

Spring 2021, Wednesday 5:00 - 7:00pm / Zoom

## **Political Science 669: Network Analysis and World Politics**

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### course description

This course introduces students to concepts in network theory as well as descriptive and inferential tools of network analysis with application to the world political system. We will explore how network theory can offer novel insights into enduring problems in world politics, including terrorism, economic development, conflict (intra- and international), and investment. We will examine agency within structures that are rendered as networks, seeking to understand the interdependent contexts in which social action occurs. At each step we will link network characteristics – e.g., prominence – to prior concepts in political science – e.g., hegemony. And we will have weekly exercises so that students become familiar with conducting network analysis using the statistical software R. No prior knowledge of network theory or methodology is required, although students should be prepared for technical discussion at times.

### requirements

This is a seminar course. Attendance at each meeting is mandatory and absences will not be excused barring truly unfortunate circumstances. I

expect you to come to each meeting having read the assigned material carefully, and to participate in discussions. The other requirements involve writing:

1. Three short writing assignments (2 - 4 pages) reacting to material assigned for that week, to be circulated to the class at least 24 hours before meeting. There is a sign-up sheet posted at <http://tinyurl.com/owg2wkj>. These are writing and thinking exercises intended to spur discussion of the readings; they are not scholarly treatises and they do not need to cover every bit of every reading. They should be thoughtful, however. Everyone is required to read the responses for that week before class.
2. An article-length paper (~6-8k words) on a topic of your choosing. Ideally this will be a practice run at your second-year paper or a dissertation chapter, depending upon where you are in the program. A successful paper will:
  - Survey the relevant literature succinctly.
  - Formulate an appropriate research design: theory, hypotheses, methodology.
  - Perform the analysis.

The goal is to have an article which is close to submittable to a conference and/or journal by the end of the semester. I understand that for some of you this will be the first (or one of the first) substantive articles you have written, so I do not expect these to be publishable in the *APSR* by May. However, successful completion of this assignment should further your research agenda in a tangible way. Therefore, I insist that this paper be on a topic related to your dissertation even if that takes you somewhat far afield from the material we read in this class. I also insist that it contain a “scientific” component, which in almost all cases should be empirical.

We will discuss this further over the course of the semester but the first step will be getting my approval for your paper. This will require the submission of an abstract that describes the research question, the theoretical approach, the hypotheses, and the method used to evaluate them. If the method is quantitative then I would also like a

list of data sources you intend to use and the modeling approaches you intend to use. I can help you find appropriate data if you are not sure where to look. If the method is not quantitative then you will need to explain what other empirical, textual, or critical methodology you wish to employ. Replication papers are allowed, and even encouraged, so long as there is a theoretical or methodological extension that would provide an original contribution.

At the end of the semester these papers will be presented to the class in standard conference format: 12-15 minutes of presentation followed by my comments (as discussant) and a question and answer session.

I understand that this will be painful, but believe me: you need the practice.

## readings

All articles will all be posted on the course website. If you can't find something let me know right away. NOTE: this reading list is highly provisional, and is subject to change as I get a sense of how the course is going and where the needs/interests of the students lie.

A background reference (on Canvas) – good for definitions, measures, and implementation in R (with code snippets!) – is:

Eric D. Kolaczyk and Gabar Csardi. *Statistical Analysis of Network Data with R*. Springer, New York, NY, 2014.

I haven't read this one yet – it literally just got released – but I suspect it will be excellent:

Skyler J. Cranmer, Bruce A. Desmarais, and Jason W. Morgan. *Inferential Network Analysis*. Cambridge University Press, 2021.

## i: introduction to networks in world politics (jan 20)

Intro lecture on Canvas; no readings.

## ii: network theory and world politics, i (jan 27)

- Emilie Hafner-Burton, Miles Kahler, and Alexander H. Montgomery. Network analysis for international relations. *International Organization*, 63:559–592, 2009.
- Cassy Dorff and Michael D. Ward. Networks, dyads, and the social relations model. *Political Science Research and Methods*, 1(2):159–178, 2013.
- Stephen P. Borgatti and Daniel S. Halgin. On network theory. *Organization Science*, 22(5):1168–1181, 2011.
- Jason Beckfield. The social structure of the world polity. *American Journal of Sociology*, 115(4):1018–1068, 2010.
- Skyler J. Cranmer and Bruce A. Desmarais. A critique of dyadic design. *International Studies Quarterly*, 60(2):355–362, 2016.

## iii: network theory and world politics (feb. 3)

- Barry Wellman. Structural analysis: From method and metaphor to theory and substance. In Barry Wellman and S.D. Berkowitz, editors, *Social structures: A network approach*. Cambridge University Press, New York, NY, 1988.
- M. E. J. Newman. The structure and function of complex networks. *SIAM Review*, 45(2):167–256, 2003.
- Daniel H. Nexon. *The Struggle for Power in Early Modern Europe*. Princeton University Press, Princeton, NJ, 2009.
- Note: read chapters 1-2 only.**
- Armando Razo. Bringing networks into comparative politics. In Jennifer Nicoll Victor, Mark Lubell, and Alexander H. Montgomery, editors, *Oxford Handbook for Political Networks*. Oxford University Press, 2017.

## iv: brokerage power in global networks (feb. 10)

### *Required*

- Stacie E. Goddard. Brokering change: networks and entrepreneurs in international politics. *International Theory*, 1(2):249–281, 2009.
- Stacie E. Goddard. Embedded revisionism: Networks, institutions, and challenges to world order. *International Organization*, 72(4):763–797, 2018.
- R. Charli Carpenter. Vetting the advocacy agenda: Network centrality and the paradox of weapons norms. *International Organization*, 65(1):69–102, 2011.

Frédéric Mérand, Stéphanie C. Hofmann, and Bastien Irondelle. Governance and state power: A network analysis of european security. *Journal of Common Market Studies*, 49(1):121–147, 2011.

## v: networks and international security, i (feb. 17)

Jason M. Smith, Daniel S. Halgin, Virginie Kidwell-Lopez, Giuseppe Labianca, Daniel J. Brass, and Stephen P. Borgatti. Power in politically charges networks. *Social Networks*, 36(0):162–176, 2014.

Yonatan Lupu and Vincent A. Traag. Trading communities, the networked structure of international relations, and the kantian peace. *Journal of Conflict Resolution*, 57(6):1011–1042, 2013.

Skyler J. Cranmer, Elizabeth J. Menninga, and Peter J. Mucha. Kantian fractionalization predicts the conflict propensity of the international system. *Proceedings of the National Academy of Sciences*, 112(38):11812–11816, 2015.

Paul W. Thurner, Christian S. Schmid, Skyler J. Cranmer, and Goran Kauermann. Network interdependencies and the evolution of the international arms trade. *Journal of Conflict Resolution*, 63(7):1736–1764, 2019.

## vi: networks and international security, ii (feb. 24)

Emilie M. Hafner-Burton and Alexander H. Montgomery. War, trade, and distrust: Why trade agreements don't always keep the peace. *Conflict Management and Peace Science*, 29(3):257–278, 2012.

Zeev Maoz. Preferential attachment, homophily, and the structure of international networks, 1816-2003. *Conflict Management and Peace Science*, 29(3):341–369, 2012.

Skyler J. Cranmer, Bruce A. Desmarais, and Elizabeth J. Menninga. Complex Dependencies in the Alliance Network. *Conflict Management and Peace Science*, 29(3):279–313, 2012.

Yasuhiro Izumikawa. Network connections and the emergence of the hub-and-spokes alliance system in east asia. *International Security*, 45(2):7–50, 2020.

### vii: elite networks (march 3)

- Jan Fichtner, Eelke M. Heemskerk, and Javier Garcia-Bernardo. Hidden power of the big three? passive index funds, re-concentration of corporate ownership, and new financial risk. *Business and Politics*, 19(2):298–326, 2017.
- Josef Woldense. The ruler’s game of musical chairs: Shuffling during the reign of ethiopia’s last emperor. *Social Networks*, 52:154–166, 2018.
- Kevin L. Young, Seth K. Goldman, Brendan O’Connor, and Tuugi Chuluun. How white is the global elite? an analysis of race, gender, and network structure. *Global Networks*, forthcoming, 2020.
- Diliara Valeeva, Eelke M. Heemskerk, and Frank W. Takes. The duality of firms and directors in board interlock networks: A relationship event modeling approach. *Social Networks*, 62:68–79, 2020.

### viii: civil conflict and terrorism networks (march 10)

- Valdis E. Krebs. Mapping networks of terrorist cells. *Connections*, 24(3):43–52, 2002.
- Shin-Kap Han. The other ride of paul revere: The brokerage role in the making of the american revolution. *Mobilization: An International Quarterly*, 14(2):143–162, 2009.
- See also [this post by Kieran Healy](#).**
- Paul Staniland. Organizing insurgency: Networks, resources, and rebellion in south asia. *International Security*, 37(1):142–177, 2012.
- Bruce A. Desmarais and Skyler J. Cranmer. Forecasting the locational dynamics of transnational terrorism: A network analytic approach. *Security Informatics*, 2(8):1–13, 2013.
- Nils W. Metternich, Cassy Dorff, Max Gallop, Simon Weschle, and Michael D. Ward. Antigovernmental networks in civil conflicts: How network structures affect conflictual behavior. *American Journal of Political Science*, 57(4):892–911, 2013.

### ix: networks in the world economy, i (march 17)

- Emilie M. Hafner-Burton and Alexander H. Montgomery. Globalization and the social power politics of international economic networks. In Miles Kahler, editor, *Networked Politics: Agency, Power, and Governance*. Cornell University Press, Ithaca, NY, 2009.

- Henry Farrell and Abraham Newman. Weaponized interdependence: How global economic networks shape state coercion. *International Security*, 44(1):42–79, 2019.
- Jan Fichtner. Perpetual decline or persistent dominance? uncovering anglo-america's true structural power in global finance. *Review of International Studies*, 43(1):3–28, 2017.
- W. Kindred Winecoff. “the persistent myth of lost hegemony,” revisited: International order as a complex network phenomenon. *European Journal of International Relations*, 26(1\_suppl):209–252, 2020.

## x: networks in the world economy, ii (march 24)

- Mark S. Manger, Mark A. Pickup, and Tom A. B. Snijders. A hierarchy of preferences: A longitudinal network analysis approach to pta formation. *Journal of Conflict Resolution*, 56(5):853–878, 2012.
- Brandon J. Kinne and Jonas B. Bunte. Guns or money? defense co-operation and bilateral lending as coevolving networks. *British Journal of Political Science*, forthcoming, 2020.
- Jong Hee Park and Byung Koo Kim. Why your neighbor matters: Positions in preferential trade agreement networks and export growth. *Economics and Politics*, 32(3):381–410, 2020.
- Thomas Oatley. Toward a political economy of complex interdependence. *European Journal of International Relations*, Forthcoming, 2019.

## xi: (april 7)

### **No Class - ISA conference**

## xii: diffusion, convergence, and migration through international networks (april 14)

- Xun Cao. Global networks and domestic policy convergence: A network explanation of policy changes. *World Politics*, 64(3):375–425, 2012.
- Jay Goodliffe and Darren Hawkins. Dependence networks and the diffusion of domestic political institutions. *Journal of Conflict Resolution*, forthcoming, 2015.

- Skyler J. Cranmer, Bruce A. Desmarais, and Benjamin W. Campbell. The contagion of democracy through international networks. *Social Networks*, 61:87–98, 2020.
- Saskia Kok and Richard Rogers. Rethinking migration in the digital age: transglobalization and the somali diaspora. *Global Networks*, 17(1):23–46, 2017.
- Justin Schon. Using ergms to disaggregate displacement. *Journal of Social Structure*, 19(1):1–40, 2018.

### xiii: networks in international law (april 21)

- Brandon J. Kinne. Network dynamics and the evolution of international cooperation. *American Political Science Review*, 107(4):766–785, 2013.
- Yonatan Lupu and Erik Voeten. Precedent in international courts: A network analysis of case citations by the european court of human rights. *British Journal of Political Science*, 42:413–439, 2011.
- Krzysztof J. Pelc. The politics of precedent in international law: A social network application. *American Political Science Review*, 108(3):547–564, 2014.
- Amanda Murdie. The ties that bind: A network analysis of human rights international nongovernmental organizations. *British Journal of Political Science*, 44(1):1–27, 2014.

### xiv: networks at iu (april 28)

- Papers from Aashna Khanna, Ore Koren, Armando Razo, Jeff Wang.  
Titles and more information to come.

### xv: fin (may 7)

**Papers due.**



## Bibliography

- [1] Jason Beckfield. The social structure of the world polity. *American Journal of Sociology*, 115(4):1018–1068, 2010.
- [2] Stephen P. Borgatti and Daniel S. Halgin. On network theory. *Organization Science*, 22(5):1168–1181, 2011.
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- [4] R. Charli Carpenter. Vetting the advocacy agenda: Network centrality and the paradox of weapons norms. *International Organization*, 65(1):69–102, 2011.
- [5] Skyler J. Cranmer and Bruce A. Desmarais. A critique of dyadic design. *International Studies Quarterly*, 60(2):355–362, 2016.
- [6] Skyler J. Cranmer, Bruce A. Desmarais, and Benjamin W. Campbell. The contagion of democracy through international networks. *Social Networks*, 61:87–98, 2020.
- [7] Skyler J. Cranmer, Bruce A. Desmarais, and Elizabeth J. Menninga. Complex Dependencies in the Alliance Network. *Conflict Management and Peace Science*, 29(3):279–313, 2012.
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- [9] Skyler J. Cranmer, Elizabeth J. Menninga, and Peter J. Mucha. Kantian fractionalization predicts the conflict propensity of the international system. *Proceedings of the National Academy of Sciences*, 112(38):11812–11816, 2015.

- [10] Bruce A. Desmarais and Skyler J. Cranmer. Forecasting the locational dynamics of transnational terrorism: A network analytic approach. *Security Informatics*, 2(8):1–13, 2013.
- [11] Cassy Dorff and Michael D. Ward. Networks, dyads, and the social relations model. *Political Science Research and Methods*, 1(2):159–178, 2013.
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- [13] Jan Fichtner. Perpetual decline or persistent dominance? uncovering anglo-america’s true structural power in global finance. *Review of International Studies*, 43(1):3–28, 2017.
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- [15] Stacie E. Goddard. Brokering change: networks and entrepreneurs in international politics. *International Theory*, 1(2):249–281, 2009.
- [16] Stacie E. Goddard. Embedded revisionism: Networks, institutions, and challenges to world order. *International Organization*, 72(4):763–797, 2018.
- [17] Jay Goodliffe and Darren Hawkins. Dependence networks and the diffusion of domestic political institutions. *Journal of Conflict Resolution*, forthcoming, 2015.
- [18] Emilie Hafner-Burton, Miles Kahler, and Alexander H. Montgomery. Network analysis for international relations. *International Organization*, 63:559–592, 2009.
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- [20] Emilie M. Hafner-Burton and Alexander H. Montgomery. War, trade, and distrust: Why trade agreements don't always keep the peace. *Conflict Management and Peace Science*, 29(3):257–278, 2012.
- [21] Shin-Kap Han. The other ride of paul revere: The brokerage role in the making of the american revolution. *Mobilization: An International Quarterly*, 14(2):143–162, 2009.
- [22] Yasuhiro Izumikawa. Network connections and the emergence of the hub-and-spokes alliance system in east asia. *International Security*, 45(2):7–50, 2020.
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- [33] Nils W. Metternich, Cassy Dorff, Max Gallop, Simon Weschle, and Michael D. Ward. Antigovernmental networks in civil conflicts: How network structures affect conflictual behavior. *American Journal of Political Science*, 57(4):892–911, 2013.
- [34] Amanda Murdie. The ties that bind: A network analysis of human rights international nongovernmental organizations. *British Journal of Political Science*, 44(1):1–27, 2014.
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- [36] Daniel H. Nexon. *The Struggle for Power in Early Modern Europe*. Princeton University Press, Princeton, NJ, 2009.
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- [43] Paul Staniland. Organizing insurgency: Networks, resources, and rebellion in south asia. *International Security*, 37(1):142–177, 2012.
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- [47] W. Kindred Winecoff. “the persistent myth of lost hegemony,” revisited: International order as a complex network phenomenon. *European Journal of International Relations*, 26(1\_suppl):209–252, 2020.
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