

# Liying Luo

she/her/hers pronouns

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## Education

- 2015 Ph.D. Sociology, University of Minnesota
- 2011 M.S. Biostatistics, University of Minnesota
- 2004 B.A. International Study, China Foreign Affairs University, Beijing, China

## Academic Positions

- 2023- Associate Professor, Department of Sociology and Criminology, The Pennsylvania State University
- 2022- Associate Director, Center for Social Data Analytics  
Faculty Associate/Affiliate, Population Research Institute, Center for Healthy Aging, Social Science Institute, Institute for Computational and Data Sciences
- 2016-23 Assistant Professor, Department of Sociology and Criminology, The Pennsylvania State University
- 2015-16 Assistant Professor, Department of Sociology and Criminal Justice, University of Delaware

## Research Interests

Quantitative Methods, Health Disparities, Cognitive Aging, and Life Course

## External Research Grants

- 2022-27 National Institutes of Health, R01AG078518. "Heterogeneous Effects of Education on Alzheimer's Disease and Related Dementias among Demographic Groups: A Multigenerational and Multilevel Study." Role: PI; \$1,779,640.
- 2021-24 National Institutes of Health, R03AG070812. "Cohort Differences in Cognitive Impairment and Alzheimer Disease and Related Dementias: Education Effects and Sex Differences." Role: PI; \$321,000.
- 2019-21 Cisco Research Center. "Education, Work, and Family Pathways of Women and Men in Computer Science, Engineering and Math." Role: Co-I (PI: Susan McHale); \$114,000.

## Awards and Honors

- 2022 Roy C. Buck Award, Pennsylvania State University
- 2019 Butler-Williams Scholar, the National Institute on Aging
- 2019 Social Sciences Research Institute Fellow, Pennsylvania State University

- 2014 Don Martindale Graduate Student Career Achievement Award, University of Minnesota
- 2013 Outstanding Research Award, Minnesota Population Center, University of Minnesota

### Peer-Reviewed Publications

<sup>s</sup> indicates graduate student or postdoctoral author at the time of writing

- Luo, Liying, and Lai Wei<sup>s</sup>. 2024. "For Whom Does Education Convey Health Benefits? A Two-Generation and Life-Course Approach." *Journal of Health and Social Behavior* 65(4): 596-617 <https://doi.org/10.1177/00221465241249120>
- England, Kira<sup>s</sup>, Liying Luo, Ashton Verdery, and Shannon Monnat. 2024. "Shifting Cohort Patterns in the Use of Drugs with Elevated Overdose Risk in the United States." *Social Problems* spae013 <https://doi.org/10.1093/socpro/spae013>
- Lu, Yunmei, Liying Luo, and Mateus R. Santos. 2024. "Social Change and Race-Specific Homicide Trajectories: An Age-Period-Cohort Analysis" *Journal of Research in Crime and Delinquency* 61(2), 224-267. <https://doi.org/10.1177/00224278221129886>
- Xu, Jiahui<sup>s</sup>, Liying Luo, Alyssa Gamaldo, Ashton Verdery, Melissa Hardy, Orfeu Buxton, and Qian Xiao. 2024. "Trends in Sleep Duration in the U.S., 2004-2018: A Decomposition Analysis." *Social Science & Medicine-Population Health* 25:101562 <https://doi.org/10.1016/j.ssmph.2023.101562>
- Zang, Emma, Michael E. Sobel, and Liying Luo. 2023. "The Mobility Effects Hypothesis: Past, Present, and Future." *Social Science Research* 110: 120818 <https://doi.org/10.1016/j.ssresearch.2022.102818>
- Luo, Liying and John Robert Warren. 2023. "Describing and Explaining Age, Period, and Cohort Trends in Americans' Vocabulary Knowledge." *Population Research and Policy Review* 42: 31 <https://doi.org/10.1007/s11113-023-09771-5>
- Nyarko, Samuel<sup>s</sup>, Liying Luo, David G. Schlundt, Qian Xiao. 2023. "Cross-sectional association between neighborhood socioeconomic status and sleep duration among Black and White men and women: The Southern Community Cohort Study." *Sleep Health* 9(3): 277-282 <https://doi.org/10.1016/j.sleh.2023.01.016>
- Zang, Emma, Josefina Flores<sup>s</sup>, Liying Luo, Drishti Baid<sup>s</sup>. 2023. "Explaining Trends in the Rural-Urban Obesity Gap, 2004-2019: A Decomposition Analysis." *Obesity* 31(2): 487-495 <https://doi.org/10.1002/oby.23608>
- Nyarko, Samuel<sup>s</sup>, Liying Luo, David G. Schlundt, Qian Xiao. 2023. "Individual and Neighborhood Socioeconomic Status and Long-term Individual Trajectories of Sleep Duration among Black and White adults: The Southern Community Cohort Study" *Sleep* 46(1): 1-9. <https://doi.org/10.1093/sleep/zsac225>
- Luo, Liying. 2022. "Heterogenous Effects of Intergenerational Social Mobility: An Improved Method and New Evidence." *American Sociological Review* 87(1): 143-173. <https://doi.org/10.1177/00031224211052028>

- Luo, Liying and James Hodges. 2022. "The Age-Period-Cohort-Interaction Model for Describing and Investigating Inter-Cohort Deviations and Intra-Cohort Life-Course Dynamics." *Sociological Methods & Research* 51(3): 1164-1210.  
<https://doi.org/10.1177/0049124119882451>
- Xu, Jiahui<sup>S</sup>, and Liying Luo. 2022. "APCI: An R and Stata Package for Visualizing and Analyzing Age-Period-Cohort Data." *The R Journal* 14(2): 77-95.  
<https://doi.org/10.32614/RJ-2022-026>
- Luo, Liying, Emma Zang, and Jiahui Xu<sup>S</sup>. 2022. "Regional Differences in Intercohort and Intracohort Trends in Obesity in the USA: Evidence from the National Health Interview Survey, 1982–2018." *BMJ Open* 12(7): e060469.  
<https://doi.org/10.1136/bmjopen-2021-060469>
- Pescosolido, Bernice, Andrew Halper-Manners, Liying Luo, and Brea Perry. 2021. "Shifts in the Public Stigma of Mental Illness in the US Over Two Decades." *JAMA Network Open* 4(12): e2140202. <https://doi:10.1001/jamanetworkopen.2021.40202>
- Han, Feng<sup>S</sup>, Jing Chen, Aaron Belkin-Rosen, Yameng Gu<sup>S</sup>, Liying Luo, Orfeu M. Buxton, and Xiao Liu. 2021. "The Coupling of Global Brain Activity and Cerebrospinal Fluid Inflow Is Correlated with Alzheimer's Disease Related Pathology." *PLOS Biology* 19(6): e3001233. <https://doi.org/10.1371/journal.pbio.3001233>
- Liao, Wenjie, and Liying Luo. 2021. "Gender, Education, and Attitudes toward Women's Leadership in Three East Asian Countries: An Intersectional and Multilevel Approach." *Societies* 11(3): 103-112. <https://doi.org/10.3390/soc11030103>
- Luo, Liying, Orfeu M. Buxton, David M. Almeida, Alyssa A. Gamaldo, and Qian Xiao. 2021. "Opposite Educational Gradients in Sleep Duration between Black and White Adults, 2004-2018." *Sleep Health* 7(1): 3-9. <https://doi.org/10.1016/j.sleh.2020.10.003>
- Baumer, Eric, Kelsey Cundiff<sup>S</sup>, and Liying Luo. 2021. "The Contemporary Transformation of American Youth: An Analysis of Changes in the Prevalence of Criminal Activity, 1991-2015." *Criminology* (59)1: 109-136. <https://doi.org/10.1111/1745-9125.12264>
- Lu, Yunmei<sup>S</sup>, and Liying Luo. 2021. "Cohort Variation in U.S. Violent Crime Patterns from 1960 to 2014: An Age-Period-Cohort-Interaction Approach." *Journal of Quantitative Criminology* 37:1047-1081. <https://doi.org/10.1007/s10940-020-09477-3>
- Verdery, Ashton, Kira England<sup>S</sup>, Liying Luo, Katherine McLean, and Shannon Monnat. 2020. "Visualizing Age, Period, and Cohort Patterns of Substance Use in the U.S. Opioid Crisis." *Socius: Sociological Research for a Dynamic World*.  
<https://doi.org/10.1177/2378023120906944>
- Fan, Wen, and Liying Luo. 2020. "A Decomposition of Trends in the Infant Mortality Disadvantage Index in the United States: 1983-2010." *Demography* 57(3): 979-1005.  
<https://doi.org/10.1007/s13524-020-00878-4>
- Luo, Liying and James Hodges. 2019. "Constraints in Random Effects Age-Period-Cohort Models." *Sociological Methodology* 50(1): 276-317.  
<https://doi.org/10.1177/0081175020903348>

- Luo, Liying, and James Hodges. 2017. "Block Constraints in Age-Period-Cohort Method with Unequal-Width Intervals." *Sociological Methods & Research* 45 (4): 700-726.  
<https://doi.org/10.1177/0049124115585359>
- Luo, Liying, James Hodges, Christopher Winship, and Daniel Powers. 2016. "The Sensitivity of the Intrinsic Estimator to Coding Schemes: A Comment on Yang, Schulhofer-Wohl, Fu, and Land." *American Journal of Sociology* 122(3): 930-961.  
<https://doi.org/10.1086/689830>
- te Grotenhuis, Manfred, Ben Pelzer, Liying Luo, Alexander Schmidt-Catran. 2016. "Alternative Estimates and Predictions of Mortality Trends: A Comment on Masters, Hummer, Powers, Beck, Lin, and Finch." *Demography* 53 (4): 1245-1252.  
<https://doi.org/10.1007/s13524-016-0476-8>
- Warren, John Robert, Liying Luo, Andrew Halpern-Manners, James Raymo, and Alberto Palloni. 2015. "Do Different Methods for Modeling Age-Graded Trajectories Yield Consistent and Valid Results?" *American Journal of Sociology* 120 (6): 1809-1856.  
<https://doi.org/10.1086/681962>
- Luo, Liying. 2013. "Assessing Validity and Application Scope of the Intrinsic Estimator Approach to the Age-Period-Cohort Problem." *Demography* 50 (6): 1945-1967.  
<https://doi.org/10.1007/s13524-013-0243-z>
- Lead article accompanied with four commentaries and a reply
- Luo, Liying. 2013. (Reply) "Paradigm Shift in Age-Period-Cohort Analysis: A Response to Yang and Land, O'Brien, Held and Riebler, and Fienberg." *Demography* 50 (6): 1985-1988.  
<https://doi.org/10.1007/s13524-013-0263-8>

### **Non-Peer Reviewed Publications**

- Fienberg, Stephen, James Hodges, and Liying Luo. 2015. "Letter to the Editor: Comment on Review of *Age-Period-Cohort Analysis: New Models, Methods, and Empirical Applications* by Y. Yang and K.C. Land." *Journal of the American Statistical Association* 110 (509): 457.

### **Manuscripts in Progress**

- Luo, Liying, Jiahui Xu<sup>S</sup>, John Robert Warren, and Kenneth Langa. "Multigenerational Education Effects on Health Inequality" (Under review)
- Ryan-Claytor, Cayley<sup>S</sup>, and Liying Luo. "Trends in Dementia Risk in South Korea, 2006-2021" (Under review)
- Jeong, Hyeyun<sup>S</sup>, Jiahui Xu<sup>S</sup>, John Robert Warren, Liying Luo, and Eric Grodsky. "Intergenerational Occupational Mobility and Health in the United States" (Under review)
- England, Kira, Cayley Ryan-Claytor, Jiahui Xu, Joseph Guerriero, Min Kim, Liying Luo. "Uneven Steps to Equality: Quantifying Spatial and Temporal Variation in Resource-based and Residential Racial Inequalities in the U.S." (In progress)

- Luo, Liying, Liyun Liu<sup>S</sup>, and Chihua Li. "Sociodemographic Inequality and Trends in Dementia Risk in China, 2011-2020: A Decomposition Analysis" (In progress)
- Luo, Liying, Emma Zang, and Kira England<sup>S</sup>. "Increasing Concentration of Maternal Mortality among Unmarried Women in the United States, 1989-2017" (In progress)
- Liu, Liyun<sup>S</sup>, Kayla Kemp, Liying Luo, and David Baker. "Does Household Education Matter for Early Child Development among Less Educated, Rural, Extended Families?" (In progress)
- Lu, Yunmei and Liying Luo. "Examining the Unequal Decline in Race-specific Youth Offending: A Decomposition Analysis" (In progress)

### Invited Presentations

- 2024 "Reducing Educational Inequality in Health by Increasing Children's Education: A Two-Generation Upstream Approach." Sociology Seminar, The Chinese University of Hong Kong  
 "The Age-Period-Cohort-Interaction Model for Describing and Investigating Inter-cohort Deviations and Intra-cohort Life-course Dynamics." Chinese Academy of Social Sciences  
 "Reducing Educational Inequality in Health by Increasing Children's Education: A Two-Generation Upstream Approach." Social Sciences Colloquium, Hong Kong University  
 "For Whom Does Education Convey Health Benefits? A Two-Generation and Life-Course Approach." Department of Sociology, the University of Wisconsin.
- 2022 "Gendered Effects of Intergenerational Mobility." Center for Studies in Demography and Ecology, the University of Washington.  
 "Multigenerational Education Effect on Cognitive Impairment and Dementia Risk." Demography Seminar, the University of Wisconsin.  
 "Heterogeneous Effects of Social Mobility: An Improved Method and New Evidence." Department of Sociology, the University of Pennsylvania.
- 2019 "Age, Period, and Cohort Trends in Americans' Vocabulary Knowledge among Immigrants and Non-Immigrants." RC28 Opening Plenary Session, Princeton, NJ
- 2019 "Women's Labor Force Participation 1990-2018: An Age-Period-Cohort Analysis" Life Course Forum Plenary Address, Beijing, China

### Professional Service

- 2022- Review Panels, the National Institutes of Health
- 2016- Editorial Board, *Sociological Methods & Research*
- 2019-24 Editorial Board, *Sociological Methodology*
- 2019- Chair, Clifford Clogg Methods and Statistics Advisory Committee, Department of Sociology & Criminology, Pennsylvania State University
- 2021- Member, Institute for Computational and Data Sciences Coordinating Committee, Pennsylvania State University

- 2022 Career Awards Committee, ASA Methodology Section
- 2021 Chair, "Methodological Potpourri", ASA
- 2020 Organizer and Chair, "Methodological Innovations in the Analysis of Life Course Data", PAA  
Chair, "Family Context of Intergenerational Mobility", PAA
- 2015 Discussant, Session 228 "Missing Data and Bayesian Models in Demography", PAA
- 2014 Discussant, Session 137 "Causal Inference and Experimental Designs", PAA
- 2013- Occasional reviewer for *American Journal of Sociology*, *Demography*, *American Sociological Review*, *Population Studies*, *Social Forces*, *Sociology of Education*, *PLOS ONE*, *Sociological Perspectives*, *Quality and Quantity*
- 2014-15 Graduate Student Editorial Board, *Sociology of Education*, ASA
- 2009-10 Graduate Student Editorial Board, *Contexts*, ASA
- 2009-10 Coordinator, Global Discussion on Campus, University of Minnesota
- 2003-04 President, Student Union of Commonwealth, China Foreign Affairs University
- 2002 Director, Education Promotion Program, China Foreign Affairs University

### **Professional Affiliations**

Population Association of America  
International Sociological Association  
American Sociological Association  
Methodology Section, Population Section, Aging and the Life Course Section  
American Public Health Association

### **Courses Taught**

Multilevel Regression Models, Pennsylvania State University  
Intermediate Social Statistics, Pennsylvania State University  
Introduction to Sociological Research, University of Delaware