

August, 2020

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Education

Harvard University
Degree: Ph.D., Education
Subfield: Sociology of Education

Harvard University
Degree: M.A., Social Relations
Subfields: Social and Clinical Psychology

Syracuse University
Degree: B.A., Sociology

Experience

Claremont Graduate University

Joseph B. Platt Chair in the Management of Technology (1999-present)

Dean, School of Educational Studies (1993-2002 and Fall, 1990)

Chair, University Faculty Executive Committee (1988-1990)

Professor of Education (1984-present)

Associate Professor of Education (1978-1984)

University of California at Los Angeles (Part-time)

Visiting Professor, Higher Education Program (1992)

Consultant/Senior Research Sociologist,
Higher Education Research Institute (1980-1992)

Visiting Professor, Sociology Department (1986-1990)

Pre-CGU Appointments

The Rand Corporation

Senior Researcher

Information Sciences Department

National Academy of Sciences/National Research Council

Director, Science Development Evaluation Study

National Board on Graduate Education

American Council on Education, Office of Research

1. Research Associate

2. Associate Director for Information Systems

American University

Sociology Department

Adjunct Professor

Harvard Graduate School of Education

Associate in Education

Harvard University Computing Center

1. Applications programmer/software engineer

2. Head applications programmer

3. Staff Analyst

Publications and Presentations

My publications and presentations are organized into the categories listed below. Within a category books, articles, and presentations are presented separately, in chronological order (Although some work is relevant to more than one category, no item is repeated).

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These 200+ publications include 9 books, more than 70 technical reports and monographs, numerous journal articles, and a few op-ed articles and book reviews.

The research reported in these publications has been funded by both government agencies (i.e., National Science Foundation, The White House) and private organizations (e.g. Kluge Foundation, Teagle Foundation, MIT).

This work has been reviewed in journals, (e.g., Science, Issues in Science and Technology, Contemporary Sociology, Journal of Higher Education, Journal of Scholarly Publishing, Review of Higher Education, Social Studies of Science, Society, Teachers College Record), magazines and newspapers, (e.g., Forbes, Discover, Psychology Today, the Chronicle of Higher Education, USA Today, the Washington Post, the Oregonian, the Los Angeles Times), on numerous radio stations, and on public, commercial and cable television.

Publications and Presentations (continued)

1. *Science Policy, Technology Development, and Economic Growth*

A. Books, Monographs, and Technical Reports

On the Allocation of Federal Funds for Science Education. ACE Research Reports, Vol. 5, No. 1. Washington, DC: American Council on Education, 1970, 44 pages)

Science Development: An Evaluation Study. Washington, DC: National Academy of Sciences, 1975, 182 pages. (Portions reprinted in the companion volume: Science Development, University Development and the Federal Government, Washington, DC: National Academy of Sciences, 1975, 48 pages.)

Evaluation Design for the Experimental Program to Stimulate Competitive Research, prepared for National Science Foundation, 1979 (co-author).

Evaluating the Scientific Quality of Appropriate Technology, prepared for National Science Foundation, October, 1980 (co-author).

EPSCOR Evaluation Redux, prepared for National Science Foundation, 1985.

Strengthening the Coverage of Third World Science. Report of the International Task Force for Assessing the Scientific Output of the Third World, Eugene, Oregon, February, 1986, 16 pages, (co-author)

STEM the Tide: Reforming Science, Technology, Engineering, and Mathematics Education in America, Baltimore: Johns Hopkins University Press, 2011. (re-issued in paperback in 2015)

B. Articles and Reviews

Review of The National Science Board's Science Indicators 1976 in 4S, the publication of the Society for the Social Studies of Science, Vol. 4, No. 1 (Winter 1979), pp. 24-34.

"Appropriate Technology." U.S. International Communication Agency, February, 1980.

"University Research and Economic Growth." United States Information Agency, June, 1988.

"Preserving America's Scientific Preeminence." Testimony for field hearings on Math, Science, Engineering, and Education held by Subcommittee on Postsecondary Education of the Committee on Education and Labor, United States House of Representatives, May, 1989.

C. Presentations

"Breaking Up the Research Monopolies." Policy Research Lecture Series, Claremont Graduate University, November, 1981.

"Evaluating EPSCOR and Strengthening Academic Science and Engineering." NSF EPSCOR Planning Conference, Columbia, South Carolina, August, 1985.

"Strategies for the Funding of Research." Arkansas Conference on Higher Education, Little Rock, AR, October, 1985.

"Research and Undergraduate Education: NSF's Role." Invited roundtable presentation to Education and Human Resources Committee, National Science Board, Washington, D.C., March, 1990.

"Building Research Capacity in Central European Economies: Lessons from the United States," a paper presented at the conference Global Challenges, Regional Opportunities—Central Europe. Budapest, Hungary, November, 1998.

2. *Graduate Education: University Management, Research Productivity*

A. Books, Monographs, and Technical Reports

As Others See Us: Three Key Publics Assess West Virginia University. Monograph prepared for the West Virginia University Foundation, Inc., 1972, 177 pages (co-author).

Evaluating Science Departments: A New Index. The Rand Corporation, P-5521 (October, 1975), 37 pages (co-author).

Excellence and Equity in University Science, prepared for National Science Foundation, January, 1983, 326 pages.

Strengthening Academic Science. New York: Praeger, 1985, 283 pages.

Realizing the Promise: Guidelines for CGS's Fourth Phase. Report of the Strategic Planning Committee, Claremont, CA, September, 1989, 96 pages, (co-author).

Evaluating the Alliance for Minority Participation Program, prepared for National Science Foundation, December, 1992.

What They Didn't Teach You in Graduate School, Sterling, Virginia: Stylus, 2008, 147 pages, (co-author).

What They Didn't Teach You in Graduate School 2.0, Sterling, Virginia: Stylus, 2012, 227 pages, (co-author)

(More than 90 excerpts from this book posted as "Weekly Wisdom" items on blog, PhD2Published: Academic Publishing Advice for First-Timers)

B. Articles and Reviews

"Recommended Reading for College Presidents," *Change*, Vol. 12, No. 5 (July-August 1980)pp. 33-38 (co-author).

"Ranking Academic Departments: Empirical Findings and a Theoretical Perspective," *Research in Higher Education*, Vol. 14, No. 4, 1981 (co-author).

Review of William Zumeta's Extending the Educational Ladder: The Changing Quality and Value of Postdoctoral Study, *Scientometrics*, 11, 1986.

"Fanciest Science Not Done in the Finest Universities," Los Angeles Times, October 18, 1987 (reprinted, sometimes under a different title, in The Hartford Courant, Washington Post, Baltimore Sun and elsewhere).

"Some Hints for Finding and Holding Your First Non-academic Job," Operations Research/Management Science Today, Vol. 17, No. 3, (June, 1990), pp. 22-26, (co-author).

"Academic's Glass Ceiling: IHEs Must Work Harder to Reverse Prejudiced Beliefs About the Male/Female Achievement Gap." University Business, March, 2005.

"What They Didn't Teach You in Graduate School I: Completing Graduate School and Securing Your First Job," Inside Higher Education, November 30, 2005, (co-author).

"What They Didn't Teach You in Graduate School II: Teaching, Service, Research, and Grantsmanship," Inside Higher Education, December 8, 2005, (co-author).

"What They Didn't Teach You in Graduate School III: Tenure, Rank, and Working with Department Chairs," Inside Higher Education, December 28, 2005, (co-author).

"What They Didn't Teach You in Graduate School IV: Life as an Academic," Inside Higher Education, January 13, 2006, (co-author).

"What They Didn't Teach You in Graduate School," Chronicle of Higher Education, April 25, 2008, p. 26 (Back Page), (co-author)

"On the Journal Impact Factor: A Historical Perspective," Communications of the Association for Information Systems, Volume 25, pp. 177-182, July, 2009.

"What They Didn't Teach You in Graduate School 2.0," Chronicle of Higher Education, February 21, 2012. (co-author)

C. Presentations

"Quantitative Indicators of Academic Quality." Conference on the Assessment of Graduate Programs, Woods Hole, MA, September, 1976.

"Managing University Researchers for Productivity: Preliminary Results of a Policy Analysis." National Science Foundation Workshop, February, 1982.

Chair, Symposium About "The Ecology of Scientific Research," American Educational Research Association Annual Meeting, Montreal, April, 1983.

"Managing and Evaluating Professional and Technical People." Presentation to the Lockheed Corporation Management Club, Burbank, CA, August, 1983.

"Developing and Assessing Quality Science and Scientists." University of Oregon Physics

Colloquium (also presented at Oregon State University Physics Colloquium), October, 1984.

"How Unidimensional Definitions of Quality Damage Higher Education." Higher Education Conference co-sponsored by Division J of AERA and ASHE, October, 1984.

"The Use of Research and Statistics in Management Decision-Making." Invited Plenary Address, National University Continuing Education Association, Louisville, KY, April, 1985.

"Strengthening Academic Science." Invited Keynote Address, National Conference on Science Research in The Comprehensive University, Long Beach, CA, January, 1988.

Chair, Symposium about "Building Effective Collaborative Ventures." National Science Foundation conference about collaborative ventures and workforce diversity, Washington, D.C., April, 1993.

Chair, Plenary Session about "Factors Affecting Competitiveness." American Association for the Advancement of Science conference on Assessing University Research Competitiveness, Kiawah Island, South Carolina, April, 1995.

"Effective Leadership for Urban Universities," Jackson State University, Jackson, Mississippi, January, 2006.

"Building a Successful Academic Career," Jackson State University, Jackson, Mississippi, January, 2009.

"Best Kept Secrets of American Higher Education," Keynote Speech at the annual meeting of the National Science Foundation Bridge to the Doctorate program, Washington, D.C., June, 2009

"What They Didn't Teach You in Graduate School," National Conference on Race and Ethnicity, San Francisco, Ca, June, 2011

"Building Academic Centers of Excellence", Dean's Lecture Series, East Tennessee State University, March, 2017

3. *Undergraduate Education*

A. Books, Monographs, and Technical Reports

The Impact of Reference Groups on the Several Dimensions of Competence in the Undergraduate Experience. Doctoral dissertation, Harvard University, 1969, 134 pages.

A Profile of the Jewish Freshman. ACE Research Reports, Vol. 5, No. 4. Washington, DC: American Council on Education, 1970, 53 pages.

National Norms for Entering College Freshmen—Fall 1969. ACE Research Reports, Vol. 4, No. 7. Washington, DC: American Council on Education, 1969, 92 pages (co-author).

National Norms for Entering College Freshmen--Fall 1970. ACE Research Reports, Vol. 5, No. 6. Washington, DC: American Council on Education, 1970, 100 pages (co-author).

The First Year of College: A Follow-up Normative Report. ACE Research Reports, Vol. 5, No. 1. Washington, DC: American Council on Education, 1970, 72 pages (co-author).

A Study of the NSF College Science Improvement Program. ACE Research Reports, Vol. 6, No. 6. Washington, DC: American Council on Education, 1971, 37 pages.

The American Freshman: National Norms--Fall 1971. ACE Research Reports, Vol.6, No. 6. Washington, DC: American Council on Education, 1971, 108 pages (co-author).

The American Freshman: National Norms for Fall 1972., ACE Research Reports, Vol. 7, No. 5. Washington, DC: American Council on Education, 1972, 106 pages (co-author).

The Vietnam-Era Veteran Enters College. ACE Research Reports, Vol. 7, No. 4. Washington, DC: American Council on Education, 1972, 55 pages (co-author).

Competency, Careers and College. San Francisco: Jossey-Bass, 1978, 114 pages (editor).

Increasing Student Development Options in College. San Francisco: Jossey-Bass, 1978, 106 pages (editor).

A Profile of the Jewish Freshmen: 1980. Higher Education Research Institute, 1981, 111 pages (co-author).

After College: A Longitudinal Study of Jewish and Non-Jewish Young Adults. Prepared for the American Jewish Committee, August, 1982 (co-author).

Long-term Effectiveness of the Calculus Workshop Model. A Report Prepared for Presentation to the National Science Foundation, April, 1992 (co-author).

Evaluation of the Undergraduate Reform Initiative, prepared for the California State University, Fullerton, December, 2000.

Evaluation Team Site Visit Reports, Louisiana Alliance for Minority Participation, 1996-2016, (co-author)

Evaluation Team Site Visit Reports. Houston Alliance for Minority Participation, 2001-2016, (co-author).

Evaluating Systematic Learning Objectives in California Community Colleges, Final Report of the WASC Evaluation Review Committee, Oakland, Ca., 2007. (co-author)

Evaluation of the Texas Southern University Science and Technology Enhancement Program, 2009-2011 (co-author)

Evaluation of the Claremont Accelerated Integrated Science Sequence Initiative, Annual Reports, 2008-2015 (co-author).

Presenting Science Effectively, Evaluation Report presented to the Keck Science Department, Claremont 2013 (co-author)

Evaluation of the Pomona College High Achievement Program, Annual Reports, 2014-2017 (co-author)

Evaluation of the Harvey Mudd College Summer Research Program, Annual Reports, 2013-2014 (co-author)

Evaluation Reports: HHMI Grant Collaborative Research Activities at the Claremont Colleges, 2015 And 2016 (co-author)

A Stepping Stone, Not a Stumbling Block, Evaluation Report for MT2 Noyce grant, California State University, Fullerton, 2015 (co-author)

Liberal Studies in Engineering: Workshop Report. <https://dspace.mit.edu/handle/1721.1/96672> 2015

Evaluation Report: Supporting Student Participation in the National Organization of Black Chemists and Chemical Engineers (NOBCChE) Conference, 2015-2017.

Evaluation of the Mount Saint Mary's University Noyce Program, Annual Reports, 2018 and 2019.

Evaluation of the NSF Capacity Building Grant at Mount Saint Mary's University, Annual Reports, 2019 and

2020.

B. Articles and Reviews

- "Jewish Students Today: Radical or Conservative?" *Transaction*, Vol. 8, No. 12 (October, 1971), pp. 45-48. (Reprinted in *Campus Power Struggles*, second edition, 1973.)
- "Undergraduate Aspirations: A Test of Several Theories," *American Journal of Sociology*, Vol. 77 (May, 1972), pp. 1151-1164 (co-author).
- "A Study of the Aspirations of Women Students," meeting of interdisciplinary research group of the Panel on the Benefits of Higher Education, National Research Council, Washington, DC, January, 1973 (co-author).
- "The College Science Improvement Program: An Empirical Evaluation," *Research in Higher Education*, Vol. 2, No. 1 (1974), pp. 25-43.
- "Competency and the College Curriculum," U.S. International Communication Agency, 1978.
- "Introduction" (Chapter 1, co-author) and "How Undergraduates Experience Science Education," (Chapter 8) in Astin, A. W. and Astin, H. S. *Undergraduate Science Education: The Impact of Different College Environments on the Educational Pipeline in the Sciences*. A report to the National Science Foundation. Higher Education Research Institute, University of California-Los Angeles, 1992.
- "Opening the Gates: Increasing Minority Students' Success in Calculus," in J. Gainen and E. Willemson (eds.) *New Directions for Teaching and Learning*, San Francisco: Jossey-Bass, 1995 (co-author).
- "Bank on What College Delivers, Not on What 'Apprentice' Presents," distributed on the Knight Ridder network and appeared in about a dozen newspapers, including the *Detroit Free Press* and the *Las Vegas Review Journal*, March 24, 2005.
- "Accelerated Integrated Science Sequence (AISS): An Introductory Biology, Chemistry, and Physics Course for College Students," *Journal of Chemical Education*, 86 (11), p. 1295-1299, (co-author)
- "Billionaire Dropouts Are Not the Rule," College Inc. blog, online Washington Post, November 4, 2011.
- "On MOOCs", *The Bridge*, Volume 45, Number 3, Fall, 2015 (co-author)
- "Liberal Studies in Engineering: A Design Plan", *Engineering Studies*, Volume 7, Numbers 2-3, pp. 105-122, 2015 (co-author)
- "Moving the Needle from Literacy to Knowledge", *Philosophical and Educational Perspectives on Engineering and Technological Literacy*, Fourth Edition, 2017 (in press)

“The Impact of a Supportive Community Experience on African-Americans in Chemistry and Chemical Engineering”, *The Learning Assistance Review*, Fall, 2018, Vol. 23, Issue 2, pp 9-40. (co-author)

“Breaking Boundaries with Liberal Studies in Engineering” (co-author), in P. Kapranos (ed.) *The Interdisciplinary Future of Engineering Education*, London: Routledge, 2018.

C. Presentations

"Survey of Current Research in Higher Education." Annual Conference of the American Association for Public Opinion Research, Atlantic City, NJ, May, 1972. (Abstract of the above paper published in *Public Opinion Quarterly*, Fall, 1972.)

"Motivating, Inspiring and Retaining Students." Invited address to the Fullerton College faculty, January, 1990.

"The Attitudes of College Students About Science and Research." Annual Conference of the American Educational Research Association, San Francisco, CA, April, 1992.

“The Next Generation of Emerging Scholarly Programs: Impact, Replication and Adaptation.” Proceedings of the 24th Annual Meeting, Psychology of Mathematics Education, Atlanta, GA. (October, 2002), pp. 1737-1742, (co-author).

“Five-Year Results from the NSF Houston-Louis Stokes Alliance for Minority Participation,” (co-author). International Conference on Mathematics and Statistics, Honolulu, HI, January, 2005.

“Opening the Doors to Mathematics and Science Education: Programs that Work,” Claremont Conference on Race and Higher Education, February 2005.

“Effecting Systemic Change in the University,” (co-author). Symposium, Mathematical Association of America “Mathfest,” Albuquerque, NM, August, 2005.

“Building Strong Colleges and Effective University Research Programs: Lessons from the US Experience,” Plenary Speech, International Conference on Education, Singapore, December, 2005.

Session Leader, Annual National Science Foundation Noyce Conference, 2006 and 2008.

“Closing the Achievement Gap in STEM Education; Dramatic Results from Houston,” (co-author). Joint Meeting of the American Mathematics Society and the Mathematics Association of America. Washington, D.C., January, 2009

“STEM Awareness and Career Development,” Texas Southern University, Houston, TX, March, 2011

“Closing the Achievement Gap with STEM Curriculum Reform,” Invited Keynote Address, Southern California Project Kaleidoscope regional meeting, January 2012

Session Leader, Conference on Engineers, Exact Scientists (Technocrats) and Political Processes: Global Perspectives, Harvey Mudd College, Claremont, March, 2012.

“The STEM Pipeline: From Preschool to the PhD,” Conference on Global Integrated Engineering, Abu Dhabi, March 2012.

“STEM the Tide: Broadening Participation in Science, Technology, Engineering, and Math,” Invited Keynote Address, Joint Annual Meeting (JAM), National Science Foundation, Washington, DC, June 14, 2012.

“Building Academic Centers of Excellence”, Conference on Liberal Arts Education in India, Bangalore, India, January 2014.

Co-chair, Conference on Liberal Studies in Engineering, National Academy of Engineering, January, 2015

“Liberal Studies in Engineering: A Smoother Pathway into the Profession”, AAAS Conference on Envisioning the Future of Undergraduate STEM Education, Poster Session, Washington, D.C., April 28, 2016 (co-author)

“STEM the Tide”, Presentation at the University of Tallinn, Estonia, May 20, 2016.

“Liberal Studies in Engineering”, Annual Meeting of the American Society for Engineering Education, New Orleans, La., June 27, 2016.

“Pre-Freshman Summer Immersion Programs to Increase Minority Retention in STEM Disciplines: Two Different Strategies”, American Society of Cell Biology Conference, 2016.

“Liberal Studies in Engineering: an Interdisciplinary Pathway into Engineering”, AAC&U Conference on Transforming Undergraduate STEM Education, Poster Session, Boston, MA, November 4, 2016 (co-author)

Co-chair, Session on the Houston LSAMP program, National Conference on Students in Transition, Costa Mesa, CA, October, 2107

“Liberal Studies in Engineering”, presentation at the University of San Diego, November 2017

“The Missing Link in Engineering Education: The Arts and Humanities”, 25th Annual International Conference on Computers in Education, Christchurch, New Zealand, December, 2017

“Key Issues in STEM Education”, Globalizing the Liberal Arts Conference, Soka University,

California, June 2018

“Integrating Engineering with the Liberal Arts”, Society for Social Studies of Science (4S) Conference, Sydney, Australia, August, 2018

“The Emergence and Power of STEAM”, Keynote at Economic Forum, Dimitrie Cantemir Christian University, Bucharest, Romania, January, 2019

4. *K-12 Education*

A. Books, Monographs, and Technical Reports

Aptitude Revisited: Rethinking Math and Science Education For America's Next Century.
Baltimore, MD: Johns Hopkins University Press, (1996), 275 pages.
(Also excerpted in the Journal of Science Education and Technology, Vol. 7, No. 4, 1998.)

Evaluation of Project LEARN, Technical Report Prepared for the UCLA School Management Program, April, 1998 (co-author).

The Effects of Elementary School Achievement on High Stakes Test Performance in High School, Technical Report prepared for the Los Angeles Unified School District, April, 2005 (co-author).

B. Articles and Reviews

Review of Christopher Jencks' Inequality: A Reassessment of the Effects of Family and Schooling in America, The Chronicle of Higher Education, Vol. III, No. 31, (May 7, 1973), p. 9.

"The Implications of Inequality for Higher Education," RANN Project Report, American Council on Education (June 1973), 13 pages.

"Trends in U.S. Science Education," U.S. International Communication Agency (April, 1979)

"Innovation in American Education," U.S. International Communication Agency (August, 1980).

"Sociology, Education and Equal Opportunity," U.S. International Communication Agency (June, 1980). (Also published in America Illustrated in 1981.)

"Industry's Move Into Education," United States Information Agency, June, 1985.

"Mathematics, Science, and Urban Education," in S.W. Rothstein (ed.), Handbook of Schooling in Urban America. Praeger/Greenwood Press, 1993, pp. 297-315.

"Class, Race, and Science Education," in S.W. Rothstein (ed.), Class, Culture, and Race in American Schools: A Handbook. Praeger/Greenwood Press, 1995, pp. 55-72.

"Rethinking the Aptitude Excuse," The Los Angeles Times, August 20, 1996, p. B7.

"America's Wasted Talent: A Karplus Lecture," Journal of Science Education and Technology, Vol. 7, No. 4, 1998.

"Education and Mobility", Issues in Science and Technology, National Academy of Science, Volume 16, Number 1, pp. 9-10, 1999.

"Tell Students: Yes, You Can," Op-Ed article, USA Today, 2/7/01.

"Five Things Most People Believe About American Education That Are Wrong," The CGU Flame, Claremont, CA, Spring, 2004.

"Three Flaws in the Education System and How to Fix Them," The Claremont Letter, October, 2005.

"Students Need Good Teachers More Than Tests," Los Angeles Times Education Blog, October 23, 2008.

"The Five Misconceptions About Teaching Math and Science (American education has not declined and other surprising truths), Slate magazine, June 19, 2012.

"Why U.S. Can't Get Back to Head of the Class (Because it was never there), The Answer Sheet blog, online Washington Post, July 2, 2012.

"New Directions in Pedagogy: Design, Playfulness, and STEAM", Proceedings of the International Conference of Computers in Education", December 2018. (co-author)

"STEM Education, Economic Productivity, and Social Justice" in R. Papa (ed.) The Oxford Encyclopedia of Educational Leadership, 2020.

"The Impact of a Three Year Original Science Research Program on High School Students' Acquisition of a STEM Degree and Career", Bulletin of the New Jersey Academy of Science, (co-author, in press)

C. Presentations

"Educational Reforms: What Works and What Doesn't." University of La Verne Doctoral Workshop, January, 1982.

"Why are Efforts to Recruit Students into Careers in Science and Technology Meeting with Little Success?" Invited Keynote Address, AMA-sponsored national conference on science education, Washington, D.C., March, 1989.

"Student Attitudes Towards Science." Symposium on Building a New Science Literacy, Oregon Graduate Institute, June, 1989.

"Science Education and Student Expectations." Anaheim Union High School District, September, 1991.

"Rethink the Aptitude Excuse: Accountability and Achievement in Mathematics and Science Education." National Science Foundation presentation, February, 1997.

Interviewed on "Connie Martinson Talks Books." L.A. Cityview Television Channel 35, March 21, 1997.

"Rethinking Math and Science Education." Educational Summit Workshop, Tacoma, Washington, March 21, 1997.

Interviewed on "Seven Live." Kiro-TV Channel 7, Seattle, Washington, March 24, 1997.

"America's Wasted Talent: A Karplus Lecture." National Science Teachers Association, New Orleans, April 5, 1997.

"Systemic Reform in Science, Math, and Technology Education: What Works and Why," International Conference on Education, Honolulu, HI, January, 2005.

"Q and A with David Drew: Broadening STEM education and debunking its myths", interview conducted by Nick Pandolfo, The Hechinger Report, December 16, 2011.

"Examining Teachers' Efficacy in Mathematics Teaching: A Pilot Study," NSF Noyce Teacher Scholarship Program Conference, Washington, DC, May, 2012 (co-author).

"The Need for a New Pedagogical Paradigm in STEM Education", Keynote presentation at 2015 Educational Summit, University of Northern Iowa, May, 2015

"America's Hidden Talent", East Tennessee State University, June, 2017

5. *Public Health Research*

A. Books, Monographs, and Technical Reports

The Effects of Federal Funds Upon Selected Health-Related Disciplines, prepared for the White House, Santa Monica, CA: The Rand Corporation, R-1944-PBRP, 1976, 42 pages (co-author).

Algorithms for Health Planners: Vol. 1, An Overview. Santa Monica, CA: The Rand Corporation, R-2215/1-HEW, August 1977, 34 pages (co-author).

Algorithms for Health Planners: Vol. 6, Hypertension. Santa Monica, CA: The Rand Corporation, R2214/76-HEW, August 1977, 73 pages (co-author).

B. Articles and Reviews

"Undergraduates Planning a Career in Medicine," Report of the Ninth Annual Conference on Research on Medical Education, Washington: Association of American Medical Colleges, 1970. (Abstract of the above paper published in Journal of Medical Education, October, 1970).

"A New Planning Methodology to Assess the Impact of the Health Care System on Health Status" Medical Care, Vol. 16, No. 12 (December, 1978), pp. 1027-1035. (co-author)

"Nonverbal Communication Signals in Behavior-Disordered and Non-Disordered LD Boys and NLD Boys," in Learning Disability Quarterly, Vol. 6, No. 1, Winter, 1983 (co-author).

"Institutional and Faculty Influences on the Reputation of Doctoral Granting Programs in Special Education," Journal of Special Education, Vol. 27, No. 1, Spring, 1993 (co-author).

"Improving Examination Performance Using Exam Analysis," in Journal of Nursing Education, Vol. 34, No. 6, September, 1995. (co-author)

"Exploring the Persuasiveness of 'Just in Time' Motivational Messages for Obesity Management," International Conference on Persuasive Technology. Proceedings of International Conference on Persuasive Technology, pp. 258-61, 2008. (co-author)

"From Persuasion to Empowerment: A Layered Model, Metrics, and Measurement" Proceedings

of Persuasive Technology Conference, 2010. (co-author)

“Understanding the Value Proposition of Health Information Exchange: The Case of Uncompensated Care Cost Recovery” *Health Systems*, 2, p. 134-46, 2013 (co-author)

“Sustaining Health Behaviors Through (Technological) Empowerment” in *Persuasive Technology*, 2018, (co-author)

C. Presentations

"Trends Affecting the Future Supply of Scientists." Meeting of the Advisory Committee to the Director, National Institutes of Health, Bethesda, Maryland, May, 1989.

“Social Networks of People with Aphasia: Do SLP’s Measure Them?” (co-author), American Speech, Language and Hearing Association national conference, San Diego, November, 2005,

“Clues to Limited Life Participation in Acquired Communication Disability,” (co-author) American Speech Language and Hearing Association Conference, Boston, MA, November, 2007.

6. *Social, Economic, and Political Trends*

“California Far From Unique,” *Providence Journal*, October 3, 2003.

“Governor’s Mentoring Machinery,” *Sacramento Bee*, June 12, 2005.

“Getting Grounded in the Post Hometown World,” *Christian Science Monitor*, August 5, 2005, (co-author, reprinted in a number of newspapers, including publications in Taiwan and the Vatican).

“Too Many Options Dilute Shared Experience,” *Christian Science Monitor*, March 6, 2006, (co-author, reprinted in a number of newspapers)

“Will Another White Male Be Elected President in 2008?” *Christian Science Monitor*, January 5, 2007, (co-author, reprinted in a number of newspapers)

“Presidential Quiz,” *Christian Science Monitor*, January 5, 2007, (co-author, reprinted in a number of newspapers)

“Hawaii Was Trailblazer in Quest for Public Worker Rights,” *Honolulu Star Advertiser*, May 1, 2011

7. *Evaluation Techniques and the Policy Research Process*

B. Articles and Reviews

"The Potential Impact of Longitudinal Research on Decision-Making in Higher Education," Journal of Educational Data Processing (Winter 1971-72), pp. 30-35.

Review of Andrew Levison's "The Blue-Collar Majority," Washington Post Outlook Section (September 29, 1974), p. C5.

"Policy Research and Social Scientists," The National Observer (May 16, 1977), p. 12.

"Assessing the Value of Learning," in D. Drew (ed.), Competency, Careers and College. San Francisco: Jossey-Bass, 1978.

"Using Research to Improve the Undergraduate Experience," in D. Drew (ed.), Increasing Student Development Options in College. San Francisco: Jossey-Bass, 1978.

"Evaluation: A New Discipline," U.S. International Communication Agency (April 1979).

"Seeing the Forest for the Trees: Contribution of Research on Higher Education," Change, Vol. 18, No. 4, (July/August, 1986), pp. 7-10.

C. Presentations

"Using Publication and Citation Data in Evaluation Research." Conference on the Use of Citation Data in the Study of Science, Belmont, MD, April, 1975.

"The Role of the Policy Analyst." Conference on the Administrator and the Management of Educational Conflict, Buena Park, CA, November, 1977.

"Using Research to Influence Policy." Southern California Community College Institutional Research Association, Fullerton, CA, May, 1985.

"Integrating Research and Policy." Research in Policy Making Conference sponsored by California Association of Community Colleges, Asilomar, CA, April, 1986.

"Effective Evaluation Techniques." Long Beach City College, September, 1988.

“Policy Research About Native Hawaiians.” Pacific American Research Center Conference, Kamehameha School, Honolulu, Hawaii, January, 2002.

8. *Analytical Models, Statistical Methods, and Data Quality*

A. Books, Monographs, and Technical Reports

Assessing the Quality of National Data About Academic Scientists. Prepared for National Science Foundation, June, 1988, 108 pages (co-author).

B. Articles and Reviews

"Data Banks in the United States: Post-secondary Education," XXVI ESOMAR/ WAPOR Congress, Budapest, Hungary, September, 1973.

Review of William H. Weber's Socioeconomic Methods in Educational Analysis, Contemporary Sociology, Vol. 6, No. 1 (January, 1977), pp. 1234-1250.

"Needed: Better Data About Academic Science," Science, Vol. 200 (1978), p. 385.

"Advanced Ocularmetrics: Graphing Multiple Time Series Residual Data," Educational - Evaluation and Policy Analysis, Vol. 5, No. 1, Spring, 1983, pp. 97-105.

C. Presentations

"The Higher Education Panel." Presentation before the Higher Education Secretariat, Washington, DC, July, 1972.

"Methodology in Public Opinion Surveys." American College Public Relations Association Conference, Washington, DC, January, 1973.

"Methods in Higher Education Research." SUNY Public Relations Council Conference, Syracuse, NY, April, 1973.

"Multivariate Techniques for Policy Analysis." Western Psychological Association, Long Beach, CA, April, 1987.

"Using Questionnaire Data to Evaluate Scientists, Engineers, and Computer Personnel in the United States." International conference about "Formation, Evaluation, et Selection par Questionnaires Fermes," Marne-La-Vallee, France, March, 1988.

9. *Information Systems, Computers and Technology*

A. Books, Monographs, and Technical Reports

Computer Aptitude, Interest and Literacy Profile, a psychometric instrument published by Pro-Ed (Austin, TX), 1984. A book-length manual accompanies this test. (co-author).

B. Articles and Reviews

Review of John G. Kemeny's Man and the Computer, Educational Record (Spring, 1973), pp. 167-168.

"Graduate Education and the Computer Revolution," CGS News, Vol. 54, No. 5, Fall, 1982, p. 5.

"Choosing the Computer Elite," United Press International, May, 1984.

"Is There an Aptitude for Learning about Computers?" Claremont Reading Conference Yearbook, Claremont, CA, 1985 (co-author).

"Why Don't All Professors Use Computers?" Academic Computing, Vol. 4, No. 2 (October, 1989), pp. 12-14, 58-60.

"ScienceMaps: An Online Resource Portal for Standards-Based Science Instruction Using Geographic Information System Technology, in Emerging Spatial Information Systems and Applications, 2007 (co-author).

"Using Grassroots ICT to Expand Women's Participation in Nontraditional Careers", in Ewa Lechman (ed.) Technology and Women's Empowerment (co-author, in press)

C. Presentations

"Mechanisms for Easing the Process of Change." Symposium on the Future of Computer Science at Harvey Mudd College, May, 1984.

"Measuring Computer Aptitudes." UCLA Conference on Adult Learning in the Computer Age, October, 1984.

"Computing Technology and the Academic World." Invited Plenary Address, National Conference on Campus Computing '88, San Francisco, CA, October, 1987.

Discussant, International Conference on Design Science Research in Information Systems and Technology, Pasadena, May 2007.

10. Forthcoming Publications

Creating Technology as Though Human Beings Mattered

How to Teach Statistics

"The Slippery Semantics of Statistics"

"The Power of Discriminant Function Analysis"

"The Gray Area in STEM Education: the Undecided Student"

Plus

Our Days Are Numbered, a mystery novel

Professional Activities, Panel Memberships, Awards

Advisory Panel, “GROWTH” international astronomy research and education project, California Institute of Technology, 2016-present

Advisory Panel, Professional Science Masters National Program, 2015 - 2016

Advisory Panel, Connective Leadership Institute, 2014 – present

Board Member, Vistamar School, 2010-2016
Chair, Education Committee, 2015 - 2016

Editorial Board, STEAM Journal, 2012 to 2016

Editorial Board, Journal of Humanistic Mathematics, 2010 - present.

External review panel, Joint Doctorate in Computational Science (Claremont Graduate University and San Diego State University), April, 2011

Advisory Panel, The Natural Learning Institute, 2007-2010..

Steering Committee, Math for America, Los Angeles, 2007-2010.

WASC Advisory Panel on the Evaluation of Systematic Learning Objectives in California Community Colleges, 2006-2007

Kozmetsky Fellow in Transdisciplinary Studies, 2003-2004

Editorial Advisory Board, Higher Education Abstracts, 1994-2007.

External review panel, Houston Alliance for Minority Participation, 2001-present.

External review panel, Louisiana Alliance for Minority Participation, 1996-present.

Advisory Committee on Research and Development, The College Board, 1996-1999.
Subcommittee on Near Term Issues in Access and Admissions, 1999.

Citation of Special Recognition for Distinguished Service, Claremont Graduate School Alumni

Association, 1995.

Advisory committee for the project on research competitiveness (EPSCoR) of the American Association for the Advancement of Science, 1993-1996.

Advisory committee for the Hughes Corporation K-12 education program Annenberg Public Broadcasting project, 1995.

Advisory panel for a project "The Role and Effects of College Employer Partnerships on Science Education in Two-Year Colleges" conducted under NSF funding by the National Center for the Development of Education, 1995.

Panel to evaluate the Louisiana Education Quality Support fund for the Louisiana State Board of Regents, 1994.

Human Resource Development Evaluation Advisory Committee, National Science Foundation, 1991-1994.

Advisor to National Study of Postsecondary Faculty, U.S. Dept. of Education, 1990.

Consultant Reviewer of Assessment for Excellence, by Alexander W. Astin, 1989.

Consultant on Research Policy to the President of the College Board, 1987.

Technical Advisory Committee for Project on Transition of Special Education Students from School to Work, 1987.

Panel Advising Chancellor of California Community Colleges on Technical Education, 1984-1988.

Traffic Safety Advisors Group, Automobile Club of Southern California, 1984-1989.

Consultant Reviewer of Manuscript, American Professors: A National Resource Imperiled, for Howard Bowen and Jack Schuster, 1985.

Advisor to National Commission on Industrial Innovation, 1984-1985.

International Task Force on Assessing Science in the Third World (NSF sponsored), 1984-1986.

President's Cabinet, (TEXACT), Technology Exchange Center, California, 1984-1986.

Academic Director, Claremont Higher Education Management Institute, 1978-1981.

American Educational Research Association: Editor, Division G Generator, 1976-79. Nominee, AERA vice president from Division G, 1980; Division J publications committee, 1982.

(Southern Association) Reaccreditation Visiting Committee to Vanderbilt University, 1975.

Advisory Committee on Methodology for Nontraditional Education Project, Center for Research and Development in Education, UC Berkeley, 1973.

Listed in: Leaders in Education, Fourth Edition. American Men and Women of Science, 12th Edition.

Special Citation, American College Public Relations Association National Competition, 1973, for: As Others See Us (co-author).

Fellow of the Harvard Computing Center on The IBM Donation, 1966-68.

Reviewer, American Journal of Sociology, Association for the Study of Higher Education, Review of Higher Education, Journal of Higher Education, Social Problems, American Educational Research Journal, Journal of Computers in Education, Knowledge, Review of Educational Research, Sociology of Education, Management Science, Journal of Policy History, STEAM, The Condition of Education, Science Indicators, Johns Hopkins University Press, Stylus Press, National Science Foundation, and National Research Council.

Institutional Service (Selected Committees)

Education Faculty: Dean's Advisory Group, 2012, Chair, Faculty Search Committees (2003-2020), Advising Policy and Curriculum Committee (2008-2020), Promotion Review Committees (2015-2020), Chair, Education Faculty (Fall, 1990 and 1993-2002), Chair, Admissions Committee (1979-80, 1986-1993)

The Claremont Graduate University: Chair, Grievance Committee, 2014 to 2018, Committee on Academic Honesty, 3018, Appointment, Promotion and Tenure Committee (1990-1993, Fall 1999, 2003-2006, Spring 2014, Spring 2018-present); Academic Standards Committee, 2012; Transition Council, 2010, Institutional Review Board (2006-2010, 2012; Chair, 2007-2010), Committee to Conduct the Faculty Evaluation of the President (2008-2009), Chair, Faculty Review of V.P. for Development, 2004; Chair, Provost Search Committee (2002-2003); Nominating Committee (2002-2003); Faculty Executive Committee (1993-2002); Search Committee for Vice President for Development (1999); Presidential Search Committee (1997-1998); Chair, Search for Arts and Humanities Center Director (1998-1999); Philosophy Interdisciplinary Committee (1997); Search Committee for CGU Research Administrator (1999-2000); Strategic Planning Committee (1993-2002); Faculty Representative at Board Meetings (1990-2002); Co-chair, Committee on Future of the Mathematics Department (1996); Faculty Council (1991-1993); AACSB Review Steering Committee (1991-1993); Committee on Teaching Evaluation (1992-1993); Chair, CGS Faculty Executive Committee (1988-1990); Research Committee (1988-1991); Academic Computing Committee (1979-87; Chair, 1980-84).

Teaching

I have taught full-time in the CGU Education program and part-time in the CGU Executive Management and Public Policy programs as well as at UCLA, American University and Harvard University. I have chaired many dissertation committees, in Education, Executive Management, and Psychology, and have served on a number of other dissertation committees.

The Claremont Graduate University: Quantitative Methods: elementary, intermediate and advanced; Public Policy Analysis; Implementation and Evaluation of Organizational Change; American Graduate Education; Science, Technology, Engineering and Math Education; Management Science Techniques in Education, Transdisciplinary Course on Social Entrepreneurship, Capstone Course.

UCLA: Introductory Statistics, Institutions in American Society, Quantitative Research Methods.

American University: Sociology of Race Relations, Advanced Research Methodology.

Harvard University: Graduate seminar on educational research, taught introductory sociology to U.S. Navy personnel (Extension Division), taught short noncredit courses on computer programming to Harvard students, faculty and staff (Computing Center).

Management

Experience in strategic planning, preparing and monitoring budgets, academic leadership, analytical decision-making, and the development, management and evaluation of knowledge workers.

Harvard University Computing Center: Supervised all applications programmers, all programming assistants and the data entry group (25 people); shared management of the Center during a period between directors.

American Council on Education: Line responsibility for programming group and quick turn-around survey group (15 people).

ACE, NRC, Rand and Claremont: Directed research projects of various sizes. The Science Development Study required a staff of 8 people.

Claremont: Chair of the CGU Faculty Executive Committee; Dean of Education (285 Full-time Equivalent Ph.D. and Master's students).

Consulting Clients

Government Agencies:

City of Henderson, Nevada
Jet Propulsion Laboratory
Los Angeles Police Department
Louisiana Board of Regents
National Aeronomics and Space Administration (NASA)
National Institute of Mental Health
National Institutes of Health
National Science Board
National Science Foundation
Triangle Coalition

Academic Institutions:

Azusa Pacific University
California Institute of Technology
California Lutheran University
California State University, Fullerton
California State University, Northridge
California State Polytechnic University, Pomona,
Claremont Colleges Keck Science Department
Claremont McKenna College
Concordia University
Dimitrie Cantemir Christian University, Romania
East Tennessee State University
Fullerton College
Harvard Center for International Studies
Harvard Graduate School of Education Dean's Office
Harvard Student Study
Harvey Mudd College
Houston Alliance for Minority Participation
Hunter College Foundation
Loma Linda University School of Nursing
Long Beach Community College
Los Angeles Trade-Technical College
Louisiana Alliance for Minority Participation
Mount Saint Mary's University
Nevada State College Foundation
Pomona College
Santa Monica College
Soka University
Southern University
Southwest College (Los Angeles)
Texas Southern University

University of California, Los Angeles
University of California, San Diego
University of California, Santa Barbara
University of La Verne
University of Northern Iowa
West Virginia University

Schools and School Districts:

Anaheim Union High School District
Baldwin Park Unified School District
Corona-Norco Unified
Los Angeles Unified/Project LEARN
Newport-Mesa Unified
San Diego Unified
The Webb School

Law Firms, Expert Witness Assignments:

Marvin O. Burton, Newport Beach, CA
Norman Ty Hilbrecht, Las Vegas, NV
Latham and Watkins, Los Angeles
Lewis, D'Amato, Brisbois & Bisgaard, Los Angeles
Los Angeles Police Command Officers Association

Corporations and Nonprofit Organizations:

American Jewish Committee
American Oil Company
Burud and Associates
Checkpoint, Inc.
The College Board, President's Office
Educational Testing Service
Energy Labs, Inc.
The Grantsmanship Center
The Heartmath Institute
Huntington Library and Museum
Lost Arrow Corporation
Medical Billing Systems, Inc.
Miami-Dade County Aviation Department
National Organization of Black Chemists and Chemical Engineers
North Orange County Regional Occupational Program
Patagonia Clothes
Steven Myers and Associates, Inc.
Systems Research Group, Toronto
Technology Exchange Center, Orange County, CA
The Verity Group
Westat Research, Inc.

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