

## Erin Lin

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- CONTACT INFORMATION**      **The Ohio State University**  
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- ACADEMIC APPOINTMENTS**      **The Ohio State University**, Columbus, OH  
Assistant Professor, Political Science, 2017-  
Instructor, Political Science, 2016-2017
- EDUCATION**      **Princeton University**, Princeton, NJ  
Ph.D. 2017, Politics  
• Committee: Amaney Jamal, Deborah Yashar, Mark Beissinger, Leonard Wantchekon  
**Yale University**, New Haven, CT  
B.A., Environmental Studies and International Studies, 2007, *Magna cum Laude*
- BOOK PROJECT**      **The Farmer's Battlefield: the legacy of unexploded ordnance in rural Cambodia.**  
In my book manuscript *The Farmer's Battlefield*, I chart the socioeconomic changes in Cambodia through six post-conflict decades, and show in detail how the changes in crop yield, risk perception, distribution of land, and ethnic relations result from exposure to unexploded ordnance leftover from the Vietnam War. The book begins with a puzzle – how the most fertile land in Cambodia is also the least productive – and provides an answer rooted in the historical contingency of the failure of bombs to detonate on soft environmental targets. A rigorous systematic analysis of closed ministerial archives, declassified US military data, ethnographic observation, and in-depth interviews from the culmination of five years of fieldwork in Cambodia reveal the effects of those unintentional duds on long-term psychological adaptations and institutional development. Though our contemporary understanding of how humans transform the environment focuses on agriculture, industrialization, and urban development, I make the case that political actors through war can change natural endowments, highlighting an avenue of influence that is not commercial but is martial.
- WORKING PAPERS**      [1] "Failure to detonate: the conditional effects of bombing on long-term agronomic capacity and local development in rural Cambodia"  
• Co-Winner of the 2019 MPSA Award for Best Paper in International Relations  
• Abstract: In evaluating the legacy of war on long-term political economy outcomes, scholars have focused on the transformation of social and economic relations during conflict, and highlight how this transformation persists through time. I argue, in contrast, that important environmental changes take place after war ends - such as when displaced migrants return and attempt to live on previously bombed areas. Munitions experts estimate as much as one-fifth of explosive ordnance failed to detonate during the Vietnam War, and impact fuses are more likely to fail on soft, fertile soil. I use the spatial variation in dud rates to show that unexploded ordnance lead to a systematic and robust decline in contemporary farming outputs, agricultural investments, and alternative sources of land-based income in rural Cambodia. Overall, my evidence indicates that this post-conflict experience of unexploded ordnance was more significant than the bombing itself in transforming rural Cambodia's long-term development trajectory.

- [2] "Detecting bomb craters from very high resolution remote sensing images for potential estimation of UXO in rural Cambodia" (Lead author with Rongjun Qin, Jared Edgerton, and Deren Kong)
- Abstract: Unexploded ordnance (UXO) pose a significant threat to post-conflict communities, and current efforts to locate bombs rely on time-intensive and dangerous in-person enumeration. Very high resolution (VHR) sub-meter satellite images may offer a low-cost and high-efficiency approach to automatically detect craters and estimate UXO density. We customize machine-learning methods from the meteor crater literature to find bomb craters, which are smaller than meteor craters and have high appearance variation, particularly in spectral reflectance and shape, due to the complex terrain environment. To address these challenges, we create a two-stage learning-based framework: we start with a simple and loose statistical classifier based on histogram of oriented gradient (HOG) and spectral information for a first pass of crater recognition, and in a second stage, we develop a patch-dependent novel spatial feature through dynamic mean-shift segmentation and SIFT descriptors. We apply the model to a multispectral Worldview-2 image of a Cambodian village, which was heavily bombed during the Vietnam War. The proposed method increased true bomb crater detection by over 160 percent. Comparative analysis demonstrates that our method significantly outperforms typical object-recognition algorithms and can be used for wide-area bomb crater detection. Our model, combined with declassified records and demining reports, suggests that 44 to 50 percent of the bombs in the vicinity of this particular Cambodian village may remain unexploded.
- [3] "Genocide and the gender gap in political representation" (with Nikhar Gaikwad)
- Abstract: Women remain underrepresented in political office around the world. The gender gap in political representation is particularly stark in developing countries, where women both lack economic resources to run for office and face patriarchal social structures that exclude them from opportunities to accumulate resources to advance their political ambitions. Societal transformations that afford women economic autonomy and avenues to enhance their material well-being are therefore predicted to improve women's representation in political office. In this paper, we examine the effects of one such watershed societal transformation: the Khmer Rouge genocide in Cambodia (1975–1979), during which 50 to 70 percent of the country's working-age men were killed. Our contention is that areas that suffered the worst killings during the genocide should have registered the largest uptick in female-headed households, with implications for long-term trends in women's political representation. We leverage exposure to the Khmer Rouge genocide as a plausibly exogenous determinant of the number of female-headed households in a community and analyze this variation to study the relationship between the legacy of war, women's economic autonomy, and gendered representation. A crucial finding emerges: Where women obtained control over household finances and economic responsibilities, they gained a clearer stake in the policy decisions of the state, and found greater incentives to become politically engaged. Our results shed light on how conflict impacts the empowerment and representation of women in politics, and help advance a key theoretical claim regarding the joint role of economic and cultural factors in determining the gender gap in political representation.
- [4] "Heavy metal contamination from UXO and landmine areas in Cambodia" (with Christine Sprunger and Nick Basta)
- Abstract: Soil contamination from UXO and landmines has the potential to degrade soil quality and soil ecological health and may result in reductions of crop production and/or quality and increase household poverty rates. Testing for heavy metal levels is the first part of a comprehensive evaluation of the effect of UXO contamination on crop productivity potential and ecological health. In May and June 2018,

we collected 93 composite soil samples from 26 former battlefields and minefields in Ratanakiri and Battambang provinces, Cambodia. Samples were collected for three purposes: 1) to estimate effect of UXO/mine leakage, 2) to estimate immediate effect of detonation, 3) to estimate the long-term effect of detonation. There is clear evidence that heavy metal concentrations increased by 86 to 113 percent post detonation in the <1m sampling area. Although bioavailability tests were not conducted, based on these large increases in concentrations after detonation we recommend farming at least 1 meter away from bomb location, due to potential UXO leakage and potential detonation contaminants.

- [5] "Internal migration and inequality: How land is redistributed in post-conflict Cambodia"
- Abstract: Many political scientists are reasonably certain that states with high inequalities are more likely to suffer from civil war. But once fighting is over, we know little about how these inequalities are resolved. In this essay, I take a new approach. I develop a theory of whether and where agrarian communities will distribute the pool of post-conflict resources equally, based on whether someone is a migrant, repatriate, or continuous resident and on the number of migrants already in the host community. Drawing on a Cambodian Ministry of Planning survey of 12,000 households, I identify the individuals who were displaced during the Khmer Rouge, their post-conflict migratory patterns, and their land holdings a decade after the genocide ended, and compare their land holdings to those who were not displaced. I find that villages comprised mostly of continuous residents tend to distribute land more equally, compared to villages comprised mostly of repatriated residents or migrants. In majority-migrant/repatriate villages, migrants and repatriates own 50 percent more land than continuous residents and end up one economic decile wealthier.

PRESENTATIONS  
AND INVITED  
TALKS

- 2019 Indiana University - Kokomo (Sustainability Day Keynote).
- 2018 InFACT/TDAI Affiliates Gathering (OSU); IPR Seminar (OSU); MPSA (Chicago); APSA (Boston); APSA Women's Mentoring Workshop (DC); Southeast Asia Program's Gatty Lecture Series (Cornell University); Center for Asian and Pacific Studies Lecture Series (University of Oregon).
- 2017 Fieldwork Conference (University of Rochester); Workshop on Governance and Internal Migration (University of Hawaii-Manoa); InFACT/FFH/SRE Seed Grant Showcase (Ohio State).
- 2016 NYU Global Issues Lecture Series; MPSA (Chicago); Southeast Asia Research Group (University of Michigan); APSA (Philadelphia).
- 2015 USIP and Empirical Studies of Conflict Research Meeting (Washington, DC); Aage Sorenson Memorial Conference (Princeton); International Institute for Asian Studies (Siem Reap, Cambodia); APSA (San Francisco).
- 2012 Global Political Identity, Global Conflict Workshop (Oxford); SEASSI Student Conference (University of Wisconsin, Madison).
- 2011 World Bank DIME-AADAPT Conference (Dakar).
- 2010 Society for Political Methodology - poster (University of Iowa).

GRANTS AND  
AWARDS

- 2019 MPSA Best Paper in International Relations.
- 2018 Mershon Faculty Grant, Office of International Affairs Academic Enrichment Grant.
- 2017 Initiative for Food and Agriculture Transformation Seed Grant (Head-PI).
- 2016 Translation Data Analytics Seed Grant (Head-PI), Young Southeast Asia Fellow.

- 2015 Princeton Institute for International and Regional Studies Dissertation Writing Fellowship.
- 2014 Princeton Institute for International and Regional Studies Summer Research Grant (also awarded 2013, 2012).
- 2013 East Asian Studies Summer Research Grant (also awarded 2012).
- 2012 Bobst Center for Peace and Justice Research Grant. Foreign Language and Area Studies Fellowship. Finalist for Usha Mahajani Memorial Prize for outstanding graduate student.
- 2007 Fulbright Student Grant. Phi Beta Kappa.
- 2006 Luce Junior Fellowship.

TEACHING  
EXPERIENCE

**The Ohio State University**, Columbus, OH

- Conflict and Development (undergraduate)
- Domestic Politics of International Conflict (undergraduate)
- Politics in the Developing World (graduate, undergraduate)

**Princeton University**, Princeton, NJ

- Politics of the Middle East (TA)
- Politics in the Developing Countries (TA)

PROFESSIONAL  
EXPERIENCE

Consultant, Development Impact Evaluation Initiative, World Bank Group (2010, 2011)

ACADEMIC  
SERVICE

Diversity Committee (OSU 2017-2019)

Speaker Series Committee (OSU 2017-2019)

Graduate Studies Committee (OSU 2016-2017)

Graduate Mentoring Award Selection Committee (Princeton 2016)

REFERENCES  
AVAILABLE TO  
CONTACT

**Amaney Jamal** (e-mail: [ajamal@princeton.edu](mailto:ajamal@princeton.edu); phone: (609) 258-7340)

- Edwards S. Sanford Professor, Department of Politics, Princeton University

**Deborah Yashar** (e-mail: [dyashar@princeton.edu](mailto:dyashar@princeton.edu); phone: (609) 258-2771)

- Professor, Department of Politics, Princeton University

**Mark Beissinger** (e-mail: [mbeissin@princeton.edu](mailto:mbeissin@princeton.edu); phone: (609) 258-8261)

- Henry R. Putnam Professor, Department of Politics, Princeton University

**Leonard Wantchekon** (e-mail: [lwantche@princeton.edu](mailto:lwantche@princeton.edu); phone: (609) 258-6723)

- Professor, Department of Politics, Princeton University

FIELDWORK

Cambodia (5 years), Indonesia (6 months), South Africa (2 months)

LANGUAGE

Khmer (advanced), Bahasa (beginner), French (reading)