

5th Annual Political Networks
Conference and Workshops
UNIVERSITY OF COLORADO **BOULDER**



June 13-16, 2012



PROGRAM

Welcome to the Fifth Annual Political Networks Conference and Workshops!

This event features two days of workshops (June 13-14), which are intended to provide instruction to scholars with beginning, intermediate, and advanced levels of prior training, as well as two days of academic panel presentations (June 15-16).

We'd like to thank you for participating in this year's conference. Over the course of the next few days, we hope to achieve the goals and objectives of the workshops and conference: build knowledge of theories and methods of network analysis; encourage application of these theories and methods to the study of politics; and facilitate networking among scholars in this field of study.

Hosts

Anand Edward Sokhey | University of Colorado at Boulder

Seth Masket | University of Denver

Program Chairs

Jennifer Victor | George Mason University

Alex Montgomery | Reed College

Fellowship Committee Chair

Skyler Cranmer | University of North Carolina at Chapel Hill

National Science Foundation Grant Administrator

John Scholz | Florida State University

ACKNOWLEDGEMENTS

Funding for this conference is generously provided by the National Science Foundation, the University of Colorado, and the University of Denver. At the University of Colorado (CU), thanks go to the department of political science and the Center to Advance Research and Teaching in the Social Sciences (CARTSS).

We appreciate the help of the other members of the fellowship committee (Bruce Desmarais and Jaimie Settle), the section officers not mentioned above (Zeev Maoz, Meredith Rolfe, Michael Heaney, Charli Carpernter, and Hans Noel), the section membership chair (Casey Klofstad), and the NSF grant writers (Janet Box-Steffensmeier and Robert Huckfeldt). Ken Bickers was instrumental in finding funding for the conference; David Brown provided CARTSS support. David Lazer, Scott McClurg and Michael Heaney all shared valuable advice during the planning stages.

The following CU graduate students provided critical staff support to the conference: Adam Cayton, Tom Cook, Jeff Lyons, Annie Miller, Joby Schaffer, and Stefan Wojcik. Special thanks go to Annie, Jeff, and Stefan for their long-term assistance. Thanks also go to Carol Hermann at CU for administrative support, and to Jeanne Gardner at CARTSS.

LOGISTICS

Wireless Internet Access

All participants will have access to wireless internet while in the Wolf Law Building. There is no username/password.

Presentation Times

Presentations should be delivered in the order indicated on the program, unless all members of the panel agree otherwise. Each presenter will have the amount of time in the session, divided by the number of presenters, to give a presentation *and* take questions. Question and answer should take place after each presentation, rather than at the end of the session.

Meals

Breakfast and lunch will be provided each day of the workshops and conference; heavy appetizers will be provided on the evening of Friday, June 15. Receptions will take place on Thursday evening after the plenary, and on Saturday afternoon after the last panel session.

Lunch: There are various locations within the building to eat, including the student commons, commons terrace, and courtyard. Participants should also feel free to eat where they like, with the exception of Friday's mentoring lunch (which has assigned seating).

Note: The mentoring lunch will be held on Friday, June 15 from 12:30 pm to 2:30 pm in the student commons at the law school. Table assignments will be provided, and intended to match senior participants with more junior participants. Please be sure to sit at the appropriate table.

Poster Session

Participants in the poster session are advised to bring their posters to the conference on Friday morning, as there may not be time to return to the hotel before the poster session. Poster set up at the Folsom Stadium Club begins at approximately 4:15 pm. Participants will be provided with a 30"x40" posterboard.

Printing Options

It is highly advisable to print your workshop, conference, and poster materials in advance. If this is not possible, Boulder has a number of office supply/print shops. Four of these options are listed below, one is located on campus, roughly a 10 minute walk from the Wolf Law School where the conference will be taking place (the other three are off campus).

On-Campus Option

Ink Spot

University Memorial Center 130C
1669 Euclid Avenue (corner Broadway & Euclid Ave)
Boulder, CO 80309

Off-Campus Options

Fed Ex Kinkos Office and Print Center
2795 Pearl St, Suite 104
Boulder, CO 80302

Eight Days a Week
840 Pearl St., Suite 104
Boulder, CO 80302

FASTSIGNS
4800 Baseline Rd.
Ste. D102
Boulder, CO 80303



SCHEDULE



WEDNESDAY, JUNE 13, 2012

9:00am – 4:45 pm ALL DAY TRAINING WORKSHOPS – Wolf Law School 2nd Floor
(note: breakfast and lunch will be provided to workshop attendees)

Module 1A: Basics of Network Analysis
Trainer: Michael T. Heaney
Room: 205

Module 1B: Intermediate Social Network Analysis with UCINET
Trainer: Steve Borgatti
Room: 206

Module 1C: Exponential Random Graph Models for Social Networks
Trainer: Carter Butts
Teaching Assistants: Emma Spiro, Sean Fitzhugh, and Adam Boessen.

Room: 207

Time	Activity	Location
8:15 am	Registration (Breakfast - Boettcher)	Wolf Law
9:00 am	Training Modules	Wolf Law
10:30 am	Break (Refreshments - Boettcher)	Wolf Law
10:45 am	Training Modules	Wolf Law
12:00 pm	Lunch Provided - Boettcher	Wolf Law
1:30 pm	Training Modules	Wolf Law
3:00 pm	Break (Refreshments - Boettcher)	Wolf Law
3:15 pm	Training Modules (ends at 4:45 pm)	Wolf Law

THURSDAY, JUNE 14, 2012

9:00am – 4:45 pm ALL DAY TRAINING WORKSHOPS – Wolf Law School 2nd Floor
 (note: breakfast and lunch will be provided to attendees)

Morning Session A: Longitudinal Network Analysis with UCINET
 Trainer: Steve Borgatti
 Room: 205

Morning Session B: Examining Dynamic Social Networks and Human Behavior
 Trainer: James Fowler
 Room: 206

Morning Session C: Modeling Network Dynamics
 Trainer: Christian Steglich
 Room: 207

 Afternoon Session A: Issues and Strategies in Social Network Data Collection
 Trainer: David Knoke
 Room: 206

Afternoon Session B: Modeling Peer Influence Processes in Dynamic Networks
 Trainer: Christian Steglich
 Room: 207

Time	Activity	Location
8:15 am	Registration (Breakfast; Boettcher)	Wolf Law
9:00 am	Morning Training Modules	Wolf Law
10:30 am	Break (Refreshments Provided - Boettcher)	Wolf Law
10:45 am	Morning Training Module	Wolf Law
12:00 pm	Lunch Provided; Boettcher	Wolf Law
1:30 pm	Afternoon Training Modules	Wolf Law
3:00 pm	Break (Refreshments Provided - Boettcher)	Wolf Law
3:15 pm	Afternoon Training Modules (ends 4:45 pm)	Wolf Law

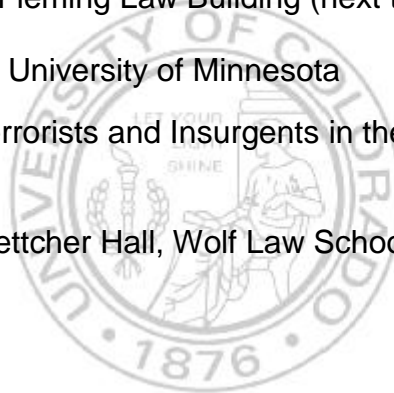
5:00pm – 6:00pm OPENING PLENARY REMARKS – Lindsley Memorial Courtroom, Fleming Law Building (next to Wolf)

Prof. David Knoke, University of Minnesota

“‘It Takes A Network’: Fighting Terrorists and Insurgents in the 21st Century”

6:00pm – 7:00pm RECEPTION – Boettcher Hall, Wolf Law School

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FRIDAY, JUNE 15, 2012

8:00am – 9:00am REGISTRATION;
Breakfast (3rd Floor Hall, Wolf);
CQ Presentation: “First Street” (Room 306)

9:00am – 10:30am, Friday

PANEL A1 – Room 306

Chair: *Brandon Kinne*, The University of Texas at Dallas

R. Karl Rethemeyer, Victor H. Asal, Hyun Hee Park, University at Albany - SUNY

Gary LaFree, University of Maryland

“Exports of Another Type: The Determinants of Interstate Transmission of Terrorism”

While the majority of quantitative terrorism research has emerged since September 11th (Silke 2004), one area that has long been the subject of quantitative analysis is international or transnational terrorism (Plumper and Neumayer 2010). While there has been a great deal of work examining where transnational terrorism is likely to

happen (Krieger and Meierrieks 2011) and some work on why some countries are targeted and where terrorism is likely to originate, there has been very little work on the patterns of international terrorism links between the terrorists' home country and the victims' country (Plumper and Neumayer 2010 :75). Plumper and Neumayer (2010) improve upon much of the existing work by using a dyadic design and find that attacking allies and particularly stronger allies that are more democratic helps to explain the export and import of terrorism between countries. This paper broadens and improves on the dyadic approach by using a stochastic approach – specifically an exponential random graph model (ERGM) – to model patterns of import and export of terrorism. ERGMs and other stochastic approaches to social network analysis are useful because they allow us to properly control for the dependencies inherent in the data. Our approach allows us to search for structural regularities in the pattern of interconnections that may help to explain what is observed – for instance, a tendency for import/export patterns to be transitive in nature. Controlling for these tendencies more carefully allows us to better isolate other factors as drivers of import/export behavior. We use data from the Global Terrorism Database (LaFree and Dugan 2007) for the years 1998-2006, as well as country-level covariates from the Quality of Government database (Teorell, Holmberg, and Rothstein 2008) and data on dyadic relationships between states from the Correlates of War datasets. We argue that the factors that are most likely to trump others when it comes to the export and import of terrorism are contiguity militarized interstate disputes. In addition we explore the impact of the political situation and regime within a given country, the nature of religious and ethnic affiliations, economic and development factors, and experience with conflict and civil strife.

Skyler Cranmer, University of North Carolina, Chapel Hill

Bruce A. Desmarais, University of Massachusetts, Amherst

“Harnessing the Power of Networks to Predict Inter-State War with Initiator-Target Specificity”

We seek to leverage the endogenous structure of connectivity in the network of inter-state wars to help predict the formation of new warring relationships. Research on interstate conflict can be characterized by regression analyses on warring relationships that do not account for network structure and tend to have poor predictive performance. Though political scientists tend to focus on correlational analyses that can suggest causation, predictive analyses are important for the study of war because they carry major, and potentially actionable, policy implications. In this study, we use a hybrid forecasting technique that combines a probability model (in the form of an exponential random graph model) with a set of proximity measures endogenous to the network to predict the probability of war in each dyadic pair of states. In other words, we use a forecasting framework that provides initiator-target specificity in its predictions; answering not what the probability of a war is, but the probability of a war with whom at what time. This analysis suggests that endogenous predictors of the inter-state war system play a more prominent role in that system's evolution than has been previously understood.

Rich Colbaugh and Kristin Glass, Sandia National Laboratories
“Predictive Analysis of Political Networks”

There is considerable interest in developing predictive capabilities for diffusion processes on political networks, for instance to permit early identification of emerging political and social trends or accurate forecasting of the ultimate reach of potentially viral ideas and behaviors. This presentation proposes a new approach to predictive analytics which leverages analysis of meso-scale network dynamics to generate useful predictions for complex political and social phenomena. More specifically, we begin by showing that the outcomes of social diffusion processes typically depend crucially upon the early dynamics of the process on the underlying networks 1.) community structure, that is, densely connected groupings of vertices which have only relatively few links to other groups, and 2.) core-periphery structure, reflecting the presence of a small group of core vertices which are densely connected to each and are also close to the other network vertices. We use this finding to identify a novel set of network dynamics metrics which possess significant predictive power for political and social diffusion processes. These network metrics provide the foundations for developing a statistical learning algorithm that enables accurate predictions about such diffusions. The utility of the prediction algorithm, and the power of network-based predictive metrics, are demonstrated through empirical studies involving the emergence of the Swedish Social Democratic Party at the turn of the 20th century, the propagation of political memes via online media during the 2008 U.S. presidential election campaign, and the planning and execution of politically-motivated cyber attacks during the period 2007-2011.

PANEL B1 – Room 301

Chair: *Yu-Ru Lin*, Harvard / Northeastern University

Suzanne Robbins, George Mason University
“Building New Networks: Cohesion, Connectivity and SuperPACs”

SuperPACs, a new kind of US political action committee, may raise and spend unlimited sums of money to advocate for or against political candidates. The 339 registered SuperPACs have raised over 130 million dollars and spent nearly 61 million in the 2012 electoral season thus far. Some certain SuperPACs support high profile presidential candidates, though most SuperPACs are not so narrowly focused. While they cannot donate directly to candidates or coordinate with them in any way, their receipts and expenditures tell a different relational story. SuperPAC donors often donate to more traditional political committees, including campaign committees and Leadership PACs. Therefore, I investigate the cohesion and connectivity between organizational networks via the donor networks, as well as the likelihood of link dependent upon total network structure.

Daniel Laurison, UC Berkeley
“Network Ties of Strategic Campaign Professionals”

In this paper, I analyze the network ties of national-level strategic campaign professionals. Where other work on political professionals has focused only political consultants, 527s, or party organizations, I draw on an original dataset including every individual who worked in any strategic capacity (in a national or statewide office, playing a key role in a major campaign department, or as a top advisor or consultant) on a Presidential or contested Senate race from 2004-2008. For each individual in the dataset (N=682, excluding isolates and cases with excessive missing data), I have data on educational institutions attended and college majors, demographic details, and detailed career history. I present the results of a network analysis of people and the organizations they worked for from 1980 - 2010. I describe the connections among strategic campaign professionals and among organizations (including both traditional political organizations and other organizations where at least two politicians worked simultaneously). I find that staffers to "fringe" campaigns are disconnected from the main network of politicians, and show substantial cross-party ties among the rest (formed most often through work at law firms), as well as a pattern of "cliques" of politicians who work together across multiple campaigns over many years. I also evaluate effects of network ties on individual campaign-staff careers, and find that a politician's network position or resources in Cycle 1 predict his or her position (in terms of size and level of the campaign, and level in the campaign hierarchy) in Cycle 2.

*Michael Kowal, Bruce A. Desmarais, Raymond La Raja, University of Massachusetts
"The Evolution of Congressional Campaign Finance Communities: A Network
Analysis of Donors and Candidates"*

Many historical, empirical and theoretical accounts of the lawmaking process hinge upon the presence of intensely involved communities (e.g., policy networks, iron triangles). Network analysis has proven fruitful in directly measuring and analyzing the collaborative relationships that underlie legislative processes. For example, with the goal of highlighting highly interactive groups of legislators, community detection has been applied to the analysis of roll-call voting and cosponsorship. We use community detection to measure and analyze the dynamics of communities that include members of Congress (MC) and campaign donors. Utilizing data from the 1990-2010 Congressional elections, we explore the United States House of Representatives campaign finance donor network. Previous research on political donor networks have relied on a unipartite projection of what is actually a bipartite network of donors connecting to candidates - collapsing one part of the network to either examine connections among candidates or among donors. Treating the data in its natural, bipartite form, and using recently developed community detection methods for the analysis of weighted bipartite networks, we identify campaign finance communities that include both MCs and donors. We analyze how polarization in campaign finance communities relates to the polarization in roll-calls and cosponsorship that have been identified in the same period. Our contributions are three-fold. First, we provide a descriptive analysis of the dynamics of campaign finance communities. Second, we show how these communities have contributed to

polarization in Congress. Third, we introduce methods of community detection in bipartite networks to political networks scholars.

PANEL C1 – Room 307

Chair: *John Ryan*, Florida State University

Laura Gee and Jason Jones, UC San Diego

“Getting a Job From a Friend: Weak Ties on Facebook's Social Network”

Unemployment is currently extremely high in the United States, yet that unemployment is often concentrated geographically, by industry, or socioeconomically. It is likely that part of this concentration is due to the fact that most jobs are found through informal search methods like the help of a social contact. Aiding a friend in getting a job can be a costly favor, and so we ask what type of relationship is most likely to result in a person getting a job with the help of a friend. We have begun our research using United States Facebook user level data for over 5 million users. We assume a person has been “transmitted” their most recent job from a friend if (a) they both work at the same employer (b) they have been Facebook friends at least one year and (c) the friend began working at the shared employer at least one year before the person’s start date. We measure tie strength by frequency of contact on Facebook and number of mutual friends. We find that most people are transmitted a job from a weak tie, but this is largely because people have many more weak ties than strong ties. However, when we look at people who got a job from a friend, we find that they are more likely to get that job from a strong tie than a weak tie. The major strength of weak ties appears to be that we have so many weak ties, but stronger ties are still useful in obtaining a job.

Sandra Gonzalez-Bailan, University of Oxford

Javier Borge-Holthoefer, Yamir Moreno, Institute for Biocomputation and Physics of Complex Systems, University of Zaragoza

“Broadcasters and Hidden Influentials in Online Protest Diffusion”

This paper explores the growth of online mobilizations using data from the “Indignados” (the “outraged”) movement in Spain, which emerged under the influence of the revolution in Egypt and as a precursor to the global Occupy mobilizations. The data tracks Twitter activity around the protests that took place in May 2011, which led to the formation of camp sites in dozens of cities all over the country and massive daily demonstrations during the week prior to the elections of May 22. We reconstruct the network of tens of thousands of users, and monitor their message activity for a month (25 April 2011 to 25 May 2011). Using both the structure of the network and levels of activity in message exchange, we identify four types of users and we analyze their role in the growth of the protest. Drawing from theories of online collective action and research on information diffusion in networks

the paper centers on the following questions: How does protest information spread in online networks? How do different actors contribute to that diffusion? How do mainstream media interact with new media? Do they help amplify protest messages? And what is the role of less popular but far more frequent users in the growth of online mobilizations? This paper aims to inform the theoretical debate on whether digital technologies are changing the logic of collective action, and provide evidence of how new media facilitates the coordination of offline mobilizations.

*Derek Ruths, Wendy Liu, Faiyaz Al Zamal , McGill University
“Characterizing and Predicting Political Orientation on Twitter”*

Characterizing and measuring political activity has significant theoretical and practical value. As political discourse increasingly moves into online forums, there is a need to understand how these platforms shape and are shaped by political debate, events, and organizations. In this work, we seek to characterize correlations between the political attributes of an individual Twitter user and her friends and to evaluate whether these correlations can be used to make neighborhood-based inferences about the political orientation of individual users. We performed a computational survey of 205,181 Twitter users. Using our data set of Twitter users, we derived a set of political hashtags and popular political Twitter accounts. We used these as proxies for quantifying the political activity and orientation of individual Twitter users and their online friends. Our results support three novel findings. First, the political activity and orientation of a user and her friends are strongly correlated, indicating that political outlook is a significant basis for link formation (or retention) in online social platforms. Furthermore, counter to prior work in this area, we find that politically active users have neighborhoods that, while enriched for individuals who share their political views, are not devoid of users who hold opposing political orientation. This suggests that Twitter is a platform in which healthy political discourse can occur. Finally, we show that the an individual's political orientation can be predicted with high accuracy from features of her neighborhood.

10:30am – 11:00am COFFEE BREAK (Refreshments in Wolf Law, 3rd Floor Hall)

11:00am – 12:30pm, Friday

PANEL A2 – Room 307

Chair: *Skyler Cranmer*, University of North Carolina, Chapel Hill

Brandon Kinne, The University of Texas at Dallas

“The Network Dynamics of Bilateral Cooperation Agreements”

Why do some countries cooperate more than others? According to international cooperation theory, states cooperate when doing so ameliorates shared problems or achieves common goals. Yet, even when external political and economic conditions predispose states toward cooperation, cooperative efforts often fall victim to fears of noncompliance (collaboration problems) or disagreements over the distribution of mutual gains (coordination problems). This paper shows that patterns of international cooperation reflect network influences, such that states' likelihood of

cooperating depends on preexisting structures of cooperation in the international system. Synthesizing network insights with cooperation theory, we argue that these network influences stem from two causal mechanisms. First, states' preexisting cooperative ties provide strategic information to others about their trustworthiness as potential partners and about their preferences over different distributions of gains. Second, network ties establish stable reference groups of partners, such that states receive beneficial externalities- e.g., security umbrellas or economic integration -- from pursuing in-group rather than out-group ties. More generally, network ties help solve the collaboration and coordination problems that imperil cooperation. We argue that states should thus be most likely to cooperate when (1) they are highly structurally equivalent in their ties to others; (2) they share many third-party ties; and/or (3) they are more centrally located within cooperation networks. We test these arguments using new data on bilateral cooperation agreements in military, economic, cultural, and environmental issue areas. Modeling these agreements as longitudinal networks reveals that, over time and space, network effects are the most consistent and substantively significant determinants of international cooperation.

Charlie Gomez, Paolo Parigi, Stanford University

“Reweaving the Global Web: Mitigating Tensions between Regionalism and Global Polity in the International Governmental Network from 1965 to 2005”

In this paper we show that the changes that have occurred in international relations in the last decades were in part driven by network dynamics operating within the World Society framework that could not be interpreted exclusively from a state perspective. Our evidence comes from the analysis of yearly networks of intergovernmental organizations (IGOs) from 1965 to 2005. Standard measures of community detection indicates that these networks have become increasingly regionalized in time and that IGOs connected to the United Nations have progressively lost their importance. Scholars of international relations have called this scenario a multi-polar world. We argue that this picture is incomplete because it makes IGOs passive bystanders of exogenous processes occurring at the national level. We use a novel community detection technique that allows IGOs to be members of multiple communities that overlap with and are nested within one another. Using this technique, we show how these networks exhibit patterns of fracturing into multiple, overlapping regionalized communities, followed by periods of recombination in time. Thus, despite these trends of fracturing the global core polity recombines these fractured, regionalized communities at the periphery back into this core.

Oliver Westerwinter, European University Institute

“Interdependent Choices: Studying State Alliance Behavior Using Exponential Random Graph Models”

The formation of alliances is the result of strategic action among states. In this paper, I argue that states' alliance behavior is not only affected by characteristics of individual states and dyads but also by outcomes in other dyads in the global

alliance network. I also maintain that patterns of cooperation in other international networks such as those constituted by states' shared memberships in intergovernmental organizations (IGOs) exercise powerful influence on how alliances are formed. In order to estimate these within and cross-network extra-dyadic effects, I use exponential random graph models. This allows to avoid the assumption of independence of observations which underlies the vast majority of estimation techniques employed by international relations scholars and to directly model interdependence effects of triadic and higher order. I test my argument using a dataset that combines information about alliances and IGOs between 1955 and 2000. Results suggest that both within and cross-network extra-dyadic dependencies exercise powerful influence on states' alliance choices indicating that strategic action does neither stop at the dyad nor at the network level.

PANEL B2 – Room 301

Chair: Gregory Koger, University of Miami

Lorien Jasny, Jacob Hileman, Mark Lubell, University of California, Davis
“Two-Mode Brokerage and Exponential Random Graph Models: Water Policy Negotiations in the San Joaquin-San Francisco Bay Delta”

Drawing on the Gould and Fernandez (1989) operationalization and implementation of brokerage, this paper makes two advances. First, we discuss how to apply brokerage to two-mode networks. For analysis, frequently two-mode data structures are converted to one-mode projections, but this transformation obscures the structures necessary to test for the significance of two-mode brokerage configurations. Second, we incorporate terms for these two-mode brokerage structures into Exponential Random Graph Models (ERGM) in order to examine hypotheses similar to the original ones of Gould and Fernandez, but using the ERGM framework to control for additional structural features. The specific bipartite network in question is made up of environmental groups in the San Joaquin-San Francisco Bay Delta (examples include the California Sportfishing Alliance and the Delta Science Center) and venues that they participate in to affect change (examples include the Sacramento Valley Environmental Water Caucus and meetings of the San Diego City Council). These venues bring policy makers and concerned organizations together, and serve as arenas in which these actors share information, negotiate policy, and implement programs. While most venues attract similar types of organizations, some venues were designed specifically with the intention of bringing different types of actors together. In Gould and Fernandez's typology, these venues should occupy significantly more liason, gatekeeper, and representative roles and significantly fewer itinerant and coordinator roles when compared to simulated baseline models. The ERGM results should support this conclusion even when incorporating other structural terms known to be significant in similar networks.

Nils Ringe, University of Wisconsin
Jennifer N. Victor, George Mason University
“Networking the Information Gap: The Social and Political Power of Legislative Member Organizations”

Networking the Information Gap is a comparative study of legislative member organizations (LMOs) in the US Congress and the European Parliament (EP). LMOs are voluntary organizations within lawmaking bodies that are made up of members who share a common interest in a particular issue or theme, such as intergroups in the EP and caucuses in the Congress. These voluntary organizations, we argue, give lawmakers the opportunity to build relationships with each other that facilitate the efficient flow of policy-relevant information. Building on classic insights from social network analysis, we emphasize the importance of LMO ties as weak ties that bridge structural holes in the legislative network. Such weak, bridging ties (which, most importantly, cut across party lines and committee jurisdictions) provide individuals with access to otherwise unattainable information and make all members of the network better informed. To test our expectations, we demonstrate the bridgingness of LMO ties using complete LMO membership information from both legislatures and also rely on insights gained from 86 in-depth interviews with legislative actors. This mixed-method approach provides for significant analytical purchase on the question of why legislatures create LMOs, why members join and choose to be active in these organizations, and what role LMOs play in legislative politics.

Jon Rogowski, Betsy Sinclair, University of Chicago
“Congressional Networks, Party Leaders, and Legislative Entrepreneurship in the U.S. House”

Legislative entrepreneurship is central to the policymaking process. Without legislators who are willing to bear the costs of acquiring information, writing legislation, building and maintaining coalitions, and shepherding it through the legislative process, little policymaking would occur (e.g., Matthews 1960; Wawro 2001). Though a variety of costs are associated with legislative entrepreneurship, these activities are also central to legislators' policy goals and re-election efforts (Mayhew 1974; Wawro 2001). Most existing accounts of entrepreneurship focus on how members acquire information, possibly by engaging interest groups (e.g., Hall and Deardorff 2006), and navigate complex institutional environments (Anderson, Box-Steffensmeier, and Chapman 2004; Schiller 1995; Sinclair 1992) to pursue their entrepreneurial activities. In contrast, this paper examines new legislators' attempts at gaining access to the House leadership. With the support of crucial party leaders, new members of Congress may be able to better understand their potential bases of support, as well as gain a crucial ally in ensuring that the bill receives proper consideration in committee and on the floor. Thus, our paper investigates how newly-elected members of Congress attempts to form legislative networks with highly-networked individuals, and the extent to which these attempts are associated with the successful exercise of legislative entrepreneurship.

PANEL C2 – Room 306

Chair: *Justin Gross*, University of North Carolina, Chapel Hill

Christopher Fariss, Jason Jones, Robert Bond, Jaime Settle, Adam Kramer, Cameron Marlow, James Fowler, University of California, San Diego
“*Estimating Ideology Using Facebook’s ‘Like’ Data*”

Sean Fitzhugh, Carter Butts, Minas Gjoka, Maciej Kurant, Athina Markopoulou, University of California, Irvine
“*The Vertex Enumeration Problem: An Illustration with Political Activist Networks*”

Social scientists have long been interested in methods for minimizing costs of data collection (whether in terms of time, capital, or complexity) while still preserving some measure of data quality (completeness, representativeness, etc.). Here we explore an issue closely related to network sampling, enumeration. In certain cases, one may wish to enumerate, or uncover and incorporate into our census, all nodes with a certain attribute. Whether we are interested in all financial backers of a particular candidate or all state and federal organizations participating in disaster response, this is a practical data collection problem which has not yet been widely explored by social networks scholars. Effective enumeration has two fundamental features: it must be efficient and it must have some guarantees on the quality of data. Our enumeration must be efficient in that we should uncover all our target nodes by sampling as few non-target nodes as possible in order to minimize sampling costs. We must also have some assurance of data quality; that is, we must be able to produce reliable estimates of how many targets we have incorporated into our census and how many we have not yet uncovered. In this paper we illustrate the enumeration problem, discuss methods for enumeration --- particularly breadth-first search, depth-first search, and random-walk---and apply them in an online context to enumerate all supporters of a particular protest/social movement as a proof of concept. We discuss results and implications of these methods of social network data collection.

Yunkyu Sohn, Harvard University
James H. Fowler, University of California, San Diego
“*Accurate Approximation Schemes for Studying Dynamics on Networks*”

The biggest obstacle of 21st century data science is computational infeasibility of extremely large datasets. Network is one of the most common representations of these big data. In order to obtain reasonable estimation for traits of massive networks, it is often necessary to have computationally tractable sized networks which preserve characteristic properties of original networks. Although few studies examined better sampling methods for recovering particular measures of static networks, to the best of our knowledge, no study has yet reported advantages and disadvantages of computationally feasible approximation methods for studying

dynamics on networks. In addition to testing a variety of standard sampling methods, we introduce a novel method for network contraction which outputs an aggregated network of groups from an individual-to-individual network. We simulate the Johnsen-Friedkin diffusion process on sampled and compressed versions of the original networks and compare the amount each factor contributing to steady state cascade outcomes of diffusion using OLS techniques. We further scrutinize the quality of estimators for the cases in which geographical proximity brings about correlations between the exogenous variables and social network ties. Our results indicate that the contraction method generates the best estimators for the coefficients of influence across a wide range of conditions.

12:30pm – 2:30pm MENTORING LUNCH
Wolf Law School, Student Commons (2nd Floor)

2:30pm – 4:00pm, Friday
PANEL A3 – Room 307

Chair: *Suzanne Robbins*, George Mason University

Jeongyoon Lee, *R. Karl Rethemeyer*, SUNY, Albany
“Connecting the Dots Differently: Comparing Two Social Service Policy Networks in the US”

Policies are the products of networks of organizations that span the public and private sectors. In particular, the past half century has seen an increasing number of network alliances between multiple entities across sectors (i.e. public agencies, legislative offices, non-governmental organizations, and private sector organizations) in the processes of social service policy decision-making and implementation. However, little is known about the different role of network contexts, properties and substructures in explaining connections within the same social service policy domain. Thus, this study will compare two social service policy networks focusing on how and why differently policy connections are shaped. We will present comparative findings from two social service policy networks where multiple stakeholders are involved: mental health (MH) policy network and adult basic education (ABE) policy network. The MH policy network data with 37 actors and ABE policy network data with 41 actors were collected through semi-structured interviewing in 2001 and in 2005, respectively. Both network data were collected in the same state in the U.S. that has more than 10 cities and an approximate population of 7,000,000. To model the network data, we will use an exponential random graph model by employing the Simulation Investigation for Empirical Network Analysis module embedded in StOCNet. The paper will review the existing literature on factors explaining network contexts, properties and structures, introduce the data, examine the points of similarity and difference between the two cases, and conclude with a set of propositions for future research drawn from this initial comparative case study.

Emma Spiro, Jeannette Sutton, Britta Johnson, Sean Fitzhugh, Carter T. Butts
University of California Irvine
“Shifting Attention: The Effect of External Stimuli on Social Ties Among Emergency Management Organizations”

Online social media are increasingly used to disseminate hazard-relation information, coordinate response activities, and facilitate communication among diverse sets of actors. However, research describing current patterns of use, especially by official government entities, is limited. In this work we use data from the popular microblogging service Twitter to examine following (i.e. attention) relationships among a set of federal and state level government emergency management related organizations. These relationships may be particularly important for signifying affiliation, as pathways for social influence and subsequent norm formation, and for rapid exchange of private information. One of the most basic questions one might ask concerns the dynamics of these relationships; many competing theories of evolution exist. Patterns of structural change may be cumulative over time if relationships are formed gradually. Structure may take one of a few configurations depending on external influences. Actors may purposefully reorganize their relationships in order to coordinate activities and exchange information in the context of particular extreme events. Using distance-based methods of graph comparison, we explore the evolution of social ties in 461 daily snapshots of the Twitter following network among a set of 216 official government accounts. Patterns of global volatility and change, as well as periods of stability, are identified. In particular, we examine how changes in the structure of social ties relate to the occurrence of hazard-related events. The implications of these network dynamics for emergency management policy are also discussed.

Hongtao Yi, John T. Scholz , Florida State University
“Measuring Policy Networks with Hyperlink Networks: Methods, Procedures and Theoretical Implications”

Extant studies on policy networks rely on surveys as the dominant data collection strategy. But surveys can be expensive, time-consuming, and suffer from declining response rates. Furthermore, self-reported relationships by individuals provide only limited coverage of a full set of organizational links. This paper presents an alternative approach to policy networks based on the significant progress in computer science and information studies in studying hyperlink networks (Park and Thelwall, 2003; Rogers, 2010; Ackland, 2011). Hyperlink networks measure the relationships among the websites of policy-relevant organizations by counting the hyperlinks connecting them. Given the fast development of information technology of modern society, most policy actors (governments, business groups, NGOs, consultants and other stakeholders) have their own websites. Therefore, the hyperlink networks among their websites provide an alternative measure of the underlying policy network. This paper presents a protocol for collecting hyperlink data in the context of Tampa Bay water policy network. We compare hyperlink network data with policy network data collected through survey methods and media

search for the same policy actors in Tampa Bay. We compare overall and nodal characteristics including network density, centralization and clustering measures, and utilize exponential random graph models to compare the organizing mechanisms of networks generated by the three alternative methods for policy network measurements. This paper concludes with a discussion on its strengths, weaknesses, and potential extensions and applications in network analysis for other policy areas.

PANEL B3 – Room 301

Chair: *Hans Noel*, Georgetown University

Christopher Liu, Jillian Chown, University of Toronto

“A Location-Based Market for Relationships: Evidence from the US Senate Chamber”

We examine a location-based market for relationships where we equate the costs of a relationship to the geographic distance between partners. Within this marketplace, locations structure the choice of relationship partners, but these geographic constraints do not bind uniformly. We propose that powerful actors can transcend their locations, and geographic distance matters less for partners who meet one another in contexts outside of the marketplace. We examine these propositions using data collected on politicians in the US Senate Chamber. Using a dyad-fixed effects approach, as well as a number of quasi-exogenous shocks to seating arrangements, we find support for our propositions. These results speak to the antecedents of relationships and networks, with an emphasis on the locational context within which relationships are chosen.

Hyung Sam Park, Shaun Michel, Xinsheng Liu, Arnold Vedlitz, East Tennessee State University

“Nonprofit Policy Organizations in Climate Change Debates: Ecology and Networks”

In advancing the climate change debate in Congress, nonprofit policy organizations have played important roles as providers of expert opinions. This study investigates the mobilizing structure of climate expertise in congressional debates in which congressional committees selectively utilized expert opinions from nonprofit policy organizations to discuss key issues of global climate change from 1976 to 2006. Our findings from statistical and network analysis show that, first, partisan control in Congress was crucial in determining the types of organizations from which witnesses were invited to the congressional debates: Under the democratic control, more advocacy/research organizations than industry coalitions were invited. Energy and natural resources were the most debated issues among the policy participants in this period. In the republican-dominant congresses, in contrast, congressional committees relied more on industry coalitions than advocacy/research organizations, focusing more on the economic impacts of global climate change. Second, our analysis of the network of the policy organizations that were invited in both republican- and democratic-dominant congresses reveals that the climate change

debates were specifically tied to the cohesive subsets of policy organizations that were clustered around common organizational type, political orientation, and issue areas. In sum, our findings suggest that the mobilization of the expert opinions from policy organizations on global climate change in Congress is largely channeled by both the organizations prominence in the network and the larger political opportunity structure such as partisan politics.

*Britta Johnson, University of Colorado Colorado Springs
Jeannette Sutton, Emma Spiro, Carter Butts, Sean Fitzhugh, University of California Irvine*

“Technology Lineage and Adoption: Diffusion of Microblog Technologies Among Government Organizations”

New communication mechanisms, such as networked social media, are being adopted by governmental organizations. Government officials increasingly recognize the potential power of online communication networks to reach large, diverse audiences, but concerns about reliability and effectiveness of new media technologies are widespread. Adoption and use of such technologies varies greatly between organizations, but little is known about why such differences may exist. In this paper we investigate the adoption a of popular microblogging service among a select set of federal and state level entities. We use networks of organizational lineage to explore the diffusion of innovation and technology adoption, relating adoption time to structural position in the lineage network. In addition, we investigate whether adoption time is associated with an organization's subsequent structural position in the online network of microblogging subscriptions (i.e., follower relations) to determine if early adoption is key to centrality within the online communication network. To further explore the relationship between pre-existing offline relationships and subsequent online relationships, we test the association between organizational lineage ties and following relations in the online social media site using QAP methods. Implications for communications technology adoption policies are discussed.

PANEL C3 – Room 306

Chair: *Betsy Sinclair, University of Chicago*

*John Ryan, Florida State University
Anand Sokhey, University of Colorado
Scott Wolford, University of Texas, Austin
“Information Exchange in Social Networks”*

Models of social communication often assume that individuals seek out discussants to serve as information sources. However, discussants can also be seen as providing information to an individual, regardless of the individual's interest in such information. This distinction is important, because experimental studies have shown that uninformed individuals can use social communication as an effective information shortcut (e.g., Calvert 1985; Lupia and McCubbins 1998), but only if they are able to

control the source of that social information (Jackman and Sniderman 2006). Further, even informed individuals may make poor voting decisions if they receive low quality information from social sources (Ryan 2011). This paper models the social communication process within a communication network of three individuals. Individuals both seek out and provide information to other members of the network some of which is unsolicited. The model is then compared to a small group experiment in which subjects choose between two computer generated candidates. The payoffs offered by the candidates are unknown, and subjects use private information and social information to determine them. Between the formal model and experimental results, we address several questions: When do individuals (egos) seek out information, and what criteria do they use to seek out discussants? When do discussants (alters) pay to provide information, and to whom do they give it? When does social information facilitate/inhibit correct voting?

Anand Sokhey, Jeff Lyons, William Jarger, The University of Colorado at Boulder
Scott McClurg, Drew Seib, Paul Martin, Southern Illinois University
“Examining Mechanisms of Social Influence”

In this research, we develop and test hypotheses about how interpersonal networks affect candidate evaluations. Working from two different models of how social stimuli may produce effects i.e., either through information seeking processes, or by functioning as heuristics. We present two different experimental designs that incorporate a simulated campaign and dynamic information board (Lau and Redlawsk 1997; 2006). In the first, we use responses gathered via Amazon’s Mechanical Turk to examine information seeking processes, comparing click patterns on the information board when social network information is incorporated alongside other possible (simulated) campaign information. This approach allows us to examine the impact of social communication in a more realistic informational and choice setting than is common in previous influence experiments. Our second experiment uses a unique recruitment design among students that allows us to unobtrusively include information from the structure of real social networks. This design gives us leverage on how network structure potentially mediates the effect of social communication. The results from these experiments contribute to the growing literature on the conditions under which interpersonal communications influence voting behavior and public opinion.

Andrew Therriault, Vanderbilt University
“Experimenting with Social Pressures”

While researchers have often noted that individuals exposed to conflicting opinions are less likely to participate in politics, attempts to identify the causes of this relationship have been frustrated by the endogeneity of social networks. To overcome this challenge, I present results from a group discussion experiment which manipulates the composition of groups to create exogenous variation in exposure to social pressures. By involving participants in either heterogeneous or homogenous discussions, I test various mechanisms by which cross-pressures have been

suspected to diminish participation. The results show how social influence with regard to candidates, parties, and issues can either reinforce or undermine individuals' opinions, stimulate or depress their engagement with the political process, and play a decisive role in their motivations to participate. These findings clarify many long-running debates about the impact of disagreement in social networks on individual behavior.

4:00pm – 5:00pm BREAK/POSTER SESSION SET-UP (Folsom Stadium Club)

5:00pm – 6:00pm PLENARY ADDRESS, Folsom Stadium Club

Prof. John Padgett, University of Chicago

"The Emergence of Organizations and Markets."

6:00pm – 7:30pm POSTER SESSION & DINNER RECEPTION
Folsom Stadium Club

7:30pm – 8:30pm IGNITE TALKS, Folsom Stadium Club
James Fowler, University of California, San Diego
Charli Carpenter, University of Massachusetts, Amherst
John Scholz, Florida State University
Betsy Sinclair, University of Chicago
Seth Masket, University of Denver

SATURDAY, JUNE 16, 2012

8:00am – 9:00am BREAKFAST (Boettcher)

9:00AM – 10:30AM, Saturday

PANEL A4 – Room 206

Chair: *Bruce Desmarais, University of Massachusetts, Amherst*

Jungah Bae, Richard C. Feiock, Florida State University

"Local and Global Affiliation Networks for Sustainable Communities"

While some research examines interlocal networks or network participation in local efforts to address climate change, these studies only measure membership in national or international organizations such as ICLEI or the U.S. Conference of Mayors Climate change agreement (Sharp, Daley and Lynch 2011; Krause 2011). The literature treats membership in these national or global climate networks as providing information and commitment to overcome local collective dilemmas and

local barriers to sustainability, but offer no evidence or information on how they work at a local level. Self-organizing networks on the other hand are active in many communities, promoting urban sustainability initiatives generally. There is a need to explore how global network operate at a local level, how they are related to local networks, and how measures of embeddedness influence policy choice. This study examines how the position of local actors within these networks influences their adoption of climate protections policies and programs.

*Jacob Hileman, Mark Lubell, Lorien Jasny , University of California, Davis
“Water Governance Networks in Central America: Simulating from Exponential Random Graph Models to Determine Small World Properties”*

This paper analyzes the policy networks involved with water governance in seven Central American communities participating in an international development initiative. We build on the literature that argues policy networks are key elements for governance of water resources. Using a rapid assessment methodology for gathering policy network data, we compare actor and network-level statistics across cases of water governance that vary in success. We hypothesize that networks with small-world properties are useful for solving the dual dilemmas of policy learning and cooperation that are necessary for effective water governance. We use exponential random graph models to evaluate the empirical networks for small world properties, and simulate the range of network statistics produced by different parameter estimates.

*Christian Hirschi, Swiss Federal Institute of Technology - ETH Zurich
“Transnational Networks and Climate Policy Behavior”*

Transnational networks increasingly impact national and international policies in various issue areas, as has been demonstrated by many case studies on international political mobilization, the internationalization of traditionally mainly domestic policies or the influence of non-governmental and sub-state actors in international politics. Climate policymaking in particular has gained growing scholarly interest as an area with important transnational interactions between state and non-state actors at various political levels. However, quantitative assessments of the structures emerging from such interactions, not to mention their impact on policy behavior and policy outcomes, have been very limited. In this paper, we make a first attempt to measure transnational climate policy network structures and their potential association with climate policy behavior using a new event data set on climate policy related transnational interactions between political actors coded from international news wires for the years 2000 to 2010. The aggregated interactions are understood as transnational networks that form through political events on the climate issue and will be analyzed using the longitudinal network analysis software SIENA. Specifically, the applied SIENA model not only helps to understand the dynamics in these transnational network structures but also allows testing their potential effect on the climate policy behavior of individual nations as displayed for example in the yearly Climate Change Performance Index.

PANEL B4 – Room 205

Chair: *Derek Ruths*, McGill University

Hans Noel, Georgetown University

“Toward a Networks Model of Political Parties”

A developing branch of the literature on political parties has begun to conceptualize the party as a network. In this paper, I argue that this is an incredibly useful and important theoretical framework, but that we still lack a carefully worked out set of implications that could be applied to social network methodology. I argue that, just as with causal inference in other network research, we need to consider rival explanations for empirical patterns, and that these rival explanations are similar to those that confound other network research. Otherwise, empirical work on parties as networks will not be able to test the theory of the party as a network. Connections among party actors may be due to deliberate attempts to coordinate and thus carry out party activity. They may be due to merely shared preferences or ideology, which is analogous to the problem of homophily as a confounder in contagion research. Or they may be an artifact of being in the same party, without any networked connections, which is analogous to the problem of shared environment in contagion research. This problem is exacerbated by the fact that much of the political network data we have is not on the kinds of connections that we think are most important. What matters is not, for example, that two members of congress vote together, or sponsor the same legislation, but that they communicate about those decisions beforehand, something we cannot infer from the observed common action. I conclude with a call for a research agenda that will take the theoretical work in this area and bridge it to the empirical work now being done in political science.

Andrew Waugh, University of California, San Diego

“Party Organizations and Campaign Donation Networks: A Computational Model and Empirical Examination”

I expand the classic computational model of electoral competition (Kollman et al. 1992, 1998) to include party organizational committees as actors. Recent scholarship has considered the effects of expanding the Kollman et al. model to allow voters to form endogenous interest groups that serve as information brokers to campaigns (Sadiraj et al. 2006). These groups are clusters of voters who coalesce due to a combination of ideological similarities and desire for social belonging. The Sadiraj et al. model allows voters to belong to multiple interest groups, but to only consider one of these groups when making voting decisions. In contrast, I hypothesize that voters who belong to multiple interest groups may suffer from indecisiveness and ambivalence in making political decisions. Theoretically, conflicted voters should be more difficult for campaigns to activate, and information garnered from ideologically ambivalent interests would be of limited use for ideological location in campaigns. I thus argue that campaigns should prefer to

curate interest groups composed of ideologically uncomplicated voters (i.e. voters who have few interest group commitments). In my expansion of the computational model, party organizations fulfill this role by researching interest groups and soliciting support from those that are ideologically pure. Campaigns are rewarded with votes and interests are rewarded with policy concessions. I test the implications of this model by looking at the behavior of party organizations, campaigns, and ideological vs. non-ideological interest groups in campaign donation networks that I compiled from FEC data from 1978-2010.

Scott Limbocker, Song Yang, Andrew Dowdle, Patrick A. Stewart, University of Arkansas

“Party Cohesion in Presidential Races: Applying Social Network Theory to the Pre-Primary Multiple Donor Network of 2004 and 2008”

The presidential nomination process in the United States has been examined by scholars for a considerable amount of time. In addition to studies that have examined the process itself, there has also been a movement towards analyzing the process at earlier points in time. Campaign finance allows for a consistent examination of the year prior to the nomination with data that are both vast in number but also consistent across time and readily available. Within the mass of donations, there are a particular set of donors that would be interesting to examine: donors that gave to multiple campaigns. These multiple donors can be examined using Social Network Analysis, with the candidates as nodes and the number of shared donors as relational ties. In examining the networks of the nomination for the Democrats in 2004 and both parties in 2008, considerable knowledge can be gained both in terms of the state of the party going into an election year as well as predictions of how the nomination and general elections will play out in the upcoming months.

PANEL C4 – Room 204

Chair: *Christopher Liu*, University of Toronto

Derek Ruths, McGill University

David Lazer, Northeastern University

“Exploring the Relationships between Vocation and Political Campaign Contribution”

In this study we report on the first large-scale analysis of correlations between vocation and campaign contribution patterns in United States politics. Using text mining strategies, we extract employer/profession details for a large proportion of individual campaign contributions reported in the publicly-available Federal Elections Commission data set. We then produce a network of flow among professions, based on the flow among the employer/profession fields (using known identities). From these details, we identify and categorize both career types as well as employers through network clustering algorithms. We then quantify how distributions of vocations present in the FEC data differ when contributions are

stratified by election cycles (time), amount, governmental level (Representative vs. senator vs. President), geography, and recipient political party.

William Eveland, Ohio State University

Myiah Hutchens, Texas Tech University

“The Political Coorientation of Young Adults in Voluntary Associations and its Relation with Political Conversation”

We employ social network data from 25 randomly sampled voluntary associations to understand the factors are associated with accurate perceptions of the political preferences of fellow group members. We build upon research in communication, social psychology, and social networks to identify relevant predictors. We analyze relationships at the dyadic level, but we also consider the aggregated accuracy of perceptions by ego of alters (“perceptiveness”) and the aggregated accuracy of perception by alters of ego (“explicitness”) regarding the political candidate preferences using a multilevel modeling approach. We find relatively low levels of accuracy on average, and in general the variables that predict perceptiveness are not the same variables that predict explicitness. However, there is a consistent and strong link between the frequency of communication (viewed as an indicator of network tie strength) and accuracy both at the dyadic and aggregate levels. However, this relationship is highly contingent on the homophily of political preferences within the group.

Michael Heaney, Geoff M. Lorenz, University of Michigan

“The Network Dynamics of Policy Implementation”

This research is a case study of the politics surrounding the enactment and implementation of the Medicare Modernization Act (MMA) of 2003 which, among other things, created a prescription drug benefit for Medicare recipients. Using publically available records, we identified 215 interested actors including interest groups, business firms, and think tanks who were actively involved in advocacy during the enactment (2003) and/or implementation (2004-2006) of the MMA. We conducted in-person interviews with representatives of 96 of these organizations to assess their level of involvement, strategies, networks, and reputations for influences during enactment and implementation stages.

We analyzed the results of these interviews using an exponential random graph model (ERGM). The analysis yielded three principal findings: (1) Actors that held central positions in multiplex social networks during enactment (measured using mutual reports of communication, coalition membership, issue involvement, and lobbying) were more likely to increase their relative influence during implementation than were actors who held more peripheral positions in these networks during enactment; (2) Actors that represented provider groups (e.g., Pharmacy Benefit Managers, long-term care pharmacists) were more likely to increase their network centrality during implementation than were other groups; (3) Network position is a better predictor of influence reputation during implementation than during enactment.

All results obtain while holding constant lobbying resources, frequency of congressional testimony, volume of media attention, and organizational type. This research increases what is known about the role of networks in the policy process and introduces a practical means of assessing that role systematically.

10:30am – 11:00am COFFEE BREAK (Boettcher)

11:00am – 12:30pm, Saturday

PANEL A5 – Room 206

Chair: Zeev Maoz, University of California, Davis

Michael Kenney, John Horgan , University of Pittsburgh
Kathleen M. Carley, Michael Bigrigg, Carnegie Mellon University

Mia Bloom, Kurt Braddock , Pennsylvania State University
“An Islamist Case of Organisational Adaptation: Social Networks, Leadership, and Change in Al-Muhajiroun”

Social networks are said to facilitate learning and adaptation by providing the connections through which network nodes (or agents) share information and experience. Yet, our understanding of how this process unfolds in real-world political networks remains underdeveloped. This paper explores this gap through a case study of al-Muhajiroun, a banned activist network that calls for the establishment of an Islamic state in Britain. Drawing on organization theory and social network analysis, we formulate three hypotheses regarding the learning capacity and social network properties of al-Muhajiroun (AM) and its successor groups. We then test these hypotheses using mixed methods that combine quantitative analysis of AM networks for structural properties that facilitate learning, including connectedness, betweenness centrality and eigenvector centrality, with qualitative analysis of dozens of interviews with AM activists focusing on themes relevant to organisational adaptation and learning. Findings from these analyses confirm our expectations that al-Muhajiroun activists respond to government pressure through simple but effective adaptations that allow them to continue their activism in an increasingly hostile environment. We conclude by discussing the policy implications of this process.

Cyrus Dioun, University of California, Berkeley
“State, Seminary, and Shia Clerical Networks”

How do the state and the seminary affect the structure of Shia clerical institutions and the content of Shia religious doctrine? I have collected autobiographical data and constructed a social network of the currently living Shia Sources of Emulation (or Maraji). I am now collecting and coding their religious rulings (fatwas) and treatises (risalahs) to test hypotheses and adjudicate between market theories at the center of academic debates on religion in sociology, political science, and economics and field theories found in economic and organizational sociology. Using

this information, I will answer the following questions: Does state policy towards religion help explain variation in the religious, political, and economic positions of the Maraji? In other words, are the Maraji in Iran more similar to one another than Maraji in Iraq or Afghanistan, controlling for factors such as educational lineage, age, and ethnicity? Alternately, do we find that Maraji that have shared different mentors are more likely to have different fatwas and risalas than those that have the same mentors? In doing so I hope to estimate the effects of the state, seminary, and society on traditional Shia religious institutions and doctrine. While this project is a work in progress, and I do not yet have all of my results, I am confident that my network and fatwa data will be of interest to MESA scholars studying Shi'ism, religious institutions, and the greater Middle East.

Ermitte Saint Jacques, University of Denver
"Personal Networks as a Measure of Transnationalism"

Based on data from the Acculturation and Personal Networks Across Cultures Project, which measured the social adaptation of different immigrant populations in Spain and the United States, this paper considers the use of personal networks for measuring transnational behavior among West African immigrants in Catalonia, Spain. Transnationalism is comprised of economic, cultural and political practices and relations that enable migrants at individual and collective levels to maintain multiple social linkages across national borders binding migrants in countries of settlement and nonmigrants in countries of origin (Basch et al. 1994). The limitations of current models for measuring transnationalism representation of the breadth of transnational activities and country context specifics call for alternative methods. Following Faist's definition (2000) of transnationalism as social spaces involving a combination of sustained social and symbolic ties found in multiple states, personal network analysis is an appropriate tool for measuring transnationalism. First, personal network analysis has the capacity to measure social ties dispersed across multiple locations. Second, personal networks analysis allows for measuring the content and structure of ties between individuals. Third, because personal networks comprise the people with whom immigrants interact, personal networks analysis is also a means of measuring immigrant integration (Lubbers et al. 2007). For this reason, social networks can provide a better understanding of the relationship between immigrant integration and their participation in transnational activities. As Kivisto (2001) notes, immigrants concurrently maintain social relations in their countries of origin as they engage in processes of integration in the receiving country.

PANEL B5 – Room 204

Chair: Janet Box-Steffensmeier, The Ohio State University

Yu-Ru Lin, Harvard / Northeastern University
David Lazer, Northeastern University

“The Geography of Money and Politics”

How is money in politics mobilized? Much of the literature on political behavior focuses on individual socioeconomic attributes (e.g., income, education, ethnicity, etc.) as predictors of behavior. Here we examine the social antecedents for contributing to campaigns, with a particular focus on the role of population density in facilitating contributions to campaigns. We hypothesize that the idea of contributing to a campaign is easier to spread in a densely populated region, where the daily opportunity of individuals being exposed to the same idea via their social network is high, compared with people living in a less populous region. Furthermore, the effect of population density is inhomogeneous with respect to the dynamics of residents mobility: if the given region has a relatively large population routinely commuting to other places, the chance of being mobilized from the place of residence decreases while the chance of being mobilized from the place of work increases. We test our hypothesis using a spatial regression model. Our results suggest that, controlling for the wealth-related variable of a given region, population density and outgoing commuting flow account for a very large amount of the variation in contribution levels. This analysis might address a perennial puzzle in US politics: how Democrats remain competitive in the money race in US politics, despite that wealth and income tend to be associated with being Republican. Our analysis implies that more densely populated areas tend to be Democratic, and thus the Democratic party starts with a substantial advantage in mobilizing monetary support.

Noah Cepela

James A. Danowski, Northwestern University

“Network Centrality and News Sentiment of President Obama’s Cabinet Members as Predictors of Job Approval Over Time “

To test hypotheses concerning presidential cabinet network centrality and its relationship to presidential job approval, this research mined the social network structure of President Barack Obama’s cabinet members through automatic network analysis of all New York Times and Washington Post stories including any of 24 individual cabinet members and the president. The WORDij semantic-network software identified their co-occurrences in these news stories. The software segmented the aggregate text into two-week intervals based on the average time between Gallup presidential approval polls. Time-series analysis linked network centrality with presidential job approval after removing serial autocorrelation. The research tested the hypothesis that when the centrality of the president is higher than the centrality of the cabinet members, presidential job approval ratings are lower. This is based on the reasoning that press coverage is commonly negative, and the president absorbs more negative press sentiment when he stands higher in centrality than the other cabinet members, acting as a metaphoric lightning rod. • To explore sentiments association with job approval, the research created a sentiment variable, which traced the shortest paths from Obama to each of 3,500 positive and negative target words and computed the ratio of positive and negative intensity. While there was considerable negative intensity, the theoretical

explanation was not supported. There was no significant relationship between sentiment variables and approval ratings. The hypothesis was supported for Obama and his cabinet with a significant negative correlation between relative presidential centrality and job approval at a lag of 3, a period of 6 weeks.

Scott Pauls, Greg Leibon, Daniel Rockmore, Robert Savell, Dartmouth College

“Partition Decoupling for roll call data.”

In this paper we bring to bear some new tools from statistical learning on the analysis of roll call data. We present a new data-driven model for roll call voting that is geometric in nature. We construct the model by adapting the "Partition Decoupling Method," an unsupervised learning technique originally developed for the analysis of families of time series, to produce a multiscale geometric description of a weighted network associated to a set of roll call votes. Central to this approach is the quantitative notion of a "motivation," a cluster-based and learned basis element that serves as a building block in the representation of roll call data. Motivations enable the formulation of a quantitative description of ideology and their data-dependent nature makes possible a quantitative analysis of the evolution of ideological factors. This approach is generally applicable to roll call data and we apply it in particular to the historical roll call voting of the U.S. House and Senate. This methodology provides a mechanism for estimating the dimension of the underlying action space. We determine that the dominant factors form a low- (one- or two-) dimensional representation with secondary factors adding higher-dimensional features. In this way our work supports and extends the findings of both Poole-Rosenthal and Heckman-Snyder concerning the dimensionality of the action space. We give a detailed analysis of several individual Senates and use the AdaBoost technique from statistical learning to determine those votes with the most powerful discriminatory value. When used as a predictive model, this geometric view significantly outperforms spatial models such as the Poole-Rosenthal DW-NOMINATE model and the Heckman-Snyder 6-factor model, both in raw accuracy as well as Aggregate Proportional Reduced Error (APRE).

PANEL C5 – Room 205

Chair: Andrew Therriault, Vanderbilt University

Andrei Boutyline, University of California, Berkeley

Stephen Vaisey, Duke University

“The Structure of Belief Systems: Ideology and Network Centrality”

Theories of the structure of political beliefs typically make claims about which opinions are central and which are derived from these more fundamental distinctions. We call these core-periphery theories of ideology. There are many different core-periphery theories, each of which places something different at the core (e.g., uncertainty reduction, authoritarianism, or parenting values) and each of which has received some empirical support. Unfortunately, it does not seem

productive to us to claim that political differences are "really" about all of these concepts simultaneously. We argue that this ambiguous state of affairs is due to the less-than-ideal way researchers have gone about using empirical data to bolster their theoretical claims. The emphasis in most research on core-periphery theories has been to establish a causal relationship between the proposed "core" concept and other political beliefs. But centrality is not a property that can be determined by examining single dyads of beliefs: it must be measured at the level of the belief structure as a whole. We develop a network-based methodology for doing this. To demonstrate its usefulness, we focus on Lakoff's core-periphery theory of moral politics, which posits that ideological differences can be explained by differences related to "strict" or "nurturant" parenting styles. One influential recent paper (Barker and Tinnick 2006) used survey data to provide support to this theory via a regression analysis. However, our approach demonstrates that parenting values are far from central to the belief network, suggesting that Lakoff's theory is not well supported by the ANES data.

*Betsy Sinclair, University of Chicago
"Voting and the Social Environment"*

Voters are commonly thought to use cues from their social environment to guide their political choices. In this paper, I present the results from both a field experiment as well as a survey experiment which test the effects of these cues by framing political stimuli (a get-out-the-vote message and a series of issue prompts) with components of the voters' social context, including location, gender and political interest. Both experiments provide clear identification strategies, with the survey experiment providing additional robustness via a panel design which estimates the social effect via difference-in-differences. By varying the extent of similarity between the framing cue and the voter, it is possible to test whether cues from the voter's social environment affect a voter's political choices. These estimates allow us to better understand the effects of an individual's social environment without needing to explicitly specify a particular social network.

Robert Huckfeldt, Yoonjung Lee, Matthew T. Pietryka, Jack Reilly, University of California, Davis

"The Diffusion of Politically Expert Opinion Within and Among Groups"

We employ small group experiments to address political influence and the diffusion of expert opinion within communication networks. Each experimental session involves 14 individuals equally divided into two groups, where communication between groups is more costly than (free) communication within groups. Individuals have incentives to communicate beyond their own groups, contingent on experimentally manipulated distributions of expertise within groups. The paper's analysis considers influence and the diffusion of information based on a DeGroot model which provides a dynamic formulation of the communication process. The paper also addresses the conditions under which interdependent populations converge toward a well defined equilibrium that is shared across an entire

population, as opposed to multiple equilibria or cycling behavior. Finally, the paper address the implications that arise due to varying levels of information among participants for (1) the construction of communication networks, (2) the influence of better informed individuals; (3) levels of reliance on individual priors and communicated messages; (4) the consequences of memory decay for the the diffusion of expertise.

12:30pm – 2:00pm LUNCH (Boettcher); SECTION MEETING & AWARDS

2:00pm – 3:30pm, Saturday

PANEL A6 – Room 206

Chair: Alexander Montgomery, Reed College

Robert Duval, Arian Spahiu, Bret Wilson, West Virginia University

Kyle Christensen, Boston University

“Looking for Hot Nodes in the Cold War: Foreign Policy Interactions and Political Networks”

The emergence of social network analysis (SNA) provides the study of international politics a versatile tool for examining system structure in ways that traditional metrics have not. We propose to use SNA to both replicate classic system approaches, as well as expand the discussion to alternative data, new methods, and new conceptualizations of system structure. We will demonstrate the utility of SNA for examining system structure using the daily fare of foreign policy dyadic event-interactions. In an examination of the COPDAB data, we will look at network centrality and centralization, along with Maoz’s index of polarization, to see to what degree these characteristics reflect more traditional measures such as capability concentration, polarity, and polarization. We will examine system structure annually, looking at the development of the system from 1948-1978 using annually aggregated events. In addition, we will analyze this network structure using exponential random graph models to provide hypothesis tests about theoretical relevance of system structure as described. Ultimately a dynamic network analysis is the desired outcome. An imaging tool that represents this development visually will be provided. We expect to find that network density measures provide both comparable and additional information about the international system. We believe that we will provide insight into new tools, make substantive contributions to our understanding of system structure, and give us some rather interesting visual aids that demonstrate the applicability of SNA to Foreign Policy Analysis.

Michael Ward, Cassy Dorff, Duke University

“Enough with the Dyads Already”

A substantial amount of quantitative scholarship in international relations has focused on analysis of the so-called dyad. Few studies have given serious thought to the definition of a dyad, nor to the implications that flow from such a

conceptualization. This piece argues that dyadic analysis is necessarily incomplete and even when rigorously pursued, such analysis provides incomplete and often incoherent pictures of the ebb and flow of interactions among actors in global politics and economics. In prior scholarship, much of this myopia was attributed to the paucity of data, a defense no longer plausible. We illustrate the benefit of network analysis through the social relations model, with applications to contemporary international trade patterns.

Zeev Maoz, University of California, Davis

Belgin Acka-San, Koç University

“Transitivity and Structural Balance in International Politics”

We study the factors that affect the degree of nodal, dyadic, and network transitivity and structural balance in international networks over the 1816-2004 period. States seek to develop security cooperation ties that are both transitive (e.g., "the ally of my ally is my ally") and balanced (e.g., "the enemy of my enemy is my ally"). But in some cases they may make choices that result in some level of intransitivity and imbalance. Our analysis reveals some generalizable features of these relations and the factors that determine when and under what conditions they emerge. We also find that transitivity tends to reduce conflict behavior, while imbalanced relations increase the level of conflict in the system.

PANEL B6 – Room 205

Chair: Michael Heaney, University of Michigan

Janet Box-Steffensmeier, The Ohio State University

Dino P. Christenson, Boston University

“Comparing Interest Group Networks Across Space and Time, Size, Issue”

We compare and contrast the structure of interest groups by industry and issue area as way to better understand social networks. Are adversarial groups, such as Business and Labor, organized differently? Why are they different or the same and does it matter? We look for similarity in network structure across a wide variety of interest groups and consider the implications of alternative structures. Our data comes from a novel measure of interest group coalitions based on cosigner status to United States Supreme Court amicus curiae briefs from 1930 to present-day. We characterize and compare different interest group networks based on the industry and issue areas, which come from the Standard Industrial Classification (SIC) codes for each group. These codes classify economic activities as well as public interest groups. Our analysis includes ERGMs, whose parameters are compared across networks using the Kolmogorov-Smirnov (KS) test to see if they are statistically indistinguishable from each other. For those networks that are not statistically different, we use the Proportional Reduction in Error to see which of the networks are the most similar. Correspondence analysis allows us to represent the similarities among all the networks. Following Faust and Skvoretz (2002), our work

addresses fundamental questions about variability or similarity in network structure and organization.

*Bruce Desmarais, University of Massachusetts, Amherst
“Dependencies in Decision making on the U.S. Supreme Court: Analysis as a Signed Bipartite Network”*

Voting on the merits in U.S. Supreme Court cases is predominantly analyzed within the discrete choice framework. Justice-votes in a given case are assumed to be independent conditional on covariates, and case outcomes are assumed to be independent. These independence assumptions are inconsistent with qualitative and strategic accounts of bargaining and influence within cases, as well as the various conceptions of the dynamics of jurisprudence. I conceptualize justice-votes on the merits in U.S. Supreme Court cases as constituting a signed (i.e., liberal/conservative) bipartite network (SBN) in which justices are connected to cases. After introducing the SBN characterization of U.S. Supreme Court voting on the merits and discussing useful approaches to exploring and visualizing the network, I introduce a temporal exponential random graph model (TERGM) of U.S. Supreme Court voting. I illustrate how qualitative and strategic theories of dependence among justice-votes can be integrated into the TERGM along with covariate-based explanations of voting. To give an example; theories of strategic voting on the Court find that the chief justice is expected to vote with the majority even when in disagreement with the majority position, in order to retain the power to assign the opinion authorship. This is impossible to integrate into a logistic regression model, but is straightforward to model with the TERGM. Voting on the Supreme Court is found to be characterized by many dependencies. Moreover, using both in and out-of-sample measures of fit, justice-votes are shown to be more dependent upon each other than on commonly used covariates.

3:30pm – 4:30pm CLOSING REMARKS & RECEPTION (Boettcher & Courtyard)

POSTER PARTICIPANTS

Friday, 6:00-7:30 pm, Folsom Stadium Club

1. *Kristen Allen, Ian Palmer Cook, Zachary James Auter*, University of Pittsburgh
Jennifer Nicoll Victor, George Mason University
“Second Street Gangs: Membership in Ad-hoc Policy Groups”
2. *David Benson, Robert Valentine*, University of Chicago
“Network Measures of National Prestige”
3. *Robert Bond*, University of California, San Diego
“Measuring the Ideology of 30 Million Facebook Users”
4. *Courtenay Brown, Krister Andersson, Lisa Dilling*, University of Colorado, Boulder
“Adaptation strategies in civic networks: social network analysis of local governance in Utah, Wyoming and Colorado”
5. *Charli Carpenter*, University of Massachusetts, Amherst
“Explaining the Advocacy Agenda: Insights from the Human Security Network”
6. *Lynelle Clarke*, The University of the West Indies
“Of MICE and Networks: A Social Network Analysis of Meetings, Incentives, Conferences/Conventions and Exhibitions tourism in Trinidad & Tobago.”
7. *Sarah Ficenec*, George Washington University
“Economic Development Policy Making Networks in the Cleveland and Detroit Regions”
8. *Phillip Garee*, Northern Illinois University (NS)
“Cosponsorship Patterns in the Illinois House of Representatives”
9. *Carly Goodman*, Creighton University
“Modernizing Deterrence: A Network Approach”
10. *Nicholas Harrigan*, Singapore Management University
“The doughnut pattern of corporate donations: Structural power and the legitimacy constraint.”
11. *Matthew Hitt, Janet Box-Steffensmeier*, The Ohio State University
Dino P. Christenson, Boston University
“The Impact of Interest Group Centrality on Judicial Decision-Making”
12. *Douglas Hughes*, University of California, San Diego

Derek K. Stafford, University of Michigan
“Network Position and Public Goods Provision in a Rural Laboratory: The Influence of Social Networks in a Public Goods Game”

13. *Jason Jones, Christopher Fariss, Robert Bond, Jaime Settle, James Fowler*
University of California, San Diego
“Yahtzee: An Anonymized Group Level Matching Procedure”
14. *Jeffrey Kaplow*, University of California, San Diego
“The Enemy of My Enemy is My Friend: Affinity Networks in International Relations”
15. *Maxat Kassen*, University of Illinois at Chicago
“Empowering Social Media: Citizens-Source e-Government and Peer-to-Peer Networks”
16. *Alla Khadka*, University of Pittsburgh
“Testing Social Science Publications for Multiple Perspectives: Using citation network analysis to assess U.S. scholarship on security strategy towards Afghanistan”
17. *Peter Krafft, Juston Moore, Hanna Wallach, Bruce Desmarais, James ben-Aaron*,
University of Massachusetts Amherst
“Modeling Government Email Networks”
18. *Seunghoo Lim, Jungah Bae, Richard C. Feiock*, Florida State University
“The Self-Organizing Policy Network of Institutional Ties in the Dynamic Process of Conflict Resolution “
19. *Yu-Ru Lin*, Harvard/Northeastern University
Sasha Goodman, David Lazer, Northeastern University
“Tracing the Invisible Networks of US Politics”
20. *Terri Mackeigan, Stephen Q Muth*, Quintus-ential Solutions
“What Sociolinguistic Network Analysis Can Tell us About Concept Formation and Diffusion”
21. *Todd Makse*, Dickinson College
Scott Minkoff, Barnard College
Anand E. Sokhey, University of Colorado, Boulder
“Spatial Processes, Network Dynamics and the Use of Spatial Sampling Frames in Survey Research”
22. *Mauro Martino, Sasha Goodman , Yu-ru Lin, David Lazer* , Northeastern University
“CineData, using storytelling in dynamic visualizations of political networks.”

23. *Elizabeth Pan*, Wellesley College
“Yes We Can: The Democratizing Impact of Social Media on Political Organizing”
24. *Jack Reilly, Matthew T. Pietryka*, University of California, Davis
“A Network Analysis of Re-election, Committee Membership, and Cosponsorship”
25. *Sean Richey, Sarah Brosnan*, Georgia State University
“Personality and Political Discussion: An Experimental Examination of the Influence of the Big 5, Right Wing Authoritarianism, Social Dominance Orientation Personality Traits on Discussion Networks”
26. *Jessica Shearer, Michelle Dion, John Lavis*, McMaster University
“Cracking open policy networks: how new institutions reshape networks for policy change”
27. *Matthew Weber*, Rutgers University
“Political Media in a Network Society: The Emergence and Evolution of Communities of Political Discussion”
28. *Gilad Wilkenfeld*, University of Colorado, Boulder
Josh M. Ryan, Bradley University
Anand E. Sokhey, University of Colorado, Boulder
“Tracing the Legislative Process: A Networks Approach”
29. *Stefan Wojcik*, University of Colorado, Boulder
“The Evolution of Interparty Switching in Brazil's Chamber of Deputies. “

Section Announcements & Information

▪If you are not already a member, please **consider joining the APSA Political Networks organized section.**

▪Please join us for *next year's meeting* at **Indiana University**, sponsored by the IU departments of political science and sociology, the Indiana Network Science Initiative, and the IU Center on American Politics. The 2013 host representatives are Bernice Pescosolido and Armando Razo.

▪**Proposals are needed for MPSA 2013.** Consider proposing a political networks paper or panel to the 2013 meeting of the Midwest Political Science Association. Proposals are due **October 5, 2012**. Note that co-sponsored panels only count as ½ a panel. Also, please consider submitting for chair and discussant positions. Please contact the 2013 MPSA networks chair, Casey Klofstad (klofstad@gmail.com) with questions.

Zeev Maoz
Meredith Rolfe
Michael Heaney
Jen Victor
Skyler Cranmer
Charli Carpenter
Hans Noel

Other Polnet Positions

Casey Klofstad
Ramiro Berardo
Seth Masket, Anand E. Sokhey

Chair
Vice-Chair
Treasurer
Communications Director
Executive Committee
Executive Committee
Executive Committee

Membership Chair
APSA 2012 Program Chair
Website Development



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