

Federico Holm
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EDUCATION

The Ohio State University Columbus, OH
Ph.D. Environment and Natural Resources June 2021
Title of dissertation: Environmental Policy Across Space and Time -
A Comparative Approach to the Study of Advocacy Coalitions in Climate Change and Energy Policy
in the United States

The Ohio State University Columbus, OH
M.S. Environment and Natural Resources May 2018
Title of thesis: Early Involvement and Multi-Stage Coalitions in
Environmental Rulemaking - A Stakeholder Analysis of the Clean Power Plan

Catholic University of Córdoba (Universidad Católica de Córdoba) Córdoba, Argentina
BA International Relations May 2013

RESEARCH EXPERIENCE

Main Research Interests and Expertise

- Environmental policy and governance
- Social-ecological systems
- Network analysis
- Computational social science

University of Michigan Ann Arbor, MI
Postdoctoral Research Fellow July 2021 - present

Research Project: “Western Forest and Fires Initiative (WFFI)”
PI: Dr. Paige Fischer

- Descriptive and inferential network analysis.
- Development of the computational social science strategy for the WFFI initiative.
- Supervision of graduate research assistants.

The Ohio State University Columbus, OH
Research Assistant, Environmental Governance Lab August 2016 - present

Research project: “Mapping the socio-ecological system of aquatic invasive species (AIS)
management in the Great Lakes.”

PI: Dr. Ramiro Berardo.

- Development and management of surveys.
- Identification of respondents via document analysis and link-tracing approaches.
- Conducted interviews with key actors in the network
- Development and analysis of social-ecological networks of actors-species.
- Development and analysis of social-ecological models for the study of network motifs.

Research project: “A Comparative Diagnosis of Policy Conflicts: Examining Unconventional Oil and Gas Development across the United States.”

PIs: Dr. Cristopher Weible, Dr. Tanya Heikkila, Dr. Ramiro Berardo, Dr. Hongtao Yi.

- Development and management of large text corpus ($n > 10000$ newspaper articles), using a combination of R, Python, and human coding.
- Development and management of large databases.
- Development and application of dictionary-based text analysis methods for the analysis of conflict in media reporting.
- Development and application of automated text analysis (topic modeling). Analysis performed with R (package `topicmodels`) and Mallet.
- Development and application of machine learning classifiers and regression for texts (neural networks, random forests, penalized regression, support vector machines). Analysis performed with the `caret` package in R.

Research project: “Polycentricity and Non-Point Source Pollution.”

PIs: Dr. Ramiro Berardo

- Data collection and processing (Total Maximum Daily Loading analyses, 9 Element NPS plans, biological and water quality indicators).
- Policy content analysis.
- Descriptive and inferential social network analysis (descriptive statistics, ERGMs, baseline models)

Research project: “Multiplex coalitions, cooperation and conflict in the U.S. environmental rulemaking process.”

PIs: Dr. Ramiro Berardo, Dr. Hongtao Yi.

- Data collection and processing of publicly available data (U.S. EPA; meeting records, public comments, court records).
- Preformed content analysis.
- Performed descriptive and inferential social network analysis (descriptive statistics, ERGMs, baseline models, QAP regression, community detection)

Research project: “Hydraulic Fracturing, Coalition Activity and Shock: Assessing the Potential for Coalition-based Collective Action in Argentina’s Vaca Muerta Formation.”

PIs: Dr. Cristopher Weible, Dr. Tanya Heikkila, Dr. Ramiro Berardo, Dr. Hongtao Yi.

- Identification and coding of newspaper articles.
- Performed descriptive and inferential network analysis.

Research project: “Electoral cartography update”
(Original: “Actualización de Cartografía electoral”)
Fundación UNSAM–Innovación y Tecnología. PI: Sebastian Freille, PhD.

- Conducted document analysis to update digital repositories of electoral maps.
- Conducted cartographical/archival research to update digital repository of electoral districts.
- Conducted interviews with local elected officials and experts.

PUBLICATIONS

- Holm, F.** & Berardo, R. (2020). Coalitional Architecture of Climate Change Litigation Networks in the U.S. *Review of Policy Research*. DOI: 10.1111/ropr.12402
- Berardo, R., **Holm, F.**, Heikkila, T., Weible, C. M., Yi, H., Kagan, J., ... & Yordy, J. (2020). Hydraulic fracturing and political conflict: News media coverage of topics and themes across nine states. *Energy Research & Social Science*, 70, 101660.
- Berardo, R., & **Holm, F.** (2018). The participation of core stakeholders in the design of, and challenges to, the US Clean Power Plan. *Climate policy*, 18(9), 1152-1164.
- Costie, D. P., **Holm, F.**, & Berardo, R. (2018). Hydraulic fracturing, coalition activity and shock: Assessing the potential for coalition-based collective action in Argentina’s Vaca Muerta formation. *The Extractive Industries and Society*, 5(4), 499-507
- Kiessling, C.; **Holm, F.** (2014). Gestión del riesgo, desarrollo humano y adaptación al cambio climático: el caso de la provincia de Córdoba, Argentina; *Núcleo de Estudos do Empresariado, Instituições e Capitalismo; Ponto de Vista*; 9; 9-2014; 1-20. issn 1983-733X

UNDER REVIEW

- Yi, H., **Holm, F.**, Kagan, J. Heikkila, T., Weible, C. Kagan, J. Berardo, R. (2019). Measuring, Mapping, and Explaining Policy Conflict Intensity in Unconventional Oil and Gas Development: A Comparative Policy Analysis of Colorado and Ohio. Under review at *Journal of Comparative Policy Analysis*.
- Yi, H., Chen, C., **Holm, F.** Heikkila, T., Weible, C. Kagan, J. Berardo, R. (2019). The Ebb and Flow of Conflicts and Concords: A Fifteen State, Ten Year Study of “Fracking” Policy Issue. Under review at *Policy Studies Journal*.

WORKING PAPERS

- Holm, F., Olivier, T., & Berardo, R. Polycentricity and Non-Point Source Pollution: An Examination of the Complex Governance of Water Quality Problems. Working paper.
- Holm, F, Berardo, R., & Alexander, S. Mapping the Social-Ecological Networks of Aquatic Invasive Species (AIS) Management in the Great Lakes. Working paper.

Holm, F. Assessing the Complex Governance Landscape of Aquatic Invasive Species in the Great Lakes. Working paper.

CONFERENCES AND PRESENTATIONS (SELECTED)

European Consortium for Political Research - General Conference

Virtual conference, August 2020

Holm, F. & Berardo, R. *Polycentricity and Non-Point Source Pollution: An Examination of the Complex Governance of Water Quality Problems*

European Consortium for Political Research - General Conference

Virtual conference, August 2020

Holm, F. & Berardo, R. *Climate Change Litigation Networks in the U.S.: Comparing Pro and Anti-Regulatory Coalitions Around Federally Mandated GHG Emissions Standards*

American Political Science Association.

Washington D.C, August-September 2019

Holm, F. & Berardo, R. *Climate Change Litigation Networks in the U.S.: Challenges to the regulatory core of the Climate Action Plan.*

American Political Science Association.

Washington D.C, August-September 2019

Berardo, R., Holm, F., Chen, C., Heikkila, T., Kagan, J., Weible, C., Yi, H., Yordy, J. *A Comparison of News Media Coverage of Hydraulic Fracturing Across the U.S.*

Political Networks Conference (POLNET)

Duke University. Durham, North Carolina, May-June 2019

Holm, F. & Berardo, R. *Climate Change Litigation Networks in the U.S.*

Environmental Politics and Governance Conference

Indiana University, Bloomington. Bloomington, Indiana, June 2017

Berardo, R., Holm, F., & Yi, H. *The rulemaking process as an ecology of games: Evidence from the Clean Power Plan.*

XVI Biennial IASC Conference - Practicing the commons: self-governance, cooperation, and institutional change.

Utrecht University. Utrecht, The Netherlands, June 2017

Berardo, R., Holm, F., & Yi, H. *The design of the Clean Power Plan as a complex ecology of policy games.*

TEACHING EXPERIENCE AND INTERESTS

Teaching Interests

- Environmental policy
- Social-ecological systems

- Quantitative and qualitative research methods
- Network analysis
- Systems thinking

The Ohio State University
School of Environment and Natural Resources
 Invited Scholar ENR6510 – Research Methods
 Main topic: text-as-data and analysis of textual sources

Columbus, OH.
 April 2020

- Review of discovery and measurement as key tasks.
- Dictionary-based, supervised, and unsupervised text methods.
- Applied models in informal lab sessions.
- Performed text preparation and processing.

The Ohio State University
School of Environment and Natural Resources
 Teaching Assistant ENR3200 – Environmental and Natural Resources Policy

Columbus, OH.
 Autumn 2019

- Taught lectures to ~100 juniors and seniors (core course for GE major)
- Held targeted individual sessions for students
- Worked with students in the development of policy briefs regarding a range of environmental policy issues.
- Evaluated highly by students for stimulating independent thinking and for demonstrating student interest

Catholic University of Córdoba
Department of Political Science and International Relations
 Practical Applications Instructor – Economics V: International Political Economy.

Córdoba, Argentina
 March-December 2015

- Prepared sessions and practical exercises to apply previously developed theoretical concepts.
- Held R and SPSS workshops targeted to students.
- Prepared and taught review sessions before the exams.
- Mentored students in relation to future academic careers.

NON-PROFIT EXPERIENCE

Enseñá por Argentina
 Operations Coordinator – Córdoba Region

Córdoba, Argentina
 March 2015 - July 2016

- Officiated as liaison between NGO and Government (Office of the Governor, Ministry of Education's) officials.
- Evaluated and interviewed ~100 candidates for teachers and fellows in the organization's educational program.
- Conducted multiple recruitment talks at universities and other higher education institutions.
- Conducted multiple extension events with other NGOs working in the same field (education).
- Developed and nurtured relationships with universities, NGOs, government, and corporate actors to secure financial and operational assets for our activities.

- Development of efficiency metrics for selection processes.
- Coordination of daily activities.

UNIVERSITY SERVICE

The Ohio State University
Gradroots Minigrants Committee Chair

Columbus, OH
 June 2018- July 2020

- Provided leadership as chair of the Committee.
- Managed application and grant review processes.
- Reviewed grant applications.
- Collaborated with the rest of the committee in the development of guidelines and metrics for the grant program.

Treasurer - Shotokan Karate Club

August 2019- July 2020

- Managed the club's budget.
- Managed bank accounts and oversaw revenues and expenses.
- Provided regular reports to the University's Office of Recreational Sports.

Mentor - School of Environment and Natural Resources Mentoring Program

Spring 2020

- Mentored an undergraduate student (senior) during the spring of 2020
- Created a welcoming and understanding space to talk about struggles and provide support and guidance during the job-hunting process.

Gradroots Minigrants Committee member

June 2017- June 2018

- Reviewed grant applications.
- Collaborated with the rest of the committee and committee chair in the development of guidelines and metrics for the grant program.

SCHOLARSHIPS AND GRANTS

- **Political Networks Conference Fellowship.** Funds destined towards the 2019 Political Networks Conference (POLNET). May 29 – June 1, 2019. Duke University. Durham, North Carolina.
- **American Political Science Association Travel Grant.** Funds destined towards the 2019 American Political Science Association. August 29 – September 3. Washington D.C.
- **Agriterra Grant.** Funds destined towards the XVI Biennial IASC Conference: Practicing the commons: self-governance, cooperation, and institutional change. June 10-14, 2017. Utrecht University. Utrecht, The Netherlands.
- **Fulbright Scholarship - Young Leaders Program.** University of Massachusetts Civic

Initiative. University of Massachusetts - Amherst. June 2015.

- **Fulbright Commission – University of San Andrés Scholarship.** International Seminar for Young Leaders in Argentina: “Estados Unidos en la actualidad: las bases de su política exterior e interna”. Fulbright Commission and University of San Andrés. Sponsored by the US Embassy in Argentina. Buenos Aires, May 2014.

PROFESSIONAL AFFILIATIONS

- American Political Science Association 2017-present
- European Consortium for Political Research 2020-present