Systemic Theory and International Relations

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Definitions

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

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)


The Lost Decades

1970s
- Singer, Bremer, and Stukey (1972)
- Healy and Stein (1973)
- Hart (1974)
- Bremer (1977)
- Organski and Kugler (1980)

1980s
- Zinnes and Muncaster (1988)
- Niou, Ordeshook, and Rose (1989)

1990s
- Cederman (2003)

2000s
- Maoz (2011)
- Cranmer, Desmetas, and Kirkland (2013)

2010s
What happened between 1990 and 2010?

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)

Braumoeller, *Great Powers and Int’l System*

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

**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

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

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

Balance of power
Balance of ideology
Arms levels

Balance of power
Balance of ideology
Arms levels

Time
Braumoeller, *Great Powers and Int’l System*

**Theory**

- Formalized as system of differential equations
- Analogy: macroeconomic models

**Empirics**

- Full information maximum likelihood (FIML)
- Historical case studies
## Data

<table>
<thead>
<tr>
<th></th>
<th>19th Century</th>
<th>Interwar Period</th>
<th>Cold War</th>
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<tbody>
<tr>
<td>Balance of power</td>
<td>Standard deviation of latent capabilities of GPs</td>
<td>German percentage of GP realized capabilities</td>
<td>Diff. between US and Soviet realized capabilities</td>
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<tr>
<td>Arms levels</td>
<td>N/A</td>
<td>Total military expenditures</td>
<td>Mil. spending + nuclear warheads</td>
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<tr>
<td>Balance of ideology</td>
<td>Average regional Polity score</td>
<td>Average regional Polity score, rescaled</td>
<td>Average regional Polity score</td>
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<td>Realized capabilities</td>
<td>Military expenditures Military personnel</td>
<td>Military expenditures Military personnel</td>
<td>Military expenditures Military personnel Nuclear warheads</td>
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<td>Worldviews</td>
<td>Assessed via survey of diplomatic historians</td>
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<tr>
<td>State Activity</td>
<td>Assessed via survey of diplomatic historians</td>
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The table with the stars

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>19th Cen.</th>
<th>Interwar</th>
<th>Cold War</th>
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<tr>
<td>$H_{St1}$: <em>Great Power security activity</em> $\rightarrow$</td>
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<td>Balance of Power</td>
<td>32.84***</td>
<td>10.78***</td>
<td>8.98*</td>
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<td>Balance of Ideology</td>
<td>13.82</td>
<td>16.89***</td>
<td>34.24***</td>
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<td>Arms Levels</td>
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<td>$H_{A1}$: <em>Structure</em> $\rightarrow$ security activity of...</td>
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<td>UK</td>
<td>20.10***</td>
<td>22.99***</td>
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<td>France</td>
<td>18.79***</td>
<td>51.10***</td>
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<td>Austria/A-H</td>
<td>24.65***</td>
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<td>Prussia/Germany</td>
<td>18.56**</td>
<td>21.46***</td>
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<td>Russia/USSR</td>
<td>21.40***</td>
<td>109.56***</td>
<td>32.37***</td>
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<td>Italy</td>
<td></td>
<td>19.25***</td>
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<td>USA</td>
<td></td>
<td>75.21***</td>
<td>11.62</td>
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<td>$H_{R1}$: <em>Reject reduction of model to...?</em></td>
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<td>Power-only model</td>
<td>132.76***</td>
<td>20.82***</td>
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<td>Ideology-only model</td>
<td>221.41***</td>
<td>49.03***</td>
<td>319.73***</td>
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The eyeball test

Anglo-German arms race prior to WWI

<table>
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<tr>
<th>Year</th>
<th>British Activity</th>
<th>German Activity</th>
<th>French Activity</th>
<th>Russian Activity</th>
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<td></td>
<td>high</td>
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<td>high</td>
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<tr>
<td>1914</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>low</td>
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<tr>
<td></td>
<td>intermediate</td>
<td>intermediate</td>
<td>intermediate</td>
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<td></td>
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The eyeball test

Pre-WWII American “isolationism”

Figure 3.7: Systemic incentives in the second half of the interwar period.

Indifference toward Hitler’s 1935 announcement that Germany would no longer observe Versailles’ military limits, which many believed to be excessive by that time, as well as toward his occupation of the Rhineland. By 1939, however, given the absorption of Austria and the success of Munich in the previous year, the magnitude of, and the trend in, the increase in Germany’s relative capabilities had become less ambiguous and a greater source of concern for both the British and the Soviets. By 1940 the invasion of Poland in the previous year had spurred Britain in particular to greater action.

America’s focus on the threat posed by Germany seems to have undergone a substantial shift in 1940. 1940 marked the year of the abrupt and unexpected fall of France, the point at which Germany’s share of capabilities in the system increased amply and without warning. This change in the structure of the system provided the
The eyeball test

Pre-WWII American “isolationism”
Predicting international conflict

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


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

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

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.