Curriculum Vitae

Andrew Gelman

May 2022

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Education

Harvard University, 1986–1990. M.A., statistics, 1987. Ph.D., statistics, 1990. Thesis: Topics in image reconstruction for emission tomography.

Massachusetts Institute of Technology, 1982–1986. S.B., mathematics, 1985. S.B., physics, 1986.

Positions

Higgins Professor of Statistics, Columbia University, 2017–present.

Professor, Department of Political Science, Columbia University, 2002–present.

Professor, Department of Statistics, Columbia University, 2000–present.

Visiting Professor, Department of Statistics, Harvard University, 2008, 2012

Alliance Visiting Professor, Sciences Po, Paris, 2009–2010.

Founding Director, Applied Statistics Center, Columbia University, 2006–present.

Faculty Fellow, Institute for Social and Economic Research and Policy, Columbia University, 1999–present.

Founding Director, Quantitative Methods in Social Sciences program, Columbia University, 1998–2002.

Associate Professor, Department of Statistics, Columbia University, 1996–2000.

Visiting Assistant Professor, Department of Statistics, University of Chicago, 1994.

Assistant Professor, Department of Statistics, University of California, Berkeley, 1990–1996.

Technical Associate, AT&T Bell Laboratories, summers, 1985–1986.

Books

2020 *Regression and Other Stories*. Cambridge University Press. (Andrew Gelman, Jennifer Hill, and Aki Vehtari)

2017 *Teaching Statistics: A Bag of Tricks*, second edition. Oxford University Press. (Andrew Gelman and Deborah Nolan).

2013 *Bayesian Data Analysis*, third edition. London: CRC Press. (Andrew Gelman, John B. Carlin, Hal S. Stern, David B. Dunson, Aki Vehtari, Donald B. Rubin).

2008 *Red State, Blue State, Rich State, Poor State: Why Americans Vote the Way They Do*. Princeton University Press. (Andrew Gelman, David Park, Boris Shor, Joseph Bafumi, and Jeronimo Cortina). Expanded edition, 2009.

2007 *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge University Press. (Andrew Gelman and Jennifer Hill).

2003 *Bayesian Data Analysis*, second edition. London: CRC Press. (Andrew Gelman, John B. Carlin, Hal S. Stern, and Donald B. Rubin).

2002 *Teaching Statistics: A Bag of Tricks*. Oxford University Press. (Andrew Gelman and Deborah Nolan).

1995 *Bayesian Data Analysis*. London: Chapman and Hall. (Andrew Gelman, John B. Carlin, Hal S. Stern, and Donald B. Rubin).

Books edited

2011 *Handbook of Markov Chain Monte Carlo*. London: CRC Press. (ed. Stephen Brooks, Andrew Gelman, Galin Jones, and Xiao-Li Meng)

2009 *A Quantitative Tour of the Social Sciences*. Cambridge University Press. (ed. Andrew Gelman and Jeronimo Cortina)

2004 *Applied Bayesian Modeling and Causal Inference from Incomplete-Data Perspectives*. New York: Wiley. (ed. Andrew Gelman and Xiao-Li Meng)

Articles

2022 Selecting on statistical significance and practical significance is wrong. *Journal of Information Technology*. (Blakeley McShane and Andrew Gelman)

2022 How should scientific journals handle "Big if true" submissions? *Chance*. (Andrew Gelman)

2022 No reason to expect large and consistent effects of nudge interventions. *Proceedings of the National Academy of Sciences*. (Barnabás Szászi, Anthony C. Higney, Aaron B. Charlton, Andrew Gelman, Ignazio Ziano, Balacs Aczel, Daniel G. Goldstein, David S. Yeager, and Elizabeth Tipton)

2022 The development of Bayesian statistics. *Journal of the Indian Institute of Science*. (Andrew Gelman)

2022 "Two truths and a lie" as a class-participation activity. *American Statistician*. (Andrew Gelman)

2022 Criticism as asynchronous collaboration: An example from social science research. *Stat*. (Andrew Gelman)

2022 Beyond vaccination rates: A synthetic random proxy metric of total SARS-CoV-2 immunity seroprevalence in the community. *Epidemiology*. (Yajuan Si, Leonard Covello, Siquan Wang, Theodore Covello, and Andrew Gelman)

2022 Stacking for non-mixing Bayesian computations: The curse and blessing of multimodal posteriors. *Journal of Machine Learning Research*. (Yuling Yao, Aki Vehtari, and Andrew Gelman)

2022 Inference from non-random samples using Bayesian machine learning. *Journal of Survey Statistics and Methodology*. (Yutao Liu, Andrew Gelman, and Qixuan Chen)

2022 The Great Society, Reagan's revolution, and generations of presidential voting. *American Journal of Political Science*. (Yair Ghitza, Andrew Gelman, and Jonathan Auerbach)

2022 A proposal for informative default priors scaled by the standard error of estimates. *American Statistician* **76**, 1–9. (Erik van Zwet and Andrew Gelman)

2021 Reconciling evaluations of the Millennium Villages Project. *Statistics and Public Policy* **9**, 1–7. (Andrew Gelman, Shira Mitchell, Jeffrey D. Sachs, and Sonia Sachs)

2021 Ethical requirements of a research assistant who is concerned about the behavior of a supervisor. *Chance* **34** (4), 21–22. (Andrew Gelman)

2021 Designing for interactive exploratory data analysis requires theories of graphical inference (with discussion and rejoinder). *Harvard Data Science Review* **3** (3). (Jessica Hullman and Andrew Gelman)

2021 Failure and success in political polling and election forecasting. *Statistics and Public Policy*. (Andrew Gelman)

2021 Bayesian hierarchical stacking: Some models are (somewhere) useful. *Bayesian Analysis*. (Yuling Yao, Gregor Pirš, Aki Vehtari, and Andrew Gelman)

2021 A fast linear regression via SVD and marginalization. *Computational Statistics*. (Philip Greengard, Andrew Gelman, and Aki Vehtari)

2021 How to embrace variation and accept uncertainty in linguistic and psycholinguistic data analysis. *Linguistics*. (Shravan Vasishth and Andrew Gelman)

2021 Accounting for uncertainty during a pandemic. *Patterns*. (Jon Zelner, Julien Riou, Ruth Etzioni, and Andrew Gelman)

2021 Research on registered report research. *Nature Human Behaviour* **5**, 978–979. (Megan Higgs and Andrew Gelman)

2021 What are the most important statistical ideas of the past 50 years? *Journal of the American Statistical Association*. (Andrew Gelman and Aki Vehtari)

2021 A simple explanation for declining temperature sensitivity with warming. *Global Change Biology*. (E. M. Wolkovich, J. L. Auerbach, C. J. Chamberlain, D. M. Buonaiuto, A. K. Ettinger, I. Morales-Castilla, and A. Gelman)

2021 Routine hospital-based SARS-CoV-2 testing outperforms state-based data in predicting clinical burden. *Epidemiology.* (Len Covello, Andrew Gelman, Yajuan Si, and Siquan Wang)

2021 Why did it take so many decades for the behavioral sciences to develop a sense of crisis around methodology and replication? *Journal of Methods and Measurement in the Social Sciences.* (Andrew Gelman and Simine Vazire)

2021 Mismatch between scientific theories and statistical models. *Behavioral and Brain Sciences.* (Andrew Gelman)

2021 Slamming the sham: A Bayesian model for adaptive adjustment with noisy control data. *Statistics in Medicine.* (Andrew Gelman and Matthijs Vákár)

2021 Social penumbras predict political attitudes. *Proceedings of the National Academy of Sciences* **118** (6), e2019375118. (Andrew Gelman and Yotam Margalit)

2021 Reflections on Lakatos's "Proofs and Refutations." *American Mathematical Monthly* **128**, 191–192. (Andrew Gelman)

2021 Holes in Bayesian statistics. *Journal of Physics G: Nuclear and Particle Physics* **48**, 014002. (Andrew Gelman and Yuling Yao)

2021 Reflections on Breiman's Two Cultures of Statistical Modeling. *Observational Studies.* (Andrew Gelman)

2021 Bayesian statistics and modelling. *Nature Reviews Methods Primers* **1**, 1. (Rens van de Schoot, Sarah Depaoli, Ruth King, Bianca Kramer, Kaspar Märtens, Mahlet G. Tadesse, Marina Vannucci, Andrew Gelman, Duco Veen, Joukje Willemsen, and Christopher Yau)

2021 Community prevalence of SARS-CoV-2 in England: Results from the ONS Coronavirus Infection Survey Pilot. *Lancet Public Health.* (Koen B. Pouwels, Thomas House, Emma Pritchard, Julie V. Robotham, Paul J. Birrell, Andrew Gelman, Karina-Doris Vihta, Nikola Bowers, Ian Boreham, Heledd Thomas, James Lewis, Iain Bell, John I. Bell, John N. Newton, Jeremy Farrar, Ian Diamond, Pete Benton, Ann Sarah Walker, and the COVID-19 Infection Survey Team)

2021 Improving multilevel regression and poststratification with structured priors. *Bayesian Analysis.* (Yuxiang Gao, Lauren Kennedy, Daniel Simpson, and Andrew Gelman)

2021 Know your population and know your model: Using model-based regression and poststratification to generalize findings beyond the observed sample. *Psychological Methods.* (Lauren Kennedy and Andrew Gelman)

2021 Rank-normalization, folding, and localization: An improved R-hat for assessing convergence of MCMC. *Bayesian Analysis* **16**, 667–718. (Aki Vehtari, Andrew Gelman, Daniel Simpson, Bob Carpenter, and Paul-Christian Bürkner)

2020 Information, incentives, and goals in election forecasts. *Judgment and Decision Making* **15**, 863–880. (Andrew Gelman, Jessica Hullman, Christopher Wlezien, and George Elliott Morris)

2020 An updated dynamic Bayesian forecasting model for the 2020 election. *Harvard Data Science Review* **2** (4). (Merlin Heidemanns, Andrew Gelman, and Elliott Morris)

2020 Bayesian hierarchical weighting adjustment and survey inference. *Survey Methodology* **46**, 181–214. (Yajuan Si, Rob Trangucci, Jonah Gabry, and Andrew Gelman)

2020 Bayesian analysis of tests with unknown specificity and sensitivity. *Journal of the Royal Statistical Society C* **69**, 1269–1284. (Andrew Gelman and Bob Carpenter)

2020 Fallout of lead over Paris from the 2019 Notre-Dame cathedral fire. *GeoHealth* **4** (8). (Alexander van Geen, Yuling Yao, Tyler Ellis, and Andrew Gelman)

2020 Evidence vs. truth. *Chance* **33** (3), 58–60. (Andrew Gelman)

2020 Using Bayesian analysis to account for uncertainty and adjust for bias in coronavirus sampling. *International Society for Bayesian Analysis Bulletin* **27** (2), 11–12. (Andrew Gelman and Bob Carpenter)

2020 Data visualization as narrative. *Frieze* **213**. (Andrew Gelman and Helen DeWitt)

2020 Lessons learned and remaining challenges for online seminars and conferences. *Amstat News*, 1 July. (Lauren Kennedy, Guillaume Basse, Andrew Gelman, Guido Imbens, Yajuan Si, Dominik Rothenhausler, and Jan Spiess)

2020 Expectation propagation as a way of life: A framework for Bayesian inference on partitioned data. *Journal of Machine Learning Research* **21**, 1–53. (Aki Vehtari, Andrew Gelman, Tuomas Sivula, Pasi Jylanki, Dustin Tran, Swupnil Sahai, Paul Blomstedt, John P. Cunningham, David Schiminovich, and Christian P. Robert)

2020 Laplace's theories of cognitive illusions, heuristics, and biases (with discussion and rejoinder). *Statistical Science* **35**, 159–177. (Joshua B. Miller and Andrew Gelman)

2020 Statistics as squid ink: How prominent researchers can get away with misrepresenting data. *Chance* **33** (2), 25–27. (Andrew Gelman and Alexey Guzey)

2020 Voter registration databases and MRP: Toward the use of large scale databases in public opinion research. *Political Analysis* **28**, 507–531. (Yair Ghitza and Andrew Gelman)

2020 A consensus-based transparency checklist. *Nature Human Behaviour* **4**, 561–563. (Balazs Aczel, Barnabas Szaszi, Alexandra Sarafoglou, Zoltan Kekecs, Šimon Kucharský, Daniel Benjamin, Christopher Chambers, Agneta Fisher, Andrew Gelman, et al.)

2020 Type M error might explain Weisburd's Paradox. *Journal of Quantitative Criminology* **36**, 295–304. (Andrew Gelman, Torbjørn Skardhamar, and Mikko Aaltonen)

2019 Are confidence intervals better termed "uncertainty intervals"? *British Medical Journal* **366**, l5381. (Andrew Gelman and Sander Greenland)

2019 When we make recommendations for scientific practice, we are (at best) acting as social scientists. *European Journal of Clinical Investigation* **49** (10), e13165. (Andrew Gelman)

2019 Bayesian hierarchical spatial models: Implementing the Besag York Mollié model in Stan. *Spatial and Spatio-temporal Epidemiology* **31**, 100301. (Mitzi Morris, Katherine Wheeler-Martin, Daniel Simpson, Stephen Mooney, Andrew Gelman, and Charles DiMaggio)

2019 The experiment is just as important as the likelihood in understanding the prior: A cautionary note on robust cognitive modeling. *Computational Brain and Behavior* **2**, 210–217. (Lauren Kennedy, Daniel Simpson, and Andrew Gelman)

2019 Childhood obesity intervention studies: A narrative review and guide for investigators, authors, editors, reviewers, journalists, and readers to guard against exaggerated effectiveness claims. *Obesity Reviews* **20**, 1523–1541. (Andrew Brown, Douglas Altman, Tom Baranowski, J. Martin Bland, John Dawson, Nikhil Dhurandhar, Shima Dowla, Kevin Fontaine, Andrew

Gelman, Steven Heymsfield, Wasantha Jayawardene, Scott Keith, Theodore Kyle, Eric Loken, J. Michael Oakes, June Stevens, Diana Thomas, and David Allison)

2019 The implementation of randomization requires corrected analyses. Comment on "Comprehensive nutritional and dietary intervention for autism spectrum disorder—A randomized, controlled 12-month trial." *Nutrients* **11**, 1126. (Colby J. Vorland, Andrew W. Brown, Stephanie L. Dickinson, Andrew Gelman, and David B. Allison)

2019 Objective Randomised Blinded Investigation With Optimal Medical Therapy of Angioplasty in Stable Angina (ORBITA) and coronary stents: A case study in the analysis and reporting of clinical trials. *American Heart Journal* **214**, 54–59. (Andrew Gelman, John Carlin, and Brahmajee Nallamothu)

2019 The principles of uncertainty. Review of "Do Dice Play God," by Ian Stewart. *Nature* **569**, 628–629. (Andrew Gelman)

2019 Post-hoc power using observed estimate of effect size is too noisy to be useful. *Annals of Surgery* **270**, e64. (Andrew Gelman)

2019 Multiple perspectives on inference for two simple statistical scenarios. *American Statistician* **73** (S1), 328–339. (Noah N. N. van Dongen, Johnny B. van Doorn, Quentin F. Gronau, Don van Ravenzwaaij, Rink Hoekstra, Matthias N. Haucke, Daniel Lakens, Christian Hennig, Richard D. Morey, Saskia Homer, Andrew Gelman, Jan Sprenger, and Eric-Jan Wagenmakers)

2019 Abandon statistical significance. *American Statistician* **73** (S1), 235–245. (Blakeley B. McShane, David Gal, Andrew Gelman, Christian Robert, and Jennifer L. Tackett)

2019 Large scale replication projects in contemporary psychological research. *American Statistician* **73** (S1), 99–105. (Jennifer L. Tackett, Blakeley B. McShane, Ulf Bockenholt, and Andrew Gelman)

2019 Don't calculate post-hoc power using observed estimate of effect size. *Annals of Surgery* **269**, e9–e10. (Andrew Gelman)

2019 Limitations of "Limitations of Bayesian leave-one-out cross-validation for model selection." *Computational Brain and Behavior* **2**, 22–27. (Aki Vehtari, Daniel P. Simpson, Yuling Yao, and Andrew Gelman)

2019 Why high-order polynomials should not be used in regression discontinuity designs. *Journal of Business and Economic Statistics* **37**, 447–456. (Andrew Gelman and Guido Imbens)

2019 Visualization in Bayesian workflow (with discussion and rejoinder). *Journal of the Royal Statistical Society A* **182**, 389–402. (Jonah Gabry, Daniel Simpson, Aki Vehtari, Michael Betancourt, and Andrew Gelman)

2018 R-squared for Bayesian regression models. *American Statistician* **73**, 307–309. (Andrew Gelman, Ben Goodrich, Jonah Gabry, and Aki Vehtari)

2018 The statistical significance filter leads to overconfident expectations of replicability. *Journal of Memory and Language* **103**, 151–175. (Shravan Vasishth, Daniela Mertzen, Lena A. Jager, and Andrew Gelman)

2018 Do researchers anchor their beliefs on the outcome of an initial study? Testing the time-reversal heuristic. *Experimental Psychology* **65**, 158–169. (Anja Ernst, Rink Hoekstra, Eric-Jan Wagenmakers, Andrew Gelman, and Don van Ravenzwaaij)

2018 Ethics in statistical practice and communication: Five recommendations. *Significance* **15** (5), 40–43. (Andrew Gelman)

2018 Bayesian inference under cluster sampling with probability proportional to size. *Statistics in Medicine* **37**, 3849–3868. (Susanna Makela, Yajuan Si, and Andrew Gelman)

2018 Yes, but did it work?: Evaluating variational inference. *Proceedings of Machine Learning Research* **80**, 5581–5590. (Yuling Yao, Aki Vehtari, Daniel Simpson, and Andrew Gelman)

2018 Gaydar and the fallacy of decontextualized measurement. *Sociological Science* **5**, 270–280. (Andrew Gelman, Greggor Mattson, and Daniel P. Simpson)

2018 Global shifts in the phenological synchrony of species interactions over recent decades. *Proceedings of the National Academy of Sciences* **115** (20), 5211–5216. (Heather M. Kharouba, Johan Ehrlen, Andrew Gelman, Kjell Bolmgren, Jenica M. Allen, Steve E. Travers, and Elizabeth M. Wolkovich)

2018 The Millennium Villages Project: A retrospective, observational, endline evaluation. *Lancet Global Health* **6** (5), e500–e513. (Shira Mitchell, Andrew Gelman, Rebecca Ross, Joyce Chen, Sehrish Bari, Uyen Kim Huynh, Matthew W. Harris, Sonia Ehrlich Sachs, Elizabeth A. Stuart, Avi Feller, Susanna Makela, Alan M. Zaslavsky, Lucy McClellan, Seth Ohemeng-Dapaah, Patricia Namakula, Cheryl A. Palm, and Jeffrey D. Sachs)

2018 Disentangling bias and variance in election polls. *Journal of the American Statistical Association* **113**, 607–614. (Houshmand Shirani-Mehr, David Rothschild, Sharad Goel, and Andrew Gelman)

2018 Don't characterize replications as successes or failures. Discussion of "Making replication mainstream," by Rolf A. Zwaan et al. *Behavioral and Brain Sciences* **41**, e128. (Andrew Gelman)

2018 Using stacking to average Bayesian predictive distributions (with discussion and rejoinder). *Bayesian Analysis* **13**, 917–1003. (Yuling Yao, Aki Vehtari, Daniel Simpson, and Andrew Gelman)

2018 Benefits and limitations of randomized controlled trials. Discussion of "Understanding and misunderstanding randomized controlled trials," by Angus Deaton and Nancy Cartwright. *Social Science & Medicine* **210**, 48–49. (Andrew Gelman)

2018 The failure of null hypothesis significance testing when studying incremental changes, and what to do about it. *Personality and Social Psychology Bulletin* **44**, 16–23. (Andrew Gelman)

2018 Bayesian aggregation of average data: An application in drug development. *Annals of Applied Statistics* **12**, 1583–1604. (Sebastian Weber, Andrew Gelman, Daniel Lee, Michael Betancourt, Aki Vehtari, and Amy Racine-Poon)

2018 How to think scientifically about scientists' proposals for fixing science. *Socius* **4**, 1–2. (Andrew Gelman)

2018 Learning from and responding to statistical criticism. *Observational Studies* **4**, 32–33. (Andrew Gelman)

2018 Donald Rubin. In *Encyclopedia of Social Research Methods*, ed. Paul Atkinson, Sara Delamont, Melissa Hardy, and Malcolm Williams. Thousand Oaks, Calif.: Sage Publications. (Andrew Gelman)

2017 The prior can often only be understood in the context of the likelihood. *Entropy* **19**, 555. (Andrew Gelman, Daniel Simpson, and Michael Betancourt)

2017 Practical Bayesian model evaluation using leave-one-out cross-validation and WAIC. *Statistics and Computing* **27**, 1413–1432. (Aki Vehtari, Andrew Gelman, and Jonah Gabry)

2017 19 things we learned from the 2016 election (with discussion and rejoinder). *Statistics and Public Policy* **4** (1), 1–10. (Andrew Gelman and Julia Azari)

2017 Exploring the relationships between USMLE performance and disciplinary action in practice: A validity study of score inferences from a licensure examination. *Academic Medicine* **92**, 1780–1785. (Monica M. Cuddy, Aaron Young, Andrew Gelman, David B. Swanson, David A. Johnson, Gerard F. Dillon, and Brian E. Clauser)

2017 Some natural solutions to the p-value communication problem—and why they won't work. *Journal of the American Statistical Association* **112**, 899–901. (Andrew Gelman and John Carlin)

2017 Beyond subjective and objective in statistics (with discussion and rejoinder). *Journal of the Royal Statistical Society A* **180**, 967–1033. (Andrew Gelman and Christian Hennig)

2017 Measurement error and the replication crisis. *Science* **355**, 584–585. (Eric Loken and Andrew Gelman)

2017 Honesty and transparency are not enough. *Chance* **30** (1), 37–39. (Andrew Gelman)

2017 Stan: A probabilistic programming language. *Journal of Statistical Software* **76** (1). (Bob Carpenter, Andrew Gelman, Matt Hoffman, Daniel Lee, Ben Goodrich, Michael Betancourt, Marcus Brubaker, Jiqiang Guo, Peter Li, and Allen Riddell)

2017 Consensus Monte Carlo using expectation propagation. *Brazilian Journal of Probability and Statistics* **31**, 692–696. (Andrew Gelman and Aki Vehtari)

2017 The 2008 election: A preregistered replication analysis. *Statistics and Public Policy* **4** (1), 1–8. (Rayleigh Lei, Andrew Gelman, and Yair Ghitza)

2017 The statistical crisis in science: How is it relevant to clinical neuropsychology? *Clinical Neuropsychologist* **31**, 1000–1014. (Andrew Gelman and Hilde Geurts)

2017 Automatic differentiation variational inference. *Journal of Machine Learning Research* **18**, 1–45. (Alp Kucukelbir, Dustin Tran, Rajesh Ranganath, Andrew Gelman, and David M. Blei)

2017 Learning about networks using sampling. *Journal of Survey Statistics and Methodology* **5**, 22–28. (Andrew Gelman)

2017 Fitting Bayesian item response models in Stata and Stan. *Stata Journal* **17**, 343–357. (Robert Grant, Daniel Furr, Bob Carpenter, and Andrew Gelman)

2016 Questionable association between front boarding and air rage. *Proceedings of the National Academy of Sciences* **113**, E7348. (Marcus Crede, Andrew Gelman, and Carol Nickerson)

2016 Age-aggregation bias in mortality trends. *Proceedings of the National Academy of Sciences* **113**, E816–E817. (Andrew Gelman and Jonathan Auerbach)

2016 A Bayesian bird's eye view of 'Replications of important results in social pscyhology.' *Royal Society Open Science* 4: 160426. (Maarten Marsman, Felix Schoonbrodt, Richard Morey, Yuling Yao, Andrew Gelman, and Eric-Jan Wagenmakers)

2016 Commentary on "Crisis in science? Or Crisis in statistics! Mixed messages in statistics with impact on science," by Donald A. S. Fraser and Nancy M. Reid. *Journal of Statistical Research* **48–50**, 11–12. (Andrew Gelman)

2016 High-frequency polling with non-representative data. In *Political Communication in Real Time: Theoretical and Applied Research Approaches*, 89–105. (Andrew Gelman, Sharad Goel, David Rothschild, and Wei Wang)

2016 Increasing transparency through a multiverse analysis. *Perspectives on Psychological Science* **11**, 702–712. (Sara Steegen, Francis Tuerlinckx, Andrew Gelman, and Wolf Vanpaemel)

2016 The problems with p-values are not just with p-values. *American Statistician* **70**. (Andrew Gelman)

2016 Will public opinion about inequality be packaged into neatly partisan positions? *Pathways*, Winter, 27–32. (Andrew Gelman and Leslie McCall)

2016 The mythical swing voter. *Quarterly Journal of Political Science* **11**, 103–130. (Andrew Gelman, Sharad Goel, Douglas Rivers, and David Rothschild)

2016 Graphical visualization of polling results. In *Oxford Handbook on Polling and Polling Methods*, ed. Lonna Atkeson and Michael Alvarez. (Susanna Makela, Yajuan Si, and Andrew Gelman)

2015 Automatic variational inference in Stan. In *Advances in Neural Information Processing Systems* ed. C. Cortes, N. Lawrence, D. Lee, M. Sugiyama, and R. Garnett, 568–576. (Alp Kucukelbir, Rajesh Ranganath, Andrew Gelman, and David Blei)

2015 A model-based approach to climate reconstruction using tree-ring data. *Journal of the American Statistical Association* **111**, 93–106. (Matthew Schofield, Richard Barker, Andrew Gelman, Edward Cook, and Keith Briffa)

2015 The state of the art in causal inference: Some changes since 1972. *Observational Studies* **1**, 182–183. (Andrew Gelman)

2015 Incorporating the sampling design in weighting adjustments for panel attrition. *Statistics in Medicine* **34**, 3637–3647. (Qixuan Chen, Andrew Gelman, Melissa Tracy, Fran H. Norris, and Sandro Galea)

2015 Stan: A probabilistic programming language for Bayesian inference and optimization. *Journal of Educational and Behavioral Statistics* **40**, 530–543. (Andrew Gelman, Daniel Lee, and Jiqiang Guo)

2015 Moving forward in statistics education while avoiding overconfidence. Discussion of "Mere Renovation is Too Little Too Late: It's Time to Rebuild the Undergraduate Curriculum from the Ground Up," by George Cobb. *American Statistician* **69**. (Andrew Gelman and Eric Loken)

2015 Political attitudes in social environments. Discussion of "Political diversity will improve social psychological science," by Jose Duarte et al. *Behavioral and Brain Sciences* **38**, 26–27. (Neil Gross and Andrew Gelman)

2015 Simulation-efficient shortest probability intervals. *Statistics and Computing* **25**, 809–819. (Ying Liu, Andrew Gelman, and Tian Zheng)

2015 Statistics and the crisis of scientific replication. *Significance* **12** (3), 39–41. (Andrew Gelman)

2015 How is ethics like logistic regression? Ethics decisions, like statistical inferences, are informative only if they're not too easy or too hard. *Chance* **28** (2), 31–33. (Andrew Gelman and David Madigan)

2015 Statistics and research integrity. *European Science Editing* **41** (1), 13–14. (Andrew Gelman)

2015 Regression: What's it all about? Review of *Bayesian and Frequentist Regression Methods*, by Jon Wakefield. *Statistics in Medicine*. (Andrew Gelman)

2015 Evidence on the deleterious impact of sustained use of polynomial regression on causal inference. *Research and Politics* **2**, 1–7. (Andrew Gelman and Adam Zelizer)

2015 Bayesian nonparametric weighted sampling inference. *Bayesian Analysis* **10**, 605–625.. (Yajuan Si, Natesh Pillai, and Andrew Gelman)

2015 Centralized analysis of local data, with dollars and lives on the line: Lessons from the home radon experience. In *Data Science for Politics, Policy and Government*, ed. R. Michael Alvarez. Cambridge University Press. (Phillip N. Price and Andrew Gelman)

2015 American democracy and its critics. Review of *American Democracy*, by Andrew Perrin. *American Journal of Sociology* **120**, 1562–1564. (Andrew Gelman)

2015 Disagreements about the strength of evidence. *Chance* **28**, 55–59. (Andrew Gelman)

2015 The connection between varying treatment effects and the crisis of unreplicable research: A Bayesian perspective. *Journal of Management* **41**, 632–643. (Andrew Gelman)

2015 Forecasting elections with non-representative polls. *International Journal of Forecasting* **31**, 980–991. (Wei Wang, David Rothschild, Sharad Goel, and Andrew Gelman)

2015 Hierarchical models for causal effects. In *Emerging Trends in the Social and Behavioral Sciences*, ed. Robert Scott and Stephen Kosslyn. (Avi Feller and Andrew Gelman)

2015 Hierarchical models for estimating state and demographic trends in U.S. death penalty public opinion. *Journal of the Royal Statistical Society A* **178**, 1–28. (Kenneth Shirley and Andrew Gelman)

2015 Difficulty of selecting among multilevel models using predictive accuracy. *Statistics and Its Interface* **8** (2), 153–160.

2014 A world without statistics. *Significance* **11** (4), 47. (Andrew Gelman)

2014 The statistical crisis in science. *American Scientist* **102**, 460–465. (Andrew Gelman and Eric Loken)

2014 Beyond power calculations: Assessing Type S (sign) and Type M (magnitude) errors. *Perspectives on Psychological Science* **9**, 641–651. (Andrew Gelman and John Carlin)

2014 Statistical graphics for survey weights. *Revista Colombiana de Estadistica* **37**, 285–295. (Susanna Makela, Yajuan Si, and Andrew Gelman)

2014 Weakly informative prior for point estimation of covariance matrices in hierarchical models. *Journal of Educational and Behavioral Statistics* **40**, 136–157. (Yeojin Chung, Andrew Gelman, Sophia Rabe-Hesketh, Jingchen Liu, and Vincent Dorie)

2014 Stop and frisk: What's the problem? *Criminal Law and Criminal Justice Books*. (Andrew Gelman)

2014 "How many zombies do you know?": Using indirect survey methods to measure alien attacks and outbreaks of the undead. In *Writing Today*, third edition, ed. Richard Johnson-Sheehan and Charles Paine. (Andrew Gelman)

2014 Revised evidence for statistical standards. *Proceedings of the National Academy of Sciences* **111**, E1933. (Andrew Gelman and Christian Robert)

2014 Bootstrap averaging: Examples where it works and where it doesn't work. *Journal of the American Statistical Association* **109**, 1015–1016. (Andrew Gelman and Aki Vehtari)

2014 How do we choose our default methods? In the Committee of Presidents of Statistical Societies (COPSS) 50th anniversary volume. (Andrew Gelman)

2014 The Commissar for Traffic presents the latest Five-Year Plan. *Chance* **27** (2), 58–60. (Andrew Gelman and Phillip N. Price)

2014 When do stories work? Evidence and illustration in the social sciences. *Sociological Methods and Research* **43**, 547–570. (Andrew Gelman and Thomas Basboll)

2014 Multiple imputation for continuous and categorical data: Comparing joint and conditional approaches. *Political Analysis* **22**, 497–519. (Jonathan Kropko, Ben Goodrich, Andrew Gelman, and Jennifer Hill)

2014 Hierarchical models for causal effects. In *Emerging Trends in the Social and Behavioral Sciences*, ed. Robert Scott and Stephen Kosslyn. (Avi Feller and Andrew Gelman)

2014 The AAA tranche of subprime science. *Chance* **27** (1), 51–56. (Andrew Gelman and Eric Loken)

2014 The twentieth-century reversal: How did the Republican states switch to the Democrats and vice versa? *Statistics and Public Policy* **1**, 1–5. (Andrew Gelman)

2014 On the stationary distribution of iterative imputations. *Biometrika* **101**, 155–173. (Jingchen Liu, Andrew Gelman, Jennifer Hill, Yu-Sung Su, and Jonathan Kropko)

2014 How Bayesian analysis cracked the red-state, blue-state problem. *Statistical Science* **29**, 26–35. (Andrew Gelman)

2014 Understanding predictive information criteria for Bayesian models. *Statistics and Computing* **24**, 997–1016. (Andrew Gelman, Jessica Hwang, and Aki Vehtari)

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2000 Diagnostic checks for discrete-data regression models using posterior predictive simulations. *Applied Statistics* **49**, 247–268. (Andrew Gelman, Yuri Goegebeur, Francis Tuerlinckx, and Iven Van Mechelen)

2000 Some class-participation demonstrations for introductory probability and statistics. *Journal of Educational and Behavioral Statistics*. **25**, 84–100. (Andrew Gelman and Mark Glickman)

1999 Analysis of local decisions using hierarchical modeling, applied to home radon measurement and remediation (with disussion). *Statistical Science* **14**, 305–337. (Chia-Yu Lin, Andrew Gelman, Phillip N. Price, and David H. Krantz)

1999 Optimal design for a study of butadiene toxicokinetics in humans. *Toxicological Sciences* **49**, 213–224. (Frederic Y. Bois, Thomas J. Smith, Andrew Gelman, Ho-Yuan Chang, and Andrew E. Smith)

1999 Evaluating and using statistical methods in the social sciences. Discussion of "A critique of the Bayesian information criterion," by D. Weakliem. *Sociological Methods and Research* **27**, 403–410. (Andrew Gelman and Donald B. Rubin)

1999 All maps of parameter estimates are misleading. *Statistics in Medicine* **18**, 3221–3234. (Andrew Gelman and Phillip N. Price)

1998 Some issues in monitoring convergence of iterative simulations. *Computing Science and Statistics*. (Stephen Brooks and Andrew Gelman)

1998 Improving upon probability weighting for household size. *Public Opinion Quarterly* **62**, 398–404. (Andrew Gelman and Thomas C. Little)

1998 Generalizing the probability matrix decomposition model: An example of Bayesian model checking and model expansion. In *Assumptions, Robustness, and Estimation Methods in Multivariate Modeling*, ed. J. Hox and E. D. de Leeuw, 1–19. (Michel Meulders, Andrew Gelman, Iven Van Mechelen, and Paul De Boeck)

1998 Simulating normalizing constants: from importance sampling to bridge sampling to path sampling. *Statistical Science* **13**, 163–185. (Andrew Gelman and Xiao-Li Meng)

1998 General methods for monitoring convergence of iterative simulations. *Journal of Computational and Graphical Statistics* **7**, 434–455. (Stephen Brooks and Andrew Gelman)

1998 Modeling differential nonresponse in sample surveys. *Sankhya B* **60**, 101–126. (Thomas C. Little and Andrew Gelman)

1998 Not asked and not answered: Multiple imputation for multiple surveys (with discussion and rejoinder). *Journal of the American Statistical Association* **93**, 846–874. (Andrew Gelman, Gary King, and Chuanhai Liu)

1998 Estimating the probability of events that have never occurred: When is your vote decisive? *Journal of the American Statistical Association* **93**, 1–9. (Andrew Gelman, Gary King, and W. John Boscardin)

1998 Some class-participation demonstrations for decision theory and Bayesian statistics. *American Statistician* **52**, 167–174. (Andrew Gelman)

1998 Student projects on statistical literacy and the media. *American Statistician* **52**, 160–166. (Andrew Gelman and Deborah Nolan, with Anna Men, Steve Warmerdam, and Michelle Bautista)

1998 Markov chain Monte Carlo in practice: A roundtable discussion. *American Statistician* **52**, 93–100. (Robert E. Kass, Bradley P. Carlin, Andrew Gelman, and Radford M. Neal)

1998 Discussion of "Quantifying surprise in the data and model verification," by M. J. Bayarri and J. O. Berger. *Bayesian Statistics 6*. (Xiao-Li Meng and Andrew Gelman)

1998 Discussion of "Bayesian projection of the acquired immune deficiency syndrome epidemic," by D. De Angelis, W. R. Gilks, and N. E. Day. *Journal of the Royal Statistical Society B.* (Andrew Gelman and John B. Carlin)

1998 Discussion of "Some algebra and geometry for hierarchical models, applied to diagnostics," by J. H. Hodges. *Journal of the Royal Statistical Society B.* (Andrew Gelman and Phillip N. Price)

1997 Poststratification into many categories using hierarchical logistic regression. *Survey Methodology* **23**, 127–135. (Andrew Gelman and Thomas C. Little)

1997 How can statistical theory help with statistical practice? Example of a Bayesian analysis in toxicokinetics. In *Good Statistical Practice. Proceedings of the 12th International Workshop on Statistical Modelling*, ed. C. E. Minder and H. Friedl, 61–70. Wien: Austrian Statistical Society. (Andrew Gelman and Frederic Y. Bois)

1997 Using exams for teaching concepts in probability and statistics. *Journal of Educational and Behavioral Statistics* **22**, 237–243. (Andrew Gelman)

1997 Weak convergence and optimal scaling of random walk Metropolis algorithms. *Annals of Applied Probability* **7**, 110–120. (Gareth O. Roberts, Andrew Gelman, and Walter R. Gilks)

1997 Walking to school and traffic exposure in Australian children. *Australian and New Zealand Journal of Public Health* **21**, 286–292. (John B. Carlin, Mark R. Stevenson, Ian Roberts, Catherine M. Bennett, Andrew Gelman, and Terry Nolan)

1997 Discussion of "Analysis of non-randomly censored ordered categorical longitudinal data from analgesic trials," by L. B. Sheiner, S. L. Beal, and A. Dunne. *Journal of the American Statistical Association.* (Andrew Gelman and Frederic Y. Bois)

1997 Discussion of "The EM algorithm—an old folk-song sung to a fast new tune," by X. L. Meng and D. Van Dyk. *Journal of the Royal Statistical Society B.* (Andrew Gelman)

1996 Bayesian analysis of election surveys and forecasts. Discussion of "Probing public opinion: the state of Valencia experience," by J. Bernardo. In *Case Studies in Bayesian Statistics 3*, ed. C. Gatsonis, J. S. Hodges, R. E. Kass, and N. D. Singpurwalla. (Andrew Gelman)

1996 Markov chain Monte Carlo methods in biostatistics. *Statistical Methods in Medical Research* **5**, 339–355. (Andrew Gelman and Donald B. Rubin)

1996 Physiological pharmacokinetic analysis using population modeling and informative prior distributions. *Journal of the American Statistical Association* **91**, 1400–1412. (Andrew Gelman, Frederic Y. Bois, and Jiming Jiang)

1996 Bayesian prediction of mean indoor radon concentrations for Minnesota counties. *Health Physics* **71**, 922–936. (Phillip N. Price, Anthony V. Nero, and Andrew Gelman)

1996 Population toxicokinetics of tetrachloroethylene. *Archives of Toxicology* **70**, 347–355. (Frederic Y. Bois, Andrew Gelman, Jiming Jiang, Don Maszle, and George Alexeef)

1996 Posterior predictive assessment of model fitness via realized discrepancies (with discussion and rejoinder). *Statistica Sinica* **6**, 733–807. (Andrew Gelman, Xiao-Li Meng, and Hal S. Stern)

1996 Advantages of conflictual redistricting. In *Fixing the Boundaries: Defining and Redefining Single-Member Electoral Districts*, ed. I. McLean and D. Butler. Aldershot, England: Dartmouth Publishing Company, 207–217. (Andrew Gelman and Gary King)

1996 Bayesian model-building by pure thought: Some principles and examples. *Statistica Sinica* **6**, 215–232. (Andrew Gelman)

1996 Bayesian regression with parametric models for heteroscedasticity. *Advances in Econometrics* **11**, A87–109. (W. John Boscardin and Andrew Gelman)

1996 Efficient Metropolis jumping rules. In *Bayesian Statistics 5*, ed. J. Bernardo et al., 599–607. Oxford University Press. (Andrew Gelman, Gareth O. Roberts, and Walter R. Gilks)
[2014] Correction notice.

1996 Discussion of "Hierarchical generalized linear models," by Y. Lee and J. A. Nelder. *Journal of the Royal Statistical Society B*. (Andrew Gelman)

1995 Avoiding model selection in Bayesian social research. Discussion of "Bayesian model selection in social research," by A. Raftery. *Sociological Methodology 1995*, 165–173. (Andrew Gelman and Donald B. Rubin)

1995 Pre-election survey methodology: Details from nine polling organizations, 1988 and 1992. *Public Opinion Quarterly* **59**, 98–132. (D. Stephen Voss, Andrew Gelman, and Gary King)

1995 Method of moments using Monte Carlo simulation. *Journal of Computational and Graphical Statistics* **3**, 36–54. (Andrew Gelman)

1995 Inference and monitoring convergence. In *Practical Markov Chain Monte Carlo*, ed. W. Gilks, S. Richardson, and D. Spiegelhalter, 131–143. London: Chapman and Hall. (Andrew Gelman)

1995 Model checking and model improvement. In *Practical Markov Chain Monte Carlo*, ed. W. Gilks, S. Richardson, and D. Spiegelhalter, 189–201. London: Chapman and Hall. (Andrew Gelman and Xiao-Li Meng)

1995 Racial fairness in legislative redistricting. In *Classifying by Race*, ed. P. E. Peterson, 85–110. Princeton University Press. (Gary King, John M. Bruce, and Andrew Gelman)

1995 Review of *Handbook of Statistical Modeling for the Social and Behavioral Sciences*, ed. G. Arminger, C. C. Clogg, and M. E. Sobel. *Contemporary Sociology* **24** 712–714. (Andrew Gelman)

1995 Discussion of "Fractional Bayes factors for model comparison," by A. O'Hagan. *Journal of the Royal Statistical Society B* **57**, 131. (Andrew Gelman and Xiao-Li Meng)

1995 Discussion of "Assessment and propagation of model uncertainty," by D. Draper. *Journal of the Royal Statistical Society B* **57**, 83. (Andrew Gelman and Xiao-Li Meng)

1994 Enhancing democracy through legislative redistricting. *American Political Science Review* **88**, 541–559. (Andrew Gelman and Gary King)

1994 Party competition and media messages in U.S. Presidential elections. In *The Parties Respond*, second edition, ed. L. S. Maisel, 255–195. Westview Press. (Andrew Gelman and Gary King)

1994 A unified model for evaluating electoral systems and redistricting plans. *American Journal of Political Science* **38**, 514–554. (Andrew Gelman and Gary King)

1994 Discussion of "A probabilistic model for the spatial distribution of party support in multiparty elections," by S. Merrill. *Journal of the American Statistical Association* **89**, 1198. (Andrew Gelman)

1994 Discussion of "Approximate Bayesian inference and the weighted likelihood bootstrap," by M. A. Newton and A. E. Raftery. *Journal of the Royal Statistical Society B* **56**, 37–38. (Andrew Gelman)

1993 Why are American Presidential election campaign polls so variable when votes are so predictable? *British Journal of Political Science* **23**, 409–451. (Andrew Gelman and Gary King)

1993 Characterizing a joint probability distribution by conditionals. *Journal of the Royal Statistical Society B* **55**, 185–188. (Andrew Gelman and T. P. Speed)
[1999] Correction notice. *Journal of the Royal Statistical Society B* **61**, 483.

1993 Assessing uncertainty in backprojection. Discussion of "Backcalculation of HIV infection rates," by P. Bacchetti, M. R. Segal, and N. P. Jewell. *Statistical Science* **8**, 104–106. (with John B. Carlin) (John B. Carlin and Andrew Gelman)

1993 Review of *Forecasting Elections*, by M. S. Lewis-Beck and T. W. Rice. *Public Opinion Quarterly* **57**, 119–121. (Andrew Gelman)

1993 Discussion of "Bayesian computation via the Gibbs sampler and related Markov chain methods," by A. F. M. Smith and G. O. Roberts. *Journal of the Royal Statistical Society B* **55**, 73. (Andrew Gelman and Donald B. Rubin)

1992 Inference from iterative simulation using multiple sequences (with discussion and rejoinder). *Statistical Science* **7**, 457–511. (Andrew Gelman and Donald B. Rubin)

1992 Iterative and non-iterative simulation algorithms. *Computing Science and Statistics* **24**, 433–438. (Andrew Gelman)

1992 A single series from the Gibbs sampler provides a false sense of security. In *Bayesian Statistics 4*, ed. J. Bernardo et al., 625–631. Oxford University Press. (Andrew Gelman and Donald B. Rubin)

1992 Discussion of "Evaluating the accuracy of sampling-based approaches to the calculation of posterior moments," by J. Geweke. In *Bayesian Statistics 4*, ed. J. Bernardo et al., 190. Oxford University Press. (Andrew Gelman and Donald B. Rubin)

1992 Discussion of "Maximum entropy and the nearly black object," by D. L. Donoho et al. *Journal of the Royal Statistical Society B* **54**, 72–73. (Andrew Gelman)

1991 The precision of positron emission tomography: Theory and measurement. *Journal of Cerebral Blood Flow and Metabolism* **11**, A26–30. (Nathaniel Alpert, W. C. Barker, A. Gelman, S. Weise, M. Senda, and J. A. Correia)

1991 A note on bivariate distributions that are conditionally normal. *American Statistician* **45**, 125–126. (Andrew Gelman and Xiao-Li Meng)

1991 Systemic consequences of incumbency advantage in U.S. House elections. *American Journal of Political Science* **35**, 110–138. (Gary King and Andrew Gelman)

1990 Estimating incumbency advantage without bias. *American Journal of Political Science* **34**, 1142–1164. (Andrew Gelman and Gary King)

1990 Estimating the electoral consequences of legislative redistricting. *Journal of the American Statistical Association* **85**, 274–282. (Andrew Gelman and Gary King)

1990 Discussion of "A smoothed EM approach to indirect estimation problems, with particular reference to stereology and emission tomography," by B. W. Silverman et al. *Journal of the Royal Statistical Society B* **52**, 314–315. (Andrew Gelman)

1989 Electoral responsiveness in U.S. Congressional elections, 1946–1986 (abstract). *Proceedings of the Social Statistics Section, American Statistical Association*, 208. (Andrew Gelman and Gary King)

1989 Constrained maximum entropy methods in an image reconstruction problem. In *Maximum Entropy and Bayesian Methods*, ed. J. Skilling, 429–435. Kluwer Academic Publishers. (Andrew Gelman)

1987 Subboundary-free zone-melt recrystallization of thin-film silicon. *Applied Physics Letters* **51**, 1256–1258. (Loren Pfeiffer, Andrew Gelman, K. A. Jackson, K. W. West, and J. L. Batstone)

1987 Growth mechanisms during thin film crystallization from the melt. *Materials Research Society Symposium Proceedings* **74**, 543–553. (Loren Pfeiffer, Andrew Gelman, K. A. Jackson, and K. W. West)

1986 Reduced subboundary misalignment in SOI films scanned at low velocities. *Materials Research Society Symposium Proceedings* **53**, 29–37. (Loren Pfeiffer, K. W. West, D. C. Joy, J. M. Gibson, and A. Gelman)

1984 The effects of solar flares on single event upset rates. *IEEE Transactions on Nuclear Science and Radiation Effects* **NS-31**, 1212–1216. (James H. Adams, Jr., and Andrew Gelman)

Public software

2012–2022 `Stan:` A C++ and R/Python package for Bayesian sampling. (Andrew Gelman, Bob Carpenter, Matt Hoffman, Daniel Lee, Ben Goodrich, Michael Betancourt, and others)

2008–2016 `mi:` An R package for missing data imputation. (Andrew Gelman, Jennifer Hill, Ben Goodrich, Jon Kropko, Masanao Yajima, and Yu-Sung Su)

2007–2016 `arm:` An R package for applied regression and multilevel modeling. (Andrew Gelman, Jennifer Hill, Maria Grazia Pittau, and Yu-Sung Su)

2002–2005 `R2WinBUGS:` Functions for running Bugs from R. (Andrew Gelman, Sibylle Sturtz, and Uwe Ligges)

1992–2008 `Judgeit`: A program for evaluating electoral systems and redistricting plans. (Andrew Gelman, Gary King, and Andrew Thomas)

1991–1995 `itsim`: Functions for inference for iterative simulation. (Andrew Gelman, Donald Rubin, and Stephen Brooks)

Honors and awards

2022 Greenberg Distinguished Lecturer Award, Department of Biostatistics, University of North Carolina.

2022 Getis-Ord Lecture in Spatial Analysis: "Understanding spatial models in context."

2020 Elected Member of American Academy of Arts and Sciences.

2020 Youden Award in Interlaboratory Testing from the American Statistical Association for "Bayesian aggregation of average data: An application in drug development." (Sebastian Weber, Andrew Gelman, Daniel Lee, Michael Betancourt, Aki Vehtari, and Amy Racine-Poon)

2019 Article "Ethics in statistical practice and communication" chosen for *The Best Writing on Mathematics 2019*.

2018 Hedges Lecture for the Society of Research on Educational Effectiveness: "Evidence-based practice is a two-way street."

2017 Article "The statistical crisis in science: How is it relevant to clinical neuropsychology?" chosen for the Continuing Education program of the American Academy of Clinical Neuropsychology. (Andrew Gelman and Hilde Geurts)

2016 DeGroot Prize from the International Society of Bayesian Analysis for *Bayesian Data Analysis*, third edition. (Andrew Gelman, John B. Carlin, Hal S. Stern, David B. Dunson, Aki Vehtari, Donald B. Rubin).

2016 Article "Why acknowledging uncertainty can make you a better scientist" chosen for *The Best Writing on Mathematics 2016*.

2015 Article "The statistical crisis in science" chosen for *The Best Writing on Mathematics 2015*. (Andrew Gelman and Eric Loken)

2014 Statistician of the Year, Chicago chapter of the American Statistical Association.

2014 Elected member, International Statistical Institute.

2012 Open Source Software World Challenge award for Stan: An R and C++ package for Bayesian sampling. (Andrew Gelman, Bob Carpenter, Matt Hoffman, Daniel Lee, Michael Malecki, Ben Goodrich, Michael Betancourt, Marcus Brubaker, and Jiqiang Guo)

2011 Blog of the Year award from *The Week* for the Monkey Cage. (John Sides, Henry Farrell, Andrew Gelman, Joshua Tucker, and Erik Voeten)

2010 Mitchell Lecturer, Department of Statistics, University of Glasgow.

2008 Mitchell Prize from the International Society of Bayesian Analysis for "How many people do you know in prison?: Using overdispersion in count data to estimate social structure in networks." (Tian Zheng, Matthew Salganik, and Andrew Gelman)

2008 Outstanding Statistical Application award from the American Statistical Association for "How many people do you know in prison?: Using overdispersion in count data to estimate social structure in networks." (Tian Zheng, Matthew Salganik, and Andrew Gelman)

2006 Otis Dudley Duncan Honorary Lecture for the American Sociological Association: "Bayesian inference and multilevel modeling."

2004 Miller Prize for the best work appearing in *Political Analysis*, for "Bayesian multilevel estimation with poststratification: State-level estimates from national polls." (David K. Park, Andrew Gelman, and Joseph Bafumi)

2003 Committee of Presidents of Statistical Societies (COPSS) Presidents' award for outstanding contributions to statistics by a person under the age of 40.

2000 Outstanding Statistical Application award from the American Statistical Association for "Not asked and not answered: multiple imputation for multiple surveys." (Andrew Gelman, Gary King, and Chuanhai Liu)

2000 Special Invited Lecture for the Institute of Mathematical Statistics: "Analysis of variance: Why it is more important than ever."

1998 Elected Fellow, American Statistical Association.

1998 Outstanding Statistical Application award from the American Statistical Association for "Physiological pharmacokinetic analysis using population modeling and informative prior distributions." (Andrew Gelman, Frederic Y. Bois, and Jiming Jiang)

1998 Article "Not asked and not answered: Multiple imputation for multiple surveys" chosen as the annual *Journal of the American Statistical Association* special invited discussion paper. (Andrew Gelman, Gary King, and Chuanhai Liu)

1998 Article "General methods for monitoring convergence of iterative simulations" chosen for the "Best of *Journal of Computational and Graphical Statistics*" session at the annual Interface meeting. (Stephen Brooks and Andrew Gelman)

1997 Elected Fellow, Institute of Mathematical Statistics.

1995 Heinz Eulau Award from the American Political Science Association for the best article published in the *American Political Science Review*, for "Enhancing Democracy Through Legislative Redistricting." (Andrew Gelman and Gary King)

1994 National Science Foundation Young Investigator Award.

1992 American Political Science Association research software award, for "JudgeIt: a program for evaluating electoral systems and redistricting plans." (Andrew Gelman and Gary King)

1992 Pi Sigma Alpha award for the best paper presented at the annual meeting of the Midwest Political Science Association, for "Why do Presidential election campaign polls vary so much when the vote is so predictable?" (Andrew Gelman and Gary King)

Principal investigator on research grants

2021–2024 National Science Foundation grant, "Revamped Bayesian Inference." (Ben Goodrich and Andrew Gelman)

2021–2013 Bureau of Labor Statistics grant, "Surveys at scale: Laplace approximation and Hamiltonian Monte Carlo for multilevel regression and postratification." (Andrew Gelman)

2021–2022 National Science Foundation grant, "Flexible, efficient, and available Bayesian computation for epidemic models." (Andrew Gelman)

2020–2021 National Science Foundation grant, "Scalable systems for probabilistic programming." (Andrew Gelman, Tamara Broderick, Michael Carbin, and Vivienne Sze)

2020–2023 National Institutes of Health grant, "Improving representativeness in non-probability surveys and causal inference with regularized regression and post-stratification." (Andrew Gelman, Qixuan Chen, and Lauren Kennedy)

2019–2022 National Science Foundation grant, "Bayesian analytical tools to improve survey estimates for subpopulations and small areas." (Andrew Gelman, Bob Carpenter, and Stephen Ansolabehere)

2019–2022 Institute of Education Sciences grant, "Efficient and flexible tools for complex multilevel and latent variable modeling in education research." (Andrew Gelman and Sophia Rabe-Hesketh)

2019–2022 Office of Naval Research grant, "Informative priors for Bayesian inference, regularization, and computation." (Andrew Gelman)

2017–2020 National Science Foundation grant, "Stan for the long run." (Bob Carpenter and Andrew Gelman)

2017–2020 Office of Naval Research grant, "Causal inference using hierarchical and nonparametric Bayesian interaction models." (Andrew Gelman and Jennifer Hill)

2015–2018 National Science Foundation grant, "Multilevel regression and poststratification: A unified framework for survey weighted inference." (Yajuan Si and Andrew Gelman)

2015–2018 Sloan Foundation grant, "Stan." (Andrew Gelman, Bob Carpenter, Michael Betancourt, and Daniel Lee)

2015–2018 Office of Naval Research grant, "Informative priors for Bayesian inference and regularization." (Andrew Gelman)

2014–2017 Institute of Education Sciences grant, "Solving difficult Bayesian computation problems in education research using Stan." (Andrew Gelman, Bob Carpenter, and Sophia Rabe-Hesketh)

2014–2017 National Science Foundation grant, "Using multilevel regression and poststratification to measure and study dynamic public opinion." (Justin Phillips, Andrew Gelman, and Jeffrey Lax)

2012–2015 National Science Foundation grant, "Stan: A computing framework for Bayesian modeling." (Andrew Gelman, Bob Carpenter, and Matt Hoffman)

2012–2017 Institute of Education Sciences grant, "NYU/Columbia quantitative postdoctoral training program." (Andrew Gelman and Jennifer Hill)

2010–2013 National Science Foundation grant, "Latent space models for aggregated relational data in social sciences." (Tian Zheng and Andrew Gelman)

2010–2012 National Science Foundation grant, "Understanding public opinion and policymaking using multilevel regression and poststratification." (Justin Phillips, Andrew Gelman, and Jeffrey Lax)

2010–2013 Institute of Education Sciences grant, "Practical tools for multilevel/hierarchical modeling in education research." (Andrew Gelman, Sophia Rabe-Hesketh, and Jingchen Liu)

2009–2012 Department of Energy grant, "Petascale hierarchical modeling via parallel execution." (Andrew Gelman, Viral Shah, Alan Edelman, and Chad Scherrer)

2009–2011 National Security Agency grant, "Weakly informative priors." (Andrew Gelman)

2009–2012 National Science Foundation grant, "Reconstructing climate from tree ring data." (Andrew Gelman, Matthew Schofield, Upmanu Lall, and Ed Cook)

2009–2012 Institute of Education Sciences grant, "Practical solutions for missing data." (Andrew Gelman and Jennifer Hill)

2007–2008 Yahoo research grant, "Purple America." (Andrew Gelman)

2006–2009 National Institutes of Health grant, "Bayesian analysis of serial dilution assays." (Andrew Gelman, Ginger Chew, and Matt Perzanowski)

2005–2008 National Science Foundation grant, "Design and analysis of 'How many X's do you know' surveys for the study of polarization in social networks." (Andrew Gelman, Tian Zheng, Thomas DiPrete, and Julien Teitler)

2003–2006 National Science Foundation grant, "Multilevel modeling for the analysis of public opinion and voting." (Andrew Gelman)

2000–2003 National Science Foundation grant, "Combining expert judgments for environmental risk analysis." (James Hammitt, Robert Clemen, Andrew Gelman, John Evans, and Roger Cooke)

2000–2003 National Science Foundation grant, "Bayesian analysis of sample surveys." (Andrew Gelman and John B. Carlin)

1997–2000 National Science Foundation grant, "Models and model checking for spatially-varying environmental hazards and decision problems." (Andrew Gelman and Phillip N. Price)

1994–1997 National Science Foundation grant, "Using inference from iterative simulation to improve efficiency of simulations." (Andrew Gelman and Donald B. Rubin)

1993–1995 National Science Foundation grant, "Generalizing multiple imputation for a time series of surveys, with application to Presidential election campaign polls and evaluating electoral systems and redistricting plans." (Gary King and Andrew Gelman)

1992–1993 University of California, Berkeley, Junior Faculty Research Grant.

1990–1993 National Science Foundation mathematical sciences postdoctoral fellowship.

Courses taught

Introduction to Probability and Statistics

Sample Surveys

Decision Analysis

Statistical Consulting

Statistical Modeling and Data Analysis I, II

Bayesian Data Analysis

Quantitative Methods in Social Sciences

Multilevel Modeling

Teaching Statistics at the University Level

Applied Regression and Multilevel Modeling

Applied Regression and Causal Inference

Research in Quantitative Political Science

Statistical Computing

Statistical Communication and Graphics

Communicating Data and Statistics

Applied Regression and Causal Inference

Service

Served on editorial board of the following journals: American Sociological Review, Annals of Applied Statistics, Biometrika, Chance, Journal of the American Statistical Association, Journal of Educational and Behavioral Statistics, Journal of Statistical Planning and Inference, Judgment and Decision Making, Medical Decision Making, Political Analysis, Sociological Methodology, and Statistica Sinica.

Refereed articles in probability and statistics for Advances and Applications in Statistics, American Mathematical Monthly, Annals of Applied Probability, Annals of the Institute of Statistical Mathematics, Annals of Statistics, Artificial Intelligence Journal, Australian Journal of Statistics, Automatica, Biometrical Journal, Biometrics, Biometrika, BMC Medical Research Methodology, Canadian Journal of Statistics, Journal of the American Statistical Association (Applications, Theory & Methods, and General sections), Communications in Statistics, Computational Statistics and Data Analysis, IEEE International Symposium on Information Theory, IEEE Transactions, IEEE Transactions on Pattern Analysis and Machine Intelligence, International Statistical Review, Journal of Business and Economic Statistics, Journal of Computational and Graphical Statistics, Journal of Educational and Behavioral Statistics, Journal of the Royal Statistical Society (Series A and B), Journal of Statistical Planning and Inference, Journal of Zhejiang University Science, Lifetime Data Analysis, Measurement Science and Technology, Metron, Pakistan Journal of Statistics, Probability in the Engineering and Information Sciences, Psychometrika, R News, Sankhya, Scandinavian Journal of Statistics, SIAM Journal on Applied Mathematics, Sociological Methodology, Sociological Methods and Research, Statistica Sinica, Statistical Modelling, Statistical Papers, Statistical Science, Statistics and Computing, Statistics and Probability Letters, Statistics in Medicine, Stochastics, Technometrics, Test, and many other journals.

Refereed articles in applied fields for the American Economic Review, American Journal of Political Science, American Journal of Public Health, American Political Science Review, Annals of Emergency Medicine, Applied Economics Research Bulletin, BMC Medical Informatics and Decision Making, BMC Medical Research Methodology, British Journal of Mathematical and Statistical Psychology, British Journal of Political Science, Chest, Clinical Infectious Diseases, Comparative Political Science, Developmental Psychology, Ecology, Ecological Applications, Economic Theory, Educational Evaluation and Policy Analysis, Electoral Studies, Environmental Modelling and Software, Epidemiology, European Journal of Political Economy, Geographical Analysis, Geographical and Environmental Modelling, IEEE Transactions on Medical Imaging, International Journal of Forecasting, International Journal of Psychiatry in Medicine, Journal of Clinical Epidemiology, Journal of Clinical Investigation, Journal of Consulting and Clinlcal Psychology, Journal of Economic Behavior and Organization, Journal of Human Development, Journal of Pharmacokinetics and Pharmacodynamics, Journal of Political Economy, Journal of Politics, Journal of Population Research, Journal of Stochastic Environmental Research and Risk Assessment, Journal of Theoretical Biology, Journal of Theoretical Politics, Legislative Studies Quarterly, Management Science, Marine and Freshwater Research, Mathematical Psychology, Nature, Organizational Research Methods, Party Politics, Pharmaceutical Statistics, Physical Review, Political Analysis, Political Behavior, Political Research Quarterly, Proceesings of the National Academy of Sciences, Psychological Methods, Pub-

lic Opinion Quarterly, Quarterly Journal of Political Science, Rationality and Society, Risk Analysis, Science, Social Problems, Social Science Quarterly, State Politics and Policy Quarterly, Theory and Decision, Trials, World Politics, and Zeitschrift fur Psychologie, and many other journals.

Reviewed research proposals or served on review panels for the Australian Research Council, Canada Foundation for Innovation, European Research Council, Hong Kong Research Council, Israel Science Foundation, Natural Sciences and Engineering Research Council of Canada, U.K. Economic and Social Research Council, U.S. Environmental Protection Agency, U.S. Geological Survey, U.S. Department of Energy, U.S. Institute of Education Sciences, U.S. National Institutes of Health, U.S. National Research Council, U.S. National Security Agency, U.S. National Science Foundation, and Wellcome Trust.

Served on advisory panel for New York City Social Indicators Survey, School of Social Work, Columbia University.

Served on advisory panel for Columbia University Superfund Basic Research Program, Health Effects and Geochemistry of Arsenic and Lead.

Served on National Academy of Sciences Panel on Improving Data to Analyze Food and Nutrition Policies.

Senior Advisor for Columbia University Center on Integrative Developmental Science.

Served on advisory panel for the General Social Survey.

Research blog, Statistical Modeling, Causal Inference, and Social Science, since 2004,
`https://statmodeling.stat.columbia.edu`

Contribute to Monkey Cage political science blog at the *Washington Post*

Communicate statistics to the public via general-interest articles in the *New York Times*, *Slate*, *Vox*, the *New Yorker*, *Wired*, and other publications.

Consulting

Areas of expertise include: sampling (design and analysis); Bayesian statatistics; regression and multilevel modeling; statistical computing; public opinion, voting, and American politics; environmental statistics; statistical communication and graphics.

Business consulting:

1998–1999 U.S. Postal Service (design and analysis of sample surveys)

2009 Intertek Sustainability Solutions (design of a supplier auditing system)

2009 Australia Online Research (survey weighting)

2013 Pfizer (discussion of trends and statistical methods related to public opinion and health reform)

2010–2017 Novartis (statistical modeling, computing, and data analysis)

2014–2016 National Board of Medical Examiners (statistical modeling, computing, and data analysis)

2018–2019 Cibo Technologies (scientific advisory board)

2020 Unlearn.ai (scientific advisory board)

2020–present Amazon.com (Amazon scholar)

2021–present Montai Health (statistical modeling)

2021–present JP Morgan Chase (statistical modeling)

Legal consulting:

2004–2005 Kornstein Veisz Wexler & Pollard, LLP, representing Employers Insurance Company of Wausau in Willis of New York, Inc. v. Employers Insurance Company of Wausau (analysis of survey data, criticism of analyses). Submitted an expert report. Case was settled before trial.

2006 Latham & Watkins, representing the American Civil Liberties Union in ACLU et al. v. Attorney General Alberto R. Gonzales (assessment of quality of surveys). Submitted an expert report. Was deposed as an expert. Case was settled before trial.

2010–2012 Cadwalader, Wickersham & Taft LLP, representing MBIA Insurance Corporation in MBIA Insurance Corporation v. Residential Funding Company, LLC (design and analysis of surveys). Submitted an expert report. Case was settled before trial.

2014–2015 Latham & Watkins, representing Health Corporation of America, in Health Care Foundation of Greater Kansas City v. HM Acquisition, LLC and HCA, Inc. (analysis of survey data, missing-data imputation, statistical graphics). Case was settled before trial.

2020 Wilshire Law Firm.

Other consulting:

Reviewed reports, performed analyses, or gave statistical advice to Alcoholics Anonymous, Associated Press, Con Edison, Council on Accreditation for Children and Family Services, Environmental Protection Agency, RAND, Museum of Modern Art, National League for Nursing, New York City Department of Health, New York State Attorney General's Office, Pandora, Random House, Transparency International, Voter News Service, and other organizations.