Curriculum Vitae

Andrew Gelman

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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

2026 *Bayesian Workflow*. London: CRC Press. (Andrew Gelman, Aki Vehtari, Richard McElreath, Daniel Simpson, Charles C. Margossian, Yuling Yao, Lauren Kennedy, Jonah Gabry, Paul-Christian Bürkner, Martin Modrák, and Vianey Leos Barajas)

2024 *Active Statistics: Stories, Games, Problems, and Hands-on Demonstrations for Applied Regression and Causal Inference*. Cambridge University Press. (Andrew Gelman and Aki Vehtari)

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

2026 *Handbook of Markov Chain Monte Carlo*, second edition. London: CRC Press. (ed. Radu Craiu, Dootika Vats, Galin Jones, Stephen Brooks, Andrew Gelman, and Xiao-Li Meng)

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

2026 Adaptive sequential Monte Carlo for structured cross validation in Bayesian hierarchical models. *Journal of Computational and Graphical Statistics*. (Geonhee Han and Andrew Gelman)

2026 Reanalysis of "Competition and innovation: An inverted-U relationship." *Journal of Robustness Reports*. (Andrew Gelman)

2026 The ladder of abstraction in statistical graphics. *American Statistician*. (Andrew Gelman and Kaiser Fung)

2026 Statistical workflow. *Philosophical Transactions of the Royal Society A*. (Andrew Gelman, Aki Vehtari, and Richard McElreath)

2026 Adjusting for underreporting of child protective services involvement in the Future of Families and Child Wellbeing Study and assessing its empirical implications through illustrative analyses of young adult disconnection. *Social Service Review*. (Lawrence M. Berger, Tia Dickerson, Andrew Gelman, Hye-Min Jung, Seonghun Lee, Margaret Thomas, and Jane Waldfogel)

2025 A multilevel Bayesian approach to climate-fueled migration and conflict. *Scientific Reports*. (Claire Palandri, Paulina Concha Larrauri, Andrew Gelman, Michael J. Puma, and Upmanu Lall)

2025 Artificial intelligence and aesthetic judgment. *Sankhya*. (Jessica Hullman, Ari Holtzman, and Andrew Gelman)

2025 Discussion of "Statistical exploration of the manifold hypothesis," by N. Whiteley, A. Gray, and P. Rubin-Delanchy. *Journal of the Royal Statistical Society B*. (Andrew Gelman)

2025 Meta-analysis with a single study. *Statistical Methods in Medical Research*. (Erik van Zwet, Witold Wiecek, and Andrew Gelman)

2025 Normative scientific conflict is unavoidable and should be welcomed. *Theory and Society*. (Andrew Gelman)

2025 Russian roulette: The need for stochastic potential outcomes when utilities depend on counterfactuals. *Biometrika*. (Andrew Gelman and Jonas Mikhaeil)

2025 Multilevel regression and poststratification using margins of poststratifiers: Improving inference for HIV health outcomes during the COVID-19 pandemic. *Statistics in Medicine*. (Amy J. Pitts, Maiko Yomogida, Angela Aidala, Andrew Gelman, and Qixuan Chen)

2025 Statistical graphics and comics: Parallel histories of visual storytelling. *Nightingale*. (Andrew Gelman and Susan Kruglinski)

2025 Letter to the editor. *Perspectives on Psychological Science*. (Andrew Gelman)

2025 Rethinking approaches to analysis of global randomised controlled trials. *British Medical Journal* **389**, r1273. (James M. Brophy and Andrew Gelman)

2025 Simulation-based calibration checking for Bayesian computation: The choice of test quantities shapes sensitivity. *Bayesian Analysis* **20**, 461–488. (Martin Modrák, Angie H. Moon, Shinyoung Kim, Paul Bürkner, Niko Huurre, Kateřina Faltejsková, Andrew Gelman, and Aki Vehtari)

2025 Visualizing distributions of covariance matrices. *Journal of Data Science, Statistics, and Visualisation* **5**, 7. (Tomoki Tokuda, Ben Goodrich, Iven Van Mechelen, Andrew Gelman, and Francis Tuerlinckx)

2025 Interrogating the "cargo cult science" metaphor. *Theory and Society* **54**, 197–207. (Andrew Gelman and Megan Higgs)

2025 A calibrated BISG for inferring race from surname and geolocation. *Journal of the Royal Statistical Society A*. (Philip Greengard and Andrew Gelman)

2025 Hierarchical Bayesian models to mitigate systematic disparities in prediction with proxy outcomes. *Journal of the Royal Statistical Society A*. (Jonas Mikhaeil, Andrew Gelman, and Philip Greengard)

2025 The piranha problem: Large effects swimming in a small pond. *Notices of the American Mathematical Society* **72**, 15–25. (Christopher Tosh, Philip Greengard, Ben Goodrich, Andrew Gelman, and Daniel Hsu)

2025 For how many iterations should we run Markov chain Monte Carlo? In *Handbook of Markov Chain Monte Carlo*, second edition. (Charles C. Margossian and Andrew Gelman)

2024 Why forecast an election that's too close to call? *Nature* **634**, 1019.

2024 Grappling with uncertainty in forecasting the 2024 U.S. presidential election. *Harvard Data Science Review* **6** (4). (Andrew Gelman, Ben Goodrich, and Geonhee Han)

2024 Review of "Noise: A Flaw in Human Judgment," by Daniel Kahneman, Olivier Sibony, and Cass R. Sunstein. *Chance* **37** (3), 70–72. (Gaurav Sood and Andrew Gelman)

2024 How statistical challenges and misreadings of the literature combine to produce unreplicable science: An example from psychology. *Advances in Methods and Practices in Psychological Science* **7**, 25152459241276398. (Andrew Gelman and Nicholas J. L. Brown)

2024 Statistics as a social activity: Attitudes toward amalgamating evidence. *Entropy* **26** (8), 652. (Andrew Gelman and Keith O'Rourke)

2024 Nested R-hat: Assessing the convergence of Markov chain Monte Carlo when running many short chains. *Bayesian Analysis*. (Charles C. Margossian, Matthew D. Hoffman, Pavel Sountsov, Lionel Riou-Durand, Aki Vehtari, and Andrew Gelman)

2024 Using leave-one-out cross-validation (LOO) in a multilevel regression and poststratification (MRP) workflow: A cautionary tale. *Statistics in Medicine* **43**, 953–982. (Swen Kuh, Lauren Kennedy, Qixuan Chen, and Andrew Gelman)

2024 Bayesian workflow for time-varying transmission in stratified compartmental infectious disease transmission models. *PLoS Computational Biology* **20**, e1011575. (Judith A. Bouma, Anthony Hauser, Simon L. Grimm, Martin Wohlfender, Samir Bhatt, Elizaveta Semenova, Andrew Gelman, Christian L. Althaus, and Julien Riou)

2024 Hopes and limitations of reproducible statistics and machine learning. *Harvard Data Science Review* **6** (1). (Andrew Gelman)

2024 Pareto smoothed importance sampling. *Journal of Machine Learning Research* **25** (72). (Aki Vehtari, Daniel Simpson, Andrew Gelman, Yuling Yao, and Jonah Gabry)

2024 A new look at p-values for randomized clinical trials. *NEJM Evidence* **3** (1). (Erik van Zwet, Andrew Gelman, Sander Greenland, Guido Imbens, Simon Schwab, and Steven N. Goodman)

2024 Before data analysis: Additional recommendations for designing experiments to learn about the world. *Journal of Consumer Psychology* **34**, 190–191. (Andrew Gelman)

2024 In pursuit of campus-wide data literacy: A guide to developing a statistics course for students in non-quantitative fields. *Journal of Statistics and Data Science Education* **32**, 241–252. (Alexis Lerner and Andrew Gelman)

2024 Causal quartets: Different ways to attain the same average treatment effect. *American Statistician* **78**, 267–272. (Andrew Gelman, Jessica Hullman, and Lauren Kennedy)

2024 Past, present, and future of software for Bayesian inference. *Statistical Science* **39**, 46–61. (Erik Štrumbelj, Alexandre Bouchard-Côté, Jukka Corander, Andrew Gelman, Håvard Rue, Lawrence Murray, Henri Pesonen, Martyn Plummer, and Aki Vehtari)

2023 Bayesian spatial modelling of localised SARS-CoV-2 transmission through mobility networks across England. *PLoS Computational Biology* **19**, e1011580. (Thomas Ward, Mitzi Morris, Andrew Gelman, Bob Carpenter, William Ferguson, Christopher Overton, and Martyn Fylesn)

2023 Generically partisan: Polarization in political communication. *Proceedings of the National Academy of Sciences* **120**, e2309361120. (Gustavo Novoa, Margaret Echelbarger, Andrew Gelman, and Susan A. Gelman)

2023 Challenges in adjusting a survey that overrepresents people interested in politics. *Harvard Data Science Review* **5** (3). (Andrew Gelman and Gustavo Novoa)

2023 What is a standard error? *Journal of Econometrics* **237**, 105516. (Andrew Gelman)

2023 Who wants school vouchers in America? A comprehensive study using multilevel regression and poststratification. *Social Sciences* **12** (8), 430. (Yu-Sung Su and Andrew Gelman)

2023 A chain as strong as its strongest link? Understanding the causes and consequences of biases arising from selective analysis and reporting of research results. *Journal of Research on Educational Effectiveness.* (Andrew Gelman)

2023 Toward a taxonomy of trust for probabilistic machine learning. *Science Advances* **9**, eabn3999. (Tamara Broderick, Andrew Gelman, Rachael Meager, Anna L. Smith, and Tian Zheng)

2023 Federated learning as variational inference: A scalable expectation propagation approach. *International Conference on Learning Representations (ICLR).* (Han Guo, Philip Greengard, Hongyi Wang, Andrew Gelman, Yoon Kim, and Eric P. Xing)

2023 I love this paper but it's barely been noticed. Part of a collaborative article, "What are your most underappreciated works?" *Econ Journal Watch* **20**, 466. (Andrew Gelman)

2023 From visualization to sensification. *Amstat News* 547, 18–19. (Andrew Gelman and S. Gwynn Sturdevant)

2023 Fast methods for posterior inference of two-group normal-normal models. *Bayesian Analysis* **18**, 889–907. (Philip Greengard, Jeremy Hoskins, Charles C. Margossian, Jonah Gabry, Andrew Gelman, and Aki Vehtari)

2023 "Two truths and a lie" as a class-participation activity. *American Statistician* **77**, 97–101. (Andrew Gelman)

2023 Inference from nonrandom samples using Bayesian machine learning, *Journal of Survey Statistics and Methodology* **11**, 433–455. (Yutao Liu, Andrew Gelman, and Qixuan Chen)

2023 The Great Society, Reagan's revolution, and generations of presidential voting. *American Journal of Political Science* **67**, 520–537. (Yair Ghitza, Andrew Gelman, and Jonathan Auerbach)

2022 Pathfinder: Parallel quasi-Newton variational inference. *Journal of Machine Learning Research* **23**, 306. (Lu Zhang, Bob Carpenter, Andrew Gelman, and Aki Vehtari)

2022 Prediction scoring of data-driven discoveries for reproducible research. *Statistics and Computing* **33**, 11. (Anna L. Smith, Tian Zheng, and Andrew Gelman)

2022 The worst of both worlds: A comparative analysis of errors in learning from data in psychology and machine learning. *AIES '22: Fifth AAAI/ACM Conference on AI, Ethics, and Society*, 335–348. (Jessica Hullman, Sayash Kapoor, Priyanka Nanayakkara, Andrew Gelman, and Arvind Narayanan)

2022 Selecting on statistical significance and practical significance is wrong. *Journal of Information Technology* **37**, 312–315. (Blakeley McShane and Andrew Gelman)

2022 How should scientific journals handle "Big if true" submissions? *Chance* **35** (2), 41–43. (Andrew Gelman)

2022 No reason to expect large and consistent effects of nudge interventions. *Proceedings of the National Academy of Sciences* **119**, e2200732119. (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* **102**, 1131–1134. (Andrew Gelman)

2022 Criticism as asynchronous collaboration: An example from social science research. *Stat* **11**, e464. (Andrew Gelman)

2022 Beyond vaccination rates: A synthetic random proxy metric of total SARS-CoV-2 immunity seroprevalence in the community. *Epidemiology* **33**, 457–464. (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* **23**, 79. (Yuling Yao, Aki Vehtari, and Andrew Gelman)

2022 Reconciling evaluations of the Millennium Villages Project. *Statistics and Public Policy* **9**, 1–7. (Andrew Gelman, Shira Mitchell, Jeffrey D. Sachs, and Sonia Sachs)

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)

2022 Bayesian hierarchical stacking: Some models are (somewhere) useful. *Bayesian Analysis* **17**, 1043–1071. (Yuling Yao, Gregor Pirš, Aki Vehtari, and Andrew Gelman)

2022 A fast linear regression via SVD and marginalization. *Computational Statistics* **37**, 701–720. (Philip Greengard, Andrew Gelman, and Aki Vehtari)

2022 Mismatch between scientific theories and statistical models. *Behavioral and Brain Sciences* **45**, e15. (Andrew Gelman)

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* **8**, 67–72. (Andrew Gelman)

2021 How to embrace variation and accept uncertainty in linguistic and psycholinguistic data analysis. *Linguistics* **59**, 1311–1342. (Shravan Vasishth and Andrew Gelman)

2021 Accounting for uncertainty during a pandemic. *Patterns* **2**, 100310. (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* **116**, 2087–2097. (Andrew Gelman and Aki Vehtari)

2021 A simple explanation for declining temperature sensitivity with warming. *Global Change Biology* **27**, 4947–4949. (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* **32**, 792–799. (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* **12**, 37–41. (Andrew Gelman and Simine Vazire)

2021 Slamming the sham: A Bayesian model for adaptive adjustment with noisy control data. *Statistics in Medicine* **40**, 3403–3424. (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)

2022 Mismatch between scientific theories and statistical models. *Behavioral and Brain Sciences* **45**, e15. (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* **6**, E30–E38. (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* **16**, 719–744. (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* **26**, 547–558. (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**, 17. (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)

2019 What statistics can't tell us in the fight over affirmative action at Harvard. *Boston Review*, January. (Andrew Gelman, Daniel E. Ho, and Sharad Goel)

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)

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2006 Visualization in Bayesian data analysis. In *Handbook of Computational Statistics, vol. III: Data Visualization.* (Jouni Kerman, Andrew Gelman, Tian Zheng, and Yuejing Ding)

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2006 Prior distributions for hierarchical variance parameters. *Bayesian Analysis* **1**, 515–533. (Andrew Gelman)

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2006 Output assessment for Monte Carlo simulations via the score statistic. *Journal of Computational and Graphical Statistics* **15**, 178–206. (Yanan Fan, Steve Brooks, and Andrew Gelman)

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2005 R2WinBUGS: a package for running WinBUGS from R. *Journal of Statistical Software* **12** (3). (Sibylle Sturtz, Uwe Ligges, and Andrew Gelman)

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2005 Probabilistic feature analysis of facial perception of emotions. *Applied Statistics* **54**, 781–793. (Michel Meulders, Paul De Boeck, Ivan Van Mechelen, and Andrew Gelman)

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2005 Practical issues in implementing and understanding Bayesian ideal point estimation. *Political Analysis* **13**, 171–187. (Joseph Bafumi, Andrew Gelman, David K. Park, and Noah Kaplan)

2005 Should you measure the radon concentration in your home? In *Statistics: A Guide to the Unknown*, fourth edition. (Phillip N. Price and Andrew Gelman)

2005 Multiple imputation for model checking: Completed-data plots with missing and latent data. *Biometrics* **61**, 74–85. (Andrew Gelman, Iven Van Mechelen, Geert Verbecke, Daniel F. Heitjan, and Michel Meulders)

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2004 Bayesian multilevel estimation with poststratification: state-level estimates from national polls. *Political Analysis* **12**, 375–385. (David K. Park, Andrew Gelman, and Joseph Bafumi)

2004 Treatment effects in before-after data. In *Applied Bayesian Modeling and Causal Inference from Incomplete-data Perspectives*, ed. A. Gelman and X. L. Meng, chapter 18. New York: Wiley. (Andrew Gelman)

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2004 A broken system: The persistent pattern of reversals of death sentences in the United States. *Journal of Empirical Legal Studies* **1**, 209–261. (Andrew Gelman, James Liebman, Valerie West, and Alexander Kiss)

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2003 A Bayesian formulation of exploratory data analysis and goodness-of-fit testing. *International Statistical Review* **71**, 369–382. (Andrew Gelman)

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2003 Spatial variability of arsenic in 6000 tube wells in a 25 km^2 area of Bangladesh. *Water Resources Research* **39**, 1140. (Alexander van Geen, Yan Zheng, R. Versteeg, Martin Stute, A. Horneman, R. Dhar, M. Steckler, Andrew Gelman, C. Small, H. Ahsan, Joseph Graziano, I. Hussein, and K. M. Ahmed)

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2001 Analysis of large-scale social surveys. In *International Encyclopedia of Social and Behavioral Sciences*, ed. N. J. Smelser and P. B. Baltes, 8386–8392. Oxford University Press. (Elaine Zanutto and Andrew Gelman)

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2001 Poststratification and weighting adjustments. In *Survey Nonresponse*, ed. R. Groves, D. Dillman, J. Eltinge, and R. Little. New York: Wiley. (Andrew Gelman and John B. Carlin)

2000 Discussion of "Inference in molecular population genetics," by M. Stephens and P. Donnelly. *Journal of the Royal Statistical Society B*. (Stephen Brooks and Andrew Gelman)

2000 Optimization and simulation transfer algorithms. Discussion of "Optimization transfer using surrogate objective functions," by K. Lange, D. R. Hunter, and I. Yang. *Journal of Computational and Graphical Statistics* **9**, 49–51. (Andrew Gelman)

2000 Simulation modeling for cost estimation. In *Current Directions in Postal Reform*, ed. M. A. Crew and P. R. Kleindorfer, 171–193. Boston: Kluwer. (Richard Waterman, Donald Rubin, Neal Thomas, and Andrew Gelman)

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2000 A method for quantifying artifacts in mapping methods, illustrated by application to headbanging. *Statistics in Medicine* **19**, 2309–2320. (Andrew Gelman, Phillip N. Price, and Chia-yu Lin)

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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)

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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)

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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)

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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)

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

1996 Discussion of "Hierarchical generalized linear models," by Y. Lee and J. A. Nelder. *Journal of the Royal Statistical Society B* **58**, 668. (Andrew Gelman)

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 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 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.

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)

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)

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)

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)

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. (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)

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.

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)

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)

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

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

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)

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)

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

2012–2025 `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

2025 Joint Program in Survey Methodology Distinguished Lecture: "Generalizing for sampling and causal inference."

2025 PROSE Award from the Association of American Publishers for *Active Statistics*. (Andrew Gelman and Aki Vehtari)

2024 Foundation Lecture for the International Society for Bayesian Analysis: "Holes in Bayesian statistics."

2023 Monroe Sirken Award in Interdisciplinary Survey Methods Research from the American Statistical Association.

2023 Warren J. Mitofsky Innovators Award from the American Association for Public Opinion Research for "Election turnout and voting patterns among small electoral subgroups." (Yair Ghitza and Andrew Gelman)

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

2025–2028 Office of Naval Research grant, "Bayesian modeling for generalization." (Andrew Gelman)

2024–2029 National Institutes of Health grant, "Improving the analysis and use of contaminated immunoassays: from methods development to implementation." (Qixuan Chen, Andrew Gelman, and Matthew Perzanowski)

2024–2027 Sloan Foundation grant, "A unified Bayesian approach to estimating heterogeneous causal effects." (Andrew Gelman and Jori Korpershoek)

2022–2025 National Institutes of Health grant, "Statistical adjustments of sample representation in community-level estimates of COVID-19 transmission and immunity." (Yajuan Si and Andrew Gelman)

2022–2025 Office of Naval Research grant, "Trustworthy Bayesian modeling, inference, and computation." (Andrew Gelman)

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

2021–2023 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 Bayesian and Multilevel Modeling

Applied Regression and Causal Inference

Research in Quantitative Political Science

Statistical Computing

Statistical Communication and Graphics

Communicating Data and Statistics

Service

Served on editorial board of the following journals: American Sociological Review, Annals of Applied Statistics, Biometrika, Chance, Econ Journal Watch, 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, Public 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, Dutch Research Council, 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`

Contributed to Monkey Cage political science blog at the *Washington Post*.

Communicated 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)

2020–2025 Amazon.com (Amazon scholar)

2021–2022 Montai Health (statistical modeling)

2021–2022 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 (combining estimates from published surveys). Submitted an expert report.

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.