

JENNIFER L. HILL

Humanities and Social Sciences
NYU Steinhardt
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Education

HARVARD UNIVERSITY. Ph.D. in Statistics, Advisor: Donald B. Rubin, June 2000.
RUTGERS UNIVERSITY. M.S. in Statistics, June, 1995.
SWARTHMORE COLLEGE. B.A. in Economics, June, 1991.

Current Professional Experience

CO-DIRECTOR

Center for the Promotion of Research Involving Innovative Statistical Methodology (PRIISM)
New York University (July 2008--present)

ASSOCIATE PROFESSOR OF APPLIED STATISTICS

New York University, Steinhardt School, Humanities & Social Sciences (July 2008--present)

ASSISTANT PROFESSOR OF PUBLIC AFFAIRS

Columbia University, School of International and Public Affairs (July 2002--June 2008)

CONSULTANT

Fund for Public Schools (half time commitment July 2006--July 2007)

Publications

BOOKS

Gelman, A. and J. Hill (2007) *Data Analysis using Regression and Multilevel/Hierarchical Models*, Cambridge University Press.

REFEREED JOURNAL ARTICLES

Gelman, A., Hill, J and M. Yajima (2011) "Why we (usually) don't have to worry about multiple comparisons", *Journal of Research on Educational Effectiveness*, in press.

Su, Y., Gelman, A., Hill, J. and M. Yajima (2011) "Multiple imputation with diagnostics (mi) in R: opening windows into the black box" *Journal of Statistical Software*, forthcoming.

- Hill, J., Weiss, C. and F. Zhai (2011) "Challenges with propensity score matching in a high-dimensional setting and a potential alternative," *Multivariate and Behavioral Research*, 46(3): 477-513.
- Hill, J. (2011) "Bayesian nonparametric modeling for causal inference," *Journal of Computational and Graphical Statistics*, 20(1): 217-240.
- Garcia, S. and J. Hill (2010) "The impact of conditional cash transfers on children's school achievement: evidence from Colombia," *Journal of Development Effectiveness*, 2(1): 117-137.
- Hill, J. and M. Scott (2009) "Discussion of 'The Essential Role of Pair Matching'," *Statistical Science*, 24(1): 54-58.
- Mincy, R., Hill, J., and M. Sinkewicz (2009) "Marriage: cause or mere indicator of future earnings growth," *Journal of Policy Analysis and Management*, 28(3): 417-439. (Winner of Vernon Prize)
- Hill, J. (2008) "Comment on 'Can Nonrandomized Experiments Yield Accurate Answers? A Randomized Experiment Comparing Random to Nonrandom Assignment'," *Journal of the American Statistical Association*, 103(484): 1346-1350.
- Hill, J. (2008) "Discussion of 'A critical appraisal of propensity score matching in the medical literature between 1996 and 2003'," *Statistics in Medicine*, 27: 2055-2061.
- Hill, J. and J. Reiter (2006) "Interval Estimation for Treatment Effects Using Propensity Score Matching," *Statistics in Medicine*, 25(13): 2230-2256.
- Witte, S., El-Bassel, N., Gilbert, L., Wu, E., Chang, M. and J. Hill (2006) "Promoting Female Condom Use to Heterosexual Couples: Findings from a Randomized Clinical Trial" *Perspectives on Sexual and Reproductive Health*, 38(3): 148-154.
- Hill, J., Brooks-Gunn, J., Waldfogel, J. and W. Han (2005) "Maternal Employment and Child Development: A Fresh Look Using Newer Methods," *Developmental Psychology*, 41(6): 833-850.
- El-Bassel, N., Gilbert, L., Wu, E., Go, H., and J. Hill. (2005) "HIV and Intimate Partner Violence Among Women on Methadone," *Social Science and Medicine*, 61(1): 171-183.
- El-Bassel, N., Witte, S., Gilbert, L., Wu, E., Chang, M., Hill, J., and P. Steinglass (2005) "Long-term effects of an HIV/STI sexual risk reduction intervention for heterosexual couples," *AIDS and Behavior*, 9(1): 1-13.
- El-Bassel, N., Gilbert, L., Wu, E., Go, H., and J. Hill (2005) "Relationship between drug abuse and intimate partner violence: A longitudinal study among women receiving methadone," *American Journal of Public Health*, 95(3): 465-470.
- Berger, L., Hill, J. and J. Waldfogel (2005) "Maternity Leave, Early Maternal Employment, and Child Outcomes in the U.S." *The Economic Journal*, 115: F29-F47.

- El-Bassel, N., Gilbert, L., Frye, V., Wu, E., Go, H., J. Hill, and B. Richman (2004) "Physical and sexual intimate partner violence among women in methadone maintenance treatment," *Psychology of Addictive Behaviors*, 18(2): 180-183.
- Hill, J., J. Brooks-Gunn, and J. Waldfogel (2003) "Sustained Effects of High Participation in an Early Intervention for Low-Birth-Weight Premature Infants," *Developmental Psychology*, 39(4): 730-44.
- Barnard, J., Frangakis, C., Hill, J., and D.B. Rubin (2003) "A Principal Stratification Approach to Broken Randomized Experiments: A Case Study of Vouchers in New York City," *Journal of the American Statistical Association*, with discussion and rejoinder, 98(462): 299-323.
- El-Bassel, N., Witte, S., Gilbert, L., Wu, E., Chang, M., Hill, J. and P. Steinglass (2003) "The Efficacy of a Relationship-Based HIV/STD Prevention for Heterosexual Couples," *American Journal of Public Health*, 93(6): 963-969.
- Hill, J. (2002) Discussion of Paul Rosenbaum's "Covariance Adjustment in Randomized Experiments and Observational Studies", *Statistical Science*, 17(3): 307-309.
- Hill, J., Waldfogel, J., and J. Brooks-Gunn (2002) "Assessing the Differential Impacts of High-Quality Child Care: A New Approach for Exploiting Post-Treatment Variables", *Journal of Policy Analysis and Management*, 21(4): 601-627. (Winner of Vernon Prize)
- Hill, J., and H. Kriesi (2001) "Classification by Opinion-Changing Behavior: A Mixture Model Approach," *Political Analysis*, 9(4): 301-324.
- Hill, J., and H. Kriesi (2001) "An Extension and Test of Converse's 'Black-and-White' Model of Response Stability," *American Political Science Review*, 95(2): 397-414.
- Hill, J. (2001) "Accommodating Missing Data in Mixture Models for Classification by Opinion-Changing Behavior," *Journal of Educational and Behavioral Statistics*, 26(2): 241-276.
- Barnard, J., Frangakis, C., Hill, J., and D. B. Rubin (2001) "School Choice in NY City: A Bayesian Analysis of an Imperfect Randomized Experiment," with discussion and rejoinder, in *Case Studies in Bayesian Statistics*, Vol. V. Edited by Kass et al. Springer-Verlag.
- Barnard, J., Du, J., Hill, J., and D. B. Rubin (1998) "A Broader Template for Analyzing Broken Randomized Experiments," *Sociological Methods and Research*, 27: 285-317.

BOOK MANUSCRIPTS IN PROGRESS

"Regression and other stories" (with A. Gelman and J. Reiter)

JOURNAL ARTICLES OR INVITED BOOK CHAPTERS IN PROGRESS OR SUBMITTED

"Multilevel models and causal inference"

"On the stationary distribution of iterative imputation" (with Lu, J., Gelman, A. and Y. Su)

- “Early grade retention and long-run outcomes: evidence from the Infant Health and Development Program” (with Martin, A., Weiss, C. and J. Brooks-Gunn)
- “Couple-based HIV prevention for low-income drug users from New York City: A randomized controlled trial to reduce dual risks” (with El-Bassel, N., Gilbert, L., Wu, E., Witte, S., Chang, W, and R. Remien)
- “A Large-Scale Randomized Controlled Trial of the Efficacy of Multimedia Design for Surgical Clerkship Education” (with Kalet, A., Song, H, Nick, M., Sarpel, U., Hopkins, MA., Pusic, M., Ellaway, R., Risucci, D., Nesbit, R., Grant, W., Dresner, L., Hochberg., M., Eisenberg, G., and J. Plass)
- “Identifying areas that lack common support in observational studies using Bayesian nonparametric modeling” (with Y. Su)
- “Bayesian nonparametric modeling with missing predictor values” (with J. Zubizarreta)
- “Confidence building for multiple imputation: diagnostics that inform structural assumptions” (with A. Gelman, S. Todorova, and Y. Su)

INVITED PAPERS, BOOK CHAPTERS, OR CONFERENCE PROCEEDINGS

- Hill, J. (2005) “Evaluating School Choice Programs,” *Statistics: A Guide to the Unknown, 4th Edition*. Edited by R. Peck, G. Casella, G. Cobb, R. Hoerl, D. Nolan, R. Starbuck, and H. Stern. Thomson Learning: Belmont, CA.
- Hill, J., Reiter, J, and E. Zanutto (2004) “A comparison of experimental and observational data analyses,” *Applied Bayesian Modeling and Causal Inference from an Incomplete-Data Perspective*. Edited by Andrew Gelman and Xiao-Li Meng. West Sussex, England: Wiley.
- Hill, J. (2001) “Bayesian Exploration into Competing Models for Opinion-Changing Behavior,” Proceedings of Society for Bayesian Statistical Science Section of the Joint Statistical Meetings.
- Hill, J., Rubin, D. B., and N. Thomas. (2000) “The Design of the New York School Choice Scholarship Program Evaluation,” *Research Design: Donald Campbell's Legacy*, ed. by Leonard Bickman, Sage Publications.
- Hill, J., and C. Morris (2000) “The Health Insurance Experiment: Design Using the Finite Selection Model,” in *Public Policy and Statistics: Case Studies from RAND*, edited by S. Morton and J. Rolph. New York: Springer-Verlag.
- Hollister, R. G. and J. Hill (1995) “Problems in the Evaluation of Community-Wide Initiatives,” in *Proceedings from the Aspen Institute's Roundtable on Comprehensive Community Initiatives for Children and Families Conference, New Approaches to Evaluating Community Initiatives: Concepts, Methods, and Contexts*, edited by J.P. Connell, A.C. Kubisch, L.B. Schorr, and C.H. Weiss, 127-72. Queenstown, MD: The Aspen Institute Publications Office.

PAPERS ISSUED AS WORKING PAPERS

Hill, J. (2004) "Reducing bias in treatment effect estimation in observational studies suffering from missing data," Columbia University Institute for Social and Economic Research and Policy (ISERP) working paper 04-01.

Hill, J. (1997) "An application of Bayesian Statistics to Program Evaluation," Harvard Project on Schooling and Children Working Paper. Cambridge, MA.

Hollister, R. G. and J. Hill (1995) "Problems in the Evaluation of Community-Wide Initiatives," Russell Sage Foundation Working Paper #70.

Previous Professional Experience

CONSULTING STATISTICIAN

Social Intervention Group, CUSSW (February 2001--April 2002), New York, NY

POST-DOCTORAL RESEARCH FELLOW

Columbia University School of Social Work (August 2000 -- April 2002), New York, NY

CONSULTING STATISTICIAN

Active Girls Initiative (Fall 1998--Summer 2000), Boston, MA

OTHER

Kwasha Lipton (July 1991--June 1993), Fort Lee, NJ

Account Supervisor in the Defined Contributions division of a benefits consulting firm. Managed savings, profit sharing, and retirement plan valuations for Fortune 500 and other large corporations. Met with and trained clients, programmed in a variety of computer formats, and supervised other employees.

Rockefeller Foundation (June 1990--August 1990), New York, NY

Research Assistant for Dr. Phoebe Cottingham. Worked independently to design and implement several projects related to a completed Gender Grant Program and a current child care demonstration.

Grants and awards

AWARDS

Vernon Prize for the best paper published in JPAM in 2009 (2009)

Vernon Prize for the best paper published in JPAM in 2002 (2002)

Certificates of Distinction in Teaching (Fall 1995, Fall 1998)

FUNDED GRANTS

PI on grant for "Sensitivity Analysis--if we're wrong, how far are we from being right?" awarded by the Institute of Education Sciences in the amount of \$609,664 in direct costs, \$918,278 in total costs

Co-PI (with Andrew Gelman) on grant, “Practical Solutions for Missing Data” awarded by the Institute of Education Sciences in the amount of \$563,170 in direct costs, \$904,973 in total costs

Co-PI (with Christopher Weiss) on grant awarded by National Science Foundation in the amount of \$61,568 in direct costs, \$99,125 in total costs

Co-Pi (with Christopher Weiss) on grant awarded by Smith Richardson Foundation \$76,903 in direct costs, \$84,593 in total costs

Columbia University Institute for Child and Family Policy Small Grants Program Award (2001)

Harvard University Graduate Society Fellowships Term Time Award for Dissertation Research (Spring 1999)

Harvard Graduate Student Council Conference Grant (Spring 1999)

Professional Activities

ASSOCIATE EDITOR

Biometrics, July 2009-present

Journal of Educational and Behavioral Statistics, July 2010-present

REFEREE

Journal of the American Statistical Association, American Political Science Review, Political Analysis, Evaluation and Program Planning, Biometrics, Journal of Political Economy, Child Development, Developmental Psychology, International Journal of Obesity, Statistics in Medicine, Journal of Business and Economic Statistics, The American Statistician, Health Economics, Journal of Statistical Software, Technometrics, Educational Evaluation and Policy Analysis, Journal of Educational and Behavioral Statistics

PANEL REVIEWER

Bi-annual panel reviewer for the Institute for Education Sciences, 2008-present

AD-HOC REVIEWER

National Science Foundation, Smith Richardson Foundation

CONFERENCE ORGANIZER

“Atlantic Causal Inference Conference” May 2010 at New York University.

Approximately 120 statisticians, epidemiologists, biostatisticians, economists, political scientists, and sociologists attended this two day conference.

“Biannual Mid-Atlantic Causal Inference Workshop” January 2007 at Columbia University.

Approximately 45 statisticians, epidemiologists, economists, political scientists, and sociologists attended this two day conference.

WORKSHOPS AND SHORTCOURSES

Propensity score matching and causal inference

Columbia University's Institute for Social and Economic Research and Policy (April, 2004, March 2006), Social Intervention Group at Columbia University School of Social Work (February 2004)

Missing data and multiple imputation

Society for Research in Educational Effectiveness(March 2011), Fordham University (May 2006), Institute for Social and Economic Research and Policy, Columbia University (February 2005), Social Intervention Group at Columbia University School of Social Work (November 2004)

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Statistical Association (1993--present)

Association for Public Policy and Management (1999--present)

International Society for Bayesian Analysis (2000--present)

International Biometric Society (1998--2002)