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6 Attorneys for Plaintiffs,  
CITY OF LAGUNA HILLS;  
7 BFE ASSET PARTNERS, LLC;  
GJC PROPERTIES 8 LP;  
8 SUKIN & ROSENFELD LLC;  
ERIK M. BLOCK

9  
10 **SUPERIOR COURT OF THE STATE OF CALIFORNIA**  
11 **COUNTY OF ORANGE**

12 CITY OF LAGUNA HILLS, a municipal entity;  
13 BFE ASSET PARTNERS, LLC, a limited  
liability company; GJC PROPERTIES 8 LP, a  
14 limited partnership; SUKIN & ROSENFELD  
LLC, a limited liability company; and ERIK M.  
15 BLOCK, an individual,

16 Plaintiffs,

17 vs.

18 ELITE HOSPITALITY, INC.; COUNTY OF  
ORANGE; BOARD OF SUPERVISORS OF  
19 THE COUNTY OF ORANGE; ORANGE  
COUNTY HEALTH CARE AGENCY; CEO  
20 REAL ESTATE; FRANK KIM; NICHOLE  
QUICK; and DOES 1 - 50, inclusive,

21 Defendants,

22 ILLUMINATION FOUNDATION, a nonprofit  
organization,

23 Real Parties in Interest.  
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Case No.: 30-2020-01139345-CU-MC-CJC

**DECLARATION OF LAWRENCE S.  
MAYER, MD, MS, PhD**

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I, Lawrence S. Mayer, MD, MS, PhD, do declare as follows:

1. I give this declaration in support of Plaintiff City of Laguna Hills’ Application for an Order to Show Cause and Temporary Restraining Order. I have personal knowledge of the facts set forth herein. If called as a witness in this matter, I could and would testify competently thereto.

2. I am a Visiting Fellow in Human Flourishing at Harvard University from 2018 to the present. I also work and consult on the application of epidemiology, clinical trials, and related methodologies in policy and legal settings. I obtained my medical degree from Guy’s Hospital Medical School in London, my master’s degree in mathematics from The Ohio State University, and my PhD from The Ohio State University in mathematics with an emphasis in statistics and biostatistics. I have served in Professorial roles for the last 50 years including professorships at Princeton, University of Pennsylvania, Stanford, and Arizona State. For the last 24 years before my retirement in 2016 I served as a Professor in the Bloomberg School of Public Health and School of Medicine of Johns Hopkins University. I also enjoyed a research appointment at the Mayo Clinic. Attached hereto as Exhibit “1” is a true and correct copy of my curriculum vitae.

3. The coronavirus pandemic disproportionately affects elderly people. While we are not certain they are more likely to contract the disease, we are certain that they are far more likely to become severely ill and die. As these severely ill patients progress to death, they require increasingly time-intensive care thus utilizing critically scarce hospital resources including ICU (Intensive Care Unit) beds, ventilators and medical staff. It is incumbent upon government, at all levels, to minimize the exposure of elderly people to the coronavirus since exposure causes transmission and transmission causes illness which often leads to severe disease and ultimately death. Minimizing the exposure of the elderly not only benefits this age cohort but conserves shared healthcare resources for all age cohorts.

1           4.       In order to make everyone safer during this pandemic the US national strategy as  
2 well as the State of California strategy is to “flatten the curve.” Flattening the curve means  
3 decreasing the rate of increase in the number of cases (the cumulative incidence curve) or  
4 decreasing the growth rate of total cases. By decreasing the rate of increase in the number of cases  
5 we husband the healthcare resources that we all share so that these resources will be available to  
6 critically ill patients that may, or may not, be infected with the Coronavirus. If government were to  
7 house and quarantine a high concentration of contagious individuals in close proximity to a dense  
8 population of elderly citizens, citizens who are most likely to become critically ill, then  
9 government would undermine its own effort to flatten the [cumulative incidence] curve.

11           5.       In 2019 a novel virus, designated as *severe acute respiratory syndrome coronavirus*  
12 2 (SARS-CoV-2 herein), was discovered to be the cause of a pneumonia outbreak in Wuhan,  
13 China.<sup>1,2</sup> Herein, coronavirus disease 2019 (COVID-19) refers to the disease caused by infection  
14 with SARS-CoV-2 (also referred to as the novel, 2019-nCoV, or HCoV-19).<sup>2,3,4</sup> SARS-CoV-2 is  
15 the viral pathogen responsible for the COVID-19 pandemic. Genetic analysis has indicated SARS-  
16 CoV-2 to be a zoonotic betacoronavirus, within the same subgenus as the SARS virus, and  
17 theorized to have been first transmitted to humans from bat hosts.<sup>1</sup> SARS-CoV-2 is the seventh  
18 coronavirus known to infect humans and one of three coronaviruses (SARS-CoV, MERS-CoV,  
19 and SARS-CoV-2) recognized as causing severe disease.<sup>5</sup>

22           6.       As of April 13, 2020, more than 1.8 million cases of COVID-19 have been detected  
23 globally (including 557,300 cases in the United States) and there are more than 114,000 recorded  
24 deaths (including 22,079 deaths in the United States).<sup>6</sup> Surprisingly but consistent with  
25 exponential growth, 1920 deaths from COVID-19 occurred in a single day (April 12) in the United  
26 States. California has 21,794 confirmed cases including 651 deaths as of April 12.<sup>7</sup> Confirmed  
27 cases of COVID-19 in California, as everywhere, are not uniformly distributed across age groups;  
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1 nearly 50% of cases are individuals over 50 years of age.<sup>8</sup> It is notable that while individuals over  
2 65 years of age comprise 14.3% of the state's population they represent approximately 22.4% of  
3 the state's COVID-19 cases, almost a 60% increase.<sup>8,9</sup>

4  
5 7. SARS-CoV-2 is highly contagious with transmission primarily due to person-to-  
6 person contact. Infected individuals who are not displaying symptoms (asymptomatic or pre-  
7 symptomatic) spread the disease to others.<sup>3,4</sup> Respiratory droplets produced via cough or sneeze  
8 from infected individuals are particularly capable of infecting others.<sup>4</sup> SARS-CoV-2 is transmitted  
9 via aerosols as well as shared contaminated objects and surfaces.<sup>4</sup>

10  
11 8. There are many documented cases of infection in patients who never develop  
12 symptoms. The prevalence of asymptomatic infection largely remains unknown since asymptomatic  
13 persons are not typically tested.<sup>3</sup> Among symptomatic individuals there is a median incubation  
14 period of 4-5 days though it may take up to 14 days or more for an infected individual to show  
15 symptoms.<sup>3,10</sup> Asymptomatic transmission is dangerous because individuals working in proximity  
16 to infected patients can contract and transmit the infection to others without ever being aware of  
17 their own infection.

18  
19 9. Among patients who do experience symptoms, the most common presentation of  
20 COVID-19 includes fever, cough, fatigue, loss of appetite, shortness of breath, sputum production,  
21 and myalgias.<sup>3</sup> Persons who are elderly or with medical comorbidities may have delayed  
22 presentation of fever and respiratory symptoms<sup>3</sup> which may lead to delays in seeking medical care.  
23 A study of 44,000 persons with COVID-19 demonstrated that 19% of cases progressed to severe  
24 or critical illness<sup>3</sup> with 2.3% of all cases (equal to nearly half of all critical cases) progressing to  
25 death.<sup>11</sup> Age is probably the strongest predictor of severe illness and death<sup>3,8</sup> with a fatality rates  
26 in China of 3.6% among 60-69 year-olds, 8.0% among 70-79 year-olds, and 14.8% among  
27 individuals 80 years old or older.<sup>3</sup> Approximately 80% of COVID deaths in China occurred  
28

1 among adults aged 60 years or older.<sup>12</sup> In the US the highest rate of death was observed in persons  
2 aged 85 years old or older (10-27%)<sup>12</sup> and the rate of death for residents of a Washington skilled  
3 nursing facility was 33.7%.<sup>13</sup>, a full third of the residents.

4           10.     There is no FDA approved treatment for COVID-19 therefore inpatient  
5 management focuses on nothing more than supportive care.<sup>3</sup> So communities with vulnerable  
6 individuals particularly elderly individuals require additional consideration during public health  
7 crises so that such individuals may be protected, as much as possible, from severe illness and  
8 death.

9  
10           11.     Laguna Woods is a retirement community with a median resident age that is nearly  
11 twice (or double) that of the surrounding areas at 75.4 years of age.<sup>14</sup> Orange County's median  
12 resident age is 37.8 years old.<sup>14</sup> The importance of this difference is not only the doubling of  
13 median age. Patients with Sars-CoV-2 infections have drastically different outcomes predicted by  
14 their age. Elderly patients suffer negative outcomes disproportionately as compared to younger  
15 patients.

16  
17           12.     For the average Orange County resident, a 38 year-old person, the rate of death for  
18 those that contract COVID-19 is 0.4%, 4/10ths of 1 percent. For the average Laguna Woods  
19 resident, a 75 year-old person, the rate of death for those that contract COVID-19 is 8%. For this  
20 elderly person, the virus confers a 20-fold increase in the risk of death. I know of no other virus  
21 that has this large of differential.

22  
23           13.     The difference between the Laguna Woods population and the general population is  
24 not limited to the differences in risk of death. Epidemiologic data from China, Europe, and  
25 severely impacted cities in the United States such as New York City has clearly demonstrated that  
26 the consumption of hospital resources is one of the foremost concerns at hand. These resources -  
27 particularly ICU beds, ventilators, and staffing - are consumed at a dramatically increased rate by  
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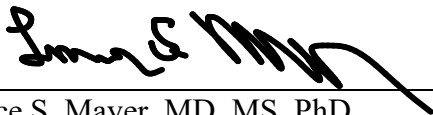
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1 elderly patients who contract COVID-19. By placing contagious patients in close proximity to  
2 this dense concentration of vulnerable people, not only do we place them at risk but we also  
3 undermine our goal of maintaining available hospital resources for patients of all ages.

4 14. Cities across the nation are doing everything they can to mitigate risks associated  
5 with the COVID-19 pandemic, particularly for their most vulnerable citizens. Senior citizen  
6 centers were often the first to be closed. Now parks, public bathrooms, trails, convention centers,  
7 and other municipal resources have been closed to reduce the spread of this virus. In addition to  
8 actions from the government, businesses have also taken action to protect their vulnerable citizens  
9 in their communities by adopting special business hours for the elderly. Reduced exposure equals  
10 reduced incidence equals lives saved. It is unusual and worrisome if public officials consider  
11 actions that run contrary to this trend.

12 15. Government officials should be cautious in engaging in any action that will spread  
13 the virus among people who will have the highest chance of severe disease and lowest chance of  
14 survival. These actions not only burden the most vulnerable part of the population, they put  
15 everyone at increased risk of serious disease and death by consuming the resources needed to care  
16 for the rest of the population.

17 I declare under penalty of perjury of the laws of the State of California that the foregoing is  
18 true and correct. Executed this 12th day of April 2020 in Orange County, California.

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24 By:   
25 Lawrence S. Mayer, MD, MS, PhD  
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# LAWRENCE S. MAYER, MD, MS, PhD

Curriculum Vita

November 2019

Primary interests: Biostatistical methods, applications and interpretations used in public health, epidemiology, medicine and social policy. Development implementation and evaluation of statistical methods for assessing health effects of preventive interventions and environmental exposures including life-style variables. Analysis of statistical and epidemiological issues arising from applying evidence-based medicine in a clinical or policy environment. Analysis of the statistical issues arising from applying epidemiological models in the diagnosis, treatment, and prognosis of disease. Particularly interested in the intersections among medicine, public health, epidemiology and statistics.

## **Current Positions:**

Visiting Fellow in Human Flourishing, Harvard University, 2018-  
<https://www.iq.harvard.edu/people/lawrence-s-mayer> (for identification only)

Independent Scholar and Consultant: Working and consulting on the application of epidemiology, clinical trials and related methodologies in policy and legal settings.

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## **Recent Addresses:**

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Mayo Clinic  
Samuel C. Johnson Research Building  
13212 East Shea Boulevard  
Scottsdale, AZ 85259

Arizona State University  
Department of Economics  
Tempe, AZ 85258

**Education:**

Undergraduate: Arizona State University (1963-64) and Ohio State University: Psychology (Pre-med), BS, 1967, Phi Beta Kappa, *magna cum laude* with distinction in psychology. President's award for outstanding graduate.

Professional: Ohio State University College of Medicine (pre-clinical), dual enrollment, 1966-68; Guy's Hospital Medical School, London, MB (British MD), 1969; Junior House Officer, Associated Medical Schools, British Virgin Islands 1969-1970, MD qualified to practice as a Public Health Physician (psychiatric epidemiologist), British Health Service, 1970

Graduate: Ohio State University, Mathematics, MS, 1969; Mathematics (Statistics and Biostatistics); PhD, 1971

Other: MA in Arts and Letters, *honoris causa*, University of Pennsylvania, 1981

**Previous Appointments:**

Scholar in Residence, Department of Psychiatry, Johns Hopkins School of Medicine, 2016-2017

Professor of Statistics, Biostatistics, and Economics, Arizona State University, 1995-2016

(Affiliate) Professor, Mayo Clinic/ASU Program in Biomedical Informatics, 2008-2016

Professor of Psychiatry and Public Health (Part-time), School of Medicine and Bloomberg School of Public Health, Johns Hopkins University, 1989-2016

Detective (Fully Sworn), Prosecutor's Office, Maricopa County, Arizona 1998-2016 (retired) and State Resource Officer (Fully Sworn), State of Arizona, 1983-1998

Professor of Epidemiology, College of Public Health, University of Arizona, 2000-2016

Research Staff Member, Mayo Clinic, 2014-2016

Consultant in Psychiatric Epidemiology, Banner Alzheimer's Institute, Phoenix, 2003-2016

Chief, Epidemiology and Biostatistics Section, Integrated Fellowship in Cardiology, Phoenix, 1998-2016

Faculty Member, Medical Education, Banner Good Samaritan Medical Center, Phoenix, 1993-2016

Visiting Professor, Division of Neuropsychiatry, Department of Psychiatry, Johns Hopkins Medicine, 2003-2004

Visiting Professor, Department of Biostatistics, Johns Hopkins School of Public Health, 1996-1997, 1989-1990

Director of Research, Maricopa Integrated Health System, 2003-2006

System Director, Research, Banner Health System; Director and Medical Director of the Banner Health Research Institute, Phoenix, 2001-2003

Director, Wharton Analysis Center, Wharton School; Associate Professor of Statistics, Public and Urban Policy, and Epidemiology, University of Pennsylvania, 1979-1983

Visiting Professor, Department of Statistics, Stanford University, 1982-1983

Research Statistician and Lecturer with Rank of Associate Professor, Department of Statistics; Member, Center for Energy and Environmental Studies; Associate Master and Fellow, Princeton Inn College; Instructor, Woodrow Wilson School of Public Affairs; Princeton University, 1974-1979

Assistant Professor of Statistics (with secondary appointments in Political Science, Sociology, and Education) Virginia Polytechnic Institute and State University, 1971-1974

Assistant Professor, Department of Political Science, The Ohio State University, 1971

Teaching Assistant, Department of Mathematics, The Ohio State University, 1967-1968

Visiting Scholar, Department of Statistics, Stanford University, Summer Semesters, 1984-1988

Instructor, Summer Programs, Inter-University Consortium for Political and Social Research, Institute for Social Research, University of Michigan, 1971-1980

### **Other Major Appointments:**

Clinical Professor, College of Medicine, University of Arizona, 1997-2006

Chair, Division of Research, Medical Professionals of Arizona, Phoenix, 2003-2006

Director, Good Samaritan Research Institute, Phoenix, 1999-2001

Consultant in Biostatistics and Clinical Epidemiology, Good Samaritan Medical Center, Phoenix, 1993-2000

Thesis Advisor, Masters in Public Health, School of Public Health, University of Arizona, 1996-1998

Member, Committee on Statistics, Graduate College, Arizona State University, 1989-2004

Member, Program on Law and the Social Sciences, Arizona State University, 1983-2004

Member, Committee on Malpractice Reform, Arizona Supreme Court, 1989-1993

Erskine Fellow, Occupational Medicine, University of Canterbury, Christchurch, New Zealand, 1989-90

### **Scholarly Publications:**

Hruz, PW, McHugh, PR, and Mayer, LS (2017) Growing Pains: Problems with Puberty Suppression in Treating Gender Dysphoria, *The New Atlantis*, Spring;(51): 1-24

Mayer, LS, and McHugh, PR (2016) Sexuality and Gender: Findings from the Biological, Psychological, and Social Sciences, *The New Atlantis*, Fall;(50): 7-143 (the entire issue – an invited issue)

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Kellam, S., Rebok G., Mayer, L., Ialongo, N. and Kalodner, C. (1994) "Depressive Symptoms Over First Grade and Their Response to a Developmental Epidemiologically Based Preventive Trial Aimed at Improving Achievement" , Development and Psychopathology, 6, 463-481

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Rebok, G.R., Kellam, S. G., Dolan, L. J., Werthamer-Larsson, L., Edwards, E. J., and Mayer, L. S., and Brown, G.H. (1991) "Preventing Early Risk Behavior: Process Issues and Problem Areas in Prevention Research", The Community Psychologist, 24, 18-21

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Mayer, L.S. (1986) "On Cross-Lagged Panel Studies with Serially Correlated Errors," Journal of Business and Economic Statistics, 4, 347-357

Mayer, L.S. (1981). "A Comment on 'Estimating Volumes of Remaining Fossil Fuel Resources'," Journal of the American Statistical Association, 76, 551-554

Mayer, L.S. and Horowitz, C.E. (1979). "The Effect of Price on the Residential Demand for Electricity: A Statistical Study," Energy, 4, 87-99

Mayer, L.S. (1978). "Estimating the Effects of the Onset of the Energy Crisis on Residential Energy Demand," Resource and Energy, 1, 57-92

Mayer, L.S. and Benjamin, Y. (1978). "Modeling Residential Demand for Natural Gas as a Function of the Coldness of the Month," Energy and Buildings, 1, 301-312

Mayer, L.S., Hoyer, R.W., and Bernd, J.L. (1977). "Some Problems in the Validation of Mathematical and Stochastic Models of Political Phenomena: The Case of the Supreme Court," American Journal of Political Science, 21, 381-403

Mayer, L.S. and Younger, M.S. (1976). "Estimation of Standardized Regression Coefficients," Journal of the American Statistical Association, 71, 154-157

Mayer, L.S. and Robinson, J.A. (1977). "Measures of Association for Multiple Regression Models with Ordinal Predictor Variables," Sociological Methodology, 1978, Jossey-Bass, 141-162

Jensen, D.R. and Mayer, L.S. (1977). "Some Variational Results and Their Applications to Problems in Multiple Inference," Annals of Statistics, 5, 922-931

Horowitz, C.E. and Mayer, L.S. (1977). "The Relationship Between the Price and Demand for Natural Gas: A Partially Controlled Study," Energy Research, 1, 193-222

Hoyer, R.W. and Mayer, L.S. (1976). "On Electoral Equilibria in a Spatial Analysis Based on the Theory of Games," Journal of Politics, 38, 116-171

Hoyer, R.W. and Mayer, L.S. (1975). "On Social Preference Orderings Under Majority Rule," Econometrica, 43, 803-806

Mayer, L.S., and Good, I.J. (1975). "Is Minimax Regret Applicable to Voting Decisions?" American Political Science Review, 69, 916-917

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Mayer, L.S. and Younger, M.S. (1975). "Multiple Indicators and the Relationship Between Abstract Variables," Sociological Methodology, 1975, 191-211

Jensen, D.R. and Mayer, L.S. (1975). "Normal-Theory Approximations to Tests for Linear Hypotheses," Annals of Statistics, 3, 429-444

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Hoyer, R.W. and Mayer, L.S. (1974). "Comparing Strategies in a Spatial Model of Electoral Competition," American Journal of Political Science, 18, 501-523

Bush, W. and Mayer, L.S. (1974). "Some Implications of Anarchy for the Distribution of Property," Journal of Economic Theory, 4, 401-411



Mayer, L.S., Singh, J. and Willke, T.A. (1974). "Utilizing Initial Estimates in Estimating the Coefficients in a Linear Model," Journal of the American Statistical Association, 69, 219-222

Mayer, L.S. and Younger, M.S. (1974). "Procedures for Estimating Standardized Regression Coefficients from Sample Data," Sociological Methods and Research, 1, 431-453

Mayer, L.S. and Good, I.J. (1974). "On Ordinal Prediction Problems," Social Forces, 52 (4), 543-549

Mayer, L.S. (1974). "On the Use of Non-Random Exogenous Variables in Path Analysis," American Sociological Review, 39, 891-893

Klemmack, D.L., Leggette, T.A. and Mayer, L.S. (1973). "Non-Random Exogenous Variables in Path Analysis," American Sociological Review, 38 (December), 778-784

Mayer, L.S. and Hendrickson, A. (1973). "A Method for Constructing an Optimal Regression Design After an Initial Set of Input Values Has Been Selected," Communications in Statistics, 2(5), 465-477

Mayer, L.S. and Willke, T.A. (1973). "On Biased Estimation in Linear Models," Technometrics, 15, 497-508

Mayer, L.S. (1973). "Estimating a Correlation Coefficient When One Variable is Not Directly Observed," Journal of the American Statistical Association, 68, 420-421

Burgess, P.M. and Mayer, L.S. (1973). "Simulation and Society, A Review Essay," Journal of Regional Science, 12, 303-311

Good, I.J. and Mayer, L.S. (1973). "On Surfaces of Constant Societal Loss in a Model of Social Choice," Journal of Mathematical Sociology, 2, 209-219

Mayer, L.S. (1972). "Using Monotone Regression to Estimate a Correlation Coefficient," Sociological Methodology, (Herbert Costner, ed.), Jossey-Bass: San Francisco, 200-212

Mayer, L.S. (1972). "An Analysis of Measures of Crosscutting and Fragmentation," Comparative Politics, 4, 405-415

Mayer, L.S. (1971). "Comment on 'The Assignment of Numbers to Rank Order Categories'," American Sociological Review, 35, 916-917

Mayer, L.S. (1971). "A Note on Treating Ordinal Data as Interval Data," American Sociological Review, 36, 519-520

Mayer, L.S. (1971). "A Note on An Axiomatic Model of Voting Bodies," American Political Science Review, 65, 764-665

Mayer, L.S. (1971). "A Method of Cluster Analysis When There Exists Multiple Indicators of a Theoretic Concept," Biometrics, 27, 143-155

Mayer, L.S. (1971). "A Comment on 'A Theorem on Voting'," American Political Science Review, 65, 779-780

## Research Monographs:

Energy Consumption Measurement: Data Needs for Public Policy, (1977) Committee on Measurement of Energy Consumption, Washington: National Academy of Science

Mayer, L.S. (1976). An Analysis of Alternative Voter Registration Systems, Modules in Applied Mathematics, Washington: Mathematical Association of America

## Chapters in Research Monographs:

Mayer, L. S. (1994) "On Cross-Lagged Panel Studies with Serially Correlated Errors," Frontiers in Econometrics, G. Maddala (ed), 154-165

Mayer, L.S. (1980). "The Effects of Price on Energy Demand: Econometrics Versus Exploratory Data Analysis," in Evaluation of Econometric Models (J. Kmenta and J. Ramsey, eds.), Academic Press, 15-45

Mayer, L.S. and Benjamin, Y. (1980). "Modelling Residential Demand for Natural Gas as a Function of the Coldness of the Month," in Saving Energy in the Home, (R. Socolow, ed.) New York: Ballinger

Bush, W. and Mayer, L.S. (1976). "On the Economics of Human Fertility," in Essays on Unorthodox Economic Strategies: Anarchy, Politics and Population, (A.T. Denzau and R.J. Mackay, eds.), University Publications, 163-181

Mayer, L.S. (1974). "Optimal Voting Behavior in a Two-Party Primary", in Applications of Mathematics in Political Science, Vol. VIII, (J. Herndon and J. Bernd, eds.), Charlottesville: University of Virginia Press, 4-14

## Published Book Reviews:

On the Verge: The Legal Fight of Travellers in England for their Rights (many authors), Romani Studies, 2001, 144-146

Firms and Markets (C. Tucker and R. Fuller, eds.), Perspective, Winter, 1988, 41

Social Science and Social Policy (R. Shotland and M. Mark, eds.), Perspective, April, 1986, 60

Principles of Epidemiology (Kleinbaum, Kupper and Morgenstern) Journal of the American Statistical Association, July/August 1984, 108

U.S. Interests and Global Natural Resources (Castle and Price, eds.), Perspective, September, 1984, 725-726

Proximity and Preference: Problems in the Multidimensional Analysis of Large Data Sets (R. Golledge and J. Raynor, eds.), Journal of the American Statistical Association, September, 1983, 78, 734

Statistical Applications in the Spatial Sciences (N. Wrigley, ed.), Journal of the American Statistical Association, June, 1983, 78, 509-510

Power, Voting, and Voting Power (Manfred J. Holler, ed.), Perspective, February, 1983

Exploratory Data Analysis (J. Tukey), Evaluation and Program Planning, 1981, 4, 195-196

On the Social Use of Information (A. Wissel), Perspective, June, 1977, Vol. 6, No. 5

Simulation Model Building: A Statistical Approach to Modeling in the Social Sciences With The Simulation Method (U. Norlen), Perspective, March 1977, Vol. 6, No. 2

Research Methods in the Social Sciences (D. Nachimas and C. Nachimas), Perspective, November 1976, Vol. 5, No. 9

Registering Voters by Mail: The Maryland and New Jersey Experience (R. Smolka), Perspective, October 1975, Vol. 4, No. 8

### **Other Professional Activities:**

Guest Lecture, Statistics and Epidemiology in Court, University of Maryland Law School, March, 2012

Editorial Board Member, Journal of Cardiology Research, 2003-

Member, Development Board, Copper Ridge Institute, Sykesville, MD, 1998-2000

Member, Expert Panel, Sexually Transmitted Disease and Teens, W. T. Grant Foundation, 2000-2001

Advisor, Sexually Transmitted Diseases & the Internet, American Social Health Association, 2000-2001

Invited Member, Panel on Mental Health Problems of Asylum Seekers, University of Greenwich, July 2000

Invited participant, Expert Panel on Mortality Associated with Alternative Fuels, Department of Energy, Carmel, May, 2000

Chief, Epidemiology and Biostatistics Branch, Phoenix Integrated Residency in Cardiology, 1999-

Clinical Professor, Prevention Center, College of Medicine, University of Arizona, 1999-

Member, Faculty of the Psychiatry Residency Program, Good Samaritan, 1998 –

Member of the Board of Directors, Palms Clinic, Phoenix, 1998-

Invited Participant, US Environmental Protection Agency Expert Panel on Cryptosporidium, October, 1998

Member, Evaluation Panel, Graduate Programs, University of Greenwich, London, August, 1998

Expert Witness, Appropriations Hearing on NIH Budget, US Senate, October, 1997-

Member, Expert Review Committee on Grant Applications and Awards, Health Care and Promotion Fund, Hong Kong, 1996-1998

Member, Clinical Committee, Health Services Advisory Group, Arizona, [the arm of the Medicare system that advises Medicare on reimbursements], 1994-1996

Alternate Member, Institutional Review Board, Samaritan Health Systems 1994-2001

Invited Attendee, Workshop on Psychosocial Research, American Psychiatric Association, Massachusetts General Hospital, Boston, October, 1996

Invited Attendee, Risk Estimation Conference, Environmental Protection Agency, Durham, North Carolina, September, 1996

Invited Attendee, Society for Prevention Research, Annual Conference, Puerto Rico, May, 1996

Proposal Evaluation Site Visit, Raptor Research Center, Boise State University, March 1996

Workshop Attendee, The Epidemiology of Avian Mortality, California Energy Commission, Sacramento, California, January, 1996

Invited Attendee, Prevention Science and Methodology Conference, Baltimore, MD, October, 1995

Invited Attendee, Avian Windpower Planning Meeting, Palm Springs, September, 1995

Invited Attendee, US Department of Energy Course on Risk Assessment, Boulder, July 1995

Invited Attendee, Mini-conference on Measuring Health Outcomes, Phoenix, March 1995

Invited Attendee, Private Conference on Wind Energy Research, California Energy Commission, Grand Island, California, December, 1994

Invited Participant, Workshop on Prevention Methodology, University of South Florida, Baltimore, December, 1994

Invited Participant, National Conference on Prevention Research, Washington, DC, December, 1994

Invited Consultant, California Energy Commission, Flagstaff, Arizona, November, 1994

Invited Participant, Workshop on the Science of Prevention, NIMH, Baltimore, December, 1994

Invited Participant, Meeting on Renewable Energy, California Energy Commission, Flagstaff, Arizona, November, 1994

Invited Participant, Workshop on Prevention Methodology, Oregon Social Learning Center, Eugene Oregon, August, 1994

Invited Technical Advisor, National Planning Meeting on Wind Power and Avian Mortality, Lakewood, CO, July, 1994

Invited Participant, Workshop on Biostatistical Methods in Preventive Mental Health Research, College of Public Health, University of South Florida, Tampa, March, 1994

Invited Participant, Biomedical Effects of Renewable Energy, Invited Conference, US Department of Energy, Washington, DC February, 1994

Member, Special Study Section, National Institute of Health, 1993-

Invited Participant, Avian Mortality Taskforce Meeting, October, Pleasonton, CA, December, 1993

Invited Participant, Conference on Avian Mortality and Wind Energy, Pacific Gas and Electric, Livermore, CA, October, 1993

Invited Participant, Prevention Center Directors Meeting, National Institute of Mental Health, Tysons Corner, September, 1993

Invited Participant, National Conference on Prevention Research, McLean, Virginia, April, 1993.

Invited Participant, Prevention Center Directors Meeting, National Institute of Mental Health, Rockville, September, 1992

Invited Participant, Prevention Center Directors Meeting, National Institute of Mental Health, Rockville, September, 1991

Invited Participant, Conference on the Future of Prevention Research, National Institute of Mental Health, Washington, DC, July, 1991

Invited Participant, Workshop on Development of Delinquency, National Academy of Science, Woods Hole Study Center, July, 1991

Invited Participant, Workshop on Preventive Research, National Institute of Mental Health, October, 1990

Invited Lecturer, Exploratory Data Analysis, The Bootstrap and Panel Models in Occupational Medicine, lecture series, College of Business Administration, University of Canterbury, Christchurch, New Zealand, September - October, 1989

Invited Host, Mini-conference on The Epidemiology of Bladder Cancer, August, 1988, Lenox, Massachusetts

Expert Witness, Department of Public Health, Commonwealth of Massachusetts, July, 1988

Expert Witness, Department of Labor and Industry, Commonwealth of Massachusetts, July, 1988

Invited Participant, Workshop in Multidimensional Analysis, Information Theory and Asymptotic Methods, Stanford University, July 1983

Assisted in Preparation and Coordination, Conference on Science and Technology in the Soviet Union, Stanford University, July, 1983

Session Organizer, International Conference on Energy Use Management, Berlin, October, 1981

Member, Committee on Industrial Use of Solar Energy, Solar Energy Research Institute, Golden, Colorado, 1979-1981

Press Conference on Wharton's Support to Litigation Project Award, April, 1981, Philadelphia

Invited Participant, Workshop on Model Validation, Department of Economics, New York University, April, 1980.

Expert Witness, Hearings on Energy Tax Exemptions, Energy Committee, Pennsylvania State Assembly, April, 1980

Lecturer, Workshop in Environmental Policy, Florida Atlantic University, March, 1980

Interviewed on Feasibility of Philadelphia's Refinery Tax Proposal, WUSL Radio, Philadelphia, November, 1980

Member, Committee on Health Manpower Training, Department of Health, New Jersey, 1976-79.

Interviewed on Model Validation, WPEN Radio, Philadelphia, November, 1979.

Interviewed on Value of Energy Forecasts, Philadelphia Inquirer, October, 1979.

Invited Panelist, Panel on Energy Models in Energy Policy-making, Program in Science Technology and Public Policy, George Washington University, Washington, D.C., October, 1979

Organizer, Workshop on Resource Estimation, Department of Energy Statistical Symposium, Gatlinburg, Tennessee, October, 1979

Session Chairperson, Special Topics Meetings on Regression, Institute of Mathematical Statistics, October, 1979

Invited Participant, Workshop on the Measurement and Interpretation of Model Confidence, National Bureau of Standards, U.S. Department of Commerce, Washington, D.C., October, 1979

Invited Participant, Workshop on Measuring Model Confidence, National Bureau of Standards, Gaithersburg, MD, October 1979

Expert Witness, Hearings on State Health Benefits, Ohio State Assembly, February, 1979

Member, Committee on Model Evaluation, General Accounting Office, United States Congress, 1977-1978.

Participant, Workshop on Assessment of Energy Models, Massachusetts Institute of Technology, October, 1978.

Organizer, Session on Multivariate Statistics, Annual Meeting, Institute of Mathematical Statistics, August, 1978

Lecturer, Program on Environmental Management, Florida Atlantic University, April, 1978

Expert Witness, Hearings on Local Energy Policies, Subcommittee on Energy and Power, Committee on Interstate and Foreign Commerce, U.S. House of Representatives, May, 1978

Invited Panelist, Policy Workshop on Energy Policy, Swarthmore College, March, 1978

Chairperson, Committee on Membership, Institute of Mathematical Statistics, 1974-78

Invited Participant, Workshop on Energy Information, Stanford University, December 1977

Invited Participant, Conference on Criteria for Evaluation of Econometric Models, University of Michigan, June 1977

Expert Witness, Hearings on Health Impacts of Energy Conservation, Commerce Committee, US House Representatives, April, 1977

Conference Chair, Conference on the Analysis of Large Data Sets, Institute of Mathematical Statistics and American Statistical Association, Dallas, February 1977

Panelist, Seminars on Models and Energy Policy, Program in Public Policy, George Washington University, February, 1977

Invited Participant, Workshop on Stochastic Models of Social Structure Carnegie-Mellon University, MSSB Workshop, Pittsburgh, December, 1977

Interviewed on Energy Policy, West Virginia Public Television Network, October, 1976

Member, Committee on Measurement of Energy Consumption, National Academy of Sciences, 1975-76

Interviewed on Energy Policy, West Virginia Public Television Network, October, 1976

Participant, Workshop on Model Building, Mathematical Association of America, Cornell University, August, 1976

Organizer and Chair, Session on Voting Models, Annual Meeting of the Public Choice Society, Roanoke, VA, April, 1976

Instructor, Short Course on Advances in Data Analysis, Princeton University, April, 1976

Member, Organizing Committee, Annual Convention, Institute of Mathematical Statistics, 1975-76

Member, Site Review Committee, University of Texas, San Antonio, National Science Foundation, 1975

Participant, Workshop on Validation of Econometric Models, National Science Foundation, Vail, Colorado, June, 1975

Participant, Workshop on Decentralization Theory, National Science Foundation, Princeton University, March, 1975

Member of the Council, Polymetrics Section, International Studies Association, 1973-75

Member, Committee on Education of Gifted Children, Department of Education, Virginia, 1973-74

Member, Committee on Health Training, State Council of Higher Education, Virginia, 1973-74

Instructor, Workshop on Survey Research, University of Cologne, Cologne, West Germany, 1973

Lecturer, Institute on Model Building, National Science Foundation, Blacksburg, Virginia, August, 1973

Clinical Assistant [Clinical Rotations], Associated Medical Schools, British Virgin Islands, 1969-1970

Summer Fellow, College of Medicine, University of Michigan, Summer, 1970

**Major Consulting Appointments (Other than Public and Non-profit):**

Play an active advisory role to several CEO's, corporate medical directors, courts, boards, and non-profits on specific health issues, which are confidential, private, proprietary or privileged. I would be glad to discuss these activities in an executive session. They are not appropriate for open documentation.

**Major Consulting Appointments (Public and Non-profit):**

Consultant in Research Compliance, Maricopa Integrated Medical System, 2002-2003

Consultant, California Energy Commission, 1994-2002

Consultant, National Renewable Energy Laboratory, 1992-1996

Consultant, Department of Mental Hygiene, Johns Hopkins Medical Institutions, June-August, 1990-1993

Consultant, Program on Delinquency, Child and Maternal Health, Harvard School of Public Health, 1991.

Consultant, Committee on the Courts, Arizona Supreme Court, 1988-1989.

Consultant, Bonneville Power Authority, 1986-1988.

Consultant, Special Counsel, Department of Energy, 1979-82.

Consultant, National Governors Association, 1979-81

Consultant, Environmental Monitoring Project, Environmental Protection Agency, 1979

Consultant, Energy Office, State of New York, 1976-78

Consultant, Department of Health, City of New York, 1976-78

Consultant, Center for the Study of Emergency Health Services, University of Pennsylvania, 1977

Consultant, Chancellor, The University of Missouri, 1976

Consultant, National Commission on Water Quality, 1974-76

Consultant, Trout Unlimited, 1976



Consultant, Policy Analysis Division, Department of Housing and Urban Development, 1974

Consultant, Department of Political Science, Ohio State University, 1974

Consultant, Committee on State Employee Benefits, Assembly of the State of Ohio, 1973

Consultant, Department of Preventive Medicine, Ohio State University, 1972-73

### **Editorial Service:**

Abstract Review Board, Annual Meeting, Society for General Internal Medicine, 1995

Member, Editorial Board, Sociological Methodology, Publication of the American Sociological Association, 1979-1983

Associate Editor, Series on Social Methodology, Sage Publications, 1974-81

Member, Editorial Board, Journal of Politics, 1974-81

Associate Editor, Journal of the American Statistical Association, 1977-79

Abstracter, Executive Sciences Incorporated, 1974-79

Abstracter, Mathematical Reviews, 1974-76

Proposal reviewer for a variety of public agencies. In 1991-93 reviewed proposals for NIH, NIMH, NSF, DOE, EPA and others

Manuscript reviewer for several publishers including John Wiley and Sons and Wadsworth

### **Honors and Awards:**

Listed in the International Who's Who in Medicine, 1997-

Listed in Who's Who in Medicine, 1994-

Honorary Member, Phi Beta Phi, Honorary Society, inducted 1991

Distinguished Research Professor, Arizona State University, 1987-88

Fellow, Royal Statistical Society, elected November, 1984.

Listed in Who's Who in the West, 1983-

Listed in Who's Who in Medical Research, 1982-

Listed in Personalities in America, 1981-

Listed in Distinguished Educators, 1982-

Member, Phi Beta Kappa, inducted 1967

Member, Alpha Iota Delta (Decision Science Honorary Society), elected 1986

Distinguished Alumni Award, Ohio State University, 1971

Awardee, Graduate Scholarship, National Science Foundation, 1967

Recipient, President's Scholarship Award, Ohio State University, 1968

Recipient, President's Scholarship Award, Ohio State University, 1967

### **Research Grants and Contracts:**

Co-Principal Investigator, Alzheimer's Disease and Anti-Inflammatory Prevention: Is Elevated Serum Cholesterol Predictive of Developing AD?, D. Larry Sparks, PI, Institute for the Study of Aging, funded, March 2001, 360,000

Biostatistical Problems in Research Methodology, Samaritan Health Services, Principal Investigator: L.S. Mayer, 1996-2003, approximate award 450,000

Statistical Problems in Developing Intermediate Outcome Models of the Role of Apolipoprotein E in Alzheimer's Disease, Office of Research, Arizona State University, 1994-95, approximate award 20,000.

Biostatistical Problems in Research Methodology, Samaritan Health Services, Principal Investigator: L.S. Mayer, 1995-96, approximate award 26,000

Co-Principal Investigator, Prevention Research Training Grant, awarded by the Prevention Branch, National Institute of Mental Health, to the Prevention Center, Department of Mental Hygiene, Johns Hopkins School of Hygiene and Public Health. Principal Investigator: S. G. Kellam, 1994-1999, approximate award 500,000

Co-Principal Investigator, Epidemiological Prevention Center for Early Risk Behavior, awarded by the Prevention Branch, National Institute of Mental Health, to the Prevention Center, Department of Mental Hygiene, Johns Hopkins School of Hygiene and Public Health. Principal Investigator: S. G. Kellam, 1990-1995, approximate award, 5,000,000

Biostatistical Problems in Research Methodology, Samaritan Health Services, Principal Investigator: L.S. Mayer, 1994-95, approximate award 26,000

Biostatistical Problems in Research Methodology, Samaritan Health Services, Principal Investigator: L.S. Mayer, 1993-94, approximate award 25,000

Wharton Support to Litigation Project, awarded by the Office of the Special Counsel, Department of Energy to the Wharton Analysis Center, Wharton School, University of Pennsylvania. Principal Investigator: L.S. Mayer, 1981-83, approximate award: 2,200,000

Wharton Energy Allocation Project, awarded by the Department of Energy to the Wharton Analysis Center, Wharton School, University of Pennsylvania, Principal Investigator: L.S. Mayer, 1981-83, approximate award: 100,000

Wharton Energy Data Analysis Project, awarded by Oak Ridge National Laboratory to the Wharton Analysis Center, Wharton School, University of Pennsylvania, Principal Investigator: L.S. Mayer, 1980-81, approximate award: 450,000

Wharton Petroleum Data Analysis Project, awarded by CEEXEC, Inc. to the Wharton Analysis Center, Wharton School, University of Pennsylvania, Principal Investigator: L.S. Mayer, 1980-81, approximate award: 100,000

Wharton Model Evaluation Project, awarded by the Energy Information Administration, Department of Energy to the Wharton Analysis Center, Wharton School, University of Pennsylvania, Principal Investigator: L.S. Mayer, 1979-81, approximate award: 900,000

Wharton Energy Assessment Project, awarded by Oak Ridge National Laboratory to the Wharton Analysis Center, Wharton School, University of Pennsylvania, Principal Investigator: L.S. Mayer, 1980-81, approximate award: 100,000

Princeton Resource Estimation and Validation Project, awarded by the Energy Information Administration, Department of Energy, to the Departments of Statistics and Geology, Princeton University, Principal Investigators: K. Deffeyes, G. Watson, and L. Mayer, 1978-79, approximate award: 450,000

Analysis of Residential Energy Demand, awarded by the Office of Conservation, Department of Energy to the Center for Energy and Environmental Studies, Princeton University, Principal Investigators: R. Socolow, D. Harrje, L. Mayer and F. Sinden, 1977-78, approximate award: 300,000

Analysis of Statistical Issues Arising from Energy Studies, awarded by the National Science Foundation to the Center for Energy and Environmental Studies, Princeton University, Principal Investigator: L.S. Mayer, 1977-78, approximate award: 50,000

Analysis of Residential Energy Demand, awarded by the Energy Research and Development Administration to the Center for Energy and Environmental Studies, Princeton University, Principal Investigators: R. Socolow, D. Harrje and L. Mayer, 1976-77, approximate award: 300,000

Assessing the Value of Econometric Energy Models, awarded by the Department of Commerce to the Center for Energy and Environmental Studies, Princeton University, Principal Investigator: L.S. Mayer, 1976-77, approximate award: 25,000

Energy Husbandry in Residential Housing, awarded by the National Science Foundation to the Center for Environmental Studies, Princeton University, Principal Investigators: R. Socolow, D. Harrje and L. Mayer, 1975-76, approximate award: 300,000

On Comparing Factor Matrices, awarded by the National Institute of Mental Health to the Department of Statistics, Princeton University, Principal Investigator: L.S. Mayer, 1974 - 1975, approximate award: 15,000

Measuring the Relationship Between Abstract Variables, awarded by the National Institute of Mental Health to the Department of Statistics, Virginia Polytechnic Institute and State University, Principal Investigator: L.S. Mayer, 1972-74, approximate award: 15,000

Component Analysis of Variance, awarded by the National Institute of Mental Health to the Behavioral Sciences Laboratory, Ohio State University and the Department of Statistics, Virginia

Polytechnic Institute and State University, Principal Investigator: L.S. Mayer, 1971-72, approximate award: 15,000

### **Papers Presented at Professional Meetings:**

Depression in Assisted Living is Common and Related To Physical Burden, Gerontology Society Annual Meeting, Washington DC, November 2004

"Methodological Issues In Modeling The Incidence Of Alzheimer's Disease As A Function Of Age", World Congress of Epidemiology, Toronto, June, 2001

"Biostatistical Problems in Forecasting the Prevalence of Alzheimer's Disease" World Psychiatric Congress, Baltimore, March, 2001

"Using Latent Growth Models and Exploratory Methods to Assess the Relationship Between Responses in a Bivariate Prevention Model (with M. Reiser) Society for Prevention Research, Annual Meeting, Washington DC, May 1997

"Standard Metrics and Methods for Conducting Avian Wind Energy Interaction Studies (with R. Anderson) American Wind Energy Association Conference, Austin Texas, June, 1997

"A Randomized Clinical Trial of a Group Empowerment Program for Somatizing Patients: Six Months Follow-up Results", (with J. C. Peirce, A. Miller and J. Westley), invited lecture, Society for General Internal Medicine, Washington, DC, May 1997

"Measuring Effectiveness: Lessons from Heparinizing Patients with Deep Vein Thrombosis and Pulmonary Embolism" (with J. C. Peirce and R. A. Raschke), invited lecture, Society for General Internal Medicine, Washington, DC, May 1997

"Latent Growth Models of the Impact of Intervention on a Bivariate Longitudinal Response", invited lecture, Society for Research on Child Development, Washington, DC, March, 1997

"Developmental Epidemiology and its Implications for Prevention Research" invited lecture (with Sheppard Kellam), Life History Society Annual Meeting, London, December, 1996

"Standard Methods for Conducting Avian Mortality Studies", with R. L. Anderson, European Wind Energy Conference, Rome, October, 1996

"Using Multilevel Models to Tease Out Variability in Individual Behavior", invited lecture, Association for Clinical Psychosocial Research, American Psychiatric Association, Boston, October, 1996

"Statistical Issues Arising from Application of the Proximal-Distal Model in Prevention Research, Society for Prevention Research, San Juan, Puerto Rico, June, 1996.

"Recent Advances in Prevention Methodology: Multilevel Models", invited lecture, Prevention Methodology Conference, Tempe, Arizona, May 1996

"Advances in the Methods of Prevention Research", invited lecture, National Forum on Prevention, McLean, VA, May, 1996

"Multilevel Models in Prevention Science", invited presentation, Prevention Science Methodology Group meeting, College of Public Health, University of South Florida, Tampa, March, 1996

"Prevented Fractions and Attributable Risk in Proximal Distal Prevention Models", invited lecture, College of Public Health, University of South Florida, Tampa, February, 1996

"Prevented Fractions and Attributable Risks in Preventive Trials", invited paper, Prevention Science and Methodology Conference, Baltimore, MD, October, 1995

"The Use of Epidemiological Measures to Estimate the Effects of Adverse Factors and Preventive Interventions", Workshop on Avian Mortality, Palm Springs, September, 1995

"The Use of Epidemiological Measures to Estimate the Effects of Adverse Factors and Preventive Interventions", invited presentation, Workshop on Avian Mortality and Avian Windpower Planning Meeting, Department of Energy, Palm Springs, September, 1995

"Methodological Advances in Prevention Research", with S. Kellam and J. Anthony, invited symposium, Prevention Research Society, Scottsdale Arizona, June 1995

"Multilevel Modeling and the Development of Aggressive Behavior", invited paper, World Psychiatric Association, New York, May, 1995

"Attributable Risk and Preventive Fractions in Prevention Research", invited lecture, Workshop on the Science of Prevention, NIMH, Baltimore, December, 1994

"Reduction of Aggressive Behavior Among First Graders and Its Consequences for Later Antisocial Behavior and Drug Use", with S. Kellam, H. Chilcoat, J. Anthony, G. Rebok, and N. Ialongo, invited lecture, Society for Prevention Research, Washington, June, 1994

"The Impact of Failure on Boys and Girls: Preventive Intervention Studies on Achievement and Depression" with S. Kellam, G. Rebok, and N. Ialongo, Society for Life History, Durham, November, 1993

"The Course and Malleability of Aggressive Behavior", with S. Kellam, G. Rebok, and N. Ialongo, invited lecture, American Society of Criminology, Annual Meeting, Phoenix, October, 1993

"Mediated Effects in Structural Equation Models", invited paper, American Statistical Association Annual Meeting, August, 1992

"The Course and Malleability of Aggressive Behavior in Young Children", invited presentation, with S. Kellam, et. al., National Academy of Science Institute of Medicine, Committee on Prevention of Mental Disorders, June, 1992

"Developmental Epidemiology and the course of Aggressive Behavior", Life Course Development Society, Philadelphia, April, 1992

"Modeling the Cotemporal Effects in a Cross-Lagged Panel Model", ASA Annual Meeting, New Orleans, August, 1988

"Estimating Multivariate Continuous Variable Panel Models", ASA Annual Meeting, San Francisco, August, 1987

"Inferences in Cross-Lagged Panel Models," invited paper, AIDS Convention, Phoenix, March, 1986

"Recent Advances in Cross-Lagged Panel Analysis," invited lecture, Southwest Social Science Convention, San Antonio, March, 1986

Hypothesis Testing with Continuous Variable Panel Data," Annual Meeting, Biometrics Society (WNAAR), San Luis Obispo, June, 1985

"Multivariate Cross-Lagged Panel Models: Does IQ Cause Achievement?" invited lecture, Regional Meeting, Institute of Mathematical Statistics, Humboldt State University, Arcata, CA, June, 1983

"Analysis of the U.S. Short-Term Integrated (Energy) Forecasting System," invited lecture, International Energy Conference, Berlin, October 1981

"Assessing Energy Models: A Policy Process Approach," invited lecture, Workshop on Energy Model Validation, National Bureau of Standards, January 1979

"Energy Use and Potential for Conservation," (with David Harrje et al.), invited lecture, International Conference on Energy Use Management, Tucson, October 1977

"Large Data Sets and the Meta-Theorems of Exploratory Data Analysis," invited lecture, American Statistical Association, Special Topic Meeting, Dallas, 1977

"The Internalization of Cosmopolitan-Local Orientations Among College Students," (with W. Snizek), invited lecture, Southern Sociological Association, Washington, D.C., April 1975

"Equivalent Estimation and a Special Group Structure," (with T. Woteki), invited lecture, Regional Meeting, Institute of Mathematical Statistics, Minneapolis, March 1975

"The Use and Abuses of Probability in Voting Theory Models," invited lecture, Annual Meeting, Public Choice Society, New Haven, April 1974

"Some Problems with the Theory of Coalitions as Applied to the Judiciary," invited paper, Annual Meeting, American Political Science Association Convention, Chicago, August 1974

"On Principal Components and Clusters," invited lecture, Annual Meeting, International Classification Society, Atlanta, Georgia, April, 1973

"On Biased Estimation in Linear Models," invited lecture, Annual Meeting, American Statistical Association, New York, December, 1973

"Invariant Estimation with Applications to Linear Models," (with M.S. Younger), Institute of Mathematical Statistics, Blacksburg, Virginia, Academy of Science, May, 1972

"On Biased Estimation in Linear Models," invited lecture, Virginia Academy of Science, Lexington, Virginia, May, 1972

"Methods of Cluster Analysis Which Utilize Principle Components," invited lecture, International Classification Society Convention, Chicago, Illinois, April 1972

"A Method of Cluster Analysis," invited lecture, Annual Meeting, Biometrics Society, Fort Collins, Colorado, August, 1971

"Measures of Association," invited lecture, International Studies Association, San Juan, Puerto Rico, March, 1971

"Utilizing Initial Estimates in Estimating the Coefficients in a General Linear Model," Annual Meeting, Institute of Mathematical Statistics, Laramie, Wyoming, August 1970

### **Speeches, Presentations, Lectures and Colloquia:**

"Validating Biomarkers in Psychiatry", Department of Psychiatry, University of Athens, Athens, Greece, October, 2006

"Fitting Failure Models to the Incidence of Alzheimer's Disease: Methodological Problems", invited lecture, Johns Hopkins School of Public Health, Noon conference series on Mental Health, January, 2001

"Psychiatric Epidemiology", Residency Program in Psychiatry, Samaritan Health System, September, 2000

"Critical Appraisal in Internal Medicine", invited speaker, Good Samaritan Internal Medicine Program. April, 2000

"Psychiatric Epidemiology", Residency Program in Psychiatry, Samaritan Health System, September, 1999

"Tradeoffs Between Latent Growth Models and Epidemiological Models of Preventive Interventions, invited colloquium, Department of Mental Hygiene, Johns Hopkins School of Hygiene and Public Health, October, 1998

"Psychiatric Epidemiology", Residency Program in Psychiatry, Samaritan Health System, September, 1998

"Advances in Psychiatric Epidemiology", Clinical Epidemiology Section, Royal Medical Society (Edinburgh), August, 1998

"Latent Growth Models and Attributable Risks", luncheon speaker, Fellowship in Drug Epidemiology, Johns Hopkins University, April 1998

"Attributable Risk Measure in Mediation Impact Models: Somatizing Behavior", invited colloquium, Department of Mental Hygiene, Johns Hopkins School of Hygiene and Public Health, March, 1998

"Statistical Issues in Using Attributable Risk Measures in Intermediate Outcome Models", Department of Statistics, The University of Lancaster, Lancaster, England, June, 1997

"Statistical Problems that Arise in Applying Intermediate outcome Models in Prevention Research", invited lecture, Department of Statistics, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, May, 1997

"The Epidemiology of Thyroid Disease", invited lecture, Grand Rounds in Endocrinology, Samaritan Health Services, April, 1997

"Attributable Risk and Preventive Fractions in Prevention Research", invited lecture, Workshop on the Science of Prevention, NIMH, Baltimore, December, 1994

"Advances in Prevention Methodology", invited lecture, Prevention Research Center, Johns Hopkins University, September, 1994

"Multi-level Modeling in Prevention Research", invited colloquium, Prevention Research Center, Arizona State University, April, 1994

"Multi-level Modeling of Health Data; The Effects of Intervention on Aggressive Behavior", invited lecture, Program in Developmental Biology, University of North Carolina, April, 1994

"Mediation in Intermediate Variable Models", Department of Epidemiology and Biostatistics, College of Public Health, University of South Florida, March, 1994

"Assessing the Impact of Interventions on Proximal and Distal Outcomes" NIMH Prevention Research Center Directors Meeting, October 1993 with Reiser, M. and Warsi, G

"Epidemiology and Social Methodology: Complementarity in Prevention Research", invited presentation, with S. Kellam, et. al., NIMH Prevention Research Conference, Tysons Corners, VA, April, 1993

"Statistical Issues in Prevention Research", invited lecture, Directors' Meeting, Prevention Research Center Directors Meeting, National Institute of Mental Health, Rockville, Maryland, October, 1992

"The Course and Malleability of Aggressive Behavior in Young Children", invited presentation, with S. Kellam, et. al., National Academy of Science Institute of Medicine, Committee on Prevention of Mental Disorders, June, 1992

"Causal Models in Prevention Research: Mediation Moderation and Confounding", invited seminar, Carl A. Taube Memorial Colloquium Series in Psychiatry and Mental Health, Johns Hopkins University, May, 1992

"Breast Implants, Risk Surveillance and Health Statistics", invited lecture, MBA Special Colloquium Series, Arizona State University, March, 1992

"Proximal/Distal Effects on Two Developmental Epidemiologically-Based Preventive Interventions", invited seminar, Colloquium Series in Mental Health, Johns Hopkins School of Hygiene and Public Health, February, 1992

"Analyzing Subgroups and Contextual Effects" [with Sheppard Kellam], invited presentation, Directors' Meeting, Prevention Research Center Directors Meeting, National Institute of Mental Health, Rockville, Maryland, September, 1991

"Proximal/Distal Effects on Two Developmental Epidemiologically-Based Preventive Interventions" [with Sheppard Kellam, et. al.], invited seminar, Carl A. Taube Memorial Colloquium Series in Mental Health, Johns Hopkins School of Hygiene and Public Health, September 1991

"The Epidemiology of Preventive Care in the Workplace", invited lecture, Phoenix Chapter, Association of Corporate Fitness Directors, Phoenix, May 1991.

"Statistics, Medicine and the Law", Invited Lecture, East Mesa Doctors Club, November 1990

"Statistical Models in the Analysis of Panel Data", invited lecture, Department of Biostatistics, Johns Hopkins School of Hygiene and Public Health, April, 1990



"Applications of Statistics to Occupational Health Problems", invited lecture, Department of Statistics, MacQuarie University, Australia, October, 1989

"Panel Models and Policy Analysis", invited lecture, Lincoln College, Christchurch, New Zealand, September 1989

"Panel Analysis and Occupational Health Analysis", invited lecture, University of Otago, New Zealand", September 1989

"Current Trends in Data Analysis, invited lecture, MBA colloquium, University of Canterbury, Christchurch, New Zealand, September 1989

"Managing the Health of Workers and the Health of the Firm", invited banquet speech, Conference on Analysis of Occupational Health Risks, Phoenix, August 1987

"Panel Models, Covariance Structures and the Exclusion of Liberals from 'Death-Sentence' Juries", invited colloquium, Department of Statistics, Stanford University, August, 1986

"A Statistician Looks at Panel Analysis or a Perfidious Peek at Pundits and Pookas," invited lecture, Arizona Chapter, American Statistical Association, March, 1984.

"A Statistician Looks at Panel Analysis", invited lecture, College of Business, University of Tennessee, June, 1983

"The Use of Panel Models in Non-experimental Research", invited lecture, College of Medicine, University of California, San Francisco, June, 1983

"Competing Approaches to Analysis of Panel Data", invited lecture, Econometrics Seminar, Stanford University, May 1983

"Science Analysis in Politics and the Politics of Science Analysis", invited lecture, Butler University, Indianapolis, March, 1983

"Statistical Problems in Panel Models", invited lecture, College of Education, Stanford University, March, 1983

"A Statistician Looks at Panel Analysis or a Perfidious Peek at Pundits and Pookas", invited lecture, Department of Computer and Information Sciences, University of California, Santa Cruz, February, 1983

"A Statistician Looks at Panel Analysis or a Perfidious Peek at Pundits and Pookas", invited lecture, Department of Computer and Information Sciences, University of Santa Clara, February, 1983

"Statistical Problems in Panel Analysis", invited lecture, Department of Mathematics, University of California, Santa Barbara, February, 1983

"A Statistician Looks at Panel Analysis", invited lecture, Department of Statistics, University of Arizona, February, 1983

"A Crossed Lagged Penal Analysis of Cross-Lagged Panel Analysis", invited colloquium, Department of Statistics, Stanford University, January, 1983

"Some Exciting Problems in Energy Modeling", invited lecture, Department of Mathematics, Arizona State University, August, 1982

"Statistical Problems in Short-term Energy Forecasting", invited lecture, Energy Information Administration, Washington, D.C., February, 1982

"Problems in Forecasting Energy Supplies", Decision Sciences Seminar, Wharton School, September, 1981

"Energy Policy: Myth and Reality", invited lecture, Philadelphia Business Seminar, April, 1981

"Energy Management: Building Image and Minimizing Liabilities", invited lecture, Wharton Executive Development Seminar, April, 1981

"Evaluating Energy Models", invited lecture, Delaware Chapter, American Statistical Association, University of Delaware, May, 1980

"Evaluating Models of Resource Depletion", invited lecture, Department of Economics, New York University, April, 1980.

"Exploratory Methods and the Art of Data Analysis", Dinner speech, Philadelphia Chapter, American Statistical Association, October, 1979

"Models of Domestic Oil Resources: Science Products and Political Agents", invited lecture, Thayer School of Engineering, Dartmouth College, March, 1979

"Models of Sequential Voting", invited lecture, Department of Political Science, Dartmouth College, March, 1979

"Estimating Oil Reserves: The Methods, Models and Policy Issues", invited lecture, School of Public and Urban Policy, University of Pennsylvania, December, 1978

"Estimating the Domestic Crude Oil Resource Base: Examining the King's Approach", invited lecture, Department of Statistics, University of Pennsylvania, November, 1978

"Picking a Multivariate Test Function, The Eenie-Meany Principle", invited lecture, Montreal Joint Statistics Colloquium, Montreal, November, 1977

"Econometric Energy Models: The Emperor's Quantitative Suit", invited lecture, Department of Commerce, October, 1977

"Exploratory Data Analysis as an Alternative to the Econometric Analysis of Social Problems," invited lecture, Department of Psychology, College of William and Mary, April, 1977

"Analyzing Energy Policy: The Competing Roles of the Economist, Engineer and Mathematician", invited lecture, Department of Mathematics, University of South Carolina, April, 1977

"Analyzing Political Data: What Can Statistics Tell Us?," invited lecture, School of International Studies, University of Denver, May, 1976

"Schur-Convexity and the Equivalence of Multivariate Tests", invited seminar, Department of Statistics, Rutgers University, October, 1975

"On Communal Indifference Curves," (with I.J. Good), invited seminar, Mathematical Economics Seminar, Virginia Polytechnic Institute and State University, October, 1975

"The Statistical Analysis of Energy Problems: Who Should We Believe?", invited lecture, Office of Energy Analysis, Department of Commerce, October, 1975

"Energy Research and Residential Housing", invited lecture, The Federal Energy Administration, September, 1975

"Consumer Reaction to the Energy Crisis: The Long Underwear Effect", invited address, West Virginia University, February, 1975

"Mathematical Models and other Forms of Hocus-Pocus", invited lecture, Department of Political Science, West Virginia University, February, 1975

"Factor Analysis: The Short Bed Problem", invited lecture, Department of Statistics and Operations Research, University of Pennsylvania, March, 1975

"LSD and Political Science: Distinguishing Uppers and Downers", invited address, Western New England College, November, 1974

"Probability, Statistics and the Theory of Democracy", invited lecture, Department of Statistics, University of Connecticut, October, 1974

"Statistical Policy Analysis: Assessing the Unobservable", invited lecture, Department of Statistics, Princeton University, January, 1974

"On Procedures for Comparing Factor Matrices", invited lecture, Department of Statistics, University of Connecticut, January, 1974.

"A Mathematician's Doubts About Econometric Solutions to Political Problems", invited lecture, Department of Political Science, Ohio State University, May, 1973

"Estimating the Relationship Between Unobserved Variables, or Can We Sell the Second Canonical Correlation to the Social Scientists?", invited lecture, Department of Statistics, Ohio State University, May, 1973

"Generalized Spatial Models of Voting Theory", invited lecture, Center for Public Choice, Virginia Polytechnic Institute and State University, February, 1973

"Estimating the Relationship Between Ordinal Variables", invited lecture, Department of Statistics, Harvard University, 1973.

"Some Statistical Problems in Spatial Models", invited colloquium, Department of Statistics, Carnegie-Mellon University, Pittsburgh, October, 1972.

"Sex, the Generation Gap, and Fermat's Last Theorem", invited speech, Tidewater Council of Teachers of Mathematics, Norfolk, Virginia, September, 1972

"Mathematics: Is it Irrelevant by Necessity or Design?", invited lecture, Department of Mathematics, Emory and Henry College, Emory, Virginia, April, 1972

"Is There Reason for a Mathematician to help a Social Scientist?", invited to deliver annual Phi Mu Epsilon Lecture, Blacksburg, Virginia, 1972

"Probability Without Calculus and Statistics Without Mathematics", invited lecture, Virginia Mathematics Teachers Annual Convention, Roanoke, Virginia, November, 1972

"If Educators Educate Educators, Who Educates the Educated?", banquet address, State Mathematics Teachers Convention, Norfolk, Virginia, 1971

"Two-Stage Estimation in linear Models", invited lecture, Department of Statistics, Pennsylvania State University, January, 1971

"Problems in Cluster Analysis", invited lecture, Department of Applied Statistics, University of Minnesota, January 1971

### **Papers in Proceedings:**

Mayer, L. S. and Reiser M.(1992) "Mediation and Confounding in Panel Models of Prevention Research" Proceedings of the Social Statistics Section, American Statistical Association

Mayer, L. S. and Carroll, S. S.(1988) "Modeling the Cotemporal Effect in a Cross-Lagged Panel Model," Proceedings of the Business and Economics Section, American Statistical Association

Carroll, S. S. and Mayer, L. S. (1987) "Testing for Serial Correlation in Cross-Lagged Panel Studies," Proceedings of the Business and Economics Section, American Statistical Association

Carroll, S. S. and Mayer, L. S. (1986) "Evaluation of the Cross Effects Parameters in a Cross-Lagged Panel Model," Proceedings of the Business and Economic Section, American Statistical Association

Mayer, L. S. (1985) "Hypothesis Testing in Cross-Lagged Panel Models," Proceedings of the Social Statistics Section, American Statistical Association

Mayer, L. S. and Carroll, S. S. (1985) "Testing for Serial Correlation in Cross-Lagged Panel Studies," Proceedings of the Business and Economics Section, American Statistical Association

Mayer, L.S. et. al. (1982). "Analysis of the U.S. Short-Term Integrated (Energy) Forecasting System," Proceedings of the International Conference on Energy Use Management, New York: Pergamon Press, 971-982

Harrje, D. and Mayer, L.S. (1978). "Energy Use and the Potential for Conservation," Proceedings of the International Conference on Energy Use Management, Volume II, R. Fazzolare and C. Smith (eds.), New York: Pergamon Press, 749- 771

Mayer, L.S. (1978). "The Use of Semi-Controlled Experiments in the Analysis of Residential Energy Demand," Proceedings of the 1978 Department of Energy Symposium, Washington: Government Printing Office

Mayer, L.S. (1978). "The Value of the Econometric Approach to Forecasting Our Energy Future," Proceedings of the International Conference on Energy Use Management, Volume III, R. Fazzolare and C. Smith (eds.), New York: Pergamon Press, 1073-1082

Mayer, L.S. (1978). "Difficulty in Developing Local Energy Policy," expert testimony, Hearings on Local Energy Policy, Washington: U.S. Congress

Mayer, L.S. (1977). "Exploratory Data Analysis and Classical Statistics: Their Abilities to Shed Light on Energy Issues," Proceedings of the 1977 Department of Energy Symposium, 27-32, Washington: Government Printing Office

### **Published Abstracts:**

"Equivariant Estimation and A Special Group Structure", (with T. Woteki), Bulletin of the Institute of Mathematical Statistics, 1975

"A Fortran Program for Linear Log Odds Analysis", (with P.J. Pichotta), Behavior Research Methods and Instrumentation, 1974, 6, p. 521

"Invariant Estimation in the Social Sciences", (with M. S. Younger), Bulletin of the Institute of Mathematical Statistics, 1973

"On Principal Components and Clusters", Bulletin of the International Classification Society, 1973

"Methods of Cluster Analysis Which Utilize Principal Components", Bulletin of the International Classification Society, 1972

"Utilizing Initial Estimates in Estimating the Coefficients in General Linear Model", Annals of Mathematical Statistics, October 1970

### **Society Membership:**

Society for Epidemiological Research, Society for Environmental Epidemiology, Royal Statistical Society, Society for Medical Decision Making, American Statistical Association, Biometrics Society, Institute for Mathematical Statistics, Psychometric Society, Econometric Society, American Association for the Advancement of Science, American Political Science Association, American Sociological Association, and Council for Applied for Social Research.

### **Courses Taught at Arizona State University and Banner University Medical Center**

Epidemiology, Epidemiological Methodology, Clinical Epidemiology, Panel Analysis, Biostatistics, Multiple Regression, Time Series Modeling, Applied Forecasting Methods, Stochastic Processes, Exploratory Data Analysis, Seminar in Multivariate Analysis, Advanced Topics in Statistical Inference, Advanced Topics in Linear Models, Advanced Research Methods.

### **Courses taught at other Universities:**

#### Undergraduate:

Biostatistics, Data Analysis, Nonparametric Methods, Regression Analysis, Mathematical Statistics, Mathematical Modeling, Design of Experiments, Statistics for the Social Sciences, Educational Statistics, Statistics and Public Policy, Computers and Society, Forecasting.

#### Graduate:

Biostatistics, Clinical Epidemiology, Statistical Forecasting, Exploratory Data Analysis, Epidemiological Methods, Econometrics, Applied Multivariate Statistics, Advanced Multivariate Statistics, Stochastic Processes, Advanced Probability, Linear Models, Advanced Inference, Time Series, Sampling Theory, Quantitative Methods of Policy Analysis, Philosophy of Science, Advances in Social Methodology.

Professional:

Statistics and Public Policy (Woodrow Wilson School, Princeton University); Advanced Study in Energy Analysis (Wharton MBA Program, University of Pennsylvania); Advanced Study in Statistics and Law (Law School, University of Pennsylvania); Medical Statistics (College of Medicine, Ohio State University)

**Notable University Committees:**

Member, Graduate Committee on Ph.D. program in Health Services Administration and Policy, Arizona State University (ASU) 1991-1992

Member, Executive Board, Program on Law and the Social Sciences, ASU, 1983-1989

Faculty Senate (elected), ASU, 1987-89

University Services Committee, ASU, 1988-89

Council on Research and Creative Activities, ASU, 1986-1988

Sunset Review Committee, Meteorite Center, ASU, 1987

Sunset Review Committee, Energy Research Center, ASU, 1987

Chair, Sunset Review Committee, Center for Advanced Research in Transportation, ASU, 1987

Women Studies Research Awards Committee, ASU, 1984-1989

Board, Ph.D. Program in Justice Studies, ASU, 1987-1989

Biomedical Research Committee, ASU< 1986-1988

**Notable Previous University Committee Assignments:**

Member, Health Professions Advisory Board, University of Pennsylvania, 1980-83

Member, Environmental Task Force Committee, Office of the Provost, University of Pennsylvania, 1979-82

Member, Committee on Undergraduate Student Life, Princeton University, 1976

Member, Council of Masters, Princeton University, 1976-79

Fellow, Princeton Inn College, Princeton University, 1975-76

Member, Chair Search Committee, Department of Statistics, Virginia Polytechnic Institute and State University, 1972-74