

# Casey F. Breen

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Leverhulme Centre for Demographic Science  
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🏠 [caseybreen.com](https://caseybreen.com)

## ACADEMIC POSITIONS

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2023– Senior Postdoctoral Fellow in Computational Social Science, University of Oxford  
Leverhulme Centre for Demographic Science  
Department of Sociology  
Non-stipendiary Research Fellow, Nuffield College

## EDUCATION

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2023 Ph.D., Demography, UC Berkeley  
Committee: Joshua R. Goldstein (chair), Dennis M. Feehan, Ayesha S. Mahmud, Christopher Muller

2021 M.A., Biostatistics, UC Berkeley

2019 M.A., Demography, UC Berkeley

2016 B.A., Economics (Mathematics minor), Pomona College

## RESEARCH AREAS

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Health and Mortality Disparities, Social Networks, Quantitative Social Science

## PUBLICATIONS

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2023 **Casey F. Breen**, Maria Osborne, Joshua R. Goldstein. “[CenSoc: Linked Administrative Mortality Records for Individual-level Research](#).” *Scientific Data*. 10(1):802. doi: 10.1038/s41597-023-02713-y. [[replication](#)]

2023 Joshua R. Goldstein, Maria Osborne, Serge Atherwood, and **Casey F. Breen**. “[Mortality Modeling of Partially Observed Cohorts Using Administrative Death Records](#).” *Population Research and Policy Review*. 42(3):36. doi: 10.1007/s11113-023-09785-z. [[open access](#)] [[replication](#)] [[R Package](#)]

2023 **Casey F. Breen**. “[Later-life Shifts in Ethnoracial Self-Identification: Evidence from Social Security Administrative Data](#).” *Population Research and Policy Review*. 42(1):10. doi: 10.1007/s11113-023-09764-4. [[open access](#)] [[replication](#)]

2022 **Casey F. Breen**, Ayesha S. Mahmud, and Dennis M. Feehan. “[Novel Estimates Reveal Subnational Heterogeneities in Disease-Relevant Contact Patterns in the United States](#).” *PLOS Computational Biology*. 18(12):e1010742. [[open access](#)] [[replication](#)]

2022 **Casey F. Breen** and Joshua R. Goldstein. 2022. “[Berkeley Unified Numident Mortality Database: Public Administrative Records for Individual-Level Mortality](#)”

- Research.” *Demographic Research*. Volume 47, Page 111-142. [[open access](#)] [[replication](#)]
- 2022 **Casey F. Breen**, Cormac Herley, and Elissa M. Redmiles. 2022. “[A Large-Scale Measurement of Cybercrime against Individuals](#).” Pp.1–41 in *ACM Conference on Human Factors in Computing Systems (CHI)*. New Orleans LA USA: ACM. [[replication](#)]

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## UNDER REVIEW

- Casey F. Breen**. “The Longevity Benefits of Homeownership: Evidence from Early 20th-Century U.S. Male Birth Cohorts.” (Revised and Resubmitted, *Demography*.) [[open access](#)]
- Casey F. Breen** and Dennis Feehan. “New Data Sources for Demographic Research.” (Revise and Resubmit, *Population and Development Review*.)
- Casey F. Breen** and Nathan Seltzer. “Sociodemographics Alone Cannot Predict Individual-level Longevity.” [[open access](#)]

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## IN PROGRESS

- Casey F. Breen**, Saeed Rahman, Christina Kay, Joeri Smits, Steve Ahuka, Dennis M. Feehan “Estimating Death Rates in Complex Humanitarian Emergencies Using the Network Survival Method.” [[Pre-registration](#)]
- Casey F. Breen**, Masoomali Fatehkia, Jiani Yan, Douglas Leasure, Ingmar Weber, and Ridhi Kashyap. “Mapping Subnational Gender Gaps in Internet and Mobile Adoption Using Social Media Data.”
- Casey F. Breen** and Dennis M. Feehan. “New Approaches to Collecting Data From a Respondent-Driven Sample.”
- Casey F. Breen**. “Black-White Mortality Crossover: New Evidence from Administrative Data.”
- Andrea Miranda-González, Katerine Perez, and **Casey F. Breen**. “Understanding the Hispanic Mortality Paradox: Variation by Country of Origin.”
- Joshua R. Goldstein, Guy Stecklov, and **Casey F. Breen**. “A Sibling Analysis of Longevity and African-American Names.”

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## TECHNICAL REPORTS

- 2022 **Casey F. Breen** and Maria Osborne. “An Assessment of CenSoc Match Quality.” [[open access](#)]

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## PRESENTATIONS

- 2024 “Estimating Death Rates in Complex Humanitarian Emergencies Using the Network Survival Method.” Measuring Adult Mortality Community of Practice Webinar, United Nations Statistical Commission. January 2024, Virtual.
- 2023 “Mapping Subnational Gender Gaps in Internet and Mobile Adoption Using Social Media Data.” Johns Hopkins Population Health Seminar Series. December 2023, Baltimore, Maryland.

“Computational Approaches to Estimating Key Demographic Quantities in Data-sparse Settings.” Oxford University, Leverhulme Centre for Demographic Science. December 2023, Oxford, United Kingdom.

“The Longevity Benefits of Homeownership.” Social Science and History Association Annual Conference. November 2023, Washington D.C.

“CenSoc: Public Linked Administrative Mortality Records for Individual-Level Research.” Social Science and History Association Annual Conference. November 2023, Washington D.C.

“Estimating Death Rates in Complex Humanitarian Emergencies Using the Network Survival Method.” Quetelet Conference. November 2023, Louvain-la-Neuve, Belgium.

“New Approaches to Collecting Data from a Respondent-Driven Sample.” Quetelet Conference. November 2023, Louvain-la-Neuve, Belgium.

“Mapping Subnational Gender Gaps in Internet and Mobile Adoption using Social Media Data.” Oxford Digital Gender Gap Workshop. October 2023, Oxford, United Kingdom.

“Estimating Death Rates in Complex Humanitarian Emergencies Using the Network Survival Method.” British Society for Population Studies Annual Conference. September 2023, Oxford, United Kingdom.

“New Approaches to Collecting Data From a Respondent-Driven Sample.” Oxford Hard-to-Reach Populations Conference. August 2023, Oxford, United Kingdom.

“Estimating Death Rates in Complex Humanitarian Emergencies Using the Network Survival Method.” Oxford Hard-to-Reach Populations Conference. August 2023, Oxford, United Kingdom.

“The Longevity Benefits of Homeownership.” IPUMS Data-Intensive Research Conference. July 2023, Minneapolis, Minnesota.

“The Unpredictability of Individual-level Longevity.” Population Association of America. April 2023, New Orleans, Louisiana.

“The Effect of Record Linkage Algorithms on Research Results.” Population Association of America. April 2023, New Orleans, Louisiana.

2022

“Berkeley Unified Numident Mortality Database: Public Administrative Records for Individual-level Mortality Research.” Social Science History Association. November 2022, Chicago, Illinois.

“The Longevity Benefits of Homeownership.” Department of Sociology, Florida State University. November 2022, Tallahassee, Florida.

“Using Machine Learning Algorithms to Predict Age of Death.” American Sociological Association. August 2022, Los Angeles, California.

“New Approaches to Collecting Data From a Respondent-Driven Sample.” American Sociological Association. August 2022, Los Angeles, California.

“A Large-Scale Study of Cybercrime Against Individuals.” The 2022 ACM Conference on Human Factors in Computing Systems (**CHI**). May 2022, New Orleans, Louisiana. [\[video\]](#)

“Mortality Consequences of Home Ownership.” Oral session at the Population Association of America. April 2022, Atlanta, Georgia.

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|      | “New Approaches to Collecting Data From a Respondent-Driven Sample.” Oral session at the Population Association of America. April 2022, Atlanta, Georgia.   |
| 2021 | <p>“Black-White Mortality Crossover: New Evidence from Linked Administrative Data.” IPUMS Data Intensive Research Conference. June 2021, virtual.</p> <p>“Estimating Subnational Contact Patterns using Multilevel Regression with Post-stratification.” Oral session at the Population Association of America. April 2021, virtual.</p> <p>“Black-White Mortality Crossover: New Evidence from Linked Administrative Data.” Poster session at the Population Association of America. April 2021, virtual.</p> <ul style="list-style-type: none"> <li>• Best Poster Award, Population Association of America</li> </ul> |
| 2020 | <p>“Shifting Racial Self-Identification for the Greatest Generation.” American Sociological Association. August 2020, virtual.</p> <p>“The CenSoc Project.” University of Toronto Data Workshop. July 2020, virtual.</p> <p>“Shifting Racial Self-Identification for the Greatest Generation.” UC Berkeley Record Linkage Conference. February 2020, Berkeley, CA.</p>  |

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## OPEN SOURCE SOFTWARE

- **gompertztrunc**: R package for computing mortality differentials under double truncation [[GitHub](#)] [[CRAN](#)]

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## PROFESSIONAL EXPERIENCE

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| 2023–      | <i>Consultant</i> , CenSoc Project (PI: Joshua Goldstein)                          |
| 2018–2023  | <i>Graduate Student Researcher</i> , CenSoc Project (PI: Joshua Goldstein)         |
| 2023       | <i>Consultant</i> , IMPACT Initiatives   |
| 2022       | <i>Research Scientist Intern</i> , Meta (Demography and Survey Science Team)       |
| 2020       | <i>Intern</i> , Microsoft Research (Mentors: Elissa M. Redmiles and Cormac Herley) |
| 2018, 2021 | <i>Consultant</i> , World Health Organization                                      |
| 2016–2018  | <i>Data Analyst</i> , Institute for Social Research and Data Innovation (IPUMS)    |

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## AWARDS

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| 2021 | Best Poster Award, Population Association of America                        |
| 2017 | Institute for Social Research and Data Innovation Outstanding Service Award |

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## TEACHING EXPERIENCE

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| 2023      | <i>Instructor</i> , Demographic Methods, University of Oxford               |
| 2023      | <i>Tutorial Lead</i> , Demography and Population, University of Oxford      |
| 2023      | <i>Instructor</i> , Introduction to R, University of Oxford                 |
| 2021      | <i>Graduate Student Instructor</i> , UC Berkeley Formal Demography Workshop |
| 2013–2015 | <i>Economics Tutor</i> , Pomona College Quantitative Resource Center        |

## PROFESSIONAL ACTIVITIES

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### REFEREE

*Demography, Population Studies, Demographic Research, Population Research and Policy Review, Journal of the International AIDS Society, Biometrical Journal, The Journal of Mathematical Sociology, The Journal for the Scientific Study of Religion, ACM conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO'23)*

### FIELD

Program Committee Chair, Family Demography (SSHA 2024)  
Chair, “Innovations in Data Infrastructure for Population Research” (PAA 2024)  
Discussant, “History and the Political Economy of Inequality” (PAA 2024)  
Discussant, “Methods and Mortality in Historical Demography” (SSHA 2023)  
Chair, “Measurement Issues in Historical Data ” (SSHA 2023)  
Discussant, “Novel Methods and Data on Aging and Related Applications” (PAA 2023)  
Discussant, “Network Methods” (PAA 2023)

### BERKELEY

Organizer, UC Berkeley Mortality Reading Group  
New student ambassador, UC Berkeley Demography Department

## RESEARCH MENTORING

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| POSITION                               | NAME             | CURRENT POSITION                                    |
|--|------------------|---|
| Research Assistant, DGG Project        | Jiaxuan Li       | MPhil Student, University of Oxford                 |
| Research Assistant, DGG Project        | Jiani Yan        | DPhil Student, University of Oxford                 |
| Research Assistant, DGG Project        | Xinyi Zhao       | DPhil Student, University of Oxford                 |
| Research Assistant, CenSoc Project     | Anna Wikle       | Biostats/Epi MPH Candidate, UC Berkeley             |
| Research Assistant, CenSoc Project     | Benjamin Shapiro | Demographic Researcher, IHME                        |
| Predoctoral Researcher, CenSoc Project | Katerine Perez   | Sociology Ph.D. Student, Columbia Univ.             |
| Cal-ADAR Fellow, UC Berkeley           | Ashley Quiterio  | Learning Sciences Ph.D. Student, Northwestern Univ. |

## LANGUAGE PROFICIENCY AND SKILLS

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- R (package development, Tidyverse), Python, SQL (Presto), ArcGIS,  $\text{\LaTeX}$ , Beamer, Qualtrics
- German (reading and oral comprehension high proficiency; intermediate speaker).

## REFERENCES

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### **Joshua R. Goldstein**

Chancellor's Professor of Demography  
Department of Demography  
University of California, Berkeley  
✉ [josh.goldstein@berkeley.edu](mailto:josh.goldstein@berkeley.edu)

### **Dennis M. Feehan**

Associate Professor of Demography  
Department of Demography  
Berkeley, CA 94720-1980  
✉ [feehan@berkeley.edu](mailto:feehan@berkeley.edu)

### **Sophia Rabe-Hesketh**

Professor of Biostatistics  
Department of Biostatistics  
University of California, Berkeley  
✉ [sophiarh@berkeley.edu](mailto:sophiarh@berkeley.edu)

### **Elissa M. Redmiles**

Assistant Professor  
Department of Computer Science  
Georgetown University  
✉ [elissa.redmiles@georgetown.edu](mailto:elissa.redmiles@georgetown.edu)