

A New Approach to Analyzing Coevolving Longitudinal Networks in International Relations[☆]

Shahryar Minhas¹, Peter D. Hoff¹, Michael D. Ward¹,

^a*Department of Political Science, Duke University, Durham, NC 27701, USA*

^b*Departments of Biostatistics & Statistics, University of Washington, Seattle, WA, USA*

Abstract

Previous models of international conflict have suffered two shortfalls. They tended not to embody dynamic changes, focusing rather on static slices of behavior over time. These models have also been empirically evaluated in ways that assumed the independence of each country, when in reality they are searching for the interdependence among all countries. We illustrate a solution to these two hurdles and evaluate this new, dynamic, network based approach to the dependencies among the ebb and flow of daily international interactions using a newly developed, and openly available, database of events among nations.

Keywords: Dynamic networks, time series, international crises, event data, tensor products

[☆]This research was partially supported by the Office of Naval Research (via grant N00014-12-C-0066) and in part by NSF Award 1259190.

*Corresponding author