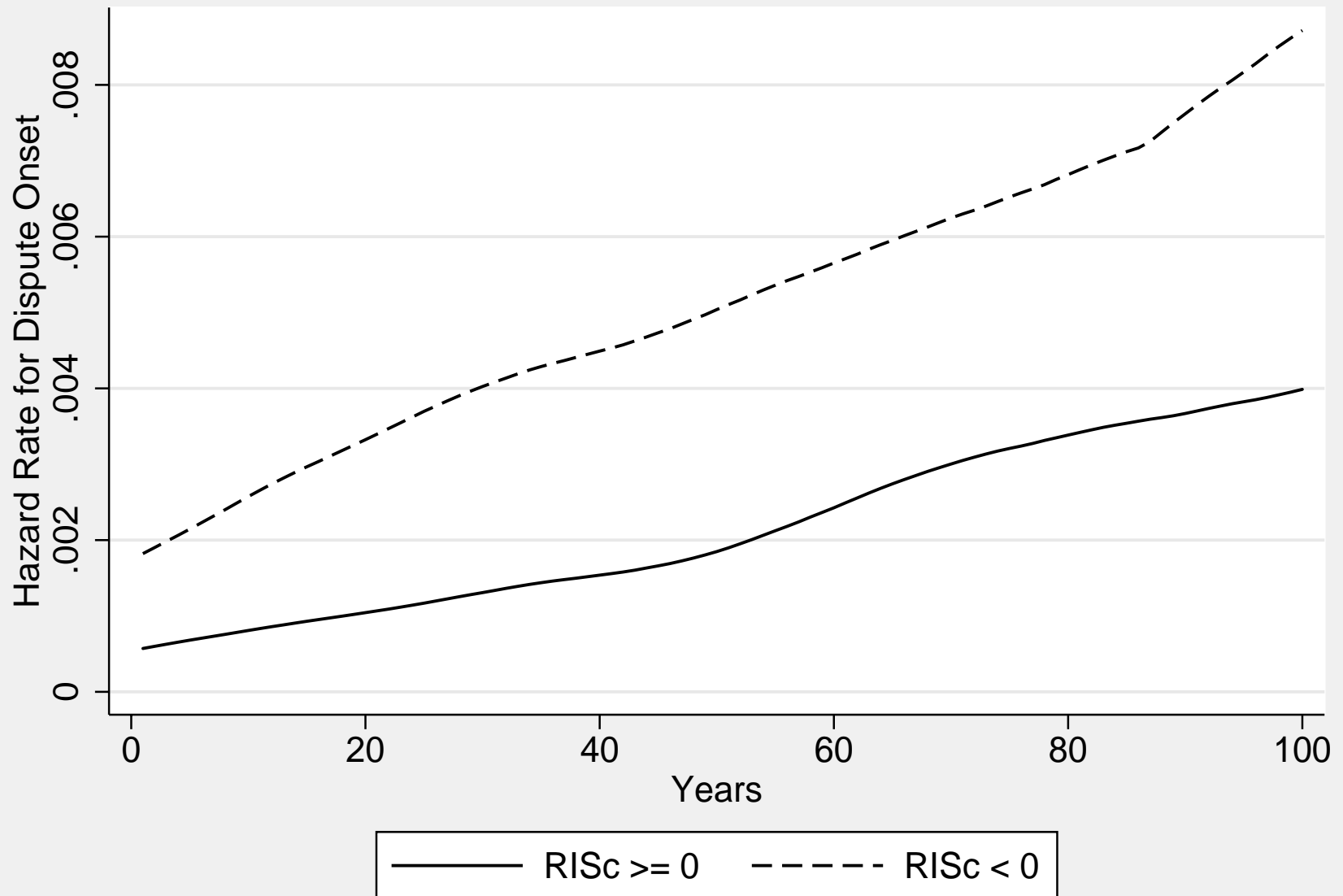
# A Closer Look at the Interaction





# Visualizing The Results

Hazard of Dispute Onset Stratified by RISc



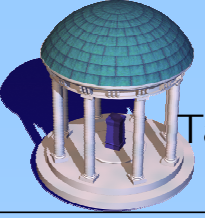


Table 1: MID Onset Analysis (Oneal, Russett & Berbaum)

Variable	All Onsets	All Onsets	Fatal Mids	Fatal Mids
RISC <sub>min</sub>		-13.161*** (2.523)		-18.545*** (2.884)
IIS		-2.015*** (0.216)		-2.465*** (0.275)
RISC <sub>min</sub> *IIS		-28.499*** (6.822)		-50.478*** (8.59)
Democracy Score <sub>L</sub>	-0.056*** (0.011)	-0.061*** (0.011)	-0.055** (0.021)	-0.062*** (0.02)
Trade-to-GDP Ratio <sub>L</sub>	-54.459*** (14.482)	-40.166*** (12.893)	-104.222*** (28.444)	-78.713*** (22.453)
Joint Memberships in IGOs	-0.125** (0.05)	-0.07 (0.048)	-0.22** (0.09)	-0.175* (0.082)
Allies	-0.373** (0.149)	-0.262* (0.138)	-0.402* (0.249)	-0.203 (0.224)
Capability Ratio (log)	-0.286*** (0.05)	-0.232*** (0.045)	-0.467*** (0.079)	-0.416*** (0.073)
Contiguous	2.747*** (0.192)	2.588*** (0.183)	2.665*** (0.282)	2.412*** (0.263)
Distance (log)	-0.573*** (0.061)	-0.543*** (0.057)	-0.653*** (0.091)	-0.608*** (0.08)
Major Power Involvement	1.92*** (0.2)	1.722*** (0.178)	1.86*** (0.298)	1.621*** (0.276)
Constant	-1.862*** (0.519)	-2.334*** (0.483)	-2.197*** (0.77)	-2.789*** (0.659)
N	320,781	318,129	320,547	317,922
$\chi^2$ (Wald)	2,335.46***	3,342.81***	1,130.59***	1,554.68***

\*\*\*=significant at the .001 level, \*\*=.01, \*=.05.

All tests are one-tailed. Semi-robust std. errors in ().

Sample includes all dyads for the years 1885-1992.



# Conclusions

- Reputation matters with respect to the onset of disputes.
- Reputation also matters with respect to the onset of war (Crescenzi, Kathman, Long 2005)

## Next Steps

- Does reputation influence alliance partnering?
- Using a rationalist approach to better understand *when* to expect reputational information to have an impact on policy choices.