David A. Freedman

David A. Freedman received his B. Sc. degree from McGill and his Ph. D. from Princeton. He is professor of statistics at U. C. Berkeley, and a former chairman of the department. He has been Sloan Professor and Miller Professor, and is now a member of the American Academy of Arts and Sciences. He has written several books, including a widely-used elementary text, as well as many papers in probability and statistics. He has worked on martingale inequalities, Markov processes, de Finetti's theorem, consistency of Bayes estimates, sampling, the bootstrap, procedures for testing and evaluating models, census adjustment, epidemiology, statistics and the law. In 2003, he received the John J. Carty Award for the Advancement of Science from the National Academy of Sciences.

He has worked as a consultant for the Carnegie Commission, the City of San Francisco, and the Federal Reserve, as well as several Departments of the U. S. Government—Energy, Treasury, Justice, and Commerce. He has testified as an expert witness on statistics in a number of law cases, including Piva v. Xerox (employment discrimination), Garza v. County of Los Angeles (voting rights), and New York v. Department of Commerce (census adjustment).

Recent Publications

P. Humphreys and D. A. Freedman. "The grand leap." *British Journal of the Philosophy of Science*, vol. 47 (1996) pp. 113–23.

T. H. Lin, L. S. Gold, and D. A. Freedman. "Concordance between rats and mice in bioassays for carcinogenesis." *Journal of Regulatory Toxicology and Pharmacology*, vol. 23 (1996) pp. 225–32.

D. A. Freedman. "De Finetti's theorem in continuous time." In *Statistics, Probability and Game Theory: Papers in Honor of David Blackwell*. Institute of Mathematical Statistics Monograph 30 (1997) pp. 83–98. T. S. Ferguson, L. S. Shapley, and J. B. MacQueen, editors.

D. A. Freedman, R. Pisani, and R. A. Purves. *Statistics*. 4th ed. W. W. Norton, Inc. New York (2007). First published in 1978. Spanish translation in 1993. Chinese translation in 1995. Hungarian translation in 2005.

P. Diaconis and D. A. Freedman. "Consistency of Bayes estimates for nonparametric regression: Normal theory." *Bernoulli Journal*, vol. 4 (1998) pp. 411–44.

D. A. Freedman, S. P. Klein, M. Ostland, and M. R. Roberts. "Review of 'A Solution to the Ecological Inference Problem.' " *Journal of the American Statistical Association*, vol. 93 (1998) pp. 1518–22; with discussion, vol. 94 (1999) pp. 352–57.

D. A. Freedman and P. Diaconis. "Iterated random functions." *SIAM Review*, vol. 41 (1999) pp. 45–67.

L. D. Brown, M. L. Eaton, D. A. Freedman, S. P. Klein, R. A. Olshen, K. W. Wachter, M. T. Wells, and D. Ylvisaker. "Statistical controversies in Census 2000." *Jurimetrics*, vol. 39 (1999) pp. 347–75.

D. A. Freedman. "From association to causation: Some remarks on the history of statistics." *Statistical Science*, vol. 14 (1999) pp. 243–58. Reprinted in *Journal de la Société Française de Statistique*, vol. 140 (1999) pp. 5–32 and in *Stochastic Musings: Perspectives from the Pioneers of the Late 20th Century.* Lawrence Erlbaum Associates (2003) pp. 45–71. J. Panaretos, editor.

D. A. Freedman and P. B. Stark. "The swine flu vaccine and Guillain-Barré syndrome." *Evaluation Review*, vol. 23 (1999) pp. 619–47.

D. A. Freedman. "On the Bernstein-von Mises theorem with infinite dimensional parameters." *Annals of Statistics*, vol. 27 (1999) pp. 1119–40.

D. A. Freedman and P. Humphreys. "Are there algorithms that discover causal structure?" *Synthese*, vol. 121 (1999) pp. 29–54.

K. W. Wachter and D. A. Freedman. "The fifth cell: Correlation bias in U.S. census adjustment." *Evaluation Review*, vol. 24 (2000) pp. 191–211.

K. W. Wachter and D. A. Freedman. "Measuring local heterogeneity with 1990 U.S. census data." *Demographic Research*, vol. 3 (2000) art. 10.

D. H. Kaye and D. A. Freedman. "Reference guide on statistics." In *Reference Manual on Scientific Evidence*, 2nd ed. Federal Judicial Center, Washington, D.C. (2000).

D. A. Freedman, P. B. Stark, and K. W. Wachter. "A probability model for census adjustment." *Mathematical Population Studies*, vol. 9 (2001) pp. 165–80

D. A. Freedman and D. B. Petitti. "Salt and blood pressure: Conventional wisdom reconsidered." *Evaluation Review*, vol. 25 (2001) pp. 267–87.

D. A. Freedman and P. B. Stark. "The swine flu vaccine and Guillain-Barré syndrome." *Law and Contemporary Problems*, vol. 64 (2001) pp. 49–62. Revised version of 1999 article.

D. A. Freedman. "Ecological inference and the ecological fallacy." In *International Encyclopedia of the Social & Behavioral Sciences*, Elsevier (2001) vol. 6 pp. 4027–30. N. J. Smelser and Paul B. Baltes, editors.

D. A. Freedman and K. W. Wachter. "Census adjustment: Statistical promise or illusion?" *Society*, vol. 39 (2001) pp. 26–33.

D. A. Freedman and D. B. Petitti. "Salt, blood pressure, and public policy." *International Journal of Epidemiology*, vol. 31 (2002) pp. 319–320.

D. H. Kaye and D. A. Freedman. "Statistical proof." In *Modern Scientific Evidence*, 2nd ed. West Books. vol. 1 (2002) pp. 155–246. D. L. Faigman, D. H. Kaye, M. J. Saks, J. Sanders, editors.

D. A. Freedman and K. W. Wachter. "On the likelihood of improving the accuracy of the census through statistical adjustment." In *Science and Statistics: A Festscrift for Terry Speed*. Institute of Mathematical Statistics Monograph 40 (2003) pp. 197–230. D. R. Goldstein, editor.

R. A. Berk and D. A. Freedman. "Statistical assumptions as empirical commitments." In *Law, Punishment, and Social Control: Essays in Honor of Sheldon Messinger*, 2nd ed. Aldine de Gruyter, New York (2003) pp. 235–254. T .G. Blomberg and S. Cohen, editors.

D. A. Freedman. "The ecological fallacy." In *Encyclopedia of Social Science Research Methods*. Sage Publications (2004) vol. 1 p. 293. M. Lewis-Beck, A. Bryman, and T. F. Liao, editors.

D. A. Freedman. "Sampling." In *Encyclopedia of Social Science Research Methods*. Sage Publications (2004) vol. 3 pp. 986–990. M. Lewis-Beck, A. Bryman, and T. F. Liao, editors.

D. A. Freedman and P. B. Stark. "What is the probability of an earthquake?" In *Earthquake Science and Seismic Risk Reduction*. NATO Science Series IV: Earth and Environmental Sciences, vol. 32, Kluwer, Dordrecht, The Netherlands (2003) pp. 201–213. F. Mulargia and R. J. Geller, editors.

P. Diaconis and D. A. Freedman. "The Markov moment problem and de Finetti's theorem: Parts I and II." *Mathematische Zeitschrift*, vol. 247 (2004) pp. 183–212.

D. A. Freedman, D. B. Petitti, and J. M. Robins. "On the efficacy of screening for breast cancer." *International Journal of Epidemiology*, vol. 33 (2004) pp. 43–73 (with discussion). Correspondence, pp. 1404–6.

D. A. Freedman. "On specifying graphical models for causation, and the identification problem." *Evaluation Review*, vol. 26 (2004) pp. 267–93. Reprinted in *Identification and Inference for Econometric Models: Essays in Honor of Thomas Rothenberg*. D. W. K. Andrews and J. H. Stock, editors, Cambridge University Press (2005) pp. 56–79.

M. L. Eaton and D. A. Freedman. "Dutch book against 'objective' priors." *Bernoulli*, vol. 10 (2004) pp. 861–72..

D. A. Freedman. "Linear statistical models for causation: A critical review." In the *Wiley Encyclopedia of Statistics in Behavioral Science* (2005). B. Everitt and D. Howell, editors.

D. B. Petitti and D. A. Freedman. "Invited commentary: How far can epidemiologists get with statistical adjustment?" *American Journal of Epidemiology* vol. 162 (2005) pp. 415–18.

D. A. Freedman and D. B. Petitti. "Hormone replacement therapy does not save lives: Comments on the Women's Health Initiative." *Biometrics* vol. 61 (2005) pp. 918–920.

D. A. Freedman. *Statistical Models: Theory and Practice*. Cambridge University Press (2005).

S. P. Klein, D. A. Freedman, and R. Bolus, "A statistical analysis of charging decisions in death-eligible federal cases: 1995–2000." Technical Report #389, RAND Corporation, Santa Monica.

D. A. Freedman. "Statistical models for causation: What inferential leverage do they provide?" *Evaluation Review* vol. 30 (2006) pp. 691–713.

D. A. Freedman. "On the so-called 'Huber Sandwich Estimator' and 'robust standard errors.'" *The American Statistician* vol. 60 (2006) pp. 299–302.

D. A. Freedman. "Causal inference." In the *Encyclopedia of Law and Society*. SAGE (2007). David S. Clark, editor.

D. A. Freedman and P. B. Stark. "Ecological inference." In the *Encyclopedia of Law and Society*. SAGE (2007). David S. Clark, editor.

D. A. Freedman. "Sampling." In the *Encyclopedia of Law and Society*. SAGE (2007). David S. Clark, editor.

D. A. Freedman. "How can the score test be inconsistent?" *The American Statistician* vol. 61 (2007) 291–95.

D. A. Freedman. "Statistical models for causation." In *Social Science Methodology*. Sage (2007) pp. 127–46. Steven Turner and William Outhwaite, editors.

T. Dunning and D. A. Freedman. "Modeling selection effects." In *Social Science Methodology*. Sage (2007) pp. 225–31. Steven Turner and William Outhwaite, editors.

D. A. Freedman and K. W. Wachter. "Methods for Census 2000 and statistical adjustments." In *Social Science Methodology*. Sage (2007) pp. 232–45. Steven Turner and William Outhwaite, editors.

D. A. Freedman. "On regression adjustments to experimental data." *Advances in Applied Mathematics* vol. 40 (2008) pp. 180–93.

D. A. Freedman. "Oasis or mirage?" CHANCE Magazine, vol. 21 (2008) pp. 59–61.

D. A. Freedman. "On regression adjustments to experimental data with several treatments." *Annals of Applied Statistics* vol. 2 (2008) pp. 176–96.

D. A. Freedman. "Survival analysis: A primer." *The American Statistician* vol. 62 (2008) pp. 110–19.

D. A. Freedman. "On types of scientific enquiry: The role of qualitative reasoning." *The Oxford Handbook of Political Methodology*, pp. 300–18. Janet M. Box-Steffensmeier, Henry E. Brady and David Collier, editors.

D. A. Freedman and R. A. Berk. "Weighting regressions by propensity scores." *Evaluation Review* vol. 32 (2008) pp. 392–409.

D. A. Freedman. "Randomization does not justify logistic regression." *Statistical Science* vol. 2 (2008) pp. 176-96.

S. P. Klein, D. A. Freedman, R. Shavelson and R. Bolus (2008). "Assessing school effectiveness." *Evaluation Review* vol. 32 (2008) 1–15.

D. A. Freedman. "Do the N's justify the means." *Qualitative Methods* (Fall 2008) pp. 3–15 (with discussion).

Recent consulting and expert testimony

Kramer Levin: sampling and the bootstrap.

Morrison & Foerster: Alaska v TAPS carriers—sampling issues.

Howard Rice: Del Rio v Kmart—consulting and expert testimony on sampling issues.

Wolkin & Timpane: sampling and data analysis.

Crosby Heafy: Loma Linda v Truck Insurance Exchange—econometric modeling.

Simpson Thatcher: econometric modeling.

Department of Justice: sampling the Nixon papers.

Bureau of the Census: American Community Survey.

Inhale Therapeutic Systems: goodness of fit tests.

O'Melveny & Myers: Armstrong v Century Indemnity—
consulting and expert testimony on statistical tests.

Day Casebeer: Biogen v Amgen—consulting on statistical tests.

Howrey & Simon: Ruiz v City of Santa Maria—ecological inference.

Lillick & Charles: forecasting asbestos claims.

Insight Capital Markets: valuing dot coms.

Mayer, Brown & Platt: evaluating bioassays.

Ernst & Young: AIG v GECC—sample study of business records.

Ernst & Young: Commerce & Industry v Lloyd's—sample study of business records.

Department of Commerce: census adjustment.

Congressional Monitoring Board: census adjustment.

Testimony to Congress on census adjustment.
Pope McGlamry: statistical models for brokerage fees.
Shearman & Sterling: survival analysis.
Department of Justice: Garcia v Venemen—regression models.
Department of Justice: Love v Venemen—data analysis.
Howrey & Simon: NPI Medical Group et al v State Compensation Insurance Fund et al—sampling.
Skadden Arps: case control studies, sampling, data analysis.
Public Defender's Office, Washington, D.C.: DNA fingerprinting.
California Secretary of State: estimating duplicates from sample data.
California State Bar Association: statistical analysis of bar exam scores.
RAND: statistical analysis of death penalty data.
Department of Justice: litigation consulting, data analysis, statistics of BSE, sampling the Web.
Brinks, Hofer, Gilson & Lione: litigation consulting.
Phillips, Parker, Orberson & Moore: meta-analysis.
Accent Capital Partners: projecting the value of insurance claims.
Impact Assessment, Inc.: analyzing quarry statistics.
Spriggs & Hollingsworth: data analysis.
Paul Hastings: litigation consulting.
Littler Mendelson: Kirkpatrick v Ironwood—sampling.
Akin Gump: litigation consulting.
Morrison & Foerster: Environmental World Watch v Proctor & Gamble.
Gibson Dunn: litigation consulting.
Munger, Tolles & Olson: litigation consulting.
Gansk Associates: litigation consulting.
Collegiate Learning Assessment: statistical modeling.

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