

Stephan Michelson

Longbranch Research Associates
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EDUCATION

Ph.D., Economics, Stanford University, 1968
M.A., Economics, Stanford University, 1962
B.A., Economics, Oberlin College, 1960 (with honors)
New York University 1958-1959 (Junior year)
Tanglewood, Summer 1956 (Orchestral Conducting)
Colby College (French, Summer 1955)

EMPLOYMENT

March 1979 to present

Econometric Research, Inc.
d/b/a Longbranch Research Associates
Hendersonville, NC
(originally Washington, DC, then Takoma Park, MD)

President: Responsible for staff and facilities, administration and quality of product.
Director of litigation analyses and research projects.

April 1978 to March 1979

The Urban Institute
Washington, DC

Senior Fellow: Resource person for Urban Institute President and staff. Conducted research for a book on social science and the law. During this period, also served as a litigation analyst as "Michelson Associates."

July 1974 to March 1978

Center for Community Economic Development
Cambridge, MA

Research Director: Directed a staff of fifteen, performing research on community based economic development. Responsible for conceptualization and supervision of research. During this period, also served as a litigation analyst as "Michelson Associates."

September 1972 to April 1974

Center for Law and Education
Harvard University
Cambridge, MA

Research Associate: Part of the Legal Services back-up system. Served as sole professional non-attorney with responsibility for all non-legal litigation support, such as statistical and economic analyses for class action cases.

January 1974 to March 1974

University of California
Irvine, CA

Lecturer in Economics: Taught two economics courses as a visiting lecturer. Completed book on public school finance.

September 1968 to June 1972

Graduate School of Education
Harvard University
Cambridge, MA

Lecturer: Joint research and teaching appointment. Taught research methods, radical economics, labor economics and human capital.

Center for Educational Policy Research Cambridge, MA

Research Associate: Part of the "Jencks team" that wrote the book *Inequality*.

September 1968 to June 1970

Department of Economics
Harvard University
Cambridge, MA

Research Fellow

September 1966 to August 1968

The Brookings Institution
Washington, DC

Research Associate: Human Resources group. Wrote unpublished book, consulted with U.S. Department of HEW on the effects of proposed policies.

Summer 1966

Stanford University
Stanford, CA

Visiting Instructor of Economics

September 1964 to June 1966

Reed College
Portland, OR

Instructor of Economics

BOOKS AND MONOGRAPHS

The Expert: The Statistical Analyst In Litigation, LRA Press, 2006

A Review of the Abt Associates' Evaluation of the Special Impact Program (Project Director and Senior Author), Center for Community Economic Development, July 1977

Children Out of School in America, A Report by the Children's Defense Fund of the Washington Research Project (multiple authors), October 1974

States and Schools: The Political Economy of Public School Finance, W. Norton Grubb and Stephan Michelson, D.C. Heath (Lexington Books), 1974

Inequality: A Reassessment of the Effect of Family and Schooling in America, Christopher Jencks et al., Basic Books, 1972, and Harper Torchbook, 1973

An Impact Study of Day Care (multiple authors), Center for the Study of Public Policy, February 1971.

Educational Vouchers, A Preliminary Report (multiple authors), Center for the Study of Public Policy, March 1970

ACADEMIC ARTICLES

"Litigation, Social Science Role In," *Encyclopedia of the Social Sciences*, Thomson-Gale, 2006

"Driving While Black: A Skeptical Note," 44 *Jurimetrics* 2:161 (Winter, 2004)

"Reverse Regression Analysis of Wage Discrimination," with Gail Blattenberger, 14 *Western Sociological Review* 1 (1983), pp. 95-110. Revised version reprinted in Rajani K. Kanth and E. K. Hunt, editors, *Explorations in Political Economy*, Rowman & Littlefield, 1991

"Regulation of Industry Through the Courts," in *Problems in the Organization of American Social Policy Research*, edited by Clark C. Abt, Abt Books, 1980

"Statistical Determination in Employment Discrimination Issues," in *The Use/Nonuse/Misuse of Applied Social Research in the Courts*, edited by Michael J. Saks and Charles H. Baron, Abt Books, 1980

"History and State of the Art of Applied Social Research Used in the Courts," in *The Use/Nonuse/Misuse of Applied Social Research in the Courts*, edited by Michael J. Saks and Charles H. Baron, Abt Books, 1980

"The Working Bureaucrat and the Nonworking Bureaucracy," *American Behavioral Scientist*, Vol. 22, No. 5, May/June 1979. Reprinted in Carol H. Weiss and Allen H. Barton, editors, *Making Bureaucracies Work*, Sage Publications, Inc., 1980

"Community Based Development In Urban Areas," in *Central City Economic Development*, edited by Benjamin Chinitz, Abt Books, 1979. Reprinted in Robert Friedman and William Schweke, editors, *Expanding the Opportunity to Produce: Revitalizing the American Economy Through New Enterprise Development*, 1981

“What is a 'Just' System for Financing Schools: An Evaluation of Alternative Reforms,” *Law and Contemporary Problems*, Vol. 38, No. 3, Winter-Spring 1974; pp. 436-438

“Public School Finance in a Post-Serrano World,” with Norton Grubb, *Harvard Civil Rights-Civil Liberties Law Review*, Vol. 8, No. 3, May 1973; pp. 550-570

“Economics in the Courts: Equal School Resource Allocation,” *Journal of Human Resources*, Vol. 3, No. 3, Summer 1972; pp. 283-306

“The Political Economy of Public School Finance,” in Martin Carnoy, editor, *Schooling in a Corporate Society*, David McKay, 1972

“Rational Income Decisions of Negroes and Everybody Else,” *Industrial and Labor Relations Review*, Vol. 23, No. 1, October 1969; pp. 15-28. Revised and reprinted in Martin Carnoy, editor, *Schooling in a Corporate Society*, David McKay, 1972

“The Association of Teacher Resourceness with Children's Characteristics,” in *Do Teachers Make A Difference?*, U.S. Office of Education, Washington, DC, 1970

“The Economics of Real Income Distribution,” *Review of Radical Political Economics*, Vol. 2, No. 1, Spring 1970

“On Income Differentials by Race: An Analysis And A Suggestion,” *Conference Papers of the Union for Radical Political Economics*, December 1968; pp. 85-121

NEWSLETTER/NEWSPAPER ARTICLES

“The Computer and The Economy,” (letter) *The Atlantic Monthly* March, 1998, p. 6; reprinted in *We The People* 1998 (Publishers Plus, Fort Lee, NJ)

“Using Statistical Evidence,” *The Baltimore Sun* May 3, 1987, page B1 (Sunday “Perspective” section)

“When Experts Disagree,” *The Expert and the Law* (The National Forensic Center) Vol. 3, No. 2, April 29, 1983

“On Profit Maximization by SIP Ventures,” *CCED Newsletter* (Center for Community Economic Development) June-July 1977

“On Assessing Economic Impact: The Multiplier,” *CCED Newsletter* (Center for Community Economic Development) October-November 1976

“Projecting Capital Requirements,” *CCED Newsletter* (Center for Community Economic Development) June-July 1976

“Who Gets To Do What?” with Roger Rice, *Inequality in Education* (Newsletter of the Center for Law and Education) No. 16, March 1974

“Principal Power,” *Inequality in Education* (Newsletter of the Center for Law and Education) No. 16, March 1974. No. 5, June 1970

“Equal Protection and School Resources,” *Inequality in Education* (Newsletter of the Center for Law and Education) No. 16, March 1974. No. 2, December 1969

Critique of “Social and Economic Conditions of Negroes in the United States” (U.S. Government), co-author: Rashi Fein (called “The Brookings Critique”), *The Washington Post*, January 1968 Reprinted in Joseph, Bach and Seeber, editors, *Economic Analysis and Social Policy*, Prentice-Hall, 1971.

REVIEWS AND DISCUSSIONS

Comments On “Significance of Test-based Ratings for Metropolitan Boston Schools” by Craig Bolon, 9 *Education Policy Analysis Archives* 42 (October 16, 2001), in 10 *Educational Policy Analysis Archives* 8, January, 2002. Available from <http://epaa.asu.edu/epaa/v10n8/>

Comments on “Regression Analyses in Employment Discrimination Cases” by Delores A. Conway and Harry V. Roberts, in *Statistics and the Law*, edited by Stephen Fienberg, Morris DeGroot, and Jay Kadane, John Wiley & Sons, 1986

“Reverse Regression and Employment Discrimination,” *Journal of Business and Economic Statistics*, Vol. 2, No. 2, April 1984, pp. 121-122

Review of John D. Owen, *School Inequality and the Welfare State*, Johns Hopkins University Press, 1974, in *Monthly Labor Review*, July 1975

“The Further Responsibility of Intellectuals,” essay review of Christopher Jencks et al., *Inequality*, in *Harvard Educational Review*, Vol. 43, No. 1, February 1973; pp. 92-105

Review of Guthrie, Kleindorfer, Levin and Stout, *Schools and Inequality*, in *Educational Studies*, Vol. 3, No. 2, Spring 1972; pp. 41-42

Comment on Lester Thurow, “On Analyzing the American Income Distribution,” *American Economic Review*, Vol. LX, No. 2, May 1970; pp. 283-285

EXPERT TESTIMONY

In Re: Claims of Racial Disparity, 2013 WL 5879422 (Conn.Super.) 2013(Sferrazza, J.)

Death row inmates claim racial discrimination in the imposition of death sentences. For respondent, the state, I analyzed the procedures (capital felony charge, plea, trial, penalty hearing) that could lead to the death sentence, and found no large or consistent differences by race of defendant or race of victim. Decision for respondent October 11, 2013.

New Hampshire v. Michael Addison, No. 06-S-2572-3, 07-S-1010, 101J, Superior Court, Hillsborough, SS-North (Kathleen McGuire, judge)

Addison was convicted of murder. He challenged the composition of the grand jury that indicted him, and two juries that convicted him. For the state, I analyzed the jury selection process, not its outcome, arguing that a fair process produces a fair jury regardless who is on it. Hearing May 27-28, 2008. Jury challenge rejected July 1, 2008.

United States v. Louis Pugliano, No. H-90-18, D. Ct. (Bridgeport Division)

Pugliano was convicted of murder prior to *Osorio*, from a jury chosen from the same corrupt selection system. Pugliano’s expert made inappropriate use of Census data, and did not understand the *Osorio* data. For the government, I presented absolute disparity calculations (as had he) correcting his methodology. Hearing January 8, 2003.

State of Connecticut v. Gibbs, 1998 WL 351903 (Conn. Super, June 17, 1998) (Spada, J) *aff'd*, 254 Conn. 578, 758 A.2d 327 (2000)

Criminal defendant Gibbs alleged that Hispanics were under-represented among jurors in the Hartford-New Britain judicial district. For the state, I concluded that the jury selection system *over*-included Hispanics on its Master list. Greater Hispanic mobility explained summons non-delivery. Hispanic characteristics explained higher disqualification rates for non-citizenship and language. Hispanics were seldom excused from service or disqualified because of hardship. Hearing March, 1998. Jury challenge rejected.

United States v. Millet, No. 3:94CR-112(AHN), D. Ct. (Bridgeport Division), March 26, 1996, decision as *U. S. v. Barnes*, 1996 WL 684388 (D. Conn., 1996)

Criminal defendant Millet alleged that the Bridgeport Qualified Wheel contained disproportionately few Hispanics. Study for The United States (using data maintained by the Clerk of the Court), considering jury questionnaires as a survey of population characteristics, showed a low rate of jury eligibility (not citizens, not speaking English) among Hispanics, who were *over*-represented on the Qualified Wheel because they were seldom excused from service. Jury challenge rejected.

United States v. Fields, No. 3:94CR-258(PCD), D. Ct (New Haven Division), 1996

Criminal defendant Fields alleged that the New Haven Qualified Wheel contained disproportionately few blacks and Hispanics. Affidavits and testimony for The United States that comparisons between Qualified Wheel and population are improper, that the Master Wheel was representative of the population, and construction of the Qualified Wheel showed a low rate of jury eligibility (not citizens, not speaking English) among Hispanics. Hearing December 14, 1995. Jury challenge rejected.

Crow Tribe of Indians v. State of Montana, CV-78-110-BLG, D. Mt (Billings Division), May, 1994

Plaintiffs had prevailed on appeal from 1984 trial, alleging that Montana's coal severance tax damaged the Crow Tribe's ability to sell coal (SM not involved then). Hearing to determine the extent of the damages, especially in light of additional Supreme Court decisions. Report and testimony for defendant. Zero restitution, November 23, 1994.

Koger et al. v. Reno, 64 FEP Cases 577, D. D. C., March 22, 1994 (Oberdorfer, J), *aff'd*, 98 F. 3rd 631 (D.C. Cir. 1996)

Plaintiffs alleged discrimination based on age in selection of US Marshals for promotion to HGS-12. Testimony for defendant that plaintiffs' expert had performed incorrect analysis. Multiple pools analysis without age variation below age 40 showed that older applicants were equally selected both given their test scores (disparate treatment), and ignoring scores (disparate impact). Decision for defendant June 6, 1994.

O'Donnell et al. v. Smith, Civ. L-92-160, D. Md (Baltimore), January 28, 1993 (Chasanow, MJ)

Project future medical costs, calculate their present value, in wrongful injury action. For plaintiffs. Jury award \$335,000.

Coker v. Charleston County School District, No. 2:84-2162-2, D. S. C. (Charleston Division), December 1991 (Houck); *aff'd*, 2 F.3d 1149 (table), 1993 WL 309580 4th Cir. (1993)

Allegation of race discrimination in failure to hire Mr. Coker. For defendant, deposition transcript entered at trial in rebuttal of plaintiff's expert's live testimony. "The court finds Dr. Michelson's statistical studies and opinions persuasive and concludes that there is no statistical evidence to support Dr. Coker's claims." Decision for defendant.

Harris v. International Paper Corp., 765 F. Supp. 1509 (D. Me, 1991) (Carter, J)

Allegations of racial harassment and discrimination in promotions to positions on paper machines, brought under Maine Human Rights Act. Testimony, for defendant, showed that blacks were not candidates for most positions filled during the relevant time period, and were not disproportionately under-selected when they were candidates. Racial harassment enjoined.

Mister v. Illinois Central Gulf Railroad, No. 81-3006 (SD Ill, 1990) (Foreman, J), 832 F. 2d 1427 (7th Cir.1987), cert. denied 485 US 1035 (1988)

Disparate treatment of blacks in hiring found. Damages in two phases: shortfall and back pay. Shortfall estimate presented for plaintiffs. See Special Master Order No. 40, in which plaintiffs' calculation is adopted as the calculation of the court, July 24, 1992. Settled in 1993.

AFSCME v. Nassau County, 799 F. Supp. 1370 (E.D.N.Y.,1992) (Glasser, J) reversed in part 96 F3rd 644 (2nd Cir. 1996); cert. denied 520 U.S. 1104 (1997)]

Pay equity case, in which, it was alleged, gender was a consideration in setting grades, hence salaries, given other characteristics of a job. For plaintiff. Decision for defendant, who argued that the "market" determined salaries.

McQueen v. Maguire, 82-CV-8445, SD NY, October 1988 (Leval, J)

For defendant, in rebuttal, showing impropriety of plaintiff expert's data handling, and calculations plaintiff would have made from consistent data. Findings and order for three plaintiffs, against three plaintiffs, on individual evidence; i.e., plaintiffs' statistical case successfully rebutted. Order July 25, 1990, modified September 14, 1990.

U.S. v. Charleston School District and the State of South Carolina, CA No. 81-50-8D. S.C., September 20, 1988 (Blatt, J)

Alleged "dual school system" including association of race of principal with race of students. Testimony showing that the schools to which they applied, not the School Board's selection, determined the assignment of principals. For defendants. Order June 5, 1990, dismissing complaint.

Hartman v. Wick, 600 F. Supp. 361 D.D.C., January 1987 (Richey, J)

Discrimination in failure to hire females in six job series. Testimony in remedy phase only, studying selection from applicants in 1984-85, for defendants. Decision January 16, 1988, stating that defendant's statistical presentation "effectively rebutted" plaintiffs' claim of continuing discrimination.

Klein v. Wright State University, CA No. C-385626 (S.D. Oh 1986) (Rice, J), Western Division, S.D. Ohio, October 1986.

Complaint of age discrimination because older faculty allegedly received lower percentage salary increases than younger. Testimony for defendant. Jury decision for plaintiffs.

Holden v. Burlington Northern, Inc., Civil No. 4-81-622 D. Minn. 1986 (Rosenbaum, J) February-April 1986, settlement approved 665 F.Supp. 1398 (1987).

Discrimination against females in hiring, assignment, transfer, promotion, compensation and discipline. Testimony for plaintiffs. Settlement including cash payments, rightful place transfers and hiring goals.

Palmer v. Shultz, 616 F. Supp. 1540 (D.D.C. 1987) (Smith, J), *aff'd in part* 8115 F.2d 84 (D.C. Cir. 1987) September 1985.

Sex discrimination in assignment, promotion and other employee actions. Testimony for defendant. Decision for defendant. Promotions defense upheld, all other actions for plaintiffs, 662 F. Supp. 1551, D.D.C. July, 1987. After appeals, remands, etc., discrimination from Class 5 to 4 found (Robinson), August 1992.

Cooper v. Ideal Basic Industries, No. LR-C-83-700(E.D. Ak 1985) (Eisele, J) February 1985.

Sex and age discrimination in termination. For defendant showing ranking of sales employees by productivity. Judge (sex) for defendant, jury (age) for plaintiff. JNOV denied.

Holden v. Burlington Northern Railroad, Civil No. 3-81-994 (D. Minn. 1987) (Magnuson, J), November 13-15 and 19, 1984.

Hearing to determine scope of the class. Discrimination against females in hiring, transfer, promotion, compensation, and discharge. Testimony for plaintiffs showing common issues throughout the Burlington Northern system. Nationwide class certified.

Wagner v. Wisconsin Department of Public Instruction, 79-C-428 (W.D. Wi, 1983) (Will, J) December 30, 1983.

Discrimination against females in hiring, advancement and pay increases. Testimony for defendants showing sex-neutral selections from certification lists and reclassification requests, and sex-neutral pay raises. Bench decision for defendants December 30, 1983.

AFSCME v. State of Washington, 578 F. Supp. 846 (W.D. Wa, 1983) (Tanner, J) reversed 770 F. 2d 1401 (9th Cir., 1985), September 1983.

Female dominated jobs have lower pay ranges than male dominated jobs with "comparable worth." For plaintiffs. District court decision for plaintiffs. Settled for changes in pay structure.

Bechtel v. Allstate Insurance Company, C81-105 (N.D. Oh, 1984) (Walinsky, J), June 28-29, 1983.

Discrimination against females in hiring and assignment alleged. Testimony for defendant showing sex-neutral offers for sales agent positions with respect to applicants. Decision for defendant.

EEOC v. International Business Machines Corporation, 583 F. Supp. 875 (D.Md, 1984) (Ramsey, J) June 16-17, 1983.

Discrimination against black professional and managerial personnel, Maryland facility, in promotion and salary. For plaintiffs only in rebuttal of defendant's statistical presentations. Decision for defendant.

Pence v. Shulton and Hart v. Shulton, C.A. 81-2311 and 81-2454 (D.N.J., 1983) (Sarokin, J), June 2, 1983.

Discrimination by age in terminations. For defendant. Jury verdict for defendant.

EEO Complaint of Cicily P. Osteen, Library of Congress Administrative Proceeding, (Oldham, ALJ), December 14, 1982.

Discrimination in promotion against older females. Testimony for defendant using stipulated data, showing no nonrandom selection by age and sex. Opinion recommending dismissal of action, July 29, 1983.

Robinson et al. v. Polaroid Corp., 567 F. Supp. 192 (D.Ma.1983) (Skinner, J), *aff'd* 732 F.2d 1010, (1st Cir., 1984) June 16-17, 1983.

Discrimination against blacks in layoffs in 1974 through 1975. Testimony for defendant showing that seniority fully explained apparent race disparity. Decisions for defendant.

Smith v. Lubbers, 28 FEP Cases 324 (D.D.C. 1982) (Gasch, J), *aff'd.*, 713 F.2d 865 (D.C. Cir. 1983), *cert. denied*, 464 U.S. 996 (1983) May 25, 1982

Age discrimination in employment. For defendant, National Labor Relations Board, showing that individual plaintiff's rejected applications for transfer were not part of a discernible pattern of rejection of applicants over age 40. All allegations dismissed.

EEOC v. McCarthy, 578 F.Supp. 45 (D. Ma 1982) (Zobel, J). *aff'd* 768 F. 2d 1 (1st Cir. 1985)

For plaintiffs who alleged equal pay act violations at Framingham State College. Findings that females were paid equally on hire, but fell behind thereafter. Decisions for plaintiffs.

Harrison v. Lewis, C.A. 79-1816 (D.D.C. 1982) (Oberdorfer, J), relief order entered 559 F. Supp. 943 (D.D.C. 1983) February 25 & 26, 1982

Alleged discrimination in promotion. Testimony for defendant that selection of competition winners from eligible applicants showed no male-female differential, nor black-white differentials at high grade levels, among selections from applicants to posted announcements. Unpublished opinion June 1982, dismissing claims of sex discrimination, but finding for plaintiffs in some claims of race discrimination based on defendant's presentations.

Cain v. Trans World Airlines, 78 Civ. 2119 (S.D. N.Y. 1982), JNOV and other motions: 549 F.Supp. 963 (1982) January 1982.

Fifty-seven individual plaintiffs claiming breach of employment contract. Estimates of damages presented for plaintiffs in damages phase of bifurcated case. Jury awarded \$1.75 million in damages, reduced to \$1.2 million. .

Marson v. Jones & Laughlin Steel Corp., 523 F.Supp. 503 (E.D. Wi 1981) (Evans, J)

For plaintiffs, age discrimination in terminations. Rebuttal to correct calculation errors made by defense expert witness. Opinion for defendant does not mention statistics.

Mateza v. Polaroid Corporation, No. 76-3379 (Mass. Super. 1981) (Murphy, J), November 1980.

Sex and age discrimination in pay and promotion. For defense, both in rebuttal of plaintiff's expert and presenting class-wide promotion study. All claims dismissed.

U.S. Department of Labor v. Firestone Tire & Rubber Co., Inc., U.S. Department of Labor Administrative Proceeding, Case No. 80-OFCCP-15 (Sternburg, ALJ), May 1980.

For defendants, who were charged with failing to declare underutilization in accordance with regulations. Decision for defense May 29, 1980, overruled by Secretary of Labor. District Court upheld original decision in *Firestone v. Marshall*, 507 F.Supp. 1330 (E.D. Tex 1981). ALJ also affirmed decision for Firestone after remand from Secretary of Labor.

U.S. Department of Labor v. Kerr Glass Manufacturing Corp., U.S. Department of Labor Administrative Proceeding, Case No. 77-OFCCP-4, October 29, 1979.

Rebuttal witness for plaintiffs, who charged that the glass container industry's job evaluation manual incorporates sex-biased wage differentials.

U.S. Department of the Treasury v. Harris Trust and Savings Bank, U.S. Department of Labor Administrative Proceeding, Case No. 78-OFCCP-2 (Burrow, ALJ), August and September 1979.

For plaintiffs who charged Harris Trust with salary discrimination on the basis of sex and race. Administrative proceeding. Administrative Law Judge finding for plaintiff, January 30, 1981. Remand by Secretary of Labor May 17, 1983, 31 FEP Cases 1223. Original finding sustained December 24, 1986. OFCCP Administrative Law Judge opinions can be found at <http://www.oalj.dol.gov/PUBLIC/OFCCP/REFERENCES/CASELISTS/OFCLIST.HTM>

Caulfield v. Board of Education of the City of New York 486 F. Supp. 862 (E.D. N.Y. 1979) (Weinstein, J), *aff'd* 632 F.2d 999 (2nd Cir. 1980) May 1979.

Local District No. 26, the teachers' union and others sued the Board and the Office of Civil Rights of HEW, to overthrow an affirmative action agreement. For U.S. Attorney in defense. Decision for defense, allowing agreement to stand.

EEOC v. Tufts Institution of Learning, C.A. No. 74-5279 (D. Mass. 1977) (Murray, J), January 1977

For plaintiffs: Did Tufts discriminate against women in faculty salaries? Judge retired, no decision. Case settled (1986-87) with some cash payments but no admission.

Rhode Island Society for Autistic Children, Inc. v. Board of Regents for Education of the State of Rhode Island No. 5081 (D. R.I. 1975) (Pettine, J), August 1975.

For plaintiffs who charged that children were mis-classified as retarded based on race. Settled for corrective action after trial on merits had begun.

Morgan v. Kerrigan, 379 F. Supp. 410 (D. Mass. 1974) (Garrity, J), *aff'd* 509 F.2d 580 (1st Cir. 1974), *cert. denied*, 421 U.S. 963 (1975)

For plaintiffs, who charged that the Boston School Committee segregated schools and discriminated against minorities in the hiring of teachers, showing the disparate impact of the National Teachers' Exam. Desegregation and non-discriminatory hiring ordered—specifying teacher qualifications with no reference to the NTE.

Robinson v. Cahill, 62 N.J. 473, 303 A. 2d 273 (1973).

School resources in New Jersey allocated by income of community. For plaintiffs. Current law found to violate state constitution.

Josephs v. Board of Appeals of Brookline, (Mass. Super. 1971), *aff'd.*, 362 Mass. 290, 285 N.E. 2d 436 (1972)

Challenge to planned new construction for inadequate transportation facilities. For plaintiffs. Original decision for defendants, for plaintiffs on appeal.

Cynthia v. O'Kelly, C.A. No. 13714 (S.D. Ga, 1970) April 1970.

For plaintiffs (sponsored by American Friends Service Committee), suing local school board for not applying for funds under Title I of the Elementary and Secondary Education Act because funds would have aided only black children. Decision for defendant in district court, reversed.

WRITTEN ANALYSES IN LAWSUITS

Multi-part report for the Connecticut State's Attorney in *In Re: Claims of Racial Disparity*, 2013 WL 5879422 (Conn.Super.) 2013(Sferrazza, J.)

John J. Donohue, III, was the analyst for the Public Defender's Office, contending that the death sentence was awarded in part on the basis of race. He also contended that the death penalty system was "irrational," based on rankings of "badness" of the crimes that he devised, and had graduate students code. Much of my report demonstrates the nonsense of Donohue's approach, as well as his many technical errors. I also present an affirmative analysis, correcting Donohue's errors, and demonstrating no racial component (not of defendant, not of victim) in death sentences in Connecticut. Trial was held inside a maximum security prison in 2012. Decision for the state, on appeal to the Connecticut Supreme Court.

Expert Report for the State in *New Hampshire v. Addison*, (Superior Court, Hillsborough, SS-North) March 26, 2008 (2009 WL 1955285)

Defendant's expert Andrew Beveridge concluded that there were disparities in several categories of juror. I described how the system operated, did find a non-uniform selection procedure, but showed that no "remedy" would achieve Beveridge's "ideal" proportions based on population, not juror availability.

"Affidavit" in *Rhode Island v. Tremblay*, (2003 WL 23018762 (R.I.Super.)) January 4, 2002

Defendant's expert Andrew Beveridge provided standard comparisons between minority status of jurors (estimated by geography) and the Census. He made no attempt to determine where, if anywhere, Rhode Island committed an error or exercised discretion with bias. I showed that many minorities apparently did not get first class mail delivery of the questionnaire. Others did not respond, others did not show up. If disproportionately many were excused, most people would see this as favoritism, not discrimination, an unlikely use of discretion in Providence, Rhode Island. I presented a graphic of the system's operation, and several analyses of renters as leavers, but provided no alternative disparity statistics. Decision for the state March 19, 2003, rejecting defendant's jury challenge.

"Review of David Pollard's 'Connecticut Juror Selection'" in *State v. Gibbs* 1998 WL 351903 (Conn. Super, June 17, 1998) (Spada, J) *aff'd*. 254 Conn. 578, 758 A.2d 327 (2000)

Explanation that defendant's concept of "OK" juror was not the same as qualified juror, his survey of persons showing up at court houses was not of OK jurors, and his assertion that Hispanics were under-represented failed to understand the impact of weighting selections in towns by their populations. Using uniform random selection from source lists as a standard, and Pollard's data, I showed that the selection system was in effect (i.e., in a disparate impact sense) biased towards *over*-inclusion of Hispanics.

"Traditional Measures of Jury Disparity" in *State v. Gibbs* 1998 WL 351903 (Conn. Super, June 17, 1998) (Spada, J) *aff'd*. 254 Conn. 578, 758 A.2d 327 (2000)

Explanation of the outcome measures traditionally used to assess jury representation. Two sets of calculations, the first using percent Hispanic in the 1990 Census population and in a juror survey. The preferred measure (though I think this analysis should not be done at all) compared Hispanics on the source lists (which were not under challenge) to qualified jurors.

"An Empirical Analysis of the Connecticut Juror Selection System" in *State v. Gibbs* 1998 WL 351903 (Conn. Super, June 17, 1998) (Spada, J) *aff'd*. 254 Conn. 578, 758 A.2d 327 (2000)

Using data from the state's Jury Information System, derive a measure of qualified juror. From Census, derive a first cut at "Eligible" population, showing that there are fewer

Hispanics among the eligible than among the population. Explain disparate impact analysis in jury selection and, using Census data, “explain” in a regression sense the disparate disqualifications of Hispanics. Conclude that Hispanics are over-represented on Connecticut juries, though they appear in smaller proportions than they are of the population.

“Movement Out Of The Hartford-New Britain Judicial District” in *State v. Gibbs* 1998 WL 351903 (Conn. Super, June 17, 1998) (Spada, J) *aff’d*. 254 Conn. 578, 758 A.2d 327 (2000)

Three studies of the mobility of Hispanics compared with non-Hispanics: from Census data, Post Office (National Change of Address) and Department of Motor Vehicles (drivers license renewals) data, based on 56 Zip codes in the Hartford-New Britain judicial district. All showed Hispanics to be more likely to leave the district, and less likely to inform authorities that they had done so. Thus “returned undeliverable” summonses had been sent to people who were no longer in the district; there was no “remedy” to this “problem.”

“Comments on Affidavit of Gene Arthur Fisher” in *United States v. Pugliano*, CT Criminal H-90-18 [AHN] (D. Ct. 1997)

On a writ of habeas corpus, Pugliano, who was convicted in the *Osorio* era, now complains that his jury wheel had too few Hispanics. Fisher confuses ethnic with race identification in Census figures, and assumes that only Hartford and New Britain had been excluded in the faulty *Osorio* wheel. Using conservative assumptions, and emphasizing Hispanic mobility, I calculate traditional measures showing that the loss of cities from the earlier faulty wheel was largely ethnic-neutral.

“Representation On Juries: An Analysis of The Federal Qualified Wheel in Bridgeport, Connecticut” in *United States v. Millet*, No. 3:94CR-112 [AHN], D. Ct March 25, 1996, revised (text only) March 29, 1996.

Defendant’s statistical model, a comparison of the Qualified Wheel to the population, was inappropriate. Use of Clerk’s data (JARA system) using “life of the wheel” to determine percent Hispanic among qualifiable, and qualified, and detail reasons for disqualification.

Two Declarations in *Palmer v. Christopher*, No. 76-1439(AER), and *Cooper v. Christopher*, No. 77-2006(AER), (D. D.C.), April, 1995 and February, 1996.

Both sides request summary judgment, plaintiffs that the State Department has continued to discriminate in promotions by gender, from 1984-1989, defendant that it has not. These declarations for defendant show that plaintiffs’ statistical arguments bear no relationship to standard statistical practice or common sense, and show that equivalently situated males and females have been equally promoted.

“Statistical Analysis of Jury Representation,” “Measures of Jury Disparity: New Haven 1993-1995,” and “The New Haven Active Master Wheel 1993-1995,” three affidavits in *United States v. Fields*, No. 3:94CR-258(PCD), (D. Ct, 1995). Affidavits submitted after testimony, December 20-21, 1995.

Explanation that defendant’s statistical model, a comparison of the Qualified Wheel to the population, was inappropriate. Calculation of standard measures (absolute disparity, etc.) from corrected New Haven data. Comparison of mailing address distribution to 1990 population validating Active Master Wheel.

“Age and Promotion of U.S. Marshals To GS-12 Senior Criminal Investigator” in *Koger et al. v. Reno*, 64 FEP Cases 577, D. D. C., March 22, 1994 (Oberdorfer, J), *aff’d*. 98 F. 3rd 631 (D.C. Cir. 1996), January 25, 1994.

Plaintiffs allege that scoring system for promotion has disparate impact on older applicants, and that in the selection process there is disparate treatment against older applicants. Analysis (for defense) shows that there is no statistical support for either proposition.

“The Food Lion Profit Sharing Retirement Plan” in *Bryant v. Food Lion et al.*, 100 F. Supp., 346 (D. S.C. 2000), December 11, 1992.

Suit alleges that Food Lion management would terminate or force resignation of employees prior to their vesting in the Food Lion Retirement Plan. Analysis, for plaintiffs, shows the incentives and the data on staying and leaving the Plan, by years of vesting credit, from 1986 through 1990. Deposition submitted without my knowledge. Decision for defendant.

Two Affidavits in *United States v. Osorio*, No. 2:92CR00063 (TFGD), (D. Ct. 1992), October, 1992.

Osorio was indicted in Hartford, and successfully quashed that indictment showing errors in the Master Wheel. Re-indicted in Bridgeport, he then alleged errors in the Qualified Wheel. These affidavits show that Hispanics fall out of jury system through their own behavior, failing to return questionnaires, not through errors in making Master Wheel or in mailing questionnaires. Osorio was tried and convicted in New Haven.

“Declaration Concerning Backgrounds of Applicants” in *Cook v. Billington*, CA No. 82-0400 (NHJ/PJA) (D.D.C.) April 4, 1991

Reports that black Library of Congress employees who apply for competitive Library positions are generally less qualified than their white Library employee competitors. Filed in opposition to plaintiffs' motion for partial summary judgment. Summary Judgment granted July 1992.

“Report of Statistical Analyses, 1990” following Consent Decree dated August 23, 1990, in *Luevano v. Newman*, C. A. No. 79-0271(JHG), (D.D.C.) January 25, 1991

Consent orders instruct “defendant's expert” to produce annual reports. This is the first, covering nine years of data.

“A Study of Salary Rate Differences Between Male and Female Employees of Nassau County, NY” in *AFSCME v. Nassau County*, (E.D N.Y.) November 20, 1989

For plaintiff, finding unexplained salary differentials, associated with percentage female per job or career line, as grades assigned to “female” jobs were apparently lower than those assigned to comparable “male” jobs. Decision for defendant.

“The Relationship Between Age and Termination: A Statistical Analysis” in *Yoder v. Mutual Broadcasting System, Inc.*, No. 88-71226 (D. Mich.) March 30, 1989

For defendant, showing that defendant's theory better explains termination than plaintiff's contention that termination was based on age. Settled April, 1989, plaintiff's expert conceding that defendant's analytic method was correct, his was not.

“Economic Analysis of Past and Future Lost Earnings of Debra Luks,” in *Luks v. National Academy of Sciences*, CA No. 87-01882 (D.C. Super) March 28, 1989.

Projected earnings following alleged wrongful discharge, for plaintiff. Case settled.

“Report On Errors in the Automated Personnel Data of the Library of Congress” (with Ani S. DiFazio), in *Cook v. Billington*, CA 82-0400 (D. D.C.) January 31, 1989

Comparing recoded sample data with computer file, for defendant. Report's conclusions accepted by the Court, resolving a data argument, allowing the case to proceed.

“Estimated Present Discounted Value of Savings of Robert C. Lee,” in *Lee v. District of Columbia*, No. 88-2025 (D. C. Super.) November 10, 1988

Economic valuation following allegation of wrongful death, for defendant. Case settled.

Three joint affidavits with Jessica Pollner in *Luevano et al. v. Horner et al.*, C. A. No. 79-0271 (JHG) (D.D.C.) October 8, 1987

For defendants, to review plaintiffs' calculations and claims that certain federal agencies have under-hired Hispanics and blacks in certain job series.

Second affidavit in *Foster v. Barry*, C. A. No. 87-0635 (D.D.C.) December 22, 1987

For plaintiffs, fire fighters' union, showing that the District of Columbia Fire Department promoted an unlikely number of black Captains due to the Fire Chief's scoring and selection. Settled January, 1988 for fees, costs, four immediate promotions, future promotion rules and continued court jurisdiction.

"A Study of Hiring At Spring Branch Independent School District" in *United States v. Spring Branch Independent School District*, C. A. H84-2949 (S. D. Tex), with Bliss Cartwright and Joy Waltzer, April 10, 1987

For plaintiffs, finding disproportionate under-selection of black applicants to teaching and clerical/aide positions, by subject area, at different selection stages.) Settled January, 1988 for \$250,000 cash, 50 priority promotions, other specific actions and five years of court jurisdiction.

Joint affidavit with Timothy Wyant in *United States of America v. Gerena*, 677 F. Supp. 1266 (D. Conn. 1986), *aff'd sub nom United States v. Maldonado-Rivera*, 922 F. 2d 934 (2d Cir. 1990), April 8, 1987

Defendants contend that Puerto Ricans are under-represented on jury panels. For plaintiffs, in rebuttal of defendants' expert, showing errors in his use of Census data and implications of correct data under accepted legal standards. Jury wheel found acceptable, defendant convicted.

Affidavit in *Foster et al. v. Barry*, C. A. No. 87-0635 (D.D.C.) March 10, 1987

For plaintiffs, fire fighters' union, showing that the District of Columbia promoted an unlikely number of black fire fighters, following subjective scoring by Fire Chief.

Second affidavit in *Morris v. Dresser Industries*, CA No. 85-P-1965-S (N. D. Ala.) September 26, 1986

Plaintiffs' expert submitted new calculations, which were still irrelevant and incorrect. Case settled.

Joint affidavit with Rebecca Klemm in *Holden, et al., v. Burlington Northern, Inc.*, Civil No. 4-81-622 (D. Minn.), September 15, 1986

For fairness hearing on settlement, recalculating damages for shorter time period than was analyzed at trial.

Affidavit in *EEOC v. Chicago Miniature Lamp* subsequent to 622 F. Supp. 1281 (N.D. Ill. 1985), *rev'd* 947 F.2d 292 (7th Cir., 1991)

Critique of EEOC's principles for remedy, for defendant. See District Court decision 640 F. Supp. 1291 (August, 1986.)

Joint Affidavit with Bliss Cartwright in *EEOC v. Firestone*, 650 F. Supp. 1561 (W.D. Tn. 1987) (McRae, J) January, 1987

For defendant, analyzing the effect of union contract plant closing provisions, as applied in closing Memphis operation, on workers, by age. Summary judgment for defendant.

Affidavit in *Weir v. Litton Bionetics, Inc.*, 43 FEP Cases 683 (D. Md. 1987) April 1, 1986

For defendant supporting motion in limine, explaining errors in plaintiff's statistics, and finding no strong relationship between age and termination. Motion to preclude plaintiffs from introducing statistical evidence granted, March 16, 1987.

Affidavit in *Morris & Birdsong v. Dresser Industries, Inc.*, CA No. 85-P-1965-S (ND Al.), March 20, 1986

For defendant, explaining that issues and numbers did not call for statistical analysis, but that, if they did, plaintiff's expert's analysis was unintelligible. Case settled.

"Filling Job Vacancies: A Statistical Analysis" in *Clark v. Boorstein*, CA No. 80-554 (D. D.C.) February 3, 1986

Statistical analysis of selection from pools defined by repeated application by one person, for defendant Library of Congress. Settled.

"A Study of Hiring by the City of Gallup," in *U.S. v. City of Gallup*, CA No. 83 1395-M (D. N.M.) June 5, 1985

Statistical analysis of hires of American Indians, for plaintiffs. Case settled with back pay distribution, March, 1986.

"Promotion of United States Foreign Service Officers, 1975 through 1983: An Analysis of Sex Differences" (two volumes), with Rebecca Klemm and Diane Steele, in *Palmer v. Shultz* (D. D.C.) April 17, 1985

Joint Affidavit with Herbert L. Tyson in *EEOC v. Southern Pacific Transportation Company*., MDL 262, Consolidated CA No. 75-H-1227 (S. D. Tex) January 16, 1985

For plaintiffs in Fairness Hearing, analyzing hires into bargaining unit positions by race and national origin.

Joint Affidavit with Bliss C. Cartwright in *EEOC v. Southern Pacific Transportation Company et al.*, MDL 262, Consolidated CA No. 75-H-1227, (S. D. Tex) January 16, 1985

For plaintiffs in Fairness Hearing, evaluating damages by race, sex, and national origin, from initial assignment and subsequent transfer.

Affidavit in the *Matter of Plaintiff Attorney Fees for In Re Burlington Northern, Inc. Employment Practices*, MDL 374, November 26, 1984

Critique of defendant's survey of attorney fees; estimates of monetary value of settlement.

Joint Affidavit with Rebecca Klemm in *Holden v. Burlington Northern, Inc.*, C.A. No. 3-81-994, D. MN, March 26 and June 19, 1984

For plaintiffs prior to hearing on class.

Affidavit in *Coffin v. The South Carolina Department of Social Services*, C.A. No. 82-803-15 (D.S.C.) February 24, 1984

Age discrimination in termination, for defendants. Settled prior to trial.

Affidavit in *Bourgeois v. Data General Corporation*, complaints before the Maine Human Rights Commission, February 7, 1984

Age discrimination in termination, for plaintiffs.

"Comments on 'Analysis of Mobility Patterns for Men and Women in the Avionics Division of the Naval Air Rework Facility-Alameda' by John H. Freeman", *Moore v. Naval Air Rework Facility*, CA No. C-81-0905, (N. D. Ca), January 13, 1984

“Review of Plaintiff’s Supplemental Motion For Certification of Class Action, and Supporting Memorandum of Law,” Affidavit for defendant in *Robinson v. Lehman*, C.A. No. 83-0745 (E. D. Pa.) September 30, 1983

Class certification denied January 6, 1984.

Affidavit Subsequent to Trial in *EEOC v. International Business Machines Corporation*, C.A. No. 80-1408 (D.Md.) July 25, 1983

“Salary Increases at the Department of Public Instruction, State of Wisconsin,” with Ani DiFazio, in *Wagner et al. v. Wisconsin DPI*, C.A. No. 79-C-428, (W. D. Wi.) March 4, 1983

A statistical analysis, of allegations of sex discrimination in promotions.

“Review of Affidavit of John H. Freeman,” *Moore et al. v. Naval Air Rework Facility*, C.A. No. C-81-0905, N.D. CA, November 12, 1982

“Polaroid Corporation Layoffs 1974 through 1975 By Race,” (two volumes), *Robinson et al. v. Polaroid Corp.*, 567 F. Supp. 192 (D.Ma.1983) (Skinner, J), *aff’d* 732 F.2d 1010, (1st Cir., 1984) November 11, 1982

“An Analysis of the Age of Selections of Transfers from the Headquarters of the National Labor Relations Board to Field Positions,” *Smith v. Lubbers* C.A. 81-1747(D.D.C.) March 17, 1982

“Employment Practices at the Navy Resale and Services Support Office, 1974 through 1978,” with Timothy Wyant, in *Verdell v. Kocher* CA 76-C-908 (E.D. N.Y.) March 10, 1982

Rebuttal and affirmative case in defense. Plaintiffs withdrew class claims after receiving this report.

“A Statistical Analysis of Competitive Appointments at the Maritime Administration Headquarters,” in *Harrison et al. v. Lewis* C.A. 79-1816 (D. D.C.) February 22, 1982

Extensive analysis of selection from applicants for positions at the U.S. Maritime Administration Headquarters, including parameterized random assignment of race to applicants of unknown race.

“‘Promotions’ at the Navy Regional Data Automation Center: A Study of Competitive Promotions and Career-Ladder Advancement March 24, 1972 through May 15, 1981,” assisted by Jay Gruber, in *Trout v. Hidalgo* C.A. 73-55 (D. D.C.) October 28, 1981

This material was a basis for the Supreme Court's vacating lower court decisions.

“A Study of Promotion Among Salaried, Non-Technical Employees at Polaroid, By Sex, 1977-1979,” with Timothy Wyant, in *Mateza v. Polaroid Corp.*, Number 76-3379 (Mass. Super.) November 1980

“Critique of Plaintiffs’ Statistical Studies,” *Mateza v. Polaroid Corporation*, Superior Court of Massachusetts (Middlesex), Number 76-3379, November 1980.

Affidavit in *Miller v. Staats* CA No. 73-996 (D. D.C.) April 1980

Summary of regression analysis estimating GS grade levels in two federal agencies. For plaintiffs, who claimed race and sex discrimination. Settled for \$4 million in relief, 1980.

“Teacher Transfers to Achieve Compliance with the September 1977 Memorandum of Agreement Between the School Board of the City of New York and the Office for Civil Rights, U.S.D.H.E.W.: A Simulation,” with Gail Blattenberger, in *Board of Education v. Harris* (E. D. NY) January 28, 1980

Affidavit in *Sun Ship, Inc. v. Hidalgo* (D. D.C.) January 1980

Analysis of the probability of a low bidder not being the lowest cost producer. For low bid plaintiff, challenging contract awarded to another ship builder. Decision for defendant.

“The Harris Bank: An Analysis of Employee Compensation” in *U.S. Department of Treasury v. Harris Bank*, OFCCP Administrative Proceeding, August 6, 1979

“The Hiring and Assignment of Teachers in the New York City Public School System,” with Gail Blattenberger, in *Caulfield v. Board of Education* (E.D. N.Y.) May 10, 1979

Written submission (preliminary data analysis supporting motion for class certification) in *Bette A. Boughton et al. v. Addison Wesley Publishing Co.* C.A. No. 76-3687-T (D. Mass.) May 1978

For plaintiffs, who claimed that defendants discriminated against women in promotion and pay. Certification granted. Case settled in 1980.

“A Statistical Analysis of Faculty Salaries in the College of Liberal Arts at Tufts Institution of Learning,” in *EEOC v. Tufts* (D. Mass.) January 1977.

“An Analysis of the Racial Consequences of Utilizing the National Teacher Examination in the Selection of Teachers for the Boston School System,” in *Morgan v. Hennigan*, 379 F.Supp. 410 (D. Mass, 1974) February 2, 1983.

Showed that the National Teacher Exam was the predominant factor determining who was hired by the Boston School system, on which basis it was eliminated from use.

Director of Research for plaintiff, author of report referred to in opinion as “the Michelson Analysis,” *Hobson v. Hansen*, 327 F.Supp. 844 (D. D.C. 1971).

Complaint that school resources in the District of Columbia were allocated to favor white and high income children. Analysis showing that “economies of scale” defense was deficient. Decision for plaintiff, with order to equalize per pupil expenditures.

ACADEMIC INSTRUCTION (Guest Appearances)

Boston University School of Education
Boston University School of Law
Bucknell University
Georgetown University School of Law
Howard University
Institute for Social and Policy Studies, Yale University
Massachusetts Institute of Technology
Northeastern University
Trinity College (Hartford, CT)
University of California, Irvine
University of Maryland (Adjunct Professor 1984-85)
University of Michigan
University of New Hampshire

University of Pittsburgh
University of Tennessee, Knoxville
Williams College
Woodrow Wilson School, Princeton University

REFEREE AND REVIEW

American Education Research Journal
Growth and Change
Journal of the American Statistical Association
Journal of Business and Economic Statistics
Journal of Human Resources
Law & Human Behavior
National Science Foundation
Sociology of Education

PROFESSIONAL ORGANIZATIONS

The American Statistical association

OTHER PROFESSIONAL ACTIVITIES

Invited speaker, Association of Government Attorneys in Capital Litigation 19th Annual Conference, San Diego, CA, August 1998

Invited participant, conference on Labor Economics, University of Utah, October 1985

Paper presented at Eastern Economic Association, Annual Meetings, March 1985

Paper presented at Society of Government Economists meeting, December 1983

Invited Speaker, Political Economy Research Association, University of Utah, May 1983

Guest Speaker, Chicago Chapter American Statistical Association, March 1983

Panelist, Massachusetts Bar Association, January 1983

Discussant, Association for Public Policy Analysis and Management, Panel on Law and Policy Analysis, October 1980

Panelist, Law and Society Association, June 1980

Panelist, "The Statistician as an Expert Witness," Boston Chapter of the American Statistical Association, February 1980

Co-leader, Workshop (On Statistics) for Judges of the Fifth Circuit, Federal Judicial Center, January 1979

Member, Select Panel on Standards for Proof of Discrimination, U.S. Department of Labor (OFCCP), 1978-79

Discussant, American Educational Studies Association Annual Convention, November 1978

Organizer and Chairman of two conferences on Input-Output Analysis, April 1975 and April 1976

Organizer and Chairman of a Conference for Community Development Corporation Planners, St. Louis, October 1976

Instructor, "Radical Economics," evening course at the Cambridge Center for Adult Education: Fall 1973; Summer and Fall 1974; Summer 1975

National Steering Committee, Union for Radical Political Economics, 1968-69

Panelist, Symposium on Educational Productivity, American Education Research Association, April 1974

Chairman of Symposium on Social Mobility, American Education Research Association, April 1971

Discussant, Econometrics Society Annual Meeting, December 1972

Discussant, American Economics Association, Annual Meetings, December 1969 and December 1971

January, 2014