

# Systemic Theory and International Relations

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# Definitions

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## Systemic theory in international relations

Theorizing impact of agents on structure and vice-versa

## Agents

States; typically major powers

## Structure

Distributions of things that matter to states

Balances of power

Balances of ideology (source of political legitimacy)

# History

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## General systems theory

Ludwig von Bertalanffy

Framework for theorizing about systemic interactions

Ancestor of modern complex systems research in many disciplines

## Systemic theories in international relations

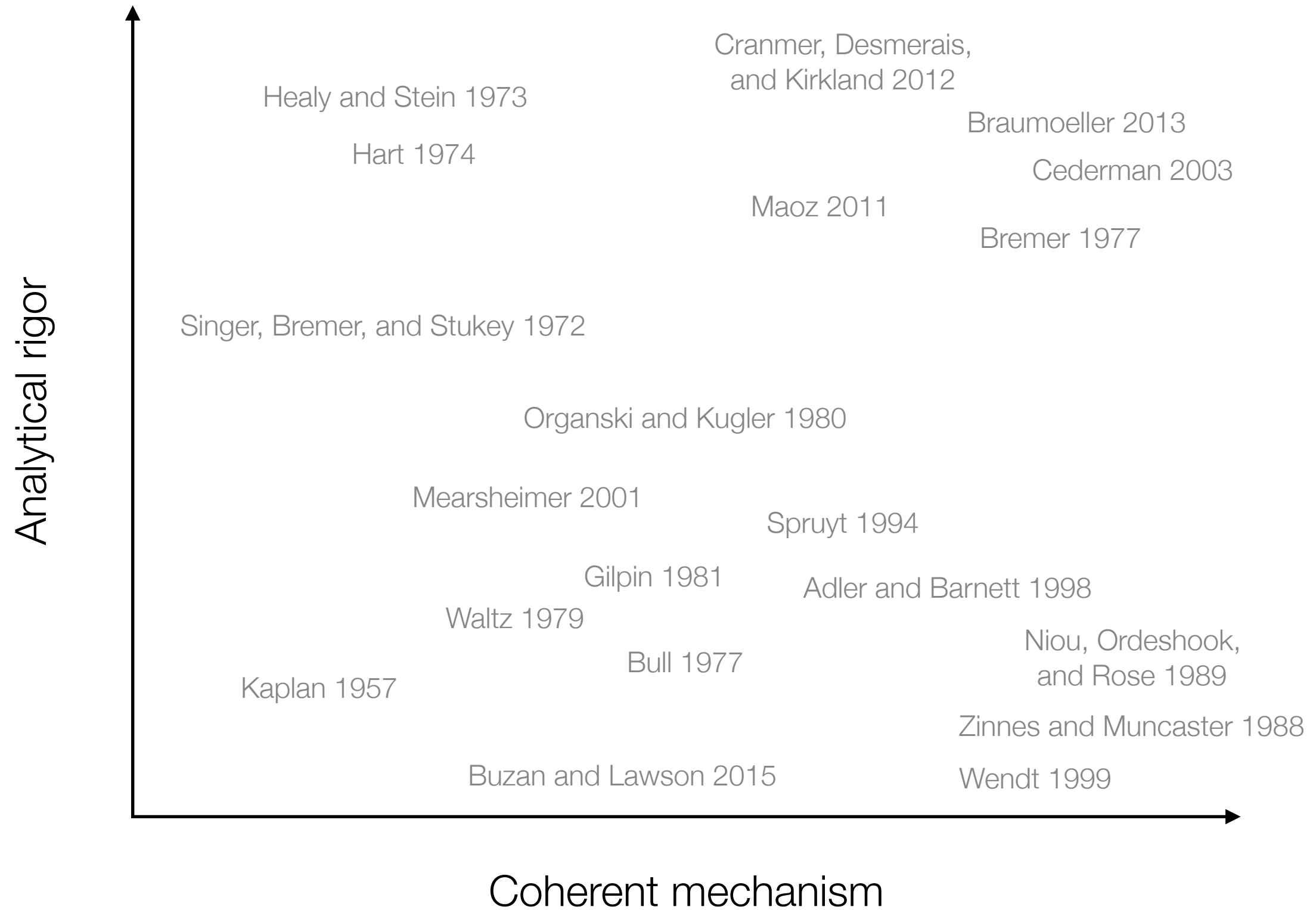
Morton Kaplan, *System and Process in International Relations* (1957)

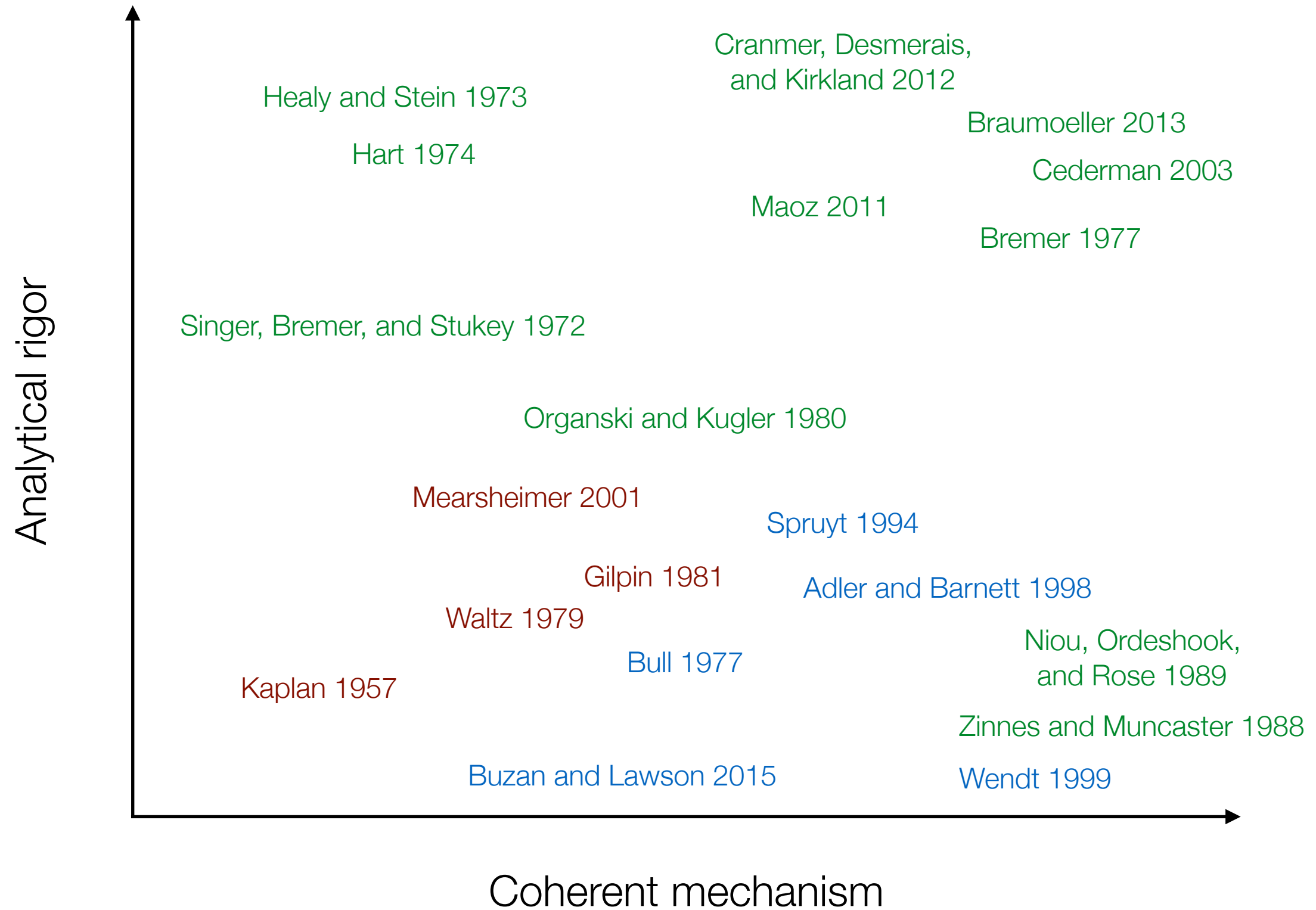
Kenneth Waltz, *Theory of International Politics* (1979)

Alexander Wendt, *Social Theory of International Politics* (1999)

Lars-Erik Cederman, “Modeling the Size of Wars: From Billiard Balls to Sandpiles” (2003)

Bear F. Braumoeller, *The Great Powers and the International System* (2013)

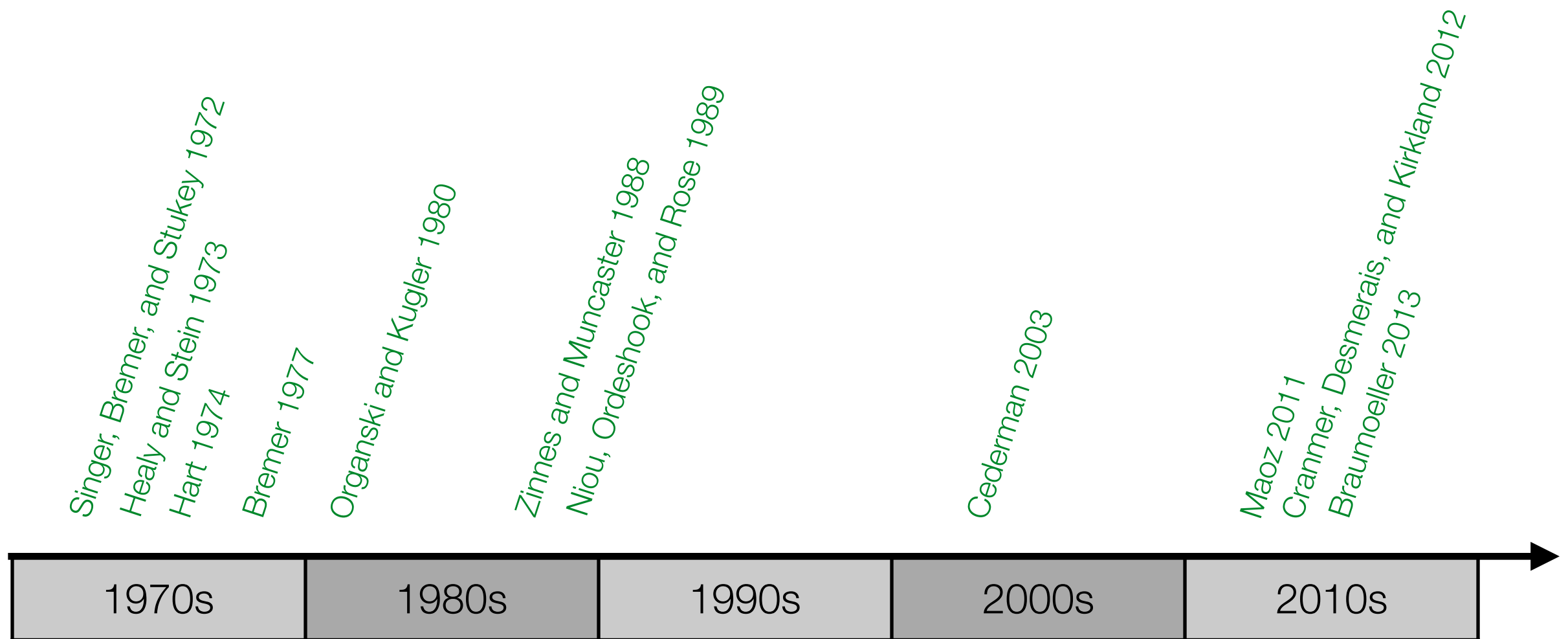




Traditional IR • English school • Peace science

# The Lost Decades

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# What happened between 1990 and 2010?

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Peace science crowd turned away from systemic theory

“Age of Regression”

Belief that single equation models with lots of RHS variables can solve any problem

Proliferation of data best suited to monadic and dyadic studies

Correlates of War data on alliances (1966), war (1972), militarized interstate disputes (1984), capabilities (1987), interstate distance (1991), etc.

International Crisis Behavior (ICB) data (1975)

Events data: COPDAB (1980), KEDS (1994), WEIS (1999), TABARI (2000), CAMEO (2000), GDELT (2013), PETRARCH (2014)

# Braumoeller, *Great Powers and Int'l System*

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Fully systemic theory of international relations

Agents influence structure and vice versa

## Arguments

Dissatisfaction with the structural status quo (distance between *status quo* and ideal points along salient dimensions) prompts states to act

States change structure in proportion to their dissatisfaction and their capabilities

Other states' actions also influence structure of the system



# Agents and structure, 1815-1991

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## **Structure**

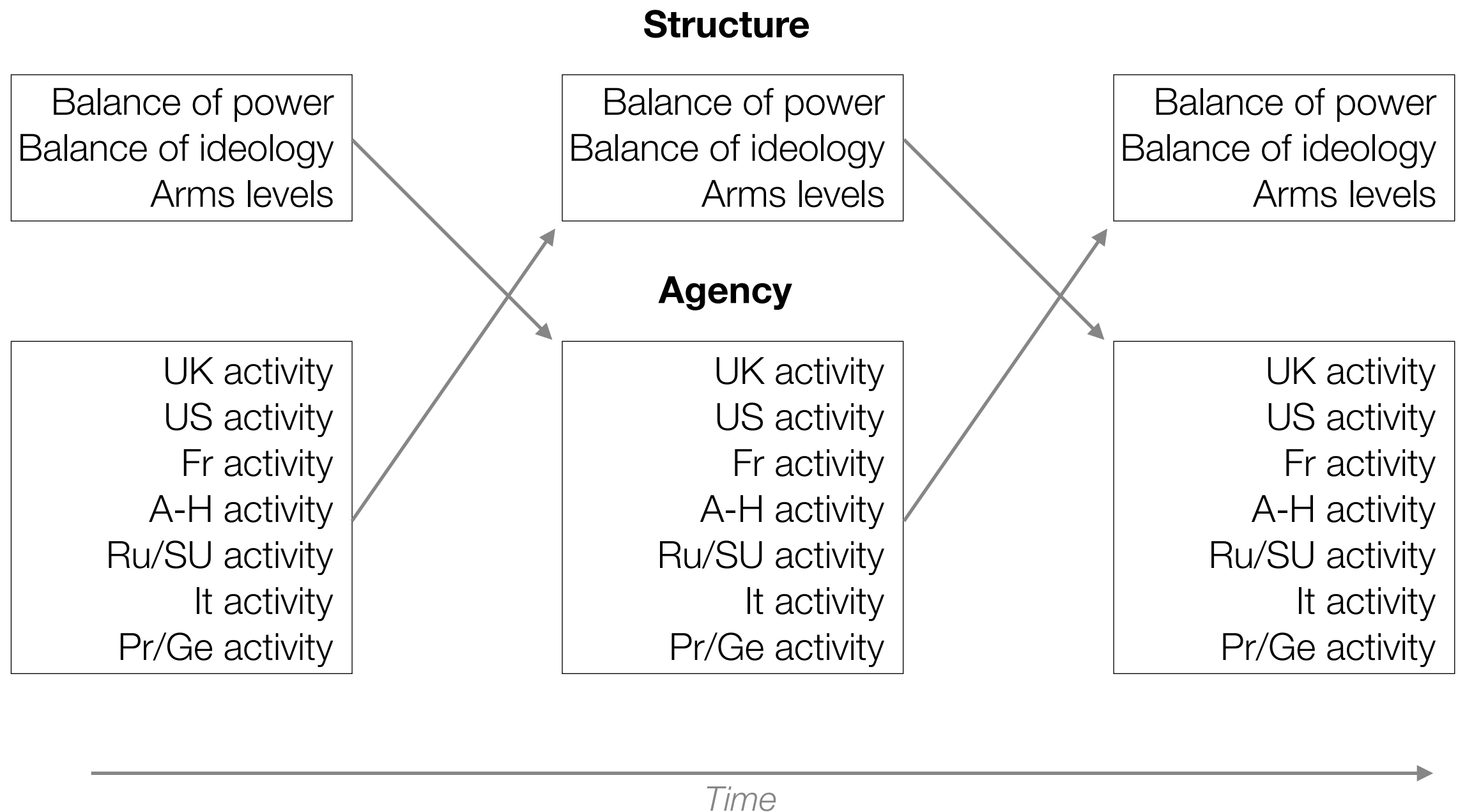
Balance of power  
Balance of ideology  
Arms levels

## **Agency**

UK activity  
US activity  
Fr activity  
A-H activity  
Ru/SU activity  
It activity  
Pr/Ge activity

# Reciprocal agent-structure interaction

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# Braumoeller, *Great Powers and Int'l System*

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## Theory

Formalized as system of differential equations

Analogy: macroeconomic models

## Empirics

Full information maximum likelihood (FIML)

Historical case studies

# Data

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	19 <sup>th</sup> Century	Interwar Period	Cold War
Balance of power	Standard deviation of latent capabilities of GPs	German percentage of GP realized capabilities	Diff. between US and Soviet realized capabilities
Arms levels	N/A	Total military expenditures	Mil. spending + nuclear warheads
Balance of ideology	Average regional Polity score	Average regional Polity score, rescaled	Average regional Polity score
Latent capabilities	Urban population Iron/steel production	Urban population Iron/steel production Energy consumption EOY gold reserves	Urban population Iron/steel production Energy consumption
Realized capabilities	Military expenditures Military personnel	Military expenditures Military personnel	Military expenditures Military personnel Nuclear warheads
Worldviews	Assessed via survey of diplomatic historians		
State Activity	Assessed via survey of diplomatic historians		

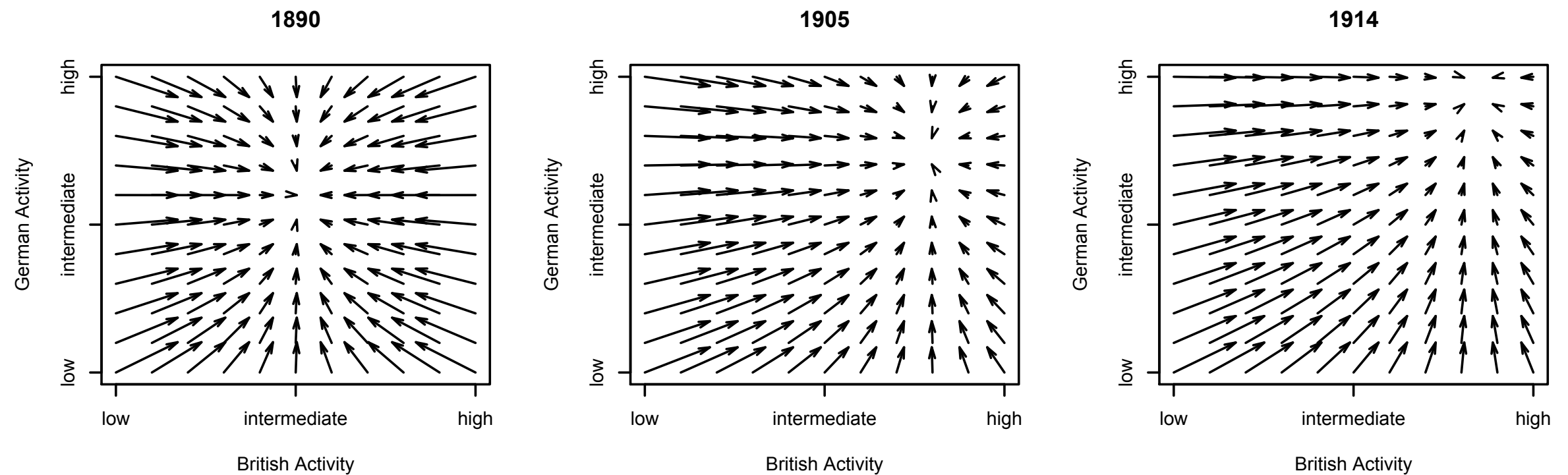
# The table with the stars

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	19 <sup>th</sup> Cen.	Interwar	Cold War
H <sub>St1</sub> : <i>Great Power security activity</i> →			
Balance of Power	32.84***	10.78***	8.98*
Balance of Ideology	13.82	16.89***	34.24***
Arms Levels		24.29***	139.65***
H <sub>A1</sub> : <i>Structure</i> → <i>security activity of...</i>			
UK	20.10***	22.99***	
France	18.79***	51.10***	
Austria/A-H	24.65***		
Prussia/Germany	18.56**	21.46***	
Russia/USSR	21.40***	109.56***	32.37***
Italy		19.25***	
USA		75.21***	11.62
H <sub>R1</sub> : <i>Reject reduction of model to...?</i>			
Power-only model	132.76***	20.82***	40.70***
Ideology-only model	221.41***	49.03***	319.73***

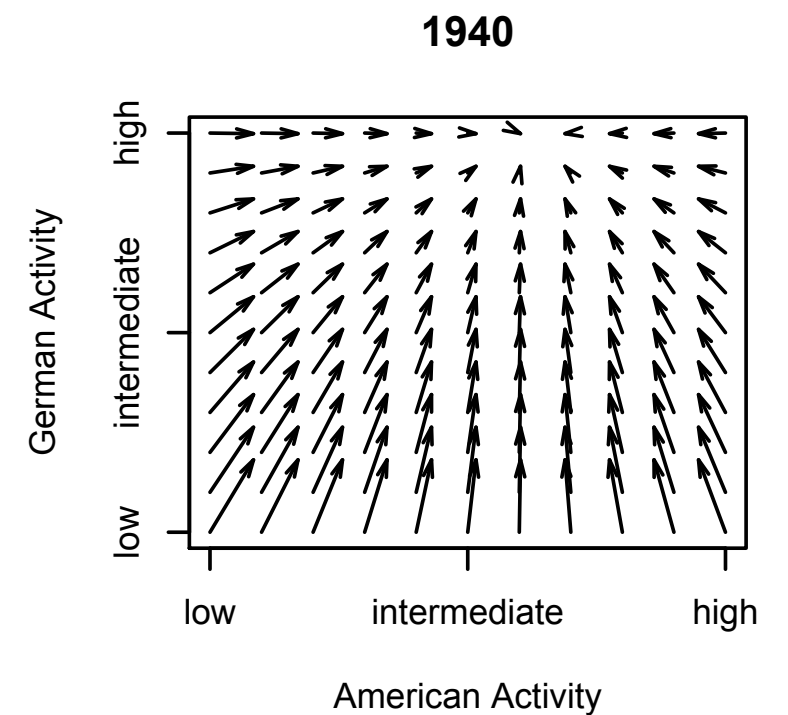
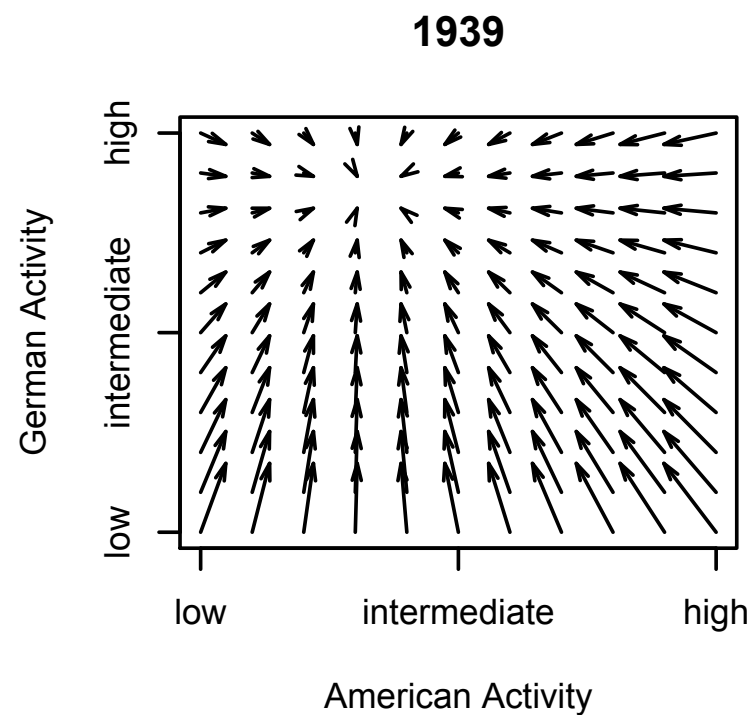
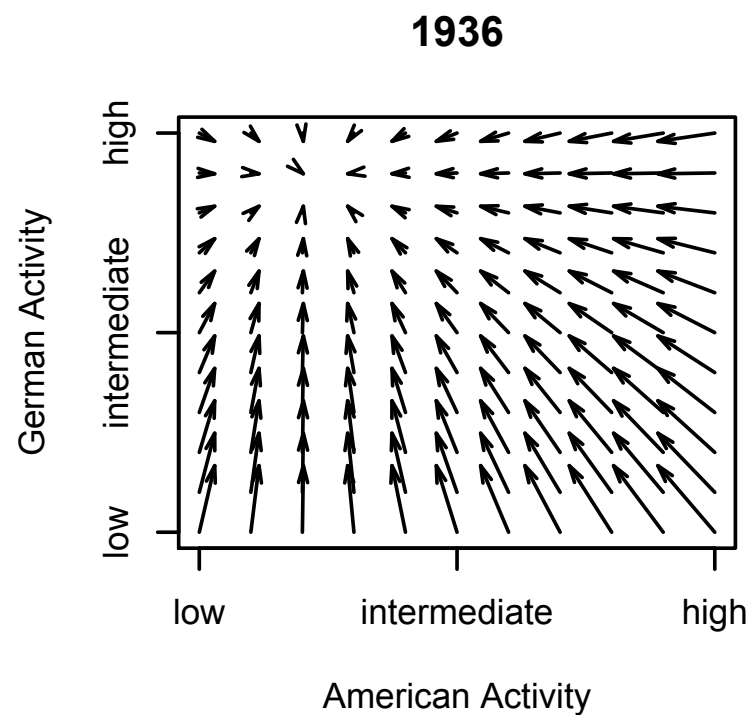
# The eyeball test

## Anglo-German arms race prior to WWI



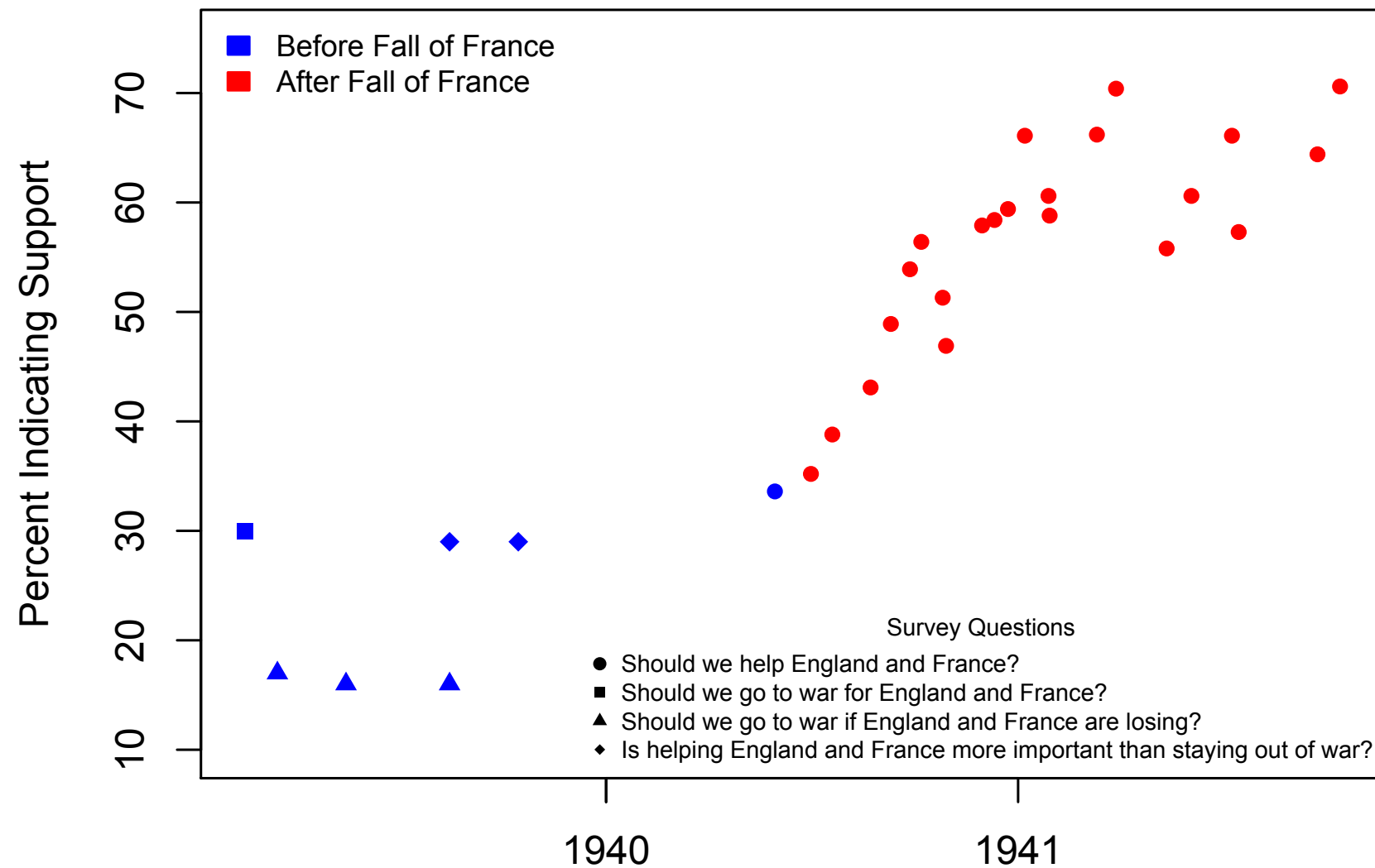
# The eyeball test

## Pre-WWII American “isolationism”



# The eyeball test

## Pre-WWII American “isolationism”





# Predicting international conflict

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Theory is agnostic regarding form of activity

Arms vs. alliances, e.g.

Compatible with lower-level theories of conflict

Deterrence model: Conflict arises when target fails to deter aggressor

Spiral model: Conflict arises when attempts to deter create hostility spirals

Dilemma: Best response in one world is worst response in the other

Which situation is most common?

# Predicting international conflict

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Braumoeller, *Systemic Politics and the Origins of Great Power Conflict* (2008)

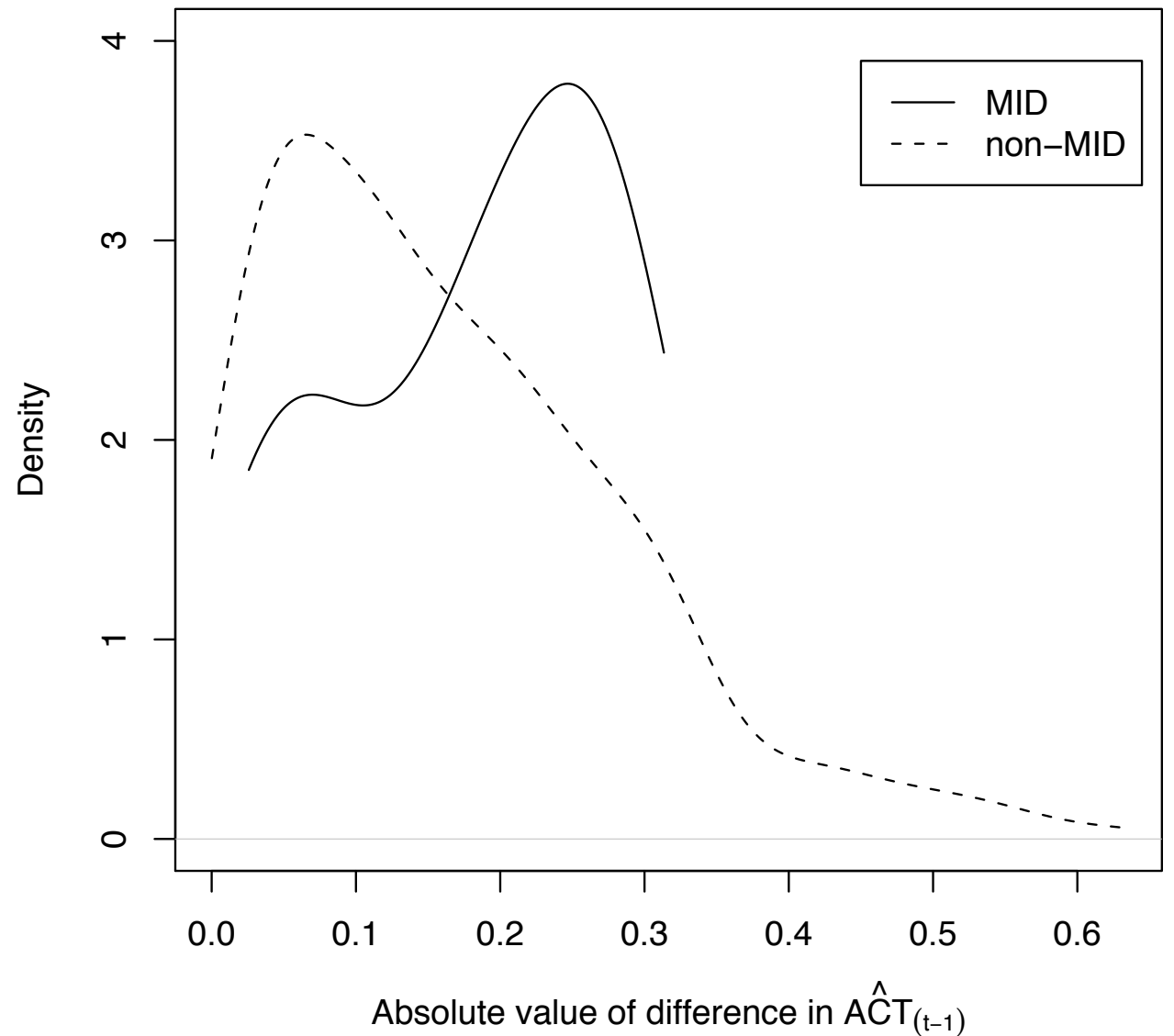
Systemic model predicts level of Great Power activity

Spiral model predicts that high levels of activity will precede conflict

Deterrence model predicts that an imbalance of activity will precede conflict

Both supported

Deterrence model more supported



# Work in progress

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## Determinants of systemic levels of conflict

Has there been a steady decline in the rate of international conflict initiation? (*nope*)

Why are some historical periods more warlike than others?

## Determinants of the deadliness of warfare

Sources of change in power-law slope coefficient for war intensity

## Origins of international order

Agent-based model explaining formation and dissolution of political orders

Applications to, e.g., current threats to Western liberal order

# Conclusions

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Systemic theorizing is making a comeback

Well, a few of us are trying, anyway

Today's big problems are often systemic in nature

Implications of rise of China

Russia, Brexit, populism, and western solidarity

Failed/failing states and nation building

NAS can help

Systemic research often more familiar to scientists outside of political science

Thank you very much.