# Allied Social Science Associations National Convention Program

American Economic Association

American Agricultural Economics Association

American Finance Association

American Statistical Association

Association for Social Economics

Biometric Society, ENAR & WNAR

Econometric Society

Industrial Relations Research Association

Institute of Mathematical Statistics

New York, New York December 27-30, 1973 Americana, Hilton and Barbizon-Plaza Hotels

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#### Dear A.S.S.A. Members:

We in New York City are pleased to host the meeting of the Allied Social Science Associations. It has been twelve years since a joint meeting has been held in our city.

A large and representative group of your fellow members has been working for almost a year in the planning of the local arrangements. Major universities, government agencies, financial and business institutions have contributed key personnel to the Local Arrangements Committee. We believe that a wide-ranging program has been prepared providing intellectual and social activity which we hope will be profitable and pleasing to you. Please take advantage of the many cultural events which will be taking place in New York City during the week between Christmas and New Year.

Members of the Local Arrangements Committee will be available for your service at all times during the Convention; do not hesitate to call on us.

Sincerely,

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Edward Marcus Brooklyn College

Cochairmen, National Convention Committee 1973 Allied Social Science Associations

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Please visit our exhibit at the Allied Social Sciences Association meeting for more information about these and other new books. Or write to:

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# ASSA General Information

All sessions and activities are arranged chronologically by the day and time at which they start. Each listing is shown alphabetically, starting on page 57; the hotel and meeting room for each session or activity is indicated.

The list of participants beginning on page 229 shows in alphabetical order the names of all persons taking part in the program and the pages on which their names appear.

The index of advertisers beginning on page 223 indicates in alphabetical order the names of all advertisers appearing in this **Program** and the pages on which their ads appear.

It is advisable to check at the information desk for information on activities that may not be listed in the **Program.** 

A list of participating associations begins on the following page.

#### PARTICIPATING ASSOCIATIONS

The following members of the Allied Social Science Associations are taking part in the 1973 Annual Meetings:

AEA American Economic Association

AAEA American Agricultural Economics Association

AFA American Finance Association
ASA American Statistical Association
ASE Association for Social Economics

ENAR Biometric Society, Eastern North American Region WNAR Biometric Society, Western North American Region

ES Econometric Society

IRRA Industrial Relations Research Association

IMS Institute of Mathematical Statistics

The associations listed below are also sponsoring sessions:

AIB Academy of International Business

AREUEA American Real Estate and Urban Economics Assoc.

ASQC American Society for Quality Control

ACES Association for Comparative Economic Studies

AFEE Association for Evolutionary Economics

ANAES Association for North American Economic Studies
ASGE Association for the Study of the Grants Economy

CBE Caucus of Black Economists

HERO Health Economics Research Organization

**HES** History of Economics Society

JCEE Joint Council on Economic Éducation NCSW National Conference on Social Welfare NYSSA New York Society of Security Analysts

ODE Omicron Delta Epsilon, Honor Society in Economics

PAA Population Association of America

PCS Public Choice Society SA Society of Actuaries

SGE Society of Government Economists

TPUG Transportation and Public Utilities Group of the AEA

URPE Union for Radical Political Economics

The Convention/Headquarters for the ASSA is located in the Morgan Suite at the New York Hilton Hotel, and in the Vendome Suite and Chambord 12 at the Americana Hotel.

#### REGISTRATION

All persons attending the meetings are required to register. The registration fee entitles registrants to admission to all meetings sponsored by the participating associations except fee events or functions where admission is by invitation only. Registration may be completed at the registration desks on the second floor Promenade in the Hilton Hotel or the Versailles Ballroom, second floor, of

the Americana Hotel or the Library, lobby of the Barbizon-Plaza

Hotel during the hours indicated below:

WEDNESDAY, December 26
THURSDAY, December 27
FRIDAY, December 28
SATURDAY, December 29
SUNDAY, December 30

6:00 PM to 8:00 PM 8:00 AM to 8:00 PM 8:00 AM to 4:00 PM 8:00 AM to 4:00 PM 8:00 AM to 12:00 PM

#### **EMPLOYMENT REGISTRY**

The New York State Department of Labor, Division of Employment, Professional Placement Center is providing placement services for both employers and applicants. Mr. Irving Smith of that agency is serving as Convention Placement Service Coordinator.

THURSDAY, December 27 9:00 AM to 5:00 PM FRIDAY, December 28 9:00 AM to 5:00 PM SATURDAY, December 29 9:00 AM to 5:00 PM SUNDAY, December 30 9:00 AM to 12:00 PM

Employers and applicants should report as early as is practicable to the appropriate reception desk in the Employment Registry in the Imperial Ballroom, second floor, or Albert Hall, lower lobby, of the Americana Hotel. Application and order forms will be supplied to those who did not file prior to the convention. Separate areas have been set aside for employers wishing to review applications and for applicants interested in reviewing position descriptions. A message exchange provides rapid communication between employers and applicants. Employers may make arrangements with the receptionist for time and space for conducting interviews in an area that has been set aside for this purpose.

#### INFORMATION

Information desks are located in the registration areas at the Hilton and Americana hotels. The information desks maintain regularly updated printout copies of local addresses of all registrants and the location of suites of department heads and employers. Messages will be accepted and held for registrants at the information desks.

THURSDAY, December 27
FRIDAY, December 28
SATURDAY, December 29
SUNDAY, December 30

8:00 AM to 8:00 PM
8:00 AM to 8:00 PM
8:00 AM to 12:00 PM

Each session or activity will be identified by a sign at the entrance to the room.

#### FEE EVENTS AND INVITATION EVENTS

Fee and invitation events are listed in the program in their appropriate chronological places. Events for which a fee is charged or which may be attended by invitation only are noted in each listing.

Tickets may be obtained at the fee events desks located in the lobbies of the Hilton and Americana hotels. To insure availability, they should be purchased as soon as possible after registration.

#### **EXHIBITS**

The exhibits are located in the Rhinelander Gallery, second floor, of the Hilton and in the Versailles Terrace, second floor, of the Americana. Hours during which exhibits may be viewed are as follows:

THURSDAY, December 27	8:00 AM to 6:00 PM
FRIDAY, December 28	8:00 AM to 9:00 PM
SATURDAY, December 29	8:00 AM to 6:00 PM
SUNDAY, December 30	8:00 AM to 12:00 PM

A directory of exhibitors appears on page 205 of this booklet.

#### **PRESS SERVICES**

A pressroom has been established in the Bryant B room, second floor, of the Hilton to provide services and facilities for press representatives. The pressroom will be open from 9:00 AM to 6:00 PM daily and a member of the Press and Publicity Committee will be on duty throughout the convention.

#### MISCELLANEOUS PROGRAM NOTES

The American Statistical Association has set aside Chambord 14 and 15 at the Americana, and Sutton North and the Green Room at the Hilton for the use of small informal discussion groups during the entire period of the Meetings, December 27-30. Anyone wishing to organize a discussion group can place a notice on the bulletin board in the registration area giving the topic(s) to be discussed, or just collect a group and go there.

The Statistical Computing Section of ASA will conduct informal sessions in a special seminar room equipped with several different types of terminals connected to a remote computer; these sessions will illustrate interactive statistical data analysis conducted live. The same data analysis will be carried out on each terminal so that comparisons can be made among the systems. Discussions concerning the illustrated and alternative interactive systems will follow the live analysis. This will be held in Chambord 15, third floor, at the Americana.

ASA-ENAR-WNAR Abstracts Booklet is available for \$1.50 at the Fee Events Booths.

The Institute of Mathematical Statistics has prepared a separate program for its sessions, which is available at the Registration Desk, Americana Hotel. Consequently, the IMS information contained in this Program is subject to change.

An Addendum containing information received too late to be included in this Program is available.

Information on Local Area: Transportation, Events, Etc. Hostesses from the N.Y. Convention Bureau will be on hand during the first three days of the convention to provide information about the New York area. They will be located in the registration areas of both hotels.

The Allied Social Science Associations has arranged for a presentation of two films by the New York Telephone Company entitled: "New York Has Everything" and "Key to the Continent." Showtime is 9:00 AM on Thursday, December 27 at the Americana, Vendome 11 (Hospitality Room).

The ASSA has arranged a Grayline Sightseeing Tour of New York City, lasting approximately 4 hours; meet in the lobby of the Americana, Friday, December 28, 9:15 AM; \$5.25 per person.

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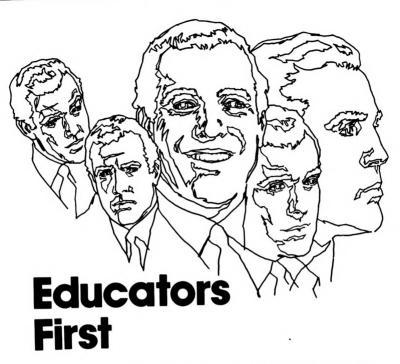
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# Daily Program Listing

#### December 26

3:00 p.m. Americana St. James Suite Chelsea Suite ASA Board and Council Meeting and Dinner

[By Invitation]

Chairman: CLIFFORD HILDRETH, University of Minnesota

5:00 p.m. to 7:00 p.m. Americana Vendome Suite 11 (Hospitality Room) American Statistical Association Cocktail Party [Cash Bar]

#### December 27

8:30 a.m. to 10:20 a.m. Americana La Loire 3

# Thursday

Analysis of Data Based on Complex Sample Surveys

Chairman: DANIEL G. HORVITZ, University of North Carolina

Statistical Standards for Analyzing Data Based on Complex Samples, MONROE G. SIRKEN and IRIS SHIMIZU, National Center for Health Statistics

Multivariate Analysis of Categorical Data Based on Complex Sample Surveys, GARY G. KOCH, University of North Carolina

Extensions of the Concept of Intraclass Correlation — A Substantive Measure and Design Tool, MARTIN R. FRAN-KEL, National Opinion Research Center

**Discussion:** PHILIP J. McCARTHY, Cornell University

8:30 a.m. to 10:20 a.m. Americana La Loire 5 Contributed Papers — Business and Economic Statistics-I

Chairman: BERT GOTTFRIED, Research Institute of America

(8:35) Forecasting with Stochastic Time Series Models: Some Considerations and Examples, RICHARD G. MARCIS, Federal National Mortgage Association and JAMES SULLIVAN, Bowling Green State University

(8:50) Significance Testing for Time-Series Regression Coefficients, JOHN T. WALTER, U.S. Postal Service and ELLIOT LEVY, U.S. Department of Commerce

(9:05) Multiplicity of Supermatrix Systems Equivalent to Conventional Normal Equations, IRVING H. SIEGEL, U.S. Department of Commerce

(9:20) Specification Choice and Mean Square Forecast Error, GREGORY K. SCHOEPFLE and H.O. STEKLER, State University of New York, Stony Brook

(9:35) A Practical Basis for Statistical Forecasting and Exponential Smoothing, A.W. HAMMOOD, Ohio University

(9:50) Mixtures of Unimodal Production Functions, PANKAJ GHOSH, Federal City College

(10:05) Nonlinear Estimation of the CES Production Function from Small Samples: Sampling Distributions and Tests, T. KRISHNA KUMAR and JAMES H. GAPINSKI, Florida State University

8:30 a.m. to 10:20 a.m. Americana Malmaison 6 and 7 ASA

#### **Bridging the Forecasting Gap**

Chairman: ROBERT ORTNER, Bank of New York

The Use of Econometric Models in Intermediate Range Forecasting, MI-CHAEL J. EVANS, Chase Econometrics

Methodological Issues in Intermediate Range Forecasting, ROBERT A. KAV-ESH, New York University and ROBERT PLATT, Andresen & Company

**Discussion:** F. GERARD ADAMS, University of Pennsylvania, EDWARD W. GREEN, Data Resources, Inc.

8:30 a.m. to 10:20 a.m. Americana Monte Carlo Suite

### Conference on Small Area Statistics-I: The Statistics of Revenue Sharing

Chairman: SHELDON A. RUBIN, U.S. Bureau of the Census

Development of State and Local Population Estimates as They Relate to Revenue Sharing, DONALD STARSINIC, U.S. Bureau of the Census

Development of the Components of Personal Income and Money Income for States and Counties, EDWIN J. COLEMAN, Bureau of Economic Analysis

(Conference continues at 10:30 A.M.)

8:30 a.m. to 10:20 a.m. Americana St. James Suite ASA

### Contributed Papers — Physical and Engineering Sciences-I

Chairman: LYLE D. BROEMELING, Oklahoma State University

(8:35) Variance Component Estimation in Some Random Effects Models with Composited Samples, DAVID EDEL-MAN, University of North Carolina

(8:50) Bivariate Exponential Distributions: Properties, Estimation and Applications, ROBERT C. KOHBERGER, Rensselaer Polytechnic Institute

(9:05) Modeling Variations in Earth's Atmosphere: A Project for Statisticians, JANET W. CAMPBELL, NASA Langley Research Center

(9:20) Maximum Likelihood Estimation with the Three Parameter Weibull and Gamma Models, HOWARD ROCKETTE, CHARLES ANTLE and LAWRENCE KLIMKO, Pennsylvania State University and University of Pittsburgh

(9:35) Optimum Sample Size for Choosing the Population Having the Smallest Variance (Large Sample Size Results), PAUL N. SOMERVILLE, Florida Technological University

(9:50) The Recursive Estimation of a Markov-Chain, J.L. DEVORE, Oberlin College

(10:05) Binomial Group Testing with Two Different Success Parameters, ELLIOTT NEBENZAHL, California State University, Hayward

8:30 a.m. to 10:20 a.m. Americana Biarritz Suite

#### Interactive Statistical Computing-I

Chairman: ROLF E. BARGMANN, University of Georgia

Conversational Statistical Computing for Instruction and Lay Use, WALTER P. BOND, University of Georgia

Interactive Statistical Computing for the Masses, DONALD GUTHRIE, University of California, Los Angeles

Problems with Interactive Computing, ROBERT M. ELASHOFF, University of California, San Francisco

**Discussion:** DAVID HOGBEN, National Bureau of Standards

8:30 a.m. to 10:20 a.m. Americana Buckingham Suite ASA, ENAR, WNAR Systematizing Information from Clinical Trials

Chairman: JOSEPH R. ASSENZO, Upjohn Company

Preparing and Displaying Information for Review by Regulating Agencies, DAVID S. SALSBURG, Pfizer Inc.

CIBA-Geigy System for Processing Clinical Data, RONALD GAUCH, CIBA-Geigy

Multivariate Statistical Procedures in Clinical and Pre-Clinical Studies, JOHN E. DUTT, G.D. Searle & Company

The Upjohn Clinical Information System GEORGE A. RIDGWAY, Upjohn Co.

8:30 a.m. to 12:00 p.m. Americana F.C. Leone Suite Committee of Presidents of Statistical Societies [COPSS] — Meeting [By Invitation]

Chairman: MARVIN A. SCHNEIDER-MAN, National Cancer Institute

9:00 a.m. Hilton Gibson Suite AIB Pedagogical Workshop: International Finance, Accounting, and Control

Chairman: JAMES C. BAKER, Kent State University

9:00 a.m. Hilton Clinton Suite AIB Pedagogical Workshop: International Management

Chairman: LESLIE E. GRAYSON, University of Virginia

9:00 a.m. Hilton Madison Suite **AIB**  Pedagogical Workshop: International Marketing

Chairman: VERN TERPSTRA, The University of Michigan

10:30 a.m. Hilton Gibson Suite AIB Strategies of European Multinational Enterprises

Chairman: RAYMOND VERNON, Harvard University

The Growth of European Multinational Firms, LAWRENCE G. FRANKO, Centre d'Etudes Industrielles

The Evolution of U.K.-based Multinational Enterprises, JOHN STOPFORD, London Business School

10:30 a.m. Hilton Clinton Suite AIB World-wide Coordination of International Business

Chairman: STANLEY M. DAVIS, Harvard University

Problems in Developing and Implementing a Worldwide Information and Control System for Multinational Firms, PHILLIP D. GRUB, George Washington University, and JAMES V. MILANO, Pfizer Inc.

Ocean Logistics for a Multinational Corporation, DAVID RUTENBERG, Carnegie-Mellon University

10:30 a.m. to 12:20 p.m. Americana La Loire 4 and 5 ASA

Contributed Papers — Business and Economic Statistics-II

Chairman: DORIS M. DRURY, University of Denver

(10:35) The Impact of the Civil Rights Legislation of 1964 on Black-White Income Differentials, DAVID D. HEMLEY, Florida Atlantic University and L.S. FAN, Colorado State University

(10:50) An Examination of Male and Female Earnings in Professional Industry and Occupational Classifications, BRUCE BOSWORTH, St. John's University

(11:05) The Effects of Welfare Payments on Family Expenditures, TEI-WEI HU and NORMAN KNAUB, Pennsylvania State University

(11:20) A Quantitative Analysis of Costs and Benefits of Some Aspects of Public Child-Welfare Programs — An Exploration, WEI SHIH, Bowling Green State University

(11:35) Minimum Wages and Employment, OTHMAR W. WINKLER, Georgetown University

(11:50) Labor Migration and Income Expectations: A Theoretical and Empirical

Analysis, RICHARD J. CEBULA, Emory University

(12:05) A Statistical Analysis of Economic Development and Income Inequality in a Depressed Region, M. ELLIS and M. KARSON, University of Alabama

10:30 a.m. to 12:20 p.m. Americana Regency Ballroom ASA

#### Interactive Statistical Computing-II

Chairman: DAVID C. HOAGLIN, Harvard University and National Bureau of Economic Research

A System for Interactive Data Analysis in Teaching and Research, ROBERT F. LING, University of Chicago

The Brown University Computational Probability Project, RICHARD VITALE, Brown University

**Discussion:** RICHARD L. CHAMBER-LAIN, Cyphernetics Corp., DONALD GUTHRIE, JR. University of California, Los Angeles

10:30 a.m. to 12:20 p.m. Americana St. James Suite ASA

#### **Mixed Contributed Papers**

Chairman: RICHARD LAMM, Warner-Lambert

(10:35) Simplifying the Iterative Proportional Fitting Algorithm for Multidimensional Contingency Tables, CHARLES L. ODOROFF, University of Rochester

(10:50) On the Nonrobustness of the Jackknife for Estimating Variances in Small Samples, PAUL I. FEDER, General Electric Company

(11:05) A Monte Carlo Study of Alternative Variance Components Regression Estimators, SWARNJITS. ARORA, University of Wisconsin

(11:20) Toward Standardized Symbols for Basic Statistical Concepts, M.A. JOHNSTON and D.R. SELF, Southwest

**Texas State University** 

(11:35) Black Statisticians in the U.S. — Low Supply for High Demand, DAVID G. KLEINBAUM, University of North Carolina

(11:50) Multivariate Analysis of Non-Orthogonal Experimental Designs Using a Multivariate Full Rank Model, NEIL H. TIMM and JAMES E. CARL-SON, University of Pittsburgh

(12:05) Small Sample Inference Procedures for the Trinomial Distribution with Applications to Brand Preference Studies, KENNETH O. COGGER and LAWRENCE A. SHERR, University of Kansas

10:30 a.m. to 12:20 p.m. Americana Regency Foyer ASA

#### **New Forecasting Techniques**

Chairman: THOMAS W. SYNNOTT, III, U.S. Trust Company

The Application of Systems Dynamics to Forecasting: The Corn-Hog Cycle, RICHARD WRIGHT, Massachusetts Institute of Technology

The Integration of Delphi and Econometric Techniques in Long-Range Forecasting, DANIEL MAXIM, Mathematica

Decision Making in the Canadian Court System — A Simulation Analysis, ROBERT G. HANN and RICHARD W. JUDY, University of Toronto

**Discussion:** JOHN MEYER, Harvard University

10:30 a.m. to 12:20 p.m. Americana Malmaison Suite ASA

#### Social Experimentation

Chairman: ROBERT F. BORUCH, Northwestern University

The Negative Income Tax Experiment, HAROLD WATTS, University of Wisconsin

The Health Insurance Experiment, JOSEPH NEWHOUSE, Rand Corp.

The Social Science Research Council Project on Social Experimentation, HENRY RIECKEN, University of Pennsylvania and ROBERT F. BORUCH, Northwestern University

**Discussion:** CARL A. BENNETT, Battelle-Northwest

10:30 a.m. to 12:20 p.m. Americana Monte Carlo Suite ASA [Continued from 8:30 a.m. session] Conference on Small Area Statistics-II: The Statistics of Revenue Sharing

Chairman: SHELDON A. RUBIN, U.S. Bureau of the Census

Preparation of Final Revenue Sharing Estimates of Money Income for Political Jurisdictions, ROGER HERRIOT, U.S. Bureau of the Census

Measurement of State and Local Tax Effort, JOHN COLEMAN, U.S. Bureau of the Census

The Real World: How the U.S. Treasury Gives Away Money, JAMES DANIELS, U.S. Treasury Department

[Conference continues at 2:00 P.M.]

10:30 a.m. to 12:20 p.m. Americana Biarritz Suite ASA, ASQC

**Statistics in Quality Control** 

Chairman: J. EDWARD JACKSON, Eastman Kodak Company

The Effect of Non-normality on Quality Control Charts, EDWARD G. SCHIL-LING, General Electric Company

Moving Average Control Systems, A.W. WORTHAM, Texas A & M University

Variables Control Charts for Multivariate Data, H.M. WADSWORTH, JR., Georgia Institute of Technology

The Economic Design of **p** Charts, A.J. DUNCAN, Johns Hopkins University

10:30 a.m. to 12:20 p.m. Americana La Loire 2 Analysis of Mark-Recapture Experiments

ASA, ENAR, WNAR

Chairman: LEE EBERHARDT, Battelle-Northwest

Robust Estimation of Population Density from Live Trapping Studies, KEN-NETH BURNHAM, Migratory Bird & Habitat Research Laboratory

Applications of a Multinomial Capture-Recapture Model to Epidemiological Data, JANET T. WITTES, Columbia University

Discussion: D.A. ROSS, University of British Columbia

10:30 a.m. to 12:20 p.m. Americana Chelsea Suite IMS

#### **Probability**

Stochastic Integrals in the Plane, JOHN WALSH, University of British Columbia

A Stochastic Model for the Motion of a Bacterium, DANIEL STROOCK, University of Colorado

Martingale Theorems in Harmonic Analysis, R. GUNDY, Rutgers

12:30 p.m. Americana Royal Ballroom ÁSA, NYSSA

Stock Market Outlook Luncheon [Fee **Event**1

Chairmen: JOHN J. CASSON, Brown Brothers Harriman & Company and SALLY S. RONK, Drexel Burnham & Company, Inc.

Title to be announced, PETER L. BERN-STEIN, Peter L. Bernstein, Inc.

Title to be announced, CHARLES F. O'HAY, Provident National Bank, Phila.

2:00 p.m. Hilton **Henry James Suite** AEA

Executive Committee Meetina **íBv** Invitation]

2:00 p.m. Hilton Madison Suite AIB

#### International Marketing

Chairman: WARREN KEEGAN, Columbia University

Product and Distribution Strategy in Semi-Industrialized Countries, WIL-LIAM CUNNINGHAM, ISABELLA CUNNINGHAM and RUSSELL MOORE, University of Texas

International Transfers of Marketing Programs, S. WATSON DUNN, University of Illinois

2:00 p.m. Hilton Clinton Suite Strategies of Japanese Multinational Enterprises

Chairman: RAYMOND VERNON, Harvard University

The Strategy and Structure of Japanese Multinational Enterprises, MICHAEL YOSHINO. Harvard University

Japanese Foreign Direct Investment in the United States and Indonesia, YOSHI TSURUMI, Harvard University

2:00 p.m. Americana F.C. Leone Suite ASA Committee on Publications — Meeting [By Invitation]

Chairman: MORRIS COHEN, Long Island University

2:00 p.m. to 3:00 p.m. Americana Regency Foyer IMS Wald Lecture I

The Probability Theory of Additive Arithmetic Functions, I, PATRICK BILLINGSLEY, University of Chicago

2:00 p.m. to 3:50 p.m. Americana Monte Carlo Suite ASA [Continued from 10:30 a.m. session] Conference on Small Area Statistics-III: Recent Developments in Estimation for Local Areas

Chairman: PAUL S. LEVY, University of Illinois

Use and Evaluation of Synthetic Estimates, MARIA E. GONZALES, U.S. Bureau of the Census

Recent Developments in Estimation for Local Areas, EUGENE P. ERICKSEN, Temple University

Discussion: RICHARD M. ROYALL,

Johns Hopkins University, HYMAN B. KAITZ, U.S. Department of Labor

2:00 p.m. to 3:50 p.m. Americana Buckingham Suite ASA Contributed Papers—Social Statistics-I Chairman: JAMES A. ZWERNEMAN, New Mexico State University

(2:05) A Look at Equity, C. SIEGEL, M. MEISNER and E. LASKA, Rockland State Hospital

(2:20) Comparison of Wages and Salaries Reported to SSA and IRS by Age, Sex and Color, HERMAN P. MILLER, Consultant

(2:35) Out-of-Pocket Expense for Health Care by Low-Income Families, REGINA LOEWENSTEIN, Columbia University

(2:50) Social Security Payments and the Aged Household Expenditures in the U.S., TEH-WEI HU and SHARIF GHALIB, Pennsylvania State University

(3:05) Access to Health Care: A First Attempt at Quantification, MARTIN K. CHEN, National Center for Health Services

(3:20) The Economics of Hospital Utilization Under Insurance, IRVING LEVE-SON, New York City Health Services Administration

(3:35) Business Cycle and Internal Migration in the United States, G.K. KRIPALANI, Western Michigan University

2:00 p.m. to 3:50 p.m. Americana La Loire 5 Contributed Papers — Physical and Engineering Sciences-II

Chairman: To be announced

(2:05) Practical Methods in Model Discrimination, T.C. HSIANG, Bell Canada

(2:20) Two-Stage Binomial Estimation, MARILYN SORUM, Northwestern University

(2:35) Three Classes of Full Sequences of 2n-m Plans, THOMAS F. PAJAK, Bowman Gray School of Medicine

(2:50) Simultaneous Prediction Intervals for Poisson Observations, DALE E. OLSON, Applied Physics Laboratory and DAVID FAULKENBERRY, Oregon State University

(3:05) Community Well-Being as a Factor to Consider in Urban Land Use Planning, D.R. BROGAN, Emory University and L. DOUGLAS JAMES, Georgia Institute of Technology

(3:20) Calculation of the Cost of Warranty Policies as a Function of Estimated Life Distributions, WALLACE R. BLISCHKE, University of Southern California and ERNEST M. SCHEUER, California State University, Northridge

(3:35) A Monte Carlo Sampling Study of Some Tests for Normality, VINCENT A. UTHOFF, West Virginia University

2:00 p.m. to 3:50 p.m. Americana Chelsea Suite ASA

### Contributed Papers — Business and Economic Statistics-III

Chairman: MONA E. DINGLE, University of Missouri, Columbia

(2:05) A New Approach to Measuring the Interest Elasticity of the Demand for Money, JAMES BARTH, George Washington University, ARTHUR KRAFT, Ohio University and JOHN KRAFT, Brookings Institute and HUD

(2:20) Rules vs. Discretion in Monetary Policy: Some Recent Evidence, LEE R. McPHETERS and MILTON B. REDMAN, Florida Atlantic University

(2:35) The Effect of Exchange Transactions Costs on Capital Mobility, HOUSTON H. STOKES, University of Illinois

(2:50) Price Elasticity in Foreign Trade

Flows: A Discriminant Analysis, JOE BILL YOUNG, U.S. Department of Commerce

(3:05) Stability of the Foreign Exchange Market: The U.S.-German Case, KURT F. HAUSAFUS, Oberlin College

(3:20) Some Trade Implications of Pollution Control in the Pulp and Paper Industry, MARY PERRIN, Drexel Burnham & Company, Inc.

(3:35) Stochastic Aspects of the Money Supply Mechanism, HASKEL BENI-SHAY, Northwestern University

2:00 p.m. to 3:50 p.m. Americana Regency Ballroom ASA

### **Evaluation of Statistical Computing from the User's Viewpoint**

Chairman: JOSEPH M. CAMERON, National Bureau of Standards

Factor Analysis: Its Purpose, Practice, and Packaged Programs, IVOR FRAN-CIS, Cornell University

The Complex Expression of Simple Concepts, RICHARD M. HEIBERGER, University of Pennsylvania

**Discussion:** HENRY L. LUCAS, North Carolina State University; WAYNE NELSON, General Eelctric Company

2:00 p.m. to 3:50 p.m. Americana Georgian Ballroom A ASA

#### Statistics and Politics

Chairman: RICHARD W. EVERETT, Chase Manhattan Bank

A Point of View: The Press, EILEEN SHANAHAN, Washington Bureau, N.Y. Times

The Public View, KAREN GERARD, Chase Manhattan Bank

The Business Story, CARL MADDEN, U.S. Chamber of Commerce

Labor's Point of View, LAZARE TEPER, International Ladies' Garment Workers' Union

2:00 p.m. to 3:50 p.m. Americana La Loire 2, 3 and 4 ASA, ENAR, WNAR Biased Estimation in Linear Models

Chairman: RAYMOND H. MYERS, Virginia Polytechnic Institute and State University

Minimum Biased Estimation in the Mixture Problem, A.R. MANSON, G.A. PAKU and L.A. NELSON, North Carolina State University

Comparing Classes of Biased Estimators for an III-Conditioned Linear Model, LAWRENCE S. MAYER, Virginia Polytechnic Institute and State University

Biased Prediction Using Multiple Linear Regression, DAVID M. ALLEN, University of Kentucky

2:00 p.m. to 3:50 p.m. Americana St. James Suite ASA, ENAR, WNAR Contributed Papers — Biometrics-I

Chairman: MAX LAYARD, National Cancer Institute

(2:05) Estimating Several Similar Regressions, PAUL K. JONES, Case Western Reserve University

(2:20) Bivariate Normit, Probit and Burrit Analysis, F.C. DURLING, University of Waikato

(2:35) A Dynamic Model of Prevalence for an Epidemiologic Study of a Chronic Disease Within a Health Maintenance Organization, JOHN P. MULLOOLY and ARTHUR OLEINICK, Kaiser Foundation Hospitals.

(2:50) The Assessment of a Treatment Effect when a Covariate is Observed in a Subset of Subjects, D.S. RUBIN, Princeton University and S. WEISBERG University of Minnesota

(3:05) Estimation of Bias in Classical Linear Regression when the Appropriate Model is Functional Linear Regression, A.H. REED, Bio-Science Laboratories

(3:20) Good Ridge Estimators, B.F. SWINDEL, North Carolina State University and D.D. CHAPMAN, Food and Drug Administration

(3:35) Residual Optimality: Ordinary vs. Weighted vs. Biased Least Squares, R.L. OBENCHAIN, Bell Laboratories

2:00 p.m. to 3:50 p.m. Americana Biarritz Suite ASA, ENAR, WNAR

#### Issues of Statistical Inference in Long-Term Clinical Trials

**Chairman:** POLLY FEIGL, University of Washington

Decision Making in Long-Term Clinical Trials, CURTIS L. MEINERT, University of Maryland

Time to Relapse as a Surrogate for Survival Time in Hodgkin's Trials, BYRON W. BROWN, Stanford Medical School

**Discussion:** EDMUND A. GEHAN, M.D. Anderson Hospital and Tumor Institution; JEROME CORNFIELD, George Washington University

4:00 p.m. Americana Georgian Ballroom A&B ASA, ENAR, WNAR, IMS

#### **General Methodology Lecture-I**

**Chairman:** MICHAEL D. PERLMAN, University of Chicago

Methodology of Estimating Several Parameters Simultaneously, BRADLEY EFRON, Stanford University

4:00 p.m. to 8:00 p.m. Barbizon-Plaza Library Headquarters and Registration

5:00 p.m. Hilton Le Petit Trianon AEA American Economic Association Cocktail Party [5:00 p.m.] and Dinner [6:00 p.m.] [By Invitation] [Fee Event]

## Thursday, December 27

Allied Social Science Associations 5:00 p.m. to 7:00 p.m. Cocktail Party, Cash Bar. Everyone wel-Hilton come. [Fee Event] Beekman Room ASSA Biometrics Section — Meeting [All 5:15 p.m. Section Members Invited Americana Provence 46 Chairman: RICHARD G. CORNELL. ASA University of Michigan Section on Training — Meeting [All 5:15 p.m. Section Members Invited Americana Malmaison 8 Chairman: ROBERT V. HOGG. Univer-ASA sity of lowa Subsection on Statistics in Marketing— 5:15 p.m. Meeting [All Subsection Members In-Americana La Loire 2 vited ASA Chairman: DONALD G. MORRISON. Columbia University Cocktail Party [For IRRA Registrants 5:30 p.m. Barbizon-Plaza Only **Barbizon Room** IRRA Committee on the Status of Women in 6:30 p.m. Hilton the Economics Profession Dinner and Damon Runyon Suite **Business Meeting [By Invitation] [Fee** Event1 AEA 7:00 p.m. Executive Board Meeting [Dinner] [By Barbizon-Plaza Invitation] Studio 2 — 5th Floor IRRA **Steering Committee Meeting** 7:00 p.m. Hilton Nassau A URPE

7:30 p.m. Hilton Madison A AFEE **Board of Directors Meeting** 

## Thursday, December 27

7:30 p.m. Americana Malmaison 8 1973 Council Meeting

Chairman: LUCIEN LeCAM, University IMS of Montreal

8:00 p.m. Hilton Gibson Suite ASE

Power and the Market System

Chairman: STEVE PEJOVICH, Ohio University

Economic Power and Labor Unions, WILLIAM HUTT, University of Dallas

Economic Power and Modern Corporations. WALTER ADAMS. Michigan State University

Discussion: EIRIK FURUBOTN, A.&M. University: WILLIAM R. WATERS, De-Paul University

8:00 p.m. Hilton Nassau A URPE

**General Business Meeting** 

8:30 p.m. Americana Regency Ballroom ASA, PAA

**Special Address Invited by the President** 

Chairman: CLIFFORD HILDRETH, University of Minnesota

Population, Food and Economic Adjustment, D. GALE JOHNSON, University of Chicago

8:30 p.m. Americana La Loire 2 **ENAR** 

Regional Advisory Board — Meeting [By Invitation]

Chairman: RICHARD G. CORNELL. University of Michigan

### December 28

7:30 a.m. Americana Regency Ballroom ASA

Chapter Presidents, Secretaries and District Representatives — Breakfast Meeting [By Invitation]

Chairman: CLIFFORD HILDRETH, University of Minnesota

7:30 a.m. Hilton Dorothy Parker and Henry James Suites College of Commerce and Business Administration, University of Illinois Breakfast [By Invitation] [Fee Event]

7:30 a.m. Hilton F. Scott Fitzgerald Suite Eastern Economic Association and Eastern Economic Journal Breakfast Meeting of the Boards [Fee Event]

7:45 a.m. Hilton Franklin P. Adams Suite AEA American Economic Association Chairman's Group Breakfast [By Invitation] [Fee Event]

8:00 a.m. Americana Buckingham Suite The City University of New York Breakfast [By Invitation]

8:00 a.m. Hilton O. Henry Suite University of Colorado, Boulder, Economics Department Breakfast [Fee Event]

8:30 a.m. Hilton Sutton North AEA, HES Perspectives on Twentieth Century Economic Theory

Chairman: ROBERT V. EAGLY, State University of New York, Binghamton

Was 1922-72 a Golden Age in the History of Economics? JOSEPH J. SPEN-GLER, Duke University and University of North Carolina

Capital Controversy: Ancient and Modern, SIR JOHN HICKS, Oxford University

**Discussion:** CARL G. UHR, University of California, Riverside; ROBERT W. CLOWER, University of California, Los Angeles

8:30 a.m. Hilton Gramercy A AEA, AFA, AREUEA What Should America's Housing Policies Be?

Chairman: ANTHONY DOWNS, Real Estate Research Corporation

What Should America's Housing Poli-

cies Be? I. JOHN KAIN, Harvard University

What Should America's Housing Policies Be? II, FRANK DE LEEUW, The Urban Institute

**Discussion:** JAMES L. SWEENEY, Stanford University; MAHLON R. STRASZHEIM, University of Maryland; BENJAMIN CHINITZ, Brown University and State University of New York, Binghamton

8:30 a.m. Hilton Le Petit Trianon AEA, AFA, ASA

The Flow of Funds and Interest Rates I: U.S. Financial Models

Chairman: LAWRENCE S. RITTER, New York University

A Flow-of-Funds Model of the U.S. Financial System, JAMES S. DUESEN-BERRY, Harvard University and BARRY BOSWORTH, The Brookings Institution

Short-Term Financial Models at the Federal Reserve Board, JAMES L. PIERCE and THOMAS THOMSON, Federal Reserve Board

Discussion: STEPHEN M. GOLDFELD, Princeton University; ALLAN H. MEL-TZER, Carnegie-Mellon University; DANIEL H. BRILL, Commercial Credit Company

8:30 a.m. Hilton West Ballroom Foyer **AEA, ASGE** 

#### A Critique of Grants Economics

Chairman: EVSEY DOMAR, Massachusetts Institute of Technology

Micro-Grants-Economics, KENNETH E. BOULDING, University of Colorado Macro-Grants-Economics, MARTIN PFAFF, Wayne State University and University of Augsburg

**Discussion:** JAMES N. MORGAN, University of Michigan; WARREN SAMUELS, Michigan State University

8:30 a.m. Hilton Beekman Room **AFEE**  Social Control of Industry: Alternative Perspectives

**Chairman:** JOHN S. GAMBS, Hamilton College

Government Intervention and the Social Control of Business: The Neoinstitutionalist Position, ALLAN G. GRUCHY, University of Maryland

Human Values and Economic Science, MELVILLE J. ULMER, University of Maryland

**Discussion:** ROBERT L. HEILBRONER, New School for Social Research, ROBERT LEKACHMAN, City University of New York

8:30 a.m. Hilton Don Marquis Suite **ASE**  Association for Social Economics Presidential Breakfast [Fee Event]

Chairman: RICHARD J. WARD, R.L. Hines Associates; Personal Values and the Anguish Affluence, PETER L. DANNER, Marquette University

8:30 a.m. Hilton Regent Room CBE **Economics of Employment and Security** 

Chairman: JOHN T. PORTER, III, The Cotton State Development Corporation, Inc.

Individual Equity Under Social Security: Some Black-White Comparisons, UBA OKONKWO, University of Rochester

Measurement of the Impact of Revenue Sharing on Metropolitan Regional Development, BERNICE EVANS, Morgan State College

New Bank Growth Patterns: Implicacations for Regulations, EDWARD IRONS. Atlanta University

**Discussion:** MARCUS ALEXIS, Northwestern University; LEON HUNTER,

University of Maryland; RONALD BROOKS, U.S. Treasury Department

8:30 a.m. Hilton Clinton Suite ES

#### **Empirical Labor Market Studies**

Chairman: BO SODERSTEN, University of Gothenberg (Sweden)

The Covariance Structure of Earnings Profiles, JOHN C. HAUSE, University of Minnesota

Race and the Determinants of Human Wealth, ALAN KING, and CHARLES KNAPP, University of Texas

The Dynamics of Family Labor Supply Decisions: Quit and Relocation for a Family Decision Unit, MARTIN DAVID, University of Wisconsin

Acceptance Wages of the Long Term Unemployed, ARNOLD KATZ, University of Pittsburgh

The Earnings and Promotion of Women Faculty, GEORGE E. JOHNSON, University of Michigan and FRANK P. STAFFORD, University of Michigan and Stanford University

Post-School Investment Differentials as a Determinant of Market Wage Differentials, SOLOMON W. POLACHEK, University of Chicago

8:30 a.m. Hilton Gibson Suite ES

#### **Topics in Theoretical Economics**

Chairman: STEVEN GOLDMAN, University of California, Berkeley

Increased Uncertainty and Allocations of Investment, RICHARD HARTMAN, University of Washington, Seattle

Convergence of Decision with Inadequate Information and Expected Utility Maximization, FREDERIC B. SHIP-LEY II, University of Tennessee, Knoxville

Information and Market Equilibrium,

R.E. KIHLSTROM and LEONARD J. MIRMAN, State University of New York, Stony Brook, N.Y.

Analysis of Non-Quantitative Phenomena, DONALD W. KATZNER, University of California, San Diego

Discussion: DARIUS GASKINS, University of California, Berkeley; OLIVER D. HART, Princeton University; JOHN P. GOULD, University of Chicago; JOSEPH HADAR, So. Methodist Univ.

8:30 a.m. Hilton Madison Suite ES

## Econometric Research in International Economics

Chairman: PETER KENEN, Princeton University

Factors Influencing United States Comparative Advantage, J. HARKNESS, Northwestern University, J. KYLE, Exxon Corporation

Bilateral Trade Flows: An Econometric Analysis, S. GOODMAN, R. DALTON, E. JONES, Central Intelligence Agency

The Effect of Exchange Rate Changes on Wage and Price Behavior in the United Kingdom, M. GOLDSTEIN, Department of Labor and International Monetary Fund

Some Early Estimates of the Price and Quantity Effects of the Smithsonian Agreement on the U.S. Trade Account, P. CLARK, Federal Reserve Board

Internationalization of U.S. Manufacturing Firms: A Type of Diversification, B. WOLF, Glendon College, York University, Toronto

Lagged Effect of the Demand Pressure on Import Fluctuations of the U.S.: An Industry-wise Disaggregation, C. ROH, University of Illinois, Champaign

#### 8:30 a.m. Hilton Murray Hill A ES

#### Inflation and Aggregate Supply

Chairman: MICHAEL WACHTER, University of Pennsylvania

The Effect of Price Level Unpredictability on the Composition of Income Change. BENJAMIN KLEIN, University of California, Los Angeles, LEVIS KOCHIN, University of Washington

An Empirical Analysis of Price Behavior LOUIS MACCINI, Johns Hopkins University

A Multi-Market Approach to Employment and Price Dynamics. THOMAS M. LENARD, University of California, Davis

Inflation and Unemployment: A Putty-Clay Approach, JAMES GAPINSKI, T. KRISHNA KUMAR, Florida State University, Tallahassee

Estimates of the Structure of Price Expectations, GEORGE de MENIL, Princeton University

Sectoral Employment and Shifts in the Aggregate Phillips Curve, SANFORD BERG, THOMAS DALTON, University of Florida, Gainesville

Excess Demand and Inflation, ROBERT VAN ORDER, Purdue University

#### 8:30 a.m. Hilton Murray Hill B ES

### **Topics in Economic Theory I**

Chairman: MICHAEL INTRILIGATOR, University of California, Los Angeles

Dynamic Non-Cooperative Oligoply: The Symmetric Quantity Game for a Homogeneous Durable Good. MICHAEL C. BURSTEIN, Northwestern University

Stability Conditions for Linear Constant Coefficient Difference Equations in Generalized Differenced Form, D.C. BOGER and R.N. FOLSOM, Naval

Postgraduate School, Monterey, California

The Nature of Equilibrium with Semiorder Preferences, DEAN T. JAMISON, LAWRENCE J. LAU, Stanford University

A New Approach to Structural Analysis of National Economy and Corresponding Data Strategies, T. GIGANTES, R. HOFFMAN, Statistics Canada, T. MATUSZEWSKI, M. TRUCHON, Universite Laval

Resource Depletion Over Infinite Time Horizons, LAWRENCE E. SCHWARTZ, University of Utah

Substitution and Expansion Effects in Production Theory: The Case of Joint Production, YASUHIRO SAKAI, University of Pittsburgh

A Differential Game Model of Collective Bargaining Under Strike, S. CLEM-HOUT, H.Y. WAN, Cornell University, G. LEITMANN, University of California, Berkeley

Factor Shares, Substitution, and the Stability of Two-Sector Growth Models — Generalizations and a Synthesis, FRANK HSIAO, University of Colorado, Boulder

Choice Paths, Rational Choice and Extending Choice, ROBERT PARKS, Washington University, St. Louis

8:30 a.m. Hilton Nassau B ES

### **Optimal Control**

Chairman: DAVID KENDRICK, University of Texas

A Solution to Optimal Control with Unknown Parameters, GREGORY C. CHOW, Princeton University

An Empirical Analysis of Optimal Macroeconomic Policies, KENNETH D.

GARBADE, Princeton University

On the Computation of the Deterministic Optimal Economic Policy, ALFRED L. NORMAN and MORRIS R. NORMAN, University of Texas and Econometrica International

Optimal Control of Econometric Models with Moving Average Disturbance Terms ADRIAN R. PAGAN, Princeton University

Application of Adaptive Control to Economic Stabilization Policy, TRIVENI N. UPADHYAY, University of Texas

**Discussion:** JOHN TAYLOR, Columbia University; STANLEY FISCHER, University of Chicago

8:30 a.m. Hilton Damon Runyon Suite URPE Racism in Economics: One of Three Sessions by the URPE Task Force on Racism

The Economy of Racism or Racist Economics: The Becker Theory of the Economics of Discrimination, RODNEY D. GREEN, American University

Additional participants to be announced; final program available at URPE table

8:30 a.m. Hilton Sutton South URPE Post-Keynesian Theory as a Teachable Alternative Macroeconomics

The Implications of the Sraffa Model, E.J. NELL. The New School

Cambridge Theory, JAN KREGEL or DON HARRIS. Stanford University

Investment and Pricing in the Mega-Corp, ALFRED EICHNER

8:30 a.m. to 10:20 a.m. Americana Biarritz 44 ASA Contributed Papers — Business and Economic Statistics-IV

**Chairman:** ROBERT G. DEDERICK, Northern Trust Company

- (8:35) Financial Risk: A Decision Theoretic Approach, JEFFREY E. JARRETT, University of Rhode Island
- (8:50) Financial Portfolio Patterns in the U.S. Economy, 1961-1972, CHRIS-TOPHER F. BAUM, Florida Atlantic University
- (9:05) A Lognormal Stochastic Process of Stock Market Prices, M.V. RAMA SASTRY, California State University
- (9:20) A Time Series Analysis of Bond Prices, RICHARD W. ZIOCK, Continental Assurance Company
- (9:35) Econometric Forecasting and Corporate Planning: A Bank's Viewpoint, JOHN C. HOWE, Security Pacific National Bank
- (9:50) Valuation of Human Capital: Implications of Recent Capital Market Investigations, JAMES L. BICKSLER, Rutgers University
- (10:05) The Distribution of Stock Purchase Warrant Price Changes, DICK A. LEABO and RICHARD J. ROGALSKI, University of Michigan

8:30 a.m. to 10:20 a.m. Americana Chelsea Suite **ASA** 

## Contributed Papers — Social Statistics-II

Chairman: DAVID L. BAYLESS, Research Triangle Institute

- (8:35) Sampling Theory and Ordinal Measures of Association; A Sociological Perspective and a Critique; B. KRISHNA SINGH, Virginia Commonwealth University
- (8:50) Relative Efficiencies of Some Measures of Association for Ordered Two-Way Contingency Tables under Varying Intervalness of Measurement Errors, CHARLES H. PROCTOR, North Carolina State University
- (9:05) Combining Two Responses Con-

taining Response Errors, HER TZAI HUANG and WAYNE A. FULLER, lowa State University

(9:20) Underreporting of Births and Deaths in Household Surveys of Population Change, MONROE SIRKEN and PATRICIA ROYSTON, National Center for Health Statistics

(9:35) Correcting the Bias Due to Non-Response in a Mailed Survey, ROBIN TSAI, Naval Personnel R&D Laboratory

(9:50) An Unbiased Response Model for Analysis of Categorical Data, GEORGE E. BATTESE and WAYNE A. FULLER, Iowa State University

(10:05) Testibility of Hypotheses Through Interview Taping as Means of Social Survey Evaluation, KAROL J. KROTKI, University of Alberta

8:30 a.m. to 10:20 a.m. Americana Malmaison 6 and 7 ASA Victimization Surveys as a Source of Crime Statistics

Chairman: DANIEL B. LEVINE, U.S. Bureau of the Census

The Scene of the Crime Revisted — New Insights from the National Crime Panel, GEORGE HALL, LEAA

Census Experience Related to the National Crime Panel, EARLE J. GERSON, MARVIN M. THOMPSON and MARIE G. ARGANA, U.S. Bureau of the Census

**Discussion:** MARVIN WOLFGANG, Center for Studies in Criminology & Criminal Law

8:30 a.m. to 10:20 a.m. Americana Princess Ballroom ASA Educational Research-I: Evaluating the Effects of Training

Chairman: PAUL MEIER, University of Chicago

The Milwaukee Study of Effects of Early Intervention, R. HEBER and H. GARBER, University of Wisconsin

Effect of College Performance on Sub-

sequent Achievement, DAVID WISE, University of California, Berkeley

**Discussion:** CRAIG RAMEY, University of North Carolina; RICHARD LIGHT, Harvard University

8:30 a.m. to 10:20 a.m. Americana Regency Foyer **ASA**  Statistics in Environmental Research

Chairman: JAMES E. GRIZZLE, University of North Carolina

Statistical Considerations Based on a Type of Design Useful in Epidemiological Studies of Occupational Health, LAWRENCE L. KUPPER, A.J. Mc-MICHAEL and R. SPIRTAS, University of North Carolina

Analysis of Los Angeles Air Pollution Data, G.A. TIAO and G.E.P. BOX, University of Wisconsin and WALTER J. HAMMING, L.A. Air Pollution Control District

Statistical Aspects of Highway Noise — Data, Simulation and Models, ALLEN H. MARCUS, Johns Hopkins University

Computerized Data Management for Ecosystems Analysis, R.C. KOHBER-GER, J.S. FISHER and J.W. WILKINSON, Rensselaer Polytechnic Institute

8:30 a.m. to 10:20 a.m. Americana La Loire 4 ASA Statistics and Marketing

**Chairman:** DONALD G. MORRISON, Columbia University

The Decision-Making Implications of Geometric Modelling: Some Specific Examples, BENJAMIN LIPSTEIN, Sullivan, Stauffer, Colwell & Bayles

**Discussion:** RUSSELL I. HALEY, Haley, Overholser & Assoc.; MORRIS J. GOTTLIEB, Market Facts. Inc.

8:30 a.m. to 10:20 a.m. Americana Monte Carlo 42 ASA, ENAR, WNAR

Contributed Papers — Biometrics-II

Chairman: J.N. SRIVASTAVA, Colorado State University

(8:35) Estimating Mean Time to Reach a Milestone, C.L. ATWOOD and A. TAUBE, Haile Selassie I University

(8:50) On Survival Curve and Life Expectancy, J.J. HSIEH, University of Toronto

(9:05) Finite Population Parameter Estimation in the Presence of Measurement Error, J. HERSON, Howard University and S. ROSENBERG, Temple University

(9:20) Permutation Tests Applied to Antibiotic Drug Resistance, R.K. TSU-TAKAWA and S.L. YANG, University of Missouri

(9:35) The Two Period Repeated Measurements Change-Over Design with Applications to Bio-Availability, S. WALLENSTEIN, Sandoz-Wander Inc.

(9:50) Two Alternatives for Three-Way Data Analysis, J. BOUROCHE and A. DUSSAIX, Metra International

(10.05) A Simple Adjustment to Analyze Unequally Replicated Rows of a Latin Square, R.D. STEWART, Upjohn Company

8:30 a.m. to 10:20 a.m. Americana St. James Suite ASA, ENAR, WNAR, IMS

# Recent Developments in Experimental Design and Their Application

Chairman: WALTER T. FEDERER, Cornell University

Recent Developments in the Design of Sequential Experiments, THOMAS J. KEEFE, Colorado State University

Recent Developments in the Design of Medical and Clinical Experiments, CHARLES W. DUNNETT, Lederle Laboratories

Some Practical Applications of Recent Developments in Design, A. HEDAYAT, Florida State University

Some Applications of Recent Develop-

ments in Fractional Replication, B.L. RAKTOE, University of Guelph

8:30 a.m. to 10:20 a.m. Americana Provence 46 ASA. IMS

#### **Decision Theory**

Chairman: JACK NADLER, American Telephone and Telegraph Company

Estimating the Multivariate Normal Mean; Alternative Admissibility Criteria A. SHAWKI SALEM and H.T. DAVID, lowa State University

Stable Decision Problems, JOSEPH KADANE, Carnegie-Mellon University

Nonstationary Means in a Multinormal Process, ROBERT L. WINKLER, Indiana University and C.B. BARRY, University of Florida

**Discussion:** GORDON M. KAUFMAN, Massachusetts Institute of Technology

8:30 a.m. to 10:20 a.m. Americana La Loire 2 and 3

#### Nonparametric Statistics

Chairman: H.A. DAVID, Iowa State University

Test of the Simple Hypothesis, W. HOEFFDING, University of North Carolina

Invariance Principles for Rank Statistics P.K. SEN, University of North Carolina

Rank Tests for Composite Hypotheses, M.L. PURI, Indiana University

**Discussion:** C.B. BELL, Tulane University

8:30 a.m. to 5:00 p.m. Barbizon-Plaza Library

### **Headquarters and Registration**

9:00 a.m. Hilton Red Smith Suite AIB Presentation of Prize-winning Thesis

Chairman: ROBERT R. MILLER, University of Iowa

Winner of Thesis Award To be

**Announced** 

**Discussion:** Second Place in Thesis Contest To be Announced; Third Place in Thesis Contest To be Announced

9:00 a.m. Barbizon-Plaza Theatre IRRA **Economic Stabilization Policies [Plenary Session]** 

Chairman: ARNOLD R. WEBER, Carnegie-Mellon University

The Problem of Setting General Pay Standards — A Historical Review, D. QUINN MILLS, Massachusetts Institute of Technology

The Impact of Controls on the Economy: Distortions and Decontrols, ROGER M. BLOUGH, White & Case

The Adjustment of Collective Bargaining to Controls, PAT GREATHOUSE, United Auto Workers

The International Scene and Controls — A Comparative Overview, DEREK ROB-INSON, British Pay Board

10:30 a.m. Hilton Gramercy A AEA The Economics of the First Amendment Chairman: LEONARD SILK, The New York Times

The Market for Goods and the Market for Ideas, RONALD H. COASE, University of Chicago

On Regulation, Efficiency, and Diversity in Communications Media, WIL-LIAM F. BAXTER, Stanford University Law School

**Discussion:** ROGER NOLL, The Brookings Institution; BRUCE OWEN, Stanford University; ALICE VANDER-MEULEN, University of California, Los Angeles

10:30 a.m. Hilton Le Petit Trianon AEA Production and the Aggregate Demand Function for Labor

Chairman: LAWRENCE R. KLEIN, University of Pennsylvania

The Elasticity of Substitution and the Cyclical Behavior of Productivity, Average Earnings, and Labor Share, NEIL WALLACE and THOMAS SARGENT, University of Minnesota and The Federal Reserve Bank of Minneapolis

A Disequilibrium Model of Demand for Factors of Production, SHERWIN ROSEN, University of Rochester, and M.I. NADIRI, National Bureau of Economic Research

A System of Industry Disaggregated Labor Requirements Equations in an Input-Output Framework, ROSS S. PRES-TON, University of Pennsylvania

Discussion: ROBERT HALL, Massachusetts Institute of Technology; MICHAEL D. McCARTHY, Case Western Reserve University; ANNE CARTER, Brandeis University

10:30 a.m. Hilton Regent Room AEA The Consequences of Demographic Changes for Economic Policy

Chairman: JOSEPH J. SPENGLER, Duke University

Resource and Amenity Implications of Changes in Population Growth Rates, RONALD G. RIDKER, Resources for the Future

The Impact of Changes in Population Growth on Employment, ALAN SWEEZY and AARON OWENS, California Institute of Technology

The Role of Population in Models of Economic Growth, ALLEN C. KELLEY, Duke University

**Discussion:** ANSLEY J. COALE, Princeton University; JOHN R. MEYER. National Bureau of Economic Research and Yale University

10:30 a.m. Hilton Beekman Room AEA, AFA **Endowment Income, Capital Gains and Inflation Accounting** 

Chairman: W. ALLEN WALLIS, Univer-

sity of Rochester

What is Permanent Endowment Income? JAMES TOBIN, Yale University

A Plan for the Definition of Endowment Income, JAMES M. LITVACK, BURTON MALKIEL, and RICHARD E. QUANDT, Princeton University

The Investment Income Formula of the American Economic Association, DONALD A. NICHOLS, University of Wisconsin

**Discussion:** ROBERT EISNER, Northwestern University; J. PETER WILLIAMSON, Dartmouth College; STANLEY W. BLACK, Vanderbilt University

10:30 a.m. Hilton Sutton South AEA, ASA Wage-Price Controls I: Two Years of Wage-Price Controls: What Have We Learned?

Chairman: GEORGE L. PERRY, The Brookings Institution

Why Phase III Failed, BARRY BOS-WORTH, The Brookings Institution

Price Controls in 1973, MARY HAMIL-TON, Loyola University

An Inside View of Controls, ROBERT LANZILLOTTI and BLAINE ROBERTS, University of Florida

Wages and the Pay Board, DANIEL J.B. MITCHELL, University of California, Los Angeles and ARNOLD WEBER, Carnegie-Mellon University

**Discussion:** PHILLIP CAGAN, Columbia University; ROBERT SOLOW, Massachusetts Institute of Technology

10:30 a.m. Hilton Rotunda AFEE **Economic Theory as a Guideline for Government Intervention and Control** 

Chairman: BOYD L. NELSON, Federal Communications Commission

The Uses and Abuses of Economic Theory in the Social Control of Business, DAVID D. MARTIN, Indiana University

The Marginal Utility of Marginal Analysis in Public Policy Formulation, WILLIAM H. MELODY, University of Pennsylvania

**Discussion:** ALFRED E. KAHN, Cornell University; WILLIAM G. SHEPHERD, University of Michigan

10:30 a.m. Hilton Damon Runyon Suite

## Manpower Management in International Operations

Chairman: DR. DUANE A. KUJAWA, Georgia State University

The Use of Third Country Nationals (TCNs) as Managers in U.S. Based International Companies, JOHN DANIELS, Pennsylvania State University

Expatriate Selection: Insuring Success and Avoiding Failure, RICHARD D. HAYS, Tulane University

10:30 a.m. Hilton Red Smith Suite AIB

### **Public Policy**

Chairman: ROBERT HAWKINS, New York University

The Impact on the USA of Investments Made by Foreign Firms, JEFFREY ARPAN, Georgia State University and DAVID RICKS, Ohio State University

The Impact of Foreign Competition on the U.S. Apparel Industry, E.W. OGRAM, JOSE DE LA TORRE, JEF-FREY ARPAN and MICHAEL JEDEL, Georgia State University

10:30 a.m. Hilton O. Henry Suite ANAES

#### Issues in International Finance

Chairman: DAVID G. TUERCK, Center for International Business

The Theory of Optimum Currency Ar-

eas: Some Thoughts Prompted by the Canadian Experience, THOMAS D. WILLETT, Department of the Treasury

World Financial System in Transition, F. JOHN MATHIS, Continental Illinois National Bank

**Discussion:** JAMES R. MELVIN, University of Western Ontario; CHARLES N. DENNIS, University of Southern Mississippi

10:30 a.m. Americana F.C. Leone Suite ASA Committee on Membership — Meeting [By Invitation]

**Chairman:** HERBERT GINSBURG, Westinghouse Electric Corporation

10:30 a.m. Hilton Franklin P. Adams Suite ASE Social Values and the Economic Power Structure

Chairman: JOSEPH W. McGUIRE, University of California

The Impact of Public Regulation on Corporate Social Behavior, ALMARIN PHILLIPS, University of Pennsylvania

Charity, Subsidy, the Market and the Public Good, JOSEPH A. PICHLER, University of Kansas

**Discussion:** WALTER L. JOHNSON, University of Missouri; LELAND S. BURNS, University of California

10:30 a.m. Hilton Clinton Suite ES

#### **Measurement Problems**

**Chairman:** ZVI GRILICHES, Harvard University

Real Property as a Depreciable Asset, F.C. WYKOFF, Brookings Institution

Measuring the Bias in Price and Productivity Measures Due to Quality Change, J.E. TRIPLETT, R.J. Mc-DONALD, D.A. SMITH, Bureau of Labor Statistics

An Approximate Divisia Index of Total

Factor Productivity, SPENCER STAR, University of British Columbia and R.E. HALL, MIT

**Discussion:** MICHAEL HURD, Stanford University; DAN USHER, Queen's University, Kingston

10:30 a.m. Hilton Gibson Suite Economic Development I: Savings, Trade and Development

**Chairman:** PAN A. YOTOPOULOS, Stanford University

GATT Tariff Concessions and the Exports of Developing Countries — United States Concessions at the Dillon Round, J.M. FINGER, UNCTAD, Geneva

A Permanent Income Theory of Export Instability, ODIN K. KNUDSEN, California State University, San Jose

Savings, Investment and the Macroeconomic Adjustment Process in Less Developed Countries, N. LEFF, Columbia University; K. SATO, State University of New York, Buffalo

**Discussion:** ROBERT E. BALDWIN, University of Wisconsin; GERRY D. ARSENIS, UNCTAD, New York; CONSTANTINO LLUCH, IBRD, Washington, D.C.

10:30 a.m. Hilton Madison Suite ES General Equilibrium and the Theory of Tariffs

Chairman: LIONEL McKENZIE, University of Rochester

An Economic Theory of Institutional Change: The Case of Tariffs, R. BROCK, S. MAGEE, University of Chicago

On the Computation of a Competitive Equilibrium on International Markets with Tariffs, J. SHOVEN, Stanford; J. WHALLEY, London School of Economics

A Non-Cooperative View of Tariffs and a General Equilibrium Model of International Trade, Y. OTANI, Purdue University

**Discussion:** LARRY KIMBELL, University of Southern California, Los Angeles; WILLIAM NORDHAUS, Yale University; ROBERT SHISHKO, Rand Corporation

10:30 a.m. Hilton Murray Hill A ES The Econometrics of the Energy Crisis Chairman: WILLIAM NORDHAUS, Yale University

Petroleum Reserve and Production Response to Special Federal Tax Provisions, JAMES C. COX and ARTHUR W. WRIGHT, University of Massachusetts, Amherst

Electricity Demand in the United States, ROBERT HALVORSEN, University of Washington

The Econometrics of Natural Gas Deregulation, ROBERT S. PINDYCK and PAUL W. MacAVOY, Massachusetts Institute of Technology

The Supply Curve of Natural Gas, R.J. REYNOLDS, University of Idaho

**Discussion:** ROBERT M. SPANN, Virginia Polytechnic Institute, CHARLES F. STONE, Wayne State University

10:30 a.m. Hilton Murray Hill B ES

### **Econometric Application**

**Chairman:** PRESTON MILLER, Federal Reserve Bank of Minneapolis

Alternative Approaches to the Balance of Payments and the Capital Account, RUSSELL S. BOYER, University of Western Ontario

A Monthly Econometric Model of U.S. and Application to an Analysis of the Federal Budget, 1974 and 1975, TA-CHUNG LIU, ERH-CHENG HWA, Cornell University

Forecasting the Consumption Effects of Stabilization Policies from Empirical Short Run Marginal Propensities to Consume, WALTER DOLDE, Carnegie-Mellon

Short-Term Capital Movements from the U.S. to Canada, CHARLES FREED-MAN, University of Minnesota

On the Variability of the Rate of Replacement Investment: Some Evidence from the Scrappage Rate, GEORGE BITROS and HARRY KELEJIAN, New York University

A Microsimulation of the Macroeconomy with Explicitly Represented Money Flows, BARBARA BERGMANN, University of Maryland, College Park

10:30 a.m. Hilton Nassau A ES Issues in the Taxation of Individuals

Chairman: JOHN BOSSONS, University of Toronto

The Effect of Welfare Payments on Family Size: Some Cross Section Evidence, FRANCES VAN LOO FLANA-GAN, University of Illinois

On the Tax Incidence of the Pennsylvania Lottery, MICHAEL H. SPIRO, University of Pittsburgh

Majority Voting and the Properties of a Simple Income Tax, T. ROMER, University of Western Ontario

Progression, Leisure, and Public Goods, PAUL E. SMITH, University of Missouri-Columbia

**Discussion:** JONATHAN R. KESSEL-MAN, University of British Columbia, STEVEN SLUTSKY, Cornell University

10:30 a.m. Hilton Nassau B General Equilibrium Theory I

**Chairman:** MICHAEL ROTHSCHILD, Princeton University

On the Existence of Equilibrium in a Portfolio Model, OLIVER HART, Prince-

ton University

On the Inefficiency of a Competitive Equilibrium Under Uncertainty, EL-HANAN HELPMAN, JEAN-JACQUES LAFFONT, Harvard University

Incentive Compatibility in Resource Allocation Mechanisms: Sufficient Conditions, JOHN O. LEDYARD, Northwestern University

Structures of Restricted Markets in Exchange Processes, SOREN QVIST-GAARD LEMCHE, Queen's University, Kingston, Ontario

**Discussion:** HAYNE LELAND, Stanford University; JOSEPH OSTROY, UCLA

10:30 a.m. City Squire Motor Inn Colonial Room SGE The Flow of Capital to Developing Countries: Hopes and Realities

Chairman: RICHARD F. LARSEN, Department of the Treasury

Capital Requirement of Developing Countries, GERASSIMOS D. ARSENIS, United Nations

Role of Multilateral Development Institutions, WILLIAM F. CLINE, Brookings Institution

Capital Flows From Industrialized Countries, CONSTANTINE MICHAL-OPOULOS, Agency for International Development

U.S. Direct Investment in Developing Countries, ANTHONY SCAPERLANDA, Northern Illinois University

**Discussion:** REED J. IRVINE, Federal Reserve Board; ENRIQUE LERDAU, International Bank for Reconstruction and Development

10:30 a.m. Hilton Don Marquis Suite URPE

#### **Alienation and Capitalism**

Papers by STEPHAN MICHELSON, Cambridge, Mass. and RON STAN-

FIELD, Idaho State University
Final program available at URPE table

10:30 a.m. to 11:30 a.m. Americana Regency Foyer IMS Wald Lecture II

Chairman: To be Announced

The Probability Theory of Additive Arithmetic Functions, II, PATRICK BILLINGSLEY, University of Chicago

10:30 a.m. to 12:20 p.m. Americana Monte Carlo 42 ASA Contributed Papers — Business and Economic Statistics-V

Chairman: ROBERT E. LIPSEY, National Bureau of Economic Research

(10:35) Determinants of the Buying Intentions of the Electric Car, G.M. NAIDU, GEORGE TESAR and GERALD UDELL, University of Wisconsin

(10:50) Effect of Call Backs in Marketing Research, GEORGE MIAOULIS, JR., University of New Hampshire; GERALD J. GLASSER, New York University and GALE D. METZGER, Statistical Research, Inc.

(11:05) Economies and Diseconomies of Scale in Administering Health Insurance, ROGER D. BLAIR and RONALD J. VOGEL, University of Florida

(11:20) Multiple Criteria in Labor Union Decision Making, JAMES L. COCH-RANE, CATHY MORGAN and C. GLYN WILLIAMS, University of South Carolina

(11:35) Compensation and Turnover Rates in State Legislatures: A Case Study, WILLIAM F. LOTT and IMANUEL WEXLER, University of Connecticut

(11:50) Economic Impacts of a University Community, G. GEOFFREY BOOTH and JEFFREY E. JARRETT, University of Rhode Island

(12:05) The Instability of the Urban Base Multiplier, JAMES C. NICHOLAS, Florida Atlantic University

10:30 a.m. to 12:20 p.m. Americana La Loire 2, 3 and 4 ASA Educational Research-II: Econometric Models

Chairman: PEGGY R. SANDAY, University of Pennsylvania

A Simultaneous Equations Model of the Educational Process: The Coleman Data Revisted, ANTHONY BOARDMAN, OTTO DAVIS and PEGGY R. SANDAY, Carnegie-Mellon University and University of Pennsylvania

An Econometric Model for Estimating IQ Scores and the Environmental Influence on the Pattern of IQ Scores over Time, JOSEPH B. KADANE, TIMOTHY McGUIRE, PEGGY R. SANDAY and RICHARD STAELIN, Carnegie-Mellon University and University of Pennsylvania

**Discussion:** ALEXANDER M. MOOD, University of California, Irvine; IRMA ADELMAN, University of Maryland

10:30 a.m. to 12:20 p.m. Americana Malmaison 6 and 7 **Measures of Capacity and Operating Rates** 

Chairman: DOUGLAS GREENWALD, McGraw-Hill Publications Company

McGraw-Hill Measures of Capacity and Operating Rates, PRISCILLA GANG, McGraw-Hill Publications Company

Analysis of Differences in Operating Rate Series, ROBERT SOMMERS, Wharton School

New Work at the FRB, NATHAN EDMONSON, Federal Reserve Board

The Pilot Study on Capacity and Operating Rate, EDWARD A. ROBINSON, U.S. Bureau of the Census

10:30 a.m. to 12:20 p.m. Americana St. James Suite ASA **Using Statistical Sampling in Auditing** 

Chairman: A.J. WILBURN, Defense Contract Audit Agency

Statistical Sampling in Auditing with Auxiliary Information Estimators, ROBERT S. KAPLAN, Carnegie-Mellon University

Dollar-Unit Sampling in Auditing, A.D. TEITLEBAUM, McGill University

Use of Statistical Design in Audit Sampling, JOHN NETER, University of Minnesota and JAMES K. LOEBBECKE, Touche Ross & Company

**Discussion:** DONALD M. ROBERTS, University of Illinois

10:30 a.m. to 12:20 p.m. Americana Biarritz 45 ASA, ENAR, WNAR

#### **Analyses of Data Collected Over Time**

**Chairman:** JOHN A. FLUECK, Temple University

Monitoring Long-Term Data Collection: Seattle Heart Watch, PAULA H. KAN-AREK and LLOYD FISHER, JR., University of Washington

Some Designs and Analyses for Temporally Stationary Experiments Involving Correlated Bivariate Responses, SINGCHOU WU and JAMES W. WILLIAMS, California Polytechnic Univ.

A Common Problem in the Analysis of Panel Data, BARBARA A. BAILAR, U.S. Bureau of the Census

**Discussion:** S. JAMES PRESS, Yale University

10:30 a.m. to 12:20 p.m. Americana Buckingham Suite ASA, ENAR, WNAR

# Open Discussion on Statistical Consulting Centers

**Moderator:** WILLIAM SCHUCANY, Southern Methodist University

This informal meeting represents an attempt to provide a vehicle for the exchange of information relating to statistical consulting centers or labs at many universities. The general theme is

to be an open discussion of topics of interest to people responsible for consulting labs, which are established for training purposes or to support researchers across the community or both. Items which are anticipated include lab operations, staffing and budget, scope of projects and relation to curriculum.

10:30 a.m. to 12:20 p.m. Americana Regency Ballroom ASA, IMS

#### **Technometrics Session**

Chairman: DONALD A. GARDINER, Oak Ridge National Laboratory

The Practice of Fitting Initial Sections of Power Series, JOHN W. TUKEY and ALBERT E. BEATON, JR., Princeton University

**Discussion:** DONALD W. MAR-QUARDT, E.I. du Pont de Nemours & Company; COLIN MALLOWS, Bell Laboratories

12:00 Noon Hilton Ring Lardner Suite TPUG Transportation & Public Utilities Group of AEA Luncheon [Fee Event]

12:30 p.m. Hilton West Ballroom AEA, AFA, ASA The Economic Outlook — Joint Luncheon [Fee Event]

Chairman: WALTER W. HELLER, University of Minnesota

GEORGE P. SHULTZ, Secretary of the Treasury

12:30 p.m. Barbizon-Plaza East and North Galleries IRRA Presidential Luncheon [Fee Event]

**Chairman:** NATHANIEL GOLDFINGER, AFL-CIO

Presidential Address, DOUGLAS SOUTAR, American Smelting and Refining Company

2:00 p.m. Americana Princess Ballroom AAEA **Factor Productivity in Agriculture** 

**Chairman:** T.D. WALLACE, North Carolina State University

A Cost Function Approach to the Measurement of Factor Demand Elasticities and Elasticities of Substitution, HANS BINSWANGER, Agricultural Development Council

The Significance of the Green Revolution in Recent Development Experience, ROBERT EVENSON, Yale University

**Discussion:** JERE BEHRMAN, University of Pennsylvania, E.J.R. BOOTH, University of Connecticut

2:00 p.m. Americana Provence 46 AAEA U.S. Policies for Food, Agriculture and Trade

Chairman: KENNETH R. FARRELL, U.S. Department of Agriculture

The World Food Situation in Perspective, DON PAARLBERG, U.S. Department of Agriculture

U.S. Policies and Policy Alternatives, GARY L. SEEVERS and LEO V. MAYER, Council of Economic Advisers, Washington, D.C.

U.S. Policies and Policy Alternatives, JAMES S. PLAXICO and LUTHER G. TWEETEN, Oklahoma State University

Discussion: To Be Announced

2:00 p.m. Hilton Regent Room Monetary Policy and Sectoral Credit Flows

Chairman: JOHN KAREKEN, University of Minnesota

Analysis of the Issues, JAMES S. DUESENBERRY, Harvard University

Alternative Strategies to Influence Credit Flows, ANDREW F. BRIMMER, Federal Reserve Board

**Discussion:** CRAIG SWAN, University of Minnesota; JOHN M. CULBERT-SON, University of Wisconsin; WILLIAM POOLE, Federal Reserve Bank of Boston

2:00 p.m. Hilton Gramercy Suite AEA, ASA Wage-Price Controls II: Appraisal of U.S. Wage and Price Control Programs

Chairman: MORRIS COHEN, Long Island University

A View from Industry, ROBERT J. EGGERT, RCA

A View from the Financial Sector, GEORGE W. McKINNEY, Irving Trust Company

A View from Washington, FRANK W. SCHIFF, Committee for Economic Development

A View from Academe, ABBA P. LERNER, Queens College, City University of New York

2:00 p.m. Hilton Gibson Suite AEA, AFA, AIB, ASA International Trade and Finance I: The Political Economy of Multinational Enterprises

Chairman: TIBOR SCITOVSKY, Stanford University

Problems and Policies in the International Adjustment Process, GARY C. HUFBAUER, University of New Mexico

Problems and Policies Affecting Labor's Interests, GEORGE HILDEBRAND, Cornell University

Problems and Policies Respecting Competition and Monopoly Power, RAYMOND VERNON, Harvard University

Discussion: C. FRED BERGSTEN, The Brookings Institution; PEGGY MUSGRAVE, Northeastern University; ROBERT B. STOBAUGH, Harvard University; THOMAS HORST, The Brookings Institution; JOHN J. McGOWAN, Charles River Associates, Inc.

2:00 p.m. Hilton Henry James Suite ANAES **Issues in Natural Resource Economics** 

**Chairman:** JOSEPH HORTON, Slippery Rock State College

Restrictions on Log Exports from the Pacific Northwest, HENRY N. GOLD-STEIN, University of Oregon

Methodology and Analysis of Natural Gas Alternative Source Systems, DAN-IEL EDWARDS, Bureau of Mines

Measuring the Impact of Flood Control Investments in Small Watersheds, RONALD M. NORTH, University of Georgia

**Discussion:** THOMAS M. JOHNSON, Eastern Michigan University; RODNEY WEIHER, Atomic Energy Commission; DAVID G. TUERCK, Center for International Business

2:00 p.m. Hilton Damon Runyon Suite URPE

#### Full Employment and the State

Full Employment Revisted: New Concepts, Old Problems, BERTRAM GROSS and STANLEY MOSES, Hunter College of the City University of New York and RUSSELL NIXON, Columbia University

Macro Policy Goals of the State: A Model of Class Conflict, RAY BODDY, American University; JIM CROTTY, Bucknell University and LEONARD RAPPING, University of Massachusetts

2:00 p.m. Hilton Trianon Ballroom URPE

# Community Economic Development — What Is It and How Do We Teach It?

Chairman: WILLIAM TABB, Queens College of the City University of New York

Panel Members: JULIAN ELLISON, Black Economic Research Center; RAYMOND FRANKLIN, Queens College, City University of New York; MARGARET SIMMS, Atlanta University; MICHAEL ZWEIG, State University of New York, Stony Brook; WINIFRED WHITFIELD, Bedford-Stuyvesant Restoration Corporation

2:00 p.m. to 3:50 p.m. Americana Biarritz Suite ASA

#### **Computer Assisted Data Analysis**

Chairman: CHARLES H. GOLDSMITH, McMaster University

Statistical Techniques Used in the National Halothane Study and in the National Assessment of Education, JOHN P. GILBERT, Harvard University

Statistical Analysis of Interlab Fatigue Time Data, JAMES J. FILLIBEN and GILBERT M. UGIANSKY, National Bureau of Standards

**Discussion:** JOHN M. CHAMBERS, Bell Laboratories; DAVID L. WALLACE, University of Chicago

2:00 p.m. to 3:50 p.m. Americana St. James Suite

# Contributed Papers — Physical and Engineering Sciences-III

Chairman: To Be Announced

(2:05) The Truncated Normal Distribution with Applications in Ballistics and Meteorology, DANNY D. DYER, University of Texas, Arlington

(2:20) Tolerance Intervals on the Class Population in a Random One-Way Classification with Covariates, KEITH KUSSMAUL, Westinghouse Research Laboratories

(2:35) The Expected Mean Squared Error, RICHARD W. ANDREWS, University of North Florida and RICHARD G. KRUTCHKOFF, Virginia Polytechnic Institute and State University

(2:50) Results on Order Statistics and Tests of the Kolmogorov-Smirnov Type, BARRY H. MARGOLIN, Yale University and WILLI MAURER, University of Florida

(3:05) A Computer Program for Evaluating Experimental Designs, W. MEEKER, Union College; P. FEDER and G. HAHN, General Electric Company

(3:20) Procedures for Grouping a Set of Observed Means, DAVID L. WEEKS and JOHN R. MURPHY, Oklahoma State University

(3:35) On Bayesian Assessments of Coherent Systems, DAVID VINCENT MASTRAN and NOZER D. SINGPURWALLA, George Washington University

2:00 p.m. to 3:50 p.m. Americana Chelsea Suite Contributed Papers — Social Statistics-III

Chairman: KAREN O. MASON, University of Michigan

(2:05) Distributed Lag Models and the Effects of Socioeconomic Change on Fertility, WILLIAM RAY ARNEY, Denver, Colorado

(2:20) A Note on the Annual Variability of the Crude Birth Rate, WILLIAM SELTZER and R. FAND, Population Council

(2:35) Sex Ratio at Birth in Relation to Father's Occupation in the United States: A Simulated Analysis, M.A. EL ATTAR and S.M. EL HAKEEM, Mississippi State University

(2:50) Fertility Decline in Canada, 1961-1970: An Analysis Through Fertility Table Approach, ASHRAF K. KAYANI and P. KRISHNAN, University of Alberta

(3:05) Optimum Values of Life Table Functions, S. MITRA, Emory University

(3:20) Determinants of Net Migration and Migration Efficiency in Southern State Economic Areas, WILLIAM J. SEROW, JULIA H. MARTIN and MICHAEL A. SPAR, University of Virginia

(3:35) Mortality Decline in India, 1951-1961: Development vs. Public Health Program Hypothesis, P. KRISHNAN, University of Alberta

2:00 p.m. to 3:50 p.m. Americana La Loire 2 and 3

# Contributed Papers — Business and Economic Statistics-VI

Chairman: ROY E. MOOR, A.G. Becker & Company

(2:05) The Consumer — Leader or Lagger, HERMAN I. LIEBLING, Office of the Secretary of the Treasury

(2:20) An Evaluation of ASA-NBER Survey of Forecasts by Economic Statisticians, JOSEPHINE SU, National Bureau of Economic Research and VINCENT SU, Baruch College, City University of New York and National Bureau of Economic Research

(2:35) A Neo-Classical Growth Model of the U.S. 1929-1966, WILLIAM B. STRONGE and GARY L. JACKSON, Florida Atlantic University

(2:50) Vacancies, Expectations, and the Phillips' Curve, THOMAS J. KNIESNER and PAUL N. RAPPOPORT, Ohio State University

(3:05) Changes Over Time and U.S. Input-Output Final Demand Coefficients, ROGER H. BEZDEK, U.S. Department of Commerce

(3:20) A Factor Regression Model of Socio-Economic Development, JACOB DE ROOY, Lehigh University

(3:35) The Residential Construction Cycle: A Long-Run and a Short-Run Analysis, RONALD L. COCCARI and FRANK FARRONE, St. John's University

2:00 p.m. to 3:50 p.m. Americana Royal Ballroom B ASA, ENAR, WNAR The Measurement of a Disaster — Late Effects of A-Bomb Radiation in Japan

Chairman: TAVIA GORDON, National Heart & Lung Institute

The Atomic Bomb Casualty Commis-

sion — A Population Laboratory, IWAO M. MORIYAMA, National Center for Health Statistics

Genes and Mutations: Hiroshima and Nagasaki Re-visited, WILLIAM J. SCHULL, University of Texas, Houston

Effects Following Radiation of the Fetus, WILLIAM J. BLOT, Johns Hopkins University

Radiation Carcinogenesis, SEYMOUR JABLON, National Academy of Sciences — National Research Council

2:00 p.m. to 3:50 p.m. Americana Malmaison 6 and 7 ASA, ENAR, WNAR, IMS

# Applications of Conditional Probability Integral Transformations

Chairman: RONALD HELMS, University of North Carolina

Applications of the CPIT in Testing: General Introduction, C.P. QUESEN-BERRY, North Carolina State University

On the Power of CPIT Tests, F.L. MILLER, JR., Oak Ridge National Laboratory

**Discussion:** ROLF BARGMANN, University of Georgia

2:00 p.m. to 3:50 p.m. Americana Monte Carlo Suite ASA, IMS

#### Inference

Chairman: ROBERT J. BUEHLER, University of Minnesota

Title to be Announced, GEORGE A. BARNARD, University of Essex, England

Estimating Equations in the Presence of a Nuisance Parameter, V.P. GOD-AMBE and M.E. THOMPSON, University of Waterloo, Canada

2:00 p.m. to 3:50 p.m. Americana Regency Ballroom ASA, NCSW Income Maintenance and Welfare Reform

**Chairman:** HAROLD WATTS, University of Wisconsin

Income Maintenance and Welfare Reform, JAMES TOBIN, Yale University

Income Maintenance and Welfare Reform, ROBERT J. LAMPMAN, University of Wisconsin

**Discussion:** ALVIN L. SCHORR, New York University; ALICE M. RIVLIN, Brookings Institution

2:30 p.m. Hilton F. Scott Fitzgerald Suite ACES Labor Market Developments in the USSR and East Europe

Chairman: MURRAY FESHBACH, Department of Commerce

Regional Wage Differentials in the USSR, GERTRUDE SCHROEDER, University of Virginia

The Industrial Relations System in Hungary after the Economic Reform, JULIUS REZLER, Loyola University of Chicago

Yugoslav Labor Migrants, LJUBISA S. ADAMOVIC, University of Belgrade

**Discussion:** MURRAY YANOWITCH, Hofstra University; JANOS HORVATH, Butler University; CARMELO MESALAGO, Pittsburgh University

2:30 p.m. Hilton Sutton South AEA Major Economic Policy Problems of the 1970s

Chairman: R.A. GORDON, University of California, Berkeley

Panelists: SAMUEL BOWLES, University of Massachusetts; ROBERT L. HEILBRONER, New School for Social Research; KERMIT GORDON, The Brookings Institution; HENDRIK S. HOUTHAKKER, Harvard University; GEOFFREY H. MOORE, National Bureau of Economic Research

2:30 p.m. Hilton Le Petit Trianon AEA The Property Tax: Progressive or Regressive?

Chairman: JOSEPH A. PECHMAN, The

**Brookings Institution** 

Views on Property Taxation: I, HENRY J. AARON, The Brookings Institution and University of Maryland

Views on Property Taxation: II, RICH-ARD A. MUSGRAVE, Harvard University

Discussion: HARVEY E. BRAZER, University of Michigan; ANN F. FRIED-LAENDER, Boston College; DICK NETZER, New York University; GEORGE E. PETERSON, Urban Institute; EARL R. ROLPH, University of California, Berkeley

2:30 p.m. Hilton Beekman Room AEA Role Prejudice and Sex Discrimination: Findings of the American Economic Association Committee on the Status of Women in the Economics Profession

Chairman: CAROLYN SHAW BELL, Wellesley College

Members: WALTER Committee ADAMS. Michigan State University: KENNETH J. ARROW, Harvard University; FRANCINE BLAU, Trinity College; MARTHA BLAXALL, National Academy of Sciences; KENNETH BOULDING, University of Colorado; JOHN KEN-NETH GALBRAITH, Harvard University; COLLETTE MOSER. Michigan University: BARBARA REAGAN, Southern Methodist University: MYRA STROBER, Stanford University; PHYL-LIS WALLACE, Sloan School, sachusetts Institute of Technology Panelists: ELIZABETH CLAYTON. University of Missouri; DAVID GORDON, New School for Social Research; GEORGE J. STIGLER, University of Chicago

2:30 p.m. Hilton West Ballroom Foyer **AFA**  The Outlook Session

Chairman: ELI SHAPIRO, Travelers Insurance Company

What can go Wrong With the Standard Economic Forecast? STANLEY REBER,

Chase Econometric Institute International Developments as They Affect the Domestic Outlook, ROBERT Z. ALIBER, University of Chicago

The Outlook for Money and Capital Markets, HENRY KAUFMAN, Salomon Brothers and Hutzler

The Outlook for Equity Prices, To be Announced

There will be 15 minute presentations, followed by active participation from the audience.

2:30 p.m. Hilton O. Henry Suite **AFEE**  Social Control, Consumer Sovereignty and the Externality Problem

Chairman: COLSTON E. WARNE, Amherst College and Consumers Union Are Institutions of Government Responsive to and Appropriate for Consumer Protection? MARK J. GREEN, Nader Corporate Accountability Research Group

Corporate Giantism Degredation of the Plane of Competition, and Countervailance, SAMUEL M. LOESCHER, Indiana University

Government Control of Externalities, or The Prey Eats the Predator, RALPH C. d'ARGE, University of California, Riverside and JAMES WILEN, University of British Columbia

**Discussion:** ROYALL BRANDIS, University of Illinois at Urbana-Champaign; HAROLD WOLOZIN, University of Massachusetts

2:30 p.m. Hilton Clifton Fadiman Room AIB

#### International Finance

Chairman: ARTHUR STONEHILL, Oregon State University

An International Comparison of Corporate Financial Goals, THEO BEEK-HUISEN and LEE REMMERS, INSEAD, ARTHUR STONEHILL, Oregon State

University; NORMAN TOY, Columbia University and RICHARD WRIGHT, Mc-Gill University

Perceptual Mapping of the Determinants of Corporate Financial Structure: An International Analysis, DOUGLAS EGAN and ARTHUR STONEHILL, Oregon State University and NORMAN TOY, Columbia University

Research Needs in International Finance: Final Results of a Delphi Approach, ARTHUR STONEHILL, Oregon State University

2:30 p.m. Hilton Franklin P. Adams Suite **AREUEA** 

#### Potpourri

Chairman: ALAN WINGER, University of Florida

Impact of Securities Regulation and Financial Responsibilities on Real Estate Investment, STEPHAN ROULAC, University of California, Berkeley

Collective Goods, Taxation and Urban Residential Land Use, COLIN WRIGHT, 'Claremont Graduate School

Some Alternative Procedures for Appraising Under Uncertainty, JOHN T. EMERY and ALLEN A. ABRAHAMSON, University of Arizona

Discussion: To be Announced

2:30 p.m. Hilton Don Marquis Suite ASE

#### Moral Issues in Collective Action

Chairman: STEPHEN T. WORLAND, University of Notre Dame

Information and Collective Action, MANCUR OLSON, University of Maryland

The Social Values of Economic Organization, JOSEPH W. McGUIRE, University of California

**Discussion:** JAMES CLARK, Villanova University; KENDALL P. COCHRAN,

North Texas State University

2:30 p.m. Hilton Clinton Suite FS

#### **Demand for High Powered Money**

Chairman: DON E. ROPER, International Finance Division, Federal Reserve Board

The Transactions Demand For Money In A Three Asset Economy, PRESTON J. MILLER, Federal Reserve Bank, Minneapolis

Flexibility And The Demand For Money, STEVEN GOLDMAN, University of California, Berkeley

The Explanation of Excess Reserves In The 1930's: A Cross Section Study, THOMAS MAYER, University of California, Davis

**Discussion:** ROBERT BARRO, University of Chicago; STEVEN A. ROSS, University of Pennsylvania; ARTHUR ROLNICK, Federal Reserve Bank of Minneapolis

2:30 p.m. Hilton Madison Suite ES

# Wage Determination in the Public Sector

Chairman: MELVIN REDER, City University of New York and National Bureau of Economic Research

A Dynamic Bargaining Model, BEN-JAMIN BENTAL and YOCHANON CO-MAY, Israel Institute of Technology

A Model of Public Sector Wage Determination, RONALD EHRENBERG, University of Massachusetts and GERALD GOLDSTEIN, Northwestern University

Wage Determination for Public School Teachers, CHARLOTTE STIGLITZ, Yale University

**Discussion:** RICHARD D. PORTER, Board of Governors of the Federal. Reserve System; DANIEL HAMER-

MESH, Michigan State University; MICHAEL WACHTER, University of Pennsylvania

2:30 p.m. Hilton Murray Hill A ES **Empirical Studies in the Economics of Hospitals** 

**Chairman:** BERNARD FRIEDMAN, Brown University

An Evaluation of Costs and Services of a Merger of Hospitals: A First Approximation, HASKEL BENISHAY, ADRI-ANNE ASTOLFI and BRUCE NEU-MANN, Northwestern University

Analysis of Hospital Mergers, PAUL B. GINSBURG and B.T. ALLEN, Michigan State University

Hospital Cost Inflation and Physician Payment, IRVING LEVESON and ELIZ-ABETH RODGERS, New York City Health Services Administration

**Discussion:** UWE REINHARDT, Princeton University; KAREN DAVIS, Brookings Institution

2:30 p.m. Hilton Murray Hill B **ES** 

#### **Topics In Public Policy**

Chairman: HERMAN STEKLER, State University of New York, Stony Brook

Negotiated versus Competitive Offerings of Corporate Bonds, LOUIS H. EDERINGTON, Georgia State University, Atlanta

Optimal Time Paths for Multiple Policy Instruments in a Stochastic Setting, JOHN H. MAKIN and YOSHIO NIHO, University of Wisconsin, Milwaukee

Rational Expectations and the Econometric Modeling of Markets Subject to Uncertainty: A Bayesian Approach, SANFORD GROSSMAN, University of Chicago

Technical Security Analysis, Markov Processes and Random Walks: Further

Evidence and Thoughts, MARVIN M. KRISTEIN, State University of New York, Stony Brook

Stability of the Armaments Race — The N Country Case, D.L. BRITO, Ohio State University, Columbus and M.D. INTRILIGATOR, University of California, Los Angeles

2:30 p.m. Hilton Nassau A ES

#### **Portfolio Theory**

Chairman: ROBERT MERTON, Massachusetts Institute of Technology

Production Theory and the Stock Market, HAYNE E. LELAND, Stanford University

Portfolio Theory When Investment Relatives Are Lognormally Distributed, EDWIN J. ELTON, MARTIN J. GRUBER, International Institute of Management, Berlin, Germany

Implications of the Lognormality of Returns Distributions for Portfolio Theory, ROBERT A. SCHWARTZ, DAVID K. WHITCOMB, New York University

**Discussion:** JAN MOSSIN, New York University; STEPHEN ROSS, University of Pennsylvania; M. BARRY GOLD-MAN, Massachusetts Institute of Technology

2:30 p.m. Hilton Nassau B ES Aggregate Models of Housing and Regional Growth

Chairman: RONALD GRIESON, Queens College

Econometric Analysis: Regional Forecasting and Policy Analysis, NORMAN J. GLICKMAN, University of Pennsylvania, Philadelphia

An Econometric Planning Model for the State of Michigan; T.H. NAYLOR, J.W. WALL, Duke University; T. SEAKS, University North Carolina; D. MILSTEIN, Michigan State Planning, East Lansing

A Commodity Hierarchy Model of the Rental Housing Market, J.L. SWEENEY, Stanford University

A Model of the Urban Housing Market, I.R. SILVER, G.K. SARDA, Ministry of State Urban Affairs, Ottawa

Determining the Level and Distribution of Occupied Housing in U.S. SMSA's — A Simultaneous Equation Approach, W. MANKIN, J.M. CAMPBELL, University of Oklahoma, Norman

The Demand for Urban Housing, JOHN QUIGLEY, Yale University

**Discussion:** JAMES OHLS, Princeton University; M. GETZ, Vanderbilt University

2:30 p.m. Hilton Rotunda ES

#### **Bayesian Analysis**

Chairman: HARRY H. KELEJIAN, New York University

Matrix Weighted Averages and Posterior Bounds, GARY CHAMBERLAIN and EDWARD LEAMER, Harvard University

Bayesian Analysis of a Single Equation, JACQUES H. DREZE and WALTER D. FISHER, C.O.R.E. and Northwestern

Bayesian Estimation and Comparison of Gamma and Poisson Distributed Lag Models, HIROKI TSURUMI, Queen's University

Bayesian and Non-Bayesian Analysis of the Regression Model with Multivariate Student-t Error Terms, ARNOLD ZELL-NER, Chicago

**Discussion:** J. PRESS, University of Chicago; HARRY H. KELEJIAN, New York University; MARTIN GEISEL, Carnegie-Mellon University

2:30 p.m. Barbizon-Plaza Barbizon Room IRRA Public Employee Collective Bargaining in Ferment

**Chairman:** EVA ROBINS, Arbitrator, New York

Impact of Collective Bargaining on the Structure of State and Local Government, HAROLD W. DAVEY, Iowa State University

The Theory of Management Reserved Rights — Revisited, PAUL PRASOW, University of California at Los Angeles

Enhancing and Measuring the Productivity of Public Employees, RUDOLPH A. OSWALD, SEIU

The Federal Experience, WILLIAM J. USERY, JR., Federal Mediation and Conciliation Service

2:30 p.m. Barbizon-Plaza South Gallery IRRA The Role and Impact of Federal Standards in Industrial Relations

Chairman: JOHN F. BURTON, JR., University of Chicago

Pensions and Social Security, MERTON C. BERNSTEIN, Ohio State University

Workmen's Compensation and Unemployment Insurance, J. ELDRED HILL, JR., Unemployment Benefit Advisors

Safety Legislation, JACK SHEEHAN, United Steelworkers of America

National Health Insurance, Welfare, and Income Maintenance, LAURENCE H. SILBERMAN, Steptoe & Johnson

A Non-Legal Discussion of Current Labor Law Issues

2:30 p.m. Barbizon-Plaza Theatre IRRA

Chairman: EDWARD B. MILLER, National Labor Relations Board

Consequences of NLRB Decisions upon Bargaining, Unions, Employers and Public, KENNETH C. McGUINESS, Attorney, Washington, D.C.

Consequences of Recent Court Decisions upon Bargaining, Unions, Employers and Public, SHELDON M. CHARONE, Carmell & Charone

The Scope of Good Faith Bargaining

and Adequacy of Remedies, ELLIOT BREDHOFF, Bredhoff, Barr, Gottesman, Cohen & Peer

The Future of the NLRB, BERNARD L. SAMOFF, National Labor Relations Board

2:30 p.m. City Squire Motor Inn State Suite SGF National Planning for Outdoor Recreation: The Economic Considerations

**Chairman:** WILLIAM H. HONORE, U.S. Department of the Interior

Outdoor Recreation: A National Viewpoint, DR. ROBERT L. ADAMS and ROBERT LEWIS, U.S. Department of the Interior

Economic Aspects in Planning Outdoor Recreation Developments, DR. GLENN GILLESPIE, University of Missouri

A Conceptual Model of Recreation Behavior of Individuals, and some Empirical Results, DR. LEWIS MANDELL, University of Maine and ELIZABETH GARDINER, University of Michigan

Economics of Integrating Recreation Into Multiple-Use Forest Planning, DR. FRED KAISER and DR. CLARK ROW, U.S. Forest Service

2:30 p.m. Hilton Red Smith Suite TPUG

The Dynamics of the Energy Situation

Chairman: L.L. WATERS, Indiana University

Supply and Demand for Energy: Largely Domestic, WILLIAM IULO, Washington State University

Supply and Demand for Energy: Largely International, MORRIS ADEL-MAN, Massachusetts Institute of Technology

Adaption of the Motor Carrier Industry to Present and Prospective Supplies, RAY ALDERSON, Yellow Freight System

Discussion: D.L. PADEN, IU Inter-

national

3:00 p.m. Hilton Mercury Ballroom AEA

The Great Society Versus the New Federalism: An Economic Perspective

Chairman: PAUL SARBANES, U.S. Congress

Sorting Out the Arguments: An Economist's Criteria, CHARLES L. SCHULTZE. The Brookings Institution

Cash Versus In-Kind Transfers: Is Economics Myopic About the Tradeoff? LESTER THUROW, Massachusetts Institute of Technology

**Discussion:** KENNETH J. ARROW, Harvard University; JACK HIRSHLEIFER, University of California, Los Angeles; Others to be Announced

4:00 p.m. Americana Georgian Ballroom A ASA, ENAR, WNAR, IMS General Methodology Lecture-II

Chairman: WILLIAM KRUSKAL, University of Chicago

Ideological Bias, Statistical Models, and Public Policy, HENRY M. LEVIN, Stanford University

4:00 p.m. Hilton Gibson Suite JCEE **Teaching Beginning Courses in Economics** 

Chairman: ARTHUR L. WELSH, Joint Council on Economic Education

Experimental Course Development at Indiana University, PHILLIP SAUN-DERS, Indiana University

Experimental Course Development at Oklahoma State University, RICHARD LEFTWICH and ANSEL SHARP, Oklahoma State University

Teaching Intermediate Micro Economics Using the Personalized System of Instruction, THOMAS H. TIETENBERG, Williams College

**Discussion:** W. LEE HANSEN, University of Wisconsin, Madison; LEWIS E. WAGNER, Indiana University, Indianapolis

4:30 p.m. Hilton Franklin P. Adams Suite ARFUFA

**Directors Meeting** 

4:30 p.m. Hilton Don Marquis Suite ASE

Cash Bar [Fee Event]

4:30 p.m. Hilton Beekman Room URPE Marxian Theory and Economic Development

The Rate of Surplus Value in Puerto Rico, EDWARD WOLFF, Yale University

Land, Labor and Property Relations: A Critique of the Neo-Classical Theory of Technical Change in Agriculture, KEN-NETH ROBERTS, University of Wisconsin

A Marxian Theory of Underdevelopment, PETER F. BELL, Purchase College

4:30 p.m. Hilton Regent Room URPE The Non-Academic Uses of Economics

Economic Policy Studies in the New York City Health Services Administration — How and Why They Fail, GEL STEVENSON and LYNDA BRODSKY, both formerly of the New York City Health Services Administration

Blue Collar Organizing — Can Economics Help? HENRY UNGER, International Brotherhood of Teamsters

Regional Economics for Community Organizing in Appalachia, ROGER LESSER, People's Appalachian Research Collective

	<b>Discussion:</b> JOHN JONES, Model Cities Program, Detroit
4:30 p.m. to 6:30 p.m. Hilton West Ballroom Foyer	Columbia University Department of Economics Cocktail Party [Fee Event]
4:50 p.m. Hilton	Walras-Bowley Lecture
Murray Hill Suite ES	Chairman: LAWRENCE R. KLEIN, University of Pennsylvania
	Marx in the Light of Modern Economic Theory, MICHIO MORISHIMA, London School of Economics
5:00 p.m. Barbizon-Plaza Theatre IRRA	Membership Meeting
5:00 p.m. Hilton Robert Benchley Suite	Journal of Economic Literature Cocktail Hour [By Invitation] [Fee Event]
5:00 p.m. Hilton Sutton South	University of Michigan Cocktail Party [Fee Event]
5:00 p.m. to 7:00 p.m. Hilton Madison Suite	Princeton University Cocktail Party [Cash Bar; Fee Event]
5:00 p.m. to 6:30 p.m. Hilton Dorothy Parker and Henry James Suites	Indiana School of Business Reception [Fee Event]
5:00 p.m. to 7:00 p.m. Hilton Gramercy A	Yale University Economics Department Cocktail Party for All Current and Former Students and Faculty [Fee Event]
5:15 p.m. Americana Malmaison 8 <b>ASA</b>	Subsection on Teaching of Statistics in the Health Sciences — Meeting [All Subsection Members Invited]
AGA	Chairman: RICHARD B. McHUGH, University of Minnesota

5:15 p.m. Americana Malmaison 6 ENAR	Annual Business Meeting
	Chairman: JAMES E. GRIZZLE, University of North Carolina, Regional President
5:15 p.m. Americana La Loire 2 <b>ASA</b>	Statistical Computing Section — Meeting [All Section Members Invited]
	Chairman: JOHN M. CHAMBERS, Bell Laboratories
5:15 p.m. Americana Provence Suite <b>WNAR</b>	Annual Business Meeting
	Chairman: JAMES S. WILLIAMS, Colorado State University
5:30 p.m. Americana Monte Carlo 42 I <b>MS</b>	Business Meeting
	Chairman: LUCIEN LeCAM, University of Montreal
5:30 p.m. Hilton Clifton Fadiman Suite	Amherst College Cocktail Party for Present and Former Faculty, Alumni and Students [Fee Event]
5:30 p.m. Hilton Gramercy B	University of Minnesota Cocktail Party [Fee Event]
5:30 p.m. Hilton Le Petit Trianon	University of Pennsylvania Cocktail Party [Fee Event]
5:30 p.m. to 7:00 p.m. Hilton Lorenz Hart Suite	University of Wisconsin Cocktail Party [Fee Event]
5:30 p.m. to 7:30 p.m. Hilton East Ballroom Foyer HERO	Health Economics Research Organization Social Hour [By Invitation]
5:30 p.m. to 7:30 p.m. Hilton Ring Lardner Suite	Northwestern University Cocktail Party [By Invitation] [Fee Event]

6:00 p.m. Hilton Red Smith Suite AEA Board of Editors, American Economic Review Meeting Dinner [Fee Event]

6:00 p.m. Hilton Walcott Gibbs Suite ANAES Association for North American Economic Studies, Business Meeting and Cocktail Party [Fee Event]

6:00 p.m. Barbizon-Plaza Barbizon Room Cocktail Party [For IRRA Registrants Only]

6:00 p.m. to 7:30 p.m. Hilton Regent Room Society of Government Economists Cocktail Party [Cash Bar; Fee Event]

6:00 p.m. to 7:30 p.m. Hilton Ogden Nash Suite University of Iowa Social Hour for Alumni, Graduate Students, Faculty and Friends [Fee Event]

6:30 p.m. to 8:00 p.m. Hilton Rotunda CBE The Caucus of Black Economists Cocktail Party [Fee Event]

7:30 p.m. Hilton Nassau A URPE The Transition to Socialism: Case Studies

**Chairman:** STEVE STAMOS, Central State University

Worker Motivation in the Transition to Socialism in China, CARL RISKIN, Columbia University

Agriculture and the Transition to Socialism in Tanzania, JOHN SAUL, Toronto Committee for the Liberation of Portugal's African Colonies

Power and Participation in Cuba, ARTHUR McEWAN, Harvard University Workers and Consciousness in Chile.

Workers and Consciousness in Chile, ANDY ZIMBALIST, Harvard University

8:00 p.m. Hilton Grand Ballroom AEA Richard T. Ely Lecture

Chairman: WALTER W. HELLER, University of Minnesota

ROBERT M. SOLOW, Massachusetts Institute of Technology

8:00 p.m. to 9:30 p.m. Hilton Mercury Ballroom CBE

The Caucus of Black Economists First Annual Award Ceremony

8:30 p.m. Hilton Don Marquis Suite **ASE**  General Membership Meeting

8:30 p.m. Americana Boyal Ballroom

**Presidential Address** 

Royal Ballroom - Chairman: WILLIAM H. SHAW, E.I. du ASA Pont de Nemours & Co.

Presentation of New Fellows: IVAN P. FELLEGI, Statistics Canada

**Speaker:** CLIFFORD HILDRETH, University of Minnesota

10:00 p.m. Americana Georgian Ballroom Suite ASA, ENAR, WNAR, IMS

Informal Party [Immediately following the Presidential Address] [All persons invited]

#### December 29

# **Saturday**

7:30 a.m. Hilton Franklin P. Adams Suite **AEA**  American Economic Association Secretaries' Breakfast [By Invitation] [Fee Event]

7:30 a.m. Barbizon-Plaza Studio 2 — 5th Floor IRRA Executive Board Meeting [Breakfast] [By Invitation]

7:30 a.m. Hilton Don Marquis Suite

The Fourth Annual Wellesley Economists Breakfast [Fee Event]

8:30 a.m. Hilton Murray Hill A AEA Allocating Resources for Policy Research

Chairman: JAMES N. MORGAN, University of Michigan

How Could Survey Research Be More Useful? F. THOMAS JUSTER, University of Michigan and Institute for Social Research

How Could Experiments Be More Useful? ALICE M. RIVLIN, The Brookings Institution

**Discussion:** BARBARA R. BERG-MANN, University of Maryland; MI-CHAEL H. MOSKOW, U.S. Department of Housing and Urban Development

8:30 a.m. Hilton Gramercy A AEA

#### **International Energy Supply**

Chairman: SAM H. SCHURR, Resources for the Future

Crude Oil Availability and Price Outside the United States, M.A. ADELMAN, Massachusetts Institute of Technology

The Political Economy of International Petroleum, JAMES W. McKIE, University of Texas

**Discussion:** RAYMOND F. MIKESELL, University of Oregon; THOMAS R. STAUFFER, Harvard University

8:30 a.m. Hilton Le Petit Trianon **AEA, ACES**  Economics in China: The Prospects For Scientific Interchange

Chairman: LLOYD G. REYNOLDS, Yale University

Panelists: CARLOS DIAZ ALEJANDRO, Yale University; JOHN GURLEY, Stanford University; DWIGHT PERKINS, Harvard University

8:30 a.m. Hilton Gramercy B AEA. ES Lexicographic Ordering and Its Application

Chairman: NICHOLAS GEORGESCU-

ROEGEN, Vanderbilt University

Economic Decisions with L\*\* Utility, RICHARD H. DAY and STEPHEN M. ROBINSON, University of Wisconsin

Protection Against Natural Hazards: A Lexicographic Approach, HOWARD KUNREUTHER, University of Pennsylvania

Lexicographic Choice: Pure and Applied Economic Theory, WILLIAM T. TERRELL, Wichita State University

**Discussion:** JOHN S. CHIPMAN, University of Minnesota

8:30 a.m. Hilton Regent Room AEA, AFA, ASA The Flow of Funds and Interest Rates II: Financial Analysis Through the Flow of Funds

Chairman: ALAN GREENSPAN, Townsend, Greenspan and Company

Homogenizing the Concepts of Financial Market Analysis, DIMITRI BALAT-SOS, Manufacturers Hanover Trust Company

A Flow-of-Funds Model of Interest Rate Determination: First Estimates, PAT-RIC HENDERSHOTT, Purdue University and RICHARD C. LEMMON, General Motors Corporation

State of the Statistical Art in Flow-of-Funds Accounting, STEPHEN P. TAY-LOR, Federal Reserve Board

**Discussion:** JAMES McKEON, Salomon Brothers

8:30 a.m. Hilton Henry James Suite AEA, ODE

#### **Graduate Student Paper Session**

Chairman: JOHN D. GUILFOIL, New York University

Estimation of Linear and Quadratic Expenditure Systems in the Cross Section: The Case of Colombia, HOWARD HOWE, University of Pennsylvania

The Effects of Depreciation on the Behavior of Regulated Firms, ROBERT DANSBY, New York University

The Pareto Properties of General Equilibrium with Indivisible Commodities, DAVID CONN and ARTHUR MALLOY, State University of New York at Stony Brook

Endogenous Technical Change and Barriers to Entry, RICHARD C. LEVIN, Yale University

Discussion: To be Announced

8:30 a.m. Hilton Rotunda AFA

# Capital Asset Pricing Models in an International Context

Chairman: MICHAEL ADLER, Columbia University, Graduate School of Business

The International Pricing of Risk, BRUNO H. SOLNIK, Stanford University

World, National and Industry Factors in Equity Returns, DONALD LESSARD, Dartmouth College

**Discussion:** BUCKNER M. WALLING-FORD, III, Columbia University; JAMES L. BICKSLER, Rutgers University; MARTIN J. GRUBER, International Institute of Management, Berlin

8:30 a.m. Hilton O. Henry Suite **AFEE**  New Dimensions of Social Control and Regulation: Clarance E. Ayres Memorial Session

Chairman: LOUISA GARDNER DIL-LARD, University Park, Maryland

The Health Service Industry: Realism in Social Control, ELI GINZBERG and DALE L. HIESTAND, Columbia University

Regulatory Circumvention and the Holding Company, MANLEY R. IRWIN, University of New Hampshire

Private Power and National Sovereignty
— Some Comments on the Multinational Corporation, ROBERT E. SMITH,
University of Oregon

**Discussion:** DAVID S. SCHWARTZ, Federal Power Commission; CHARLES K. WILBER, The American University

8:30 a.m. Americana F.C. Leone Suite ASA, ASQC Technometrics Management Committee — Meeting [By Invitation]

Chairman: HARRY SMITH, JR., Rensselaer Polytechnic Institute

8:30 a.m. Hilton Clinton Suite ES

#### **Small Sample Properties**

Chairman: JOSEPH B. KADANE, Carnegie-Mellon University

The Sensitivity of Small-Sample Properties of Simultaneous Equation Estimators to Various Degrees of Multicollinearity and Parameter Sets, SCOTT E. ATKINSON, Environmental Protectection Agency

Small-Sample Tests for Heteroscedasticity, CHARLES BEACH, Queen's University

An Evaluation of Asymptotic Approximations in Simultaneous Equations Estimation, MARTIN S. GEISEL and JOHN G. RAMAGE, Carnegie-Mellon University

A Monte Carlo Study of Some Small Sample Properties of Estimators of the Linear Probability Function, JAMES L. KENKEL, University of Pittsburgh

The Finite Sample Properties of Optimal Instruments and the Use of Principal Components, ROGER W. KLEIN, Carnegie-Mellon University

**Discussion:** JOHN G. CRAGG, University of British Columbia; ROBERTO S. MARIANO, University of Pennsylvania

8:30 a.m. Hilton Gibson Suite

# Analytical and Quantitative Models in Health Economics

Chairman: JOHN RAFFERTY, U.S. Department of Health, Education and Welfare

The Specification and Estimation of a Hospital Production Function, FRED HELLINGER, U.S. Department of Health, Education and Welfare

A Microsimulation Model of the Health Care System in the U.S., D. YETT, L. DRABEK, M. INTRILIGATOR and L. KIMBELL, University of Southern California, Los Angeles

Efficiency of Prepaid Group Practice: Allocation of Physician Work Effort Between Office and Hospital, F.H. MURPHY and M.A. SATTERTHWAITE, Northwestern University

An Analytical Model of a Teaching Hospital, R. DUSANSKY and P.J. KALMAN, State University of New York, Stony Brook

Discussion: UWE REINHARDT, Princeton University; RICHARD ROSETT, University of Rochester; EGON NEUBERGER, State University of New York, Stony Brook; MORTON I. KAMIEN, Northwestern University

8:30 a.m. Hilton Madison Suite ES

# International Capital Movements and Monetary Policy

**Chairman:** WILLIAM BRANSON, Princeton University

A Two Country Model of Financial Capital Movements with Emphasis on the Effects of Central Bank Policy, L. GIRTON, D. HENDERSON, Federal Reserve Board

International Short-Term Capital Movements: A Micro Approach to the U.S. —

U.K. Experience, KURT HAUSAFUS, Oberlin College

The Integration of National and International Money Markets: A Study of Interest Rate Linkages, R. MARSTON and R. HERRING, University of Pennsylvania

**Discussion:** RUDIGER DORNBUSCH, University of Rochester; CHARLES FREEDMAN, University of Minnesota, PENTI KHOURI, International Monetary Fund

#### 8:30 a.m. Hilton Murray Hill B **ES**

#### **Topics in Economic Theory II**

**Chairman:** HAYNE LELAND, Stanford University

Expectations, Market Structure and Sequential Bid Pricing, E.D. ATTANASI, U.S. Geological Survey and S.R. JOHNSON, University of Missouri, Columbia

Informational Aspects of Planning With Quantity Targets, JOHN P. BONIN, Wesleyan University

A Dynamic Model of a Proper Team, DAVID CONN, State University of New York, Stony Brook

Theory of the Firm Under Uncertainty, SANDWIP K. DAS and AVINASH SETH, Southern Methodist University

The Optimal Investment Policy of a Regulated Public Utility, BENTTI O. HOISKA, Union College, Schenectady

On Optimal Space-Time Development Models, WALTER ISARD, P. LIOSSA-TOS, University of Pennsylvania

Information and Shadow Prices for the Constrained Concave Team Problem, JAMES JORDAN, Northwestern University

Incentive Properties of the Competitive Mechanism, ANDREW POSTLEWAITE

and DONALD J. ROBERTS, Northwestern University

8:30 a.m. Hilton Nassau A ES

#### **Topics in Industrial Organization**

**Chairman:** CHARLES H. BERRY, Princeton University

The Desirability of Merger in Complementary Monopoly, COLIN A. GANNON, University of Pennsylvania

The Black Lung Benefits Program: An Analysis of Its Likely Impact on Prices, Output and Employment in the Coal Industry, MORRIS GOLDSTEIN and ROBERT S. SMITH, U.S. Department of Labor

Dynamic Limit Price-Advertisement and Potential Entry, MANAK C. GUPTA, Temple University

An Econometric Model of Domestic Air Travel between N.Y.C. and Other Cities, VINCENT SU and LUCY HUFFMAN, Baruch College, City University of New York

An Investigation of the Economic Determinants of Size of Public Research Universities, SUSAN S. WESTIN, Northwestern University

8:30 a.m. Hilton Nassau B ES

# Macroeconomics and General Equilibrium

Chairman: ROBERT A. MEYER, School of Business, University of California, Berkeley

A Foreign Exchange Liquidity Trap for Mexico? MARK L. LADENSON, Michigan State University, East Lansing

General Equilibrium of Financial Markets, VLADIMIR SIMUNEK and HENRY WOUDENBERG, Kent State University

The Stability of Macro Models, GEORGE HORWICH and SHENG CHENG HU, Purdue University

The Endogenous Supply of Money and the National Debt, JOHN DRABICKI and A. TAKAYAMA, Purdue University

Monetary Policy, Monetarism and Short Run Macroeconomic Adjustment, PAUL D. McNELIS, Johns Hopkins University

Composition of Technical Change in U.S. Industries, 1958-66, MARVIN SHULMAN and ROMESH DIWAN, Rensselaer Polytechnic Institute

8:30 a.m. Hilton Beekman Room HERO

# Contributed Papers on the Economics of Health

**Chairman:** KENNETH ARROW, Harvard University

The Economics of Medical Malpractice, SIMON ROTTENBERG, University of Massachusetts

Medicine and Social Change: Analysis of Attitudes and Comparative Expected Earnings, DIANE CHRZANOWSKI ROBERTS, U.S. Department of Transportation

An Application of Two-Part Tariff Models to the Market for Nurses, MICHAEL SATTINGER, State University of New York, Stony Brook

The Role of the Physician in the Demand for Medical Services, JOSEPH C. MORREALE, Western Michigan University

The Outputs of the Hospital Industry: A Proposal for their Identification and Measurement, HERMAN P. BONES and BERND ZECHEL, Statistics, Canada

**Discussion:** JAMES JEFFERS, University of Iowa

8:30 a.m. Hilton Damon Runyon Suite URPE Open Session for Unscheduled Panels or Discussions

8:30 a.m. to 10:20 a.m. Americana Biarritz 44 ASA

# Contributed Papers — Training-I: Courses for Non-Statisticans

Chairman: ANITA K. BAHN, Medical College of Pennsylvania

- (8:35) Designing a Self-Instructional Course in Statistics, R.C. DUNCAN, J.R. GRANT and M.C. MILLER, III, Medical University of South Carolina
- (8:50) Experiences with a Personalized System of Instruction (PSI) in Biostatistics, M.C. MILLER, III, J.R. GRANT and R.C. DUNCAN, Medical University of South Carolina
- (9:05) What We Should Teach Engineers But Sometimes Don't, GER-ALD J. HAHN, General Electric Co.
- (9:20) Biostatistics for Medical Students at West Virginia University, JOHN M. KRALL and WALTER A. MORGAN, West Virginia University
- (9:35) Statistical Science Training for Government Employees, BENJAMIN J. MANDEL, Consultant
- (9:50) A Survey of Statistical Training Offered for Undergraduate Sociology Majors in Accredited Colleges and Universities in the United States, EUI-HANG SHIN, University of South Carolina

8:30 a.m. to 10:20 a.m. Americana Biarritz 45 ASA, ENAR, WNAR

#### Contributed Papers — Biometrics-III

Chairman: THOMAS J. BOARDMAN, Colorado State University

- (8:35) A More General Essentially Linear Model, C.P. COX, Iowa State University
- (8:50) A Tag Recapture Model Allowing for Unequal Survival and Catchability, K.H. POLLOCK, Cornell University
- (9:05) Models of Physiological Response to Random Environments: Ap-

plications to Environmental Health Standards, A.H. MARCUS, University of Maryland

(9:20) A Probability of Damage Model for Self Repairing Biological Organisms Continuously Exposed to Ionizing Radiation, T.W. THORSLUND, Nat. Water Quality Lab EPA

(9:35) A Stochastic Model in Population Genetics, E.M. NOURI, State University of New York, Oneonta

(9:50) A Bayesian Approach to the Design and Analysis of Experiments for Regression Models, M.C. CHEW and S.J. MONACO, Rensselaer Polytechnic Institute

(10:05) Two Models for the Two Period Change-Over Design with Applications to Clinical Trials, A.C. FISHER, Sandoz-Wander Inc.

#### 8:30 a.m. to 10:20 a.m. Americana Malmaison 6 and 7 ASA

# Contributed Papers — Business and Economic Statistics-VII

Chairman: DANIEL S. AHEARN, Wellington Management Co.

(8:35) Estimation of Permanent Household Income Using the 1970 Census Users' File, RAYMOND J. STRUYK, Urban Institute

(8:50) Statistical Aspects of the 1972 Florida Price Level Index Survey, DOUGLAS A. ZAHN, Florida State University

(9:05) Tax Policy and Investment Behavior of Ohio's Electric Utilities, HENRY G. RENNIE, University of Toledo

(9:20) A New Look at Inequality in the United States, HERMAN P. MILLER, Economic Consultant

(9:35) Local Government Finance and Metropolitan Growth, BEN-CHIEH LIU,

Midwest Research Institute

(9:50) Effects of Medicare on Hospital Use: A Disease-Specific Statistical Analysis, MAW LIN LEE and RICHARD L. WALLACE, University of Missouri

(10:05) Determinants of State Per Capita Income Differentials, FENG-YAO LEE and STEPHEN S. IRVINE, University of Tennessee

8:30 a.m. to 10:20 a.m. Americana Princess Ballroom ASA

# **Creative Plotting [Emphasis on Printer Plotting]**

Chairman: BRIAN L. JOINER, Pennsylvania State University

Efficient Plotting Techniques for Univariate and Higher Dimensional Data, DAVID ANDREWS, University of Toronto

Multivariate Histograms and Block Diagrams, JOHN HARTIGAN, Yale University

Computer Defined Stem and Leaf Displays, DAVID HOGBEN and SALLY PEAVY, National Bureau of Standards and WESLEY L. NICHOLSON, Battelle-Northwest

**Discussion:** MARTIN B. WILK, American Telephone and Telegraph Company

8:30 a.m. to 10:20 a.m. Americana Regency Foyer ASA

#### **Social Accounting**

Chairman: WILLIAM M. MASON, University of Michigan

Social Theory and the Development of Social Accounts, ROBERT W. HODGE, University of California, Los Angeles

Toward the Development of Measures of Community Health as Indicators of Social Change, LEO G. REEDER, University of California, Los Angeles

Microanalytic Simulation and the Development of Social Accounts, GUY H.

ORCUTT, Yale University and STEVEN CALDWELL, Urban Institute

**Discussion:** DAVID L. FEATHERMAN, University of Wisconsin

8:30 a.m. to 10:20 a.m. Americana La Loire 2 and 3 ASA, ENAR, WNAR

#### Panel on Data Files and Clinical Trials

Chairman: MARVIN ZELEN, State University of New York, Buffalo

Clinical Trials in Heart Disease, RON-ALD W. HELMS, University of North Carolina

Clinical Trials in Cardiovascular Disease, PAUL CANNER, University of Maryland

Clinical Trials in Cancer, STUART J. POCOCK, State University of New York, Buffalo

8:30 a.m. to 10:20 a.m. Americana Regency Ballroom ASA, ENAR, WNAR, IMS

# Variable Selection Procedures in Regression

**Chairman:** J.M. DAVENPORT, Texas Technical University

Some Additional Indices for Selecting Variables in Regression, RICHARD GUNST, Southern Methodist University and ROBERT MASON, Medical University of South Carolina

The Use of Individual Effects and Residuals in Fitting Equations to Data, F.S. WOOD, Standard Oil Co.

**Discussion:** NATHAN MANTEL, National Cancer Institute

8:30 a.m. to 10:20 a.m. Americana Monte Carlo Suite

#### **Multivariate Analysis**

Chairman: To be Announced

On Estimation of Linear Functional Relations, T.W. ANDERSON, Stanford University

Title to be Announced, ROBB MUIR-HEAD, Yale University

Title to be Announced, RICARDO FRISHTAK, Cornell University

8:30 a.m. to Noon Barbizon-Plaza Library Registration

8:30 a.m. to 5:00 p.m. Barbizon-Plaza Library IRRA

**Headquarters** 

9:00 a.m. Barbizon-Plaza South Gallery IRRA **Contributed Papers** 

**Chairman:** NATHANIEL GOLDFINGER, AFL-CIO

Police Labor Relations and Multilateralism, PETER FEUILLE, University of Oregon

Public Sector Bargaining: An Investigation of Possible Environmental Influences, DAVID A. HUETTNER and THOMAS L. WATKINS, Wayne State University

Determinants of Differences in Union Membership Among the States, WIL-LIAM J. MOORE and ROBERT J. NEWMAN, University of Houston

Determinants of Completion in Apprenticeship Programs, THOMAS A. BAR-OCCI, Cornell University

**Discussion:** JOSEPH P. GOLDBERG, Bureau of Labor Statistics

9:00 a.m. Barbizon-Plaza Theatre IRRA New Vistas in Collective Bargaining [Plenary Session]

**Chairman:** DAVID L. COLE, National Commission for Industrial Peace

Summary and Evaluation of Current Experiments in Collective Bargaining, JOHN J. O'CONNELL, Bethlehem Steel Corporation

Review of the Structure and Restructur-

ing of Collective Bargaining, HERBERT R. NORTHRUP, Wharton School

Trends in International and Multinational Collective Bargaining and Respective Strategies, LEE C. SHAW, Seyfarth, Shaw, Fairweather & Geraldson

Role of the National Commission on Industrial Peace, DAVID L. COLE, National Commission for Industrial Peace

10:30 a.m. Hilton Nassau A AAEA. ES

#### **Factor Productivity in Agriculture**

Chairman: T.D. WALLACE, North Carolina State University

A Cost Function Approach to the Measurement of Factor Demand Elasticities and Elasticities of Substitution, HANS BINSWANGER, Argicultural and Development Council

The Significance of the Green Revolution in Recent Development Experience, ROBERT EVENSON, Yale University

**Discussion:** JERE BEHRMAN, University of Pennsylvania; E.J.R. BOOTH, The University of Connecticut

10:30 a.m. Hilton Sutton North AEA **Lessons From and For the Current Economic Expansion** 

Chairman: ARTHUR M. OKUN, The Brookings Institution

Panelists: OTTO ECKSTEIN, Harvard University; WILLIAM J. FELLNER, American Enterprise Institute; PAUL W. McCRACKEN, University of Michigan; PAUL A. SAMUELSON, Massachusetts Institute of Technology

10:30 a.m. Hilton Mercury Ballroom AEA, ASA Women at Work: At Home and in the Market

Chairman: MARINA v. N. WHITMAN, University of Pittsburgh

The Effects of Government Taxes and Expenditures on Female Labor, MI-CHAEL J. BOSKIN, Stanford University

Production Within the Household, ARLEEN LEIBOWITZ, National Bureau of Economic Research and Brown University

Short-Run and Long-Run Prospects for Female Earnings, VICTOR R. FUCHS, City University of New York and National Bureau of Economic Research

**Discussion:** MARY L. EYSENBACH, University of Utah; MICHAEL PIORE, Massachusetts Institute of Technology; ISABEL V. SAWHILL, Goucher College

10:30 a.m. Hilton Regent Room AEA, ASGE The Fight Against Poverty: Conflicting Objectives and Alternative Strategies For Income Maintenance

Chairman: ANDREW F. BRIMMER, Federal Reserve Board

Conflicting Objectives in Income Maintenance Programs: Is There an Easy Way Out? ALAIR TOWNSEND and ROBERT LERMAN, Joint Economic Committee, U.S. Congress

Earnings Capacity and the Anti-Poverty Effectiveness of Income Maintenance Alternatives, ROBERT H. !AVEMAN and IRWIN GARFINKEL, University of Wisconsin

Discussion: WORTH BATEMAN, Urban Institute; J.R. DOMINGUEZ, University of California, Los Angeles; PHYLLIS WALLACE, Massachusetts Institute of Technology; VINCENTE T. XIMENES, former Commissioner, Equal Employment Opportunity Commission

10:30 a.m. Hilton Le Petit Trianon **AEA. ES**  The Theory of Policy

Chairman: BENT HANSEN, University of California, Berkeley

On the Theory of Optimal Taxation with Costly Administration, WALTER P. HELLER and KARL SHELL, University of Pennsylvania

On Finding a Good Stabilization Policy: Models and Methods, THOMAS MUENCH and NEIL WALLACE, University of Minnesota and the Federal Reserve Bank of Minneapolis

**Discussion:** ANTHONY B. ATKINSON, University of Essex; EDMUND S. PHELPS, Columbia University

10:30 a.m. Hilton Beekman Room AEA, AFA, ASA International Trade and Finance II: U.S. Competitiveness in World Markets

Chairman: ROBERT G. HAWKINS, New York University

Estimating Demand and Supply Parameters for Imports without Import Prices: Methodology and Empirical Results, J. DAVID RICHARDSON, University of Wisconsin

The Effects of Changes in Economic Activity on the U.S. Trade Balance in the Monitoring System for the Balance-of-Payments Process, HELEN B. JUNZ and BARBARA R. LOWREY, Federal Reserve Board

Foreign Penetration of the Automobile Market in the United States, RICHARD A. LA BARGE, Universidad Autonoma, Monterey, Mexico

**Discussion:** JAMES L. BURTLE, W.R. Grace & Company

10:30 a.m. Hilton Gramercy B AFA **Individual Investors and Mutual Funds** 

Chairman: JACK L. TREYNOR, Financial Analysts Journal

The Individual Investor: A Profile From Sample Data, RONALD C. LEASE, University of Utah, WILBUR G. LEW-ELLEN and GARY G. SCHLARBAUM,

**Purdue University** 

Determinants of Mutual Fund Sales and Redemptions, DONALD FARRAR, University of California, Los Angeles and GARY BERGSTROM, Putnam Management Company

From Theory to a New Financial Product, FISCHER BLACK, University of Chicago and MYRON SCHOLES, Massachusetts Institute of Technology

**Discussion:** DR. JOHN C. BOGLE, Wellington Management Company; JOHN G. McDONALD, Stanford University

10:30 a.m. Hilton Henry James Suite ANAES

#### Issues in U.S.-Mexican Relations

Chairman: THOMAS M. JOHNSON, Eastern Michigan University

Problems of Integration of Developed with Less Developed Economies: The Case of the United States and Mexico, PATRICK M. BOARMAN, Center for International Business

The Economic Development of the U.S.-Mexican Border Zone in Historical Perspective, RAUL FERNANDEZ, University of California, Irvine

**Discussion:** HARRY G. JOHNSON, University of Chicago; FRANK FALERO, JR., California State College, Bakersfield

10:30 a.m. Hilton Franklin P. Adams Suite **AREUEA** 

#### New Frontiers in Appraisal Theory

Chairman: BYRL N. BOYCE, University of Connecticut

Panel Discussion: JAMES E. GIBBONS Sackman-Gilliland Corp.; DR. RICH-ARD U. RATCLIFF, Real Estate Counselor and Appraiser, Santa Cruz, California; JOHN ROBERT WHITE, James D. Landauer Assoc. Inc.; DR. PAUL F. WENDT, University of Georgia

10:30 a.m. Hilton Don Marquis Suite **ASE** 

#### **Human Values and the Economy**

Chairman: JAMES E. KENNEY, Le-Moyne College

The Moral Dimensions of Gain Maximization, Technology and Affluence, DONALD R. CAMPION, S.J., America Toward Human Economy, THOMAS O. NITSCH. Creighton University

Free Market, Economic Power, and Human Values, IRVING J. GOFFMAN, University of Florida

10:30 a.m. Hilton Clinton Suite ES

#### **Optimal Macroeconomic Control**

Chairman: ARTHUR ROLNICK, Federal Reserve Bank of Minneapolis

Time Optimal Control of Inflation, DAVID C. CHENG and SAN WAN, Georgia Institute of Technology

Approximations to Optimal Control Solutions, ROGER CRAINE, Federal Reserve Board

A Stochastic Cobweb Model for the Money Supply Process, TAEHO KIM, Thunderbird Graduate School of International Management, Arizona

**Discussion:** E. PHILIP HOWREY, University of Michigan; NANCY GORDON, Carnegie-Mellon University; PRESTON MILLER, Federal Reserve Bank of Minneapolis

10:30 a.m. Hilton Gibson Suite ES

#### **Capital and Production Theory**

Chairman: EDWIN BURMEISTER, University of Pennsylvania

The Ricardian Economics of Production, Distribution, Value and Accumulation, EMMANUEL DRANDAKIS, Center of Planning and Economic Research, Athens, Greece

Perverse Behavior of Production Func-

tions and Complementality of Inputs, TATSUO HATTA, Ohio State University

The Insensitivity of the Global Turnpike Result, JOSE ALEXANDRE SCHEINK-MAN, University of Chicago

The Choice of Numeraire and the Reswitching of Techniques, GREGORY J.L. YI, West Virginia University

**Discussion:** WILFRED J. ETHIER, University of Pennsylvania; E. ROY WEINTRAUB, Duke University, MUKUL MAJUMDAR, Cornell University; DAVID A. STARRETT, Stanford University

10:30 a.m. Hilton Madison Suite ES

#### Simulations of the Labor Market

**Chairman:** STEVE SALOP, Federal Reserve Board

Simulating Labor Market Equilibrium when Talents and Job Needs are Heterogeneous, DONALD A. NICHOLS, University of Wisconsin

Modeling a Segmented Labor Market, CHARLES HOLT, Urban Institute

**Discussion:** DAVID CASS, Carnegie-Mellon University; ROBERT E. HALL, Massachusetts Institute of Technology; ROBERT LUCAS, Carnegie-Mellon University; CHRISTOPHER SIMS, University of Minnesota

10:30 a.m. Hilton Murray Hill A ES **Duality and Growth Theory and Comparative Statics** 

Chairman: JOHN CHIPMAN, University of Minnesota

Duality in Optimal Growth: An Exposition, ELLI APPELBAUM and KEIZO NAGATANI, University of British Columbia

Reciprocity Theorems for a Von Neumann Economy, S.N. AFRIAT, University of Waterloo

The Theory of the Firm in "Long-Run" Equilibrium, EUGENE SILBERBERG, University of Washington

Frank Knights Theorem in Linear Programming Revisited, W.E. DIEWERT and A.D. WOODLAND, University of British Columbia

**Discussion:** DAVID CASS, Carnegie-Mellon University; LAWRENCE LAU, Stanford University

10:30 a.m. Hilton Murray Hill B ES

#### **Environmental Economics**

Chairman: EDWIN S. MILLS, Princeton University

Democratic Exploitation of a Replenishable Environment, PHILIP A. NEHER, University of British Columbia

Pollution-Abatement Charges: Partial-Equilibrium Bias in the Determination of Optimal Rates, BARBARA HENNE-BERRY, P. KOCHANOWSKI and J.G. WITTE, Indiana University

Enforcement Economics in Air Pollution Control, P.B. DOWNING, University of California, Riverside and W.D. WATSON, Environmental Protection Agency

Learning and Environmental Tradeoffs in Natural Resource Industry Utilization and Investment, GORDON RAUSSER, University of Chicago

Income Distributional Effects of Environmental Policy: A General Equilibrium Approach, F. REED JOHNSON, State University of New York, Stony Brook

**Discussion:** NORMAN GLICKMAN, University of Pennsylvania; WILLIAM C. WHEATON, Massachusetts Institute of Technology

10:30 a.m. Hilton Nassau B ES The Behavior of the Regulated Firm

Chairman: PAUL L. JOSKOW, Massachusetts Institute of Technology

Reversals in Peak and Offpeak Prices, ELIZABETH E. BAILEY, Bell Laboratories; LAWRENCE J. WHITE, Princeton University

Rate-of-Return Regulation of a Monopoly Firm with Random Demand, S. PERRAKIS, University of Ottawa

Behavior of the Vertically Integrated Firm Under Regulatory Constraint, DAVID DAYAN, American Telephone and Telegraph Company

An Empirical Analysis of Rate of Return Regulation: The Averch-Johnson Effect, W.J. BOYES, Claremont Graduate School

**Discussion:** LEONARD WAVERMAN, University of Toronto; JOHN P. GOULD JR., University of Chicago

10:30 a.m. Hilton West Ballroom Foyer **HERO** 

**Economic Analyses of Private Medical Practice** 

**Chairman:** RICHARD RUGGLES, Yale University

The Definition of Homogeneous Medical Outputs and the Estimation of Ambulatory Care Technologies: An Hierarchical Clustering Analysis, FREDRICK L. GOLLADAY, MEAD OVER and KENNETH R. SMITH, University of Wisconsin

Physician Productivity and Economies of Scale, LARRY J. KIMBELL, University of Southern California and JOHN H. LORANT, American Medical Association

The Structure and Economic Performance of Ambulatory Care Systems, GERALD ROSENTHAL, Brandeis University

Economies of Scale and the Pricing of Physician Services, BARBARA KEHRER, American Medical Association and JAMES C. KNOWLES, University of Southern California

**Discussion:** UWE REINHARDT, Princeton University; DAVID CHU, Rand Corporation

10:30 a.m. City Squire Motor Inn Colonial Room SGE Composition of the Public Sector in 1980

Chairman: PETER WAGNER, Federal Reserve Board

Expenditures at the Federal, State and Local Level, JOSEPH WAKEFIELD and DAVID LEVIN, U.S. Department of Commerce

Taxes and Stabilization Policies, WIL-LIAM BEEMAN, FRANK RUSSEK and DAVID WYSS, Federal Reserve Board

Manpower in the Government Sector, JAMES B. ROBINSON, Office of Management and Budget

10:30 a.m. Hilton Damon Runyon Suite **URPE** 

Racism in the Other Social Sciences: One of Three Sessions by the URPE Task Force on Racism

The Neo-Nazis of Academe: Eugenics Revisted, JON HARRIS, Northeastern University

The Unheavenly Scholars: The Culture of Poverty and Other Poor Excuses, JAMES KRONIN, Northeastern University

Additional Participants to be Announced

10:30 a.m. to 11:30 a.m. Americana Georgian Ballroom A IMS Rietz Lecture

Chairman: To be Announced D.R. COX, Imperial College

10:30 a.m. to 12:20 p.m. Americana Chelsea Suite Contributed Papers — Business and Economic Statistics-VIII

Chairman: JOSEPH W. DUNCAN, Battelle Memorial Institute

(10:35) Sample Design for the 1971 USDA Farm Production Expenditure

Survey, FREDERIC A. VOGEL, U.S. Department of Agriculture

(10:50) On the Measurement of Price Elasticity of Demand for Public Utilities NOEL DOHERTY, St. John's University

(11:05) Aggregate Consumption and Functional Distribution of Income, SOO-BIN PARK, Carleton University

(11:20) The Consumer Price Indices of Hong Kong, S.C. FAN, University of Hong Kong

(11:35) On the Maximization of the Geometric Mean with Lognormal Return Distribution, EDWIN J. ELTON and MARTIN GRUBER, International Institute of Management, Berlin

(11:50) A Distributed Log Model of Employment Levels in Seattle, DANIEL A. RELLES, Rand Corporation

(12:05) Productivity Growth in U.S. Manufacturing, CARL E. MOODY, JR., College of William & Mary

10:30 a.m. to 12:20 p.m. Americana La Loire 2 and 3 Contributed Papers — Social Statistics-IV

Chairman: JOHN L. WASIK, North Carolina State University

(10:35) A Statistical Analysis of Achievement Levels and Academic Performance in the College of Business Administration: The Memphis State Experience, ROBERT D. DEAN, Memphis State University

(10:50) Stages and Determinants of the Student's Decision-Making Process in the Choice of an Educational Institution ARNO KLEIMENHAGEN and G.M. NAIDU, University of Wisconsin, Whitewater

(11:05) The Measurement of Factors of Comprehension in Reading, ANN BEZ-DEK, Illinois Department of Mental Health

(11:20) Some Determinants of Student Achievement in Higher Education, RINALDO H. TOPOROVSKY, Fairleigh Dickinson University

(11:35) Model Building — Race and IQ, JAMES M. LUCAS, E.I. du Pont de Nemours & Co.

(11:50) Equity and Efficiency in State Aid to Public Schools, ELCHANAN COHN, Pennsylvania State University

(12:05) Students' Attitudes Toward Mathematics and Statistics in the Social Sciences, IBTIHAJ ARAFAT, City College of New York and JAMES HULBERT, Columbia University

10:30 a.m. to 12:20 p.m. Americana Regency Ballroom Statistics for Public Policy [In Memory of Donald C. Riley]

Chairman: ALEXANDER M. MOOD, University of California, Irvine

Statistics for Public Policy, ELEANOR SHELDON and ROBERT PARKE, Social Science Research Council

**Discussion:** MANCUR OLSON, University of Maryland; JAMES McPART-LAND, Johns Hopkins University

10:30 a.m. to 12:20 p.m. Americana Regency Foyer ASA Core Curriculum in Biostatistics for Medical Students — Panel Discussion

**Chairman:** ALFRED A. RIMM, Medical College of Wisconsin

A Survey of the Statistical Tests that Appear in General Medical Journals, ALVAN R. FEINSTEIN, Yale University

The Place of Biostatistics in the Medical Curriculum, WILLIAM COOPER, American Association of Medical Colleges

Biostatistics for Bread and Butter Students, DONALD R. PETERSON, University of Washington

Three Levels of Biostatistics for Medical

Students, THEODORE COLTON, Harvard Medical School

10:30 a.m. to 12:20 p.m. Americana St. James Suite ASA. ASGE

# Measures of Grant Flows Concerning the Environment

Chairman: THOMAS F. MALONE, Holcomb Research Institute

Toward a Pollution Inventory: The Incidence of Externalities and Grant Equivalents, JANOS HORVATH, Butler University

Voluntary Grants of Labor in Behalf of Environmental Quality: A Socio-Economic Profile, THOMAS M. HAVRIL-ESKY, Duke University

Water Management in Hungary: Grants as a Policy Tool, PAUL JONAS, University of New Mexico

**Discussion:** KENNETH E. BOULDING, University of Colorado

10:30 a.m. to 12:30 p.m. Americana Monte Carlo 42 ASA, ENAR, WNAR

#### Contributed Papers — Biometrics-IV

Chairman: JAMES S. WILLIAMS, Colorado State University

(10:35) The Regression Analysis of Dependent Vectors of Variable Dimension with a Residual Covariance Matrix of Intra-Class Form, J.J. WIORKOWSKI, Pennsylvania State University

(10:50) A Deterministic Error Component for Polynomial Regression, B.J.N. BLIGHT, Birkbeck College and L. OTT, University of Florida

(11:05) A Bivariate t-Distribution which Occurs in Stepwise Regression, F.E. STEFFENS, University of South Africa

(11:20) All Subsets vs. Stepwise Regression, K.N. BERK, Illinois State University

(11:35) Estimation in a Mixture of Two Multivariate Normal Distributions, WEI-

CHIEN CHANG, Northern Illinois University

(11:50) Some Two Sample Tests of Mixed Populations, S.C. CHOI, Washington University

(12:05) Classification Based on Dichotomous and Continuous Variables, P.C. CHANG and A.A. AFIFI, University of California, Los Angeles

11:00 a.m. Hilton Sutton South **AFEE** 

#### **Presidential Address**

**Chairman:** WILLARD F. MUELLER, University of Wisconsin

Realism and Relevance in Public Utility Regulation, HARRY M. TREBING, Michigan State University

11:30 a.m. Americana Biarritz 45 Chairmen of Statistics Departments — Meeting [By Invitation]

Chairman: ROBERT V. HOGG, University of Iowa

12:00 Noon Hilton Damon Runyon Suite AREUEA

American Real Estate and Urban Economics Association Luncheon, Presidential Address, Norbert Stefaniak [Fee Event]

12:00 Noon Hilton Dorothy Parker Suite ES

Econometric Society Luncheon for the Standing Committee on North American Meetings [By Invitation] [Fee Event]

12:30 p.m. Hilton East Ballroom Foyer ACES Association for Comparative Economic Studies Membership Meeting Luncheon [By Invitation] [Fee Event]

12:30 p.m. Americana Princess Ballroom **ASA** 

Business and Economic Statistics Section of the ASA — Luncheon Meeting: [All section members urged to attend; guests are cordially invited] [Fee Event]

**Chairman:** HORACE J. DePODWIN, Rutgers University

Results of Survey on 1973 Business Outlook Expectations

12:30 p.m. Americana Buckingham Suite Social Statistics Section of the ASA Luncheon [Fee Event]

**Chairman:** THEODORE D. WOOLSEY, Consultant

Work of the Committee on National Statistics, MARGARET E. MARTIN, Committee on National Statistics

12:30 p.m. Barbizon-Plaza Studio 2 — 5th Floor IRRA Chapter Presidents' Meeting [Luncheon] [By Invitation]

Chairman: RICHARD U. MILLER, University of Wisconsin

12:30 p.m. Hilton Clifton Fadiman Suite Editors' Luncheon [By Invitation] [Fee Event]

12:30 p.m. to 2:00 p.m. Hilton F. Scott Fitzgerald Suite AFEE

Association for Evolutionary Economics, Veblen-Commons Award Luncheon [Fee Event]

1:30 p.m. Hilton Regent Room AEA, PCS

#### **Concepts of Distributional Equity**

Chairman: CARL KAYSEN, Institute for Advanced Study Distributional Equity, JOHN RAWLS, Harvard University

Achieving the Just Polity, DENNIS MUELLER, Cornell University

Positive Limits on Distributional Policy, JAMES M. BUCHANAN and WINSTON BUSH, Virginia Polytechnic Institute and State University

**Discussion:** LESTER THUROW, Massachusetts Institute of Technology; ALVIN KLEVORICK, Yale University

2:00 p.m. Hilton Grand Ballroom AEA, AAEA

**Energy Supply and Demand in the United States** 

Chairman: DUANE CHAPMAN, Cornell

University

Incentive Policy and Supplies of Energy Sources, STEPHEN L. McDONALD, University of Texas

Policies for Energy Research and Development, HARRY PERRY and MILTON F. SEARL, Resources for the Future

Demand Studies for Energy Resources, HENDRIK HOUTHAKKER, Harvard University and PHILIP VERLEGER, Data Resources, Inc.

Supply-Demand Interactions: Environmental Protection, Price Policy, and Industrial Organization, JOHN WILSON, Federal Power Commission

Discussion: A. MYRICK FREEMAN, Bowdoin College; RICHARD L. GOR-DON, Pennsylvania State University; ROBERT KALTER, Cornell University; WALTER MEAD, University of California, Santa Barbara

2:00 p.m. Hilton Henry James Suite ANAES Issues in U.S.-Canadian Relations

Chairman: FRANK FALERO, JR., California State College, Bakersfield

Canadian Response to Fluctuations in United States Prices, LEE R. Mc-PHETERS and WILLIAM B. STRONGE, Florida Atlantic University

The Effect of the Canadian Tax Structure on Canada's International Tade, JAMES R. MELVIN, University of Western Ontario

Government Incentives in R&D: Canada and the United States, DANIEL LLOYD SPENCER, Morgan State College

**Discussion:** R.J. WONNACOTT, University of Western Ontario; JOSEPH HORTON, Slippery Rock State College; JOSEPH A. HASSON, Howard University

2:00 p.m. Hilton Franklin P. Adams Suite **AREUEA** 

# Lender Risk in Transition Neighborhoods

Chairman: HALBERT C. SMITH, University of Florida

Factors Affecting Mortgage Credit Risk in Urban Areas — A Pittsburgh Prototype Analysis, ALEX O. WILLIAMS, WILLIAM BERANEK, ROBERT F. BYRNE, JAMES KENKEL and DAVID PENTICO, University of Pittsburgh

REMIC — An Experiment in Mortgage Insurance at the City Level, NEAL J. HARDY, Housing and Development Admin., City of New York

The Role of Financial Intermediaries in Financing the Housing Stock in Transition Areas, EMANUEL TOBIER and MATTHEW DRENNAN, New York University

**Discussion:** CLAYTON C. CURTIS, University of Florida; ROBERT P. SANGSTER, U.S. Department of Housing and Urban Development; WILLIAM B. BRUEGGEMAN, The Ohio State University

#### 2:00 p.m. Hilton Rotunda URPE

#### Perspectives on Sexism

The Labor Market Isn't Everything: New Directions for Research, LAURIE NIS-INOFF, Yale University

The Effects of Occupational Segregation on the Male-Female Income Gap in the United States and the Soviet Union, WILLIAM MOSKOFF, Sangamon State University

The Women's Movement — A Democratic Struggle, A Revolutionary Question, RENEE BLAKKAN, The Guardian

Women and Work: Sexism and Underemployment, DOROTHY DEAN, Radical Feminist

The Impact of Middle-Class Feminism on Working Women, CAROLE A. De-

SARAM, New York City Chapter, National Organization for Women

2:00 p.m. to 3:00 p.m. Americana Regency Ballroom IMS Wald Lecture III

**Chairman:** HERMAN CHERNOFF, Stanford University

The Probability Theory of Additive Arithmetic Functions, III, PATRICK BILLINGSLEY, University of Chicago

2:00 p.m. to 3:50 p.m. Americana Biarritz 45 Contributed Papers — Social Statistics-V

Chairman: CHARLES D. PALIT, University of Wisconsin-Extension

(2:05) Aspects of Sampling a Rare Population: Black Females Aged 15 to 19 Years, E.P. ERICKSEN and C. AMOROSO, Temple University

(2:20) Sampling 17-Year Olds Not Enrolled in School, R.P. MOORE and B.L. JONES, Research Triangle Inst.

(2:35) The Effect of Stratification with Differential Sampling Rates on Attributes of Subsets of the Population, J. WAKSBERG, Westat Research, Inc.

(2:50) A National Sample Design for the U.S. Jewish Population: Some Results, B. LAZERWITZ, University of Missouri

(3:05) A Bayesian Approach to Second Guessing Undecided Respondents, S. JAMES PRESS and CHUNG-FANG YANG, University of Chicago

2:00 p.m. to 3:50 p.m. Americana Chelsea Suite Contributed Papers — Business and . Economic Statistics-IX

Chairman: MARTHA R. SEGER, Detroit Bank & Trust Company

(2:05) Classification and Prediction of Problem Banks Using Multiple Discriminant Analysis, JOSEPH F. SINKEY, JR., Federal Deposit Insurance Company

(2:20) Reserve Requirements, Federal Reserve Membership and Bank Performance, GARY G. GILBERT and MANFERD PETERSON, Federal Deposit Insurance Company

(2:35) Loan Losses, Earnings, and the Problem of Capital Accumulation at Minority-Owned Commercial Banks, JOHN T. BOORMAN, University of Maryland and Federal Deposit Insurance Corp.

(2:50) Changes in Prices and the Gamma Normal Distribution, ROBERT W. RESEK, University of Illinois

(3:05) Relationship of Measures of Concentration and Profitability, DICK A. LEABO, University of Michigan and DARYL N. WINN, University of Colorado

(3:20) Time Series Analysis and Simultaneous Equation Models, ARNOLD ZELLNER and FRANZ PALM, University of Chicago

(3:35) Western Trade Liberalization and Imports from Centrally Planned Economies: The Case of the Federal Republic of Germany, THOMAS A. WOLF, International Inst. of Management, Berlin

2:00 p.m. to 3:50 p.m. Americana Monte Carlo Suite ASA On the Statistics of Equal Opportunity for Women

Chairman: REGINA LOEWENSTEIN, Columbia University

Application of Multivariate Regression to Studies of Salary Differences Between Men and Women, ELIZABETH L. SCOTT, University of California, Berkeley

Statistical Measures of Earnings Differentials, JOSEPH L. GASTWIRTH, George Washington University

Studying Changes in Sex Role Definitions via Attitude Data, KAREN OP-

PENHEIM MASON, University of Michigan

**Discussion:** DONNA BROGAN, Emory University

2:00 p.m. to 3:50 p.m. Americana Regency Foyer ASA Smaller Computers and Programmable Desk Calculators in Statistics

Chairman: D.F. ANDREWS, University of Toronto

Utilization of Mini-Computers in a Scientific Laboratory, ROBERT C. RAYBOLD, National Bureau of Standards

Some Statistical Programs for Desk Calculators, ROBERT KOPITZKE and THOMAS J. BOARDMAN, Colorado State University

Interactive Statistical Computation on a Small Computer, PAUL MEIER, University of Chicago

**Discussion:** JOHN M. CHAMBERS, Bell Laboratories

2:00 p.m. to 3:50 p.m. Americana Malmaison 6 and 7 ASA, ASGE Federal Policies and State and Local Finances

Chairman: SELMA J. MUSHKIN, Georgeton University

Long-Range Implications of Federal Grant Policies, NED GRAMLICH, Federal Reserve Board

Federal Assistance and the Municipal Bond Market, JOHN PETERSEN, Securities Industry Association

Optimum Allocation of Public Needs, PATRICIA F. BOWERS, Brooklyn College, City University of New York

**Discussion:** ROBERT REISCHAUER, Brookings Institution

2:00 p.m. to 3:50 p.m. Americana St. James Suite ASA, ENAR, WNAR Contributed Papers — Biometrics-V

**Chairman:** WILLIAM FAIRWEATHER, Food and Drug Administration

(2:05) Fixed Precision Estimation of the Binomial Parameter O, T.A. DeROUEN, Tulane University and T.J. MITCHELL, Oak Ridge National Laboratory

(2:20) A Survey and Comparison of Several Empirical Bayes Estimators for the Binomial Parameter **p**, H.F. MARTZ, Texas Tech University

(2:35) Measuring Agreement Between Two Observers on the Presence or Absence of a Trait, J.L. FLEISS, N.Y. State Department of Mental Hygiene

(2:50) The Wilcoxon Signed Rank Test in the Presence of Zeroes and Ties, A.L. GOULD, Merck, Sharp and Dohme

(3:05) Direct Procedures for Truncated Group Sequential Sign Rank Tests, G. ELFRING and J.R. SCHULTZ, Upjohn Company

(3:20) Tests and Multiple Comparisons for Contingency Tables, J.D. KNOKE, Case Western Reserve University

(3:35) A Monte Carlo Study of Multidimensional Contingency Table Analysis, D. SYLWESTER, University of Vermont

2:00 p.m. to 3:50 p.m. Americana La Loire 2 and 3 ASA, ENAR, WNAR Statistical Problems Concerned with Neutrality and Non-Darwinian Evolution

Chairman: JAMES F. CROW, University of Wisconsin

Models for Environmental Effects in the Transmission of Phenotypes, MARCUS W. FELDMAN, Stanford University

Sampling Theory and Testing of Neutrality, W.J. EWENS, University of Pennsylvania

**Discussion:** RICHARD C. LEWONTIN, University of Chicago

2:00 p.m. to 3:50 p.m. Americana Royal Ballroom B ASA, ENAR, WNAR, IMS

#### **History of Statistics**

Chairman: WILLIAM L. HARKNESS, Pennsylvania State University

Richard Price: Population and Miracles, WILLIAM KRUSKAL, University of Chicago

Napoleonic Statistics, STEPHEN STIG-LER, University of Wisconsin

**Discussion:** CHURCHILL EISENHART, National Bureau of Standards

2:30 p.m. Hilton Beekman Room **AEA** 

#### **Economic Education**

Chairman: ROBERT L. HEILBRONER, New School for Social Research

Introducing Freshmen to the Social Sciences, KENNETH BOULDING and ELISE BOULDING, University of Colorado

Developing Independent Problem-Solving Ability in Economics, RENDIGS FELS, Vanderbilt University

Computer-Aided Instruction for Large Elementary Courses, BERNARD BOOMS, Tacoma, Washington and D. LYNNE KALTREIDER, Pennsylvania State University

**Discussion:** LESTER FETTER, Ocean County College; HENRY H. VILLARD, City University of New York; ELISABETH ALLISON, Harvard University

2:30 p.m. Hilton Sutton South AEA. ACES Trends, Prospects and Policies for East-West Trade

Chairman: WALTER GALENSON, Cornell University

Prospects and Policy for Sino-U.S. Trade, ALEXANDER ECKSTEIN, University of Michigan

Prospects and Policy for Soviet-U.S.

Trade, GREGORY GROSSMAN, University of California, Berkeley

Prospects and Policy for Trade Between Eastern Europe and the United States, EGON NEUBERGER, State University of New York, Stony Brook; ALAN A. BROWN, University of Windsor and PAUL MARER, University of Indiana

**Discussion:** T.C. LIU, Cornell University; LAWRENCE J. BRAINARD, The Chase Manhattan Bank; GILBERT RODGERS, U.S. Department of Commerce

#### 2:30 p.m. Barbizon-Plaza South Gallery IRRA

Human Capital Theory — Its Importance to Labor Economics

**Chairman:** ALBERT REES, Princeton University

Potential Problems in Human Capital Theory, DANIEL S. HAMERMESH, Michigan State University

To be Announced, FINIS WELCH, University of California, Los Angeles and Rand Corporation

To be Announced, LESTER C. THUROW Massachusetts Institute of Technology To be Announced, SHERWIN ROSEN, University of Rochester

#### 2:30 p.m. Hilton Gramercy B AFA

Finance and Investment: Refereed Papers I

Chairman: CHARLES W. HALEY, University of Washington

An Application of Information Theory to a Test of the Weak Form Martingale Hypothesis, TERRY F. MARTELL, University of Alabama, and GEORGE C. PHILIPPATOS, Pennsylvania State University

Stochastic Demand, Output and the Cost of Capital, MICHAEL S. LONG, Georgia Institute of Technology, and

**GEORGE RACETTE, Purdue University** 

The Tokyo Stock Exchange and the Capital Asset Pricing Model, SHEILA C. LAU, STUART R. QUAY and CARL M. RAMSEY, Wells Fargo Bank, N.A.

Portfolio Analysis Under Uncertain Means, Variances, and Covariances, CHRISTOPHER B. BARRY, University of Florida

**Discussion:** JEAN CROCKETT, University of Pennsylvania; GEORGE E. PINCHES, University of Missouri

2:30 p.m. Hilton Nassau A Risk, Information and Capital Budgeting

**Chairman:** WILLIAM F. SHARPE, Stanford University

The Economic Determinants of Systematic Risk, ALEXANDER A. ROBICHEK, Stanford University, and RICHARD COHN, Massachusetts Institute of Technology

On The Capital Budgeting Problem Under Uncertainty, ROBERT MERTON, Massachusetts Institute of Technology

The Value of Information and the Optimal Governmental Guarantee of Its Agencies' Issues, ROBERT EDELSTEIN, University of Pennsylvania

**Discussion:** JOHN B. LONG, JR., University of Rochester; LAWRENCE FISHER, University of Chicago

2:30 p.m. Hilton O. Henry Suite **AFEE**  Government Control of Industry — Structure, Performance, and Public Policy

Chairman: WARREN J. SAMUELS, Michigan State University

Market Power and Inflation, JOHN M. BLAIR, University of South Florida Social Control, Income Distribution and

the Corporate State, WALLACE C. PETERSON, University of Nebraska

**Discussion:** ROBERT F. LANZILLOTTI, University of Florida; DONALD J. DEWEY, Columbia University; WILLARD F. MUELLER, University of Wisconsin

2:30 p.m. Hilton Clinton Suite ES

#### The Financial Sector

Chairman: E. PHILIP HOWREY, University of Michigan

The Value of A Priori Information In Estimating The Financial Sector, WIL-LIAM BRAINARD and GARY SMITH, Yale University

The Market for Long-Term Corporate Debt Capital, BENJAMIN FRIEDMAN, Harvard University

Recursive Bank Asset Management: Actual Versus Optimal Results, DAVID A. WALKER, Federal Deposit Insurance Corporation

**Discussion:** NEIL WALLACE, University of Minnesota; DALE HENDERSON, Federal Reserve Board

2:30 p.m. Hilton Gibson Suite ES

#### **Time Series Problem**

**Chairman:** PHOEBUS J. DHRYMES, Columbia University

Operational Time and Seasonality in Distributed Lag Estimation, PETER K. CLARK, University of Minnesota

Alternative Tests for a First-Order Vector Autoregressive Error Specification, DAVID K. GUILKEY, University of North Carolina

An Efficient Two-Step Estimator for the Dynamic Adjustment Model with Autoregressive Errors, MICHIO HATANAKA, Osaka University, Japan

Multiperiod Predictions in Dynamic Models, KAJAL LAHIRI, University of Rochester

Effect of Temporal Aggregation on a Simple Dynamic Time Series Model, G.C. TIAO and W.S. WEI, University of Wisconsin

**Discussion:** ROBERT ENGLE, Massachusetts Institute of Technology; H.D. VINOD. Bell Laboratories

2:30 p.m. Hilton Gramercy A ES

# Resource Allocation with Imperfect Information

Chairman: DAVID A. STARRETT, Stanford University

Information, Efficiency and Equilibrium, JERRY GREEN, Harvard University

Bounded Rationality and the Internal Allocation of Resources, ROY RADNER, University of California, Berkeley

Search, Equilibrium and Information, KENNETH ARROW, Harvard University and MICHAEL ROTHSCHILD, Princeton University

**Discussion:** ANDREU MAS-COLELL, University of California, Berkeley; LEONID HURWICZ, University of Minnesota; GEORGE FEIGER, Harvard University

2:30 p.m. Hilton Murray Hill A ES

# Microeconomic Approaches to Income Distribution

Chairman: BENJAMIN OKNER, Brookings Institution

A Micro-simulation Model of the Size Distribution of Income, ALAN S. BLINDER, Princeton University

Tax Reform and Income Redistribution: Issues and Alternatives, WILLIAM C. BRAINARD, JEREMY BULOW and JAMES TOBIN, Yale University; JOHN B. SHOVEN, Stanford University

Differential Time Preference as a Cause of Income Inequality: Theory, Evidence & Policy Implications, CHARLES

BEACH, Queen's University; SHAR-ONA and SHLOMO MAITAL, Tel Aviv University

**Discussion:** WALTER DOLDE, Carnegie-Mellon University; HENRY J. AARON, Brookings Institution

2:30 p.m. Hilton Murray Hill B ES

#### **Issues in Company Taxation**

Chairman: PETER MIESZKOWSKI, Queen's University

The Economic Effects of Taxes, Price Controls and Regulations: A Reformulation, YORAM BARZEL, University of Washington

A General Equilibrium Model of the Incidence of the Corporation Income Tax Under Uncertainty, RAVEENDRA BATRA, Southern Methodist University

Economic and Tax Depreciation in Manufacturing Industries, ROBERT M. COEN, Northwestern University

Production Functions, Demand Functions, and the Incidence of the Corporation Income Tax, 1947 to 1970, DAVID M. REAUME, Federal Reserve Board

**Discussion:** JOHN SHOVEN, Stanford University; W. OAKLAND, Ohio State

2:30 p.m. Hilton Madison Suite ES

#### **Applications of Duality Theory**

Chairman: RICHARD PARKS, University of Washington, Seattle

Econometrics of Monotonicity, Convexity and Quasiconvexity, LAWRENCE J. LAU, Stanford University

Testing the Assumptions of Production Theory, J.R. MARSDEN, University of Kentucky; D.E. PINGRY, Virginia Polytechnic Institute and State University and A. WHINSTON, Purdue University

Duality and Optimal Consumption Under Uncertainty, L. EPSTEIN, Department of Manpower and Immigration, Ottawa

Characterizing and Computing an Optimal Tax-Subsidy Structure, C. BRONS-ARD, L. SALVAS — BRONSARD and Y. ZARRA, University of Montreal

**Discussion:** GIORA HANOCH, Harvard University; RICHARD HARRIS, University of British Columbia

2:30 p.m. Hilton Nassau B ES

#### **Economic Development II**

Chairman: JEFFREY B. NUGENT, University of Southern California

A Multi-Sector Dynamic Planning Model for Tunisia, O. HAWRYLYSHYN, Queen's University, Ontario; A. MARTENS, Sir George Williams University, Montreal; R. PINDYCK, Massachusetts Institute of Technology; M. HAMZA, Institute of Quantitative Economics, Republic of Tunisia

The Application of the Inter-Industry Eigen-Model to a Centrally Planned Economy, ANTONIO MARIA COSTA, United Nations

The Linkage Approach as a Development Strategy, WUU-LONG LIN, Stanford University

Two Empirical Tests of the Trade Gap Theory of Economic Development, ROMESH DIWAN, Rensselaer Polytechnic Institute

Population Growth, Agricultural Capital and the Development of the Dual Economy: An Application to Germany and the United States, YOSHIO NIHO, University of Wisconsin

Human Fertility, Population Change and Economic Development, MILTON AME IYOHA, State University of New York, Buffalo

Discussion: Discussion from the floor

2:30 p.m. Barbizon-Plaza Barbizon Room IRRA A Discussion of Growth in Labor Organizations

Chairman: RICHARD L. ROWAN, Whar-

ton School

Higher Education, JOSEPH W. GAR-BARINO, University of California, Berkeley

Farm and Food Employees, RICHARD W. HURD, University of New Hampshire

Prisoners, WILLIAM J. MORAN, United Steelworkers of America

Public, Service, Clerical and Laborers, JACK BARBASH, University of Wisconsin

2:30 p.m. Barbizon-Plaza Theatre IRRA Employee Attitudes, Job Enrichment, and the Work Ethic

Chairman: JOHN M. BAITSELL, Mobil Oil Corporation

To be Announced, LEONARD R. SAYLES, Columbia University

To be Announced, HAROLD L. SHEP-PARD, W.E. Upjohn Institute for Employment Research

To be Announced, DONALD F. EPHLIN, United Auto Workers

To be Announced, D.L. LANDEN, General Motors Corporation

2:30 p.m. Hilton Trianon Ballroom ODE John R. Commons Award Lecture and Biennial Convention

Chairman: E. BRYANT PHILLIPS, University of Southern California

KENNETH ARROW, Harvard University

2:30 p.m. City Squire Motor Inn Washington Suite SGE Regional Economics: Differential Patterns of Regional Growth in the Current Economic Recovery

Chairman: ROSEMARY SCANLON, The Port Authority of New York and New Jersey

Regional Perspective: The North East, IMANUEL TOBIER, New York University

Regional Perspective: The North Central, THOMAS LANGFORD, Bureau of the Budget, State of Illinois

Regional Perspective: The South, ANN BADHAM, Department of Commerce, State of Kentucky

Regional Perspective: The West, WIL-LIAM BURKE, **Monthly Review**, Federal Reserve Bank of San Francisco

3:00 p.m. Hilton Trianon Ballroom **AEA** 

#### Is Economic Theory With It?

Chairman: ROBERT M. SOLOW, Massachusetts Institute of Technology

Panelists: HARRY G. JOHNSON, University of Chicago and London School of Economics; VERNON L. SMITH, California Institute of Technology; GARY S. BECKER, University of Chicago; TJALLING C. KOOPMANS, Yale University; JOHN KENNETH GALBRAITH, Harvard University

4:00 p.m. Americana Georgian Ballroom A and B

#### R.A. Fisher Memorial Lecture

**Chairman:** OSCAR KEMPTHORNE, lowa State University

ASA, ENAR, WNAR, IMS

On Making Sense of Data, JEROME CORNFIELD, George Washington University

4:30 p.m. Hilton Mercury Ballroom **AFA** 

Presidential Address and Annual Business Meeting SHERMAN MAISEL, University of California, Berkeley

4:30 p.m. Hilton Franklin P. Adams Suite **AREUEA**  **Business Meeting** 

4:30 p.m. Hilton Don Marquis Suite ASE ASE Meeting of Editors of Review of Social Economy

4:30 p.m. Hilton Clinton Suite URPE
4:30 p.m. Hilton Nassau B URPE

Marxist Developments in the Social Sciences

Chairmen: BUZZ FRIES, Lehigh University and JAMES MARSH, University of Hawaii

Program available at URPE table

Capital-Labor Conflict at the International Level

International Capital and Multinational Labor, STEPHEN HYMER, The New School

The Foreign Workers Problem in Western Europe: Recent Trends, JANET MILLER, The New School

U.S. Border Industries and Mexican Labor: A Description of Recent Developments, JAMES BASS, Queens College of the City University of New York

**Discussion:** Representatives from the Labor Movement

5:00 p.m. Hilton Gibson Suite **AFEE**  **General Business Meeting** 

5:00 p.m. Hilton Le Petit Trianon Massachusetts Institute of Technology Cocktail Party [Fee Event]

5:00 p.m. Hilton Murray Hill B Murray Hill A Cocktails [5:00 p.m.] and Dinner [6:00 p.m.] to honor Lloyd Metzler [By Invitation]

5:15 p.m. Americana La Loire 2 ASA Section on Physical and Engineering Sciences — Meeting [All Section Members Invited]

**Chairman:** GERALD J. LIEBERMAN, Stanford University

Social Statistics Section — Meeting 5:15 p.m. [All Section Members Invited] Americana La Loire 5 Chairman: THEODORE D. WOOLSEY. ASA Consultant Biopharmaceutical Subsection — Meet-5:15 p.m. ing [All Subsection Members Invited] Americana **Provence Suite** Chairman: THEODORE COLTON, Har-ASA vard Medical School American Real Estate and Urban 6:30 p.m. **Economics Association Cocktail Party** Hilton Walcott Gibbs Suite [Fee Event] AREUEA Annual Banquet — Biometric Society 7:30 p.m. [ENAR] [Fee Event] Tom's Shangri-La Chinese Restaurant 237 Madison Avenue **ENAR** 1974 Council Meeting — Institute of 7:30 p.m. **Mathematical Statistics** Americana La Loire 2 Chairman: R.R. BAHADUR, Indian IMS Statistical Institute Session 7:30 p.m. Hilton **Sutton North** URPE **Presidential Address** 8:00 p.m. Hilton Chairman: SIR JOHN HICKS. Oxford Grand Ballroom AEA University KENNETH J. ARROW. Harvard University **Fellows Meeting** 9:00 p.m. Hilton

Murray Hill Suite

ES

9:15 p.m. Hilton Grand Ballroom **Business Meeting** 

#### December 30

8:30 a.m. Hilton Gramercy A AEA, ACES

# **Sunday**

Postwar Economic Growth in Eastern Europe

**Chairman:** ABRAM BERGSON, Harvard University

Industrialization with Low Level Urbanization: The Experiences of Socialist Eastern Europe, GUR OFER, Hebrew University

Postwar Industrial Growth in Czechoslovakia, GEORGE STALLER, Cornell University

Economic Growth, Stability and Structural Change in Post-War Hungary, ALAN BROWN, University of Windsor and JOSEPH A. LICARI, Occidental College

**Discussion:** J. MICHAEL MONTIAS, Yale University; BELA BALASSA, Johns Hopkins University

8:30 a.m. Hilton Beekman Room **AEA, ASA** 

# Unemployment in a Full Employment Economy

Chairman: CHARLES C. HOLT, Urban Institute

Unemployment Issues, HYMAN KAITZ, U.S. Bureau of Labor Statistics

The Discouraged Worker in a Full Employment Economy, RALPH E. SMITH, Urban Institute

Subemployment in the United States, HERMAN P. MILLER, Temple and George Washington Universities

**Discussion:** BELTON FLEISHER, Ohio State University

8:30 a.m. Hilton Regent Room **AEA, TPUG**  Intercity Passenger Transportation: Ailments and Prescriptions

Chairman: ROY J. SAMPSON, University of Oregon

The Wheel: Should We Re-Invent It? HUGH S. NORTON, University of South Carolina

Where Goest the Pointless Arrow? EDWIN P. PATTON, University of Tennessee

Airline Capacity Limitation Controls: Private Vice Equals Public Virtue? GEORGE C. EADS, George Washington University

**Discussion:** JAMES C. NELSON, Washington State University

8:30 a.m. Hilton Gramercy B AFA

Finance and Investment: Refereed Papers II

Chairman: EUGENE BRIGHAM, University of Florida

Entry, Control and the Market for Bank Charters, STUART I. GREENBAUM and MUKHTAR M. ALI, University of Kentucky

Market Risk and Quality of Debt Relationships in the Electric Utility Industry, RONALD W. MELICHER, University of Colorado

Investor Evaluation of Foreign and Domestic Risk, ALAN K. SEVERN, Federal Reserve Board

The Price Adjustment Process of Bonds to Rating Reclassifications: A Test of Bond Market Efficiency, STEVEN KATZ, Baruch College, City University of New York

**Discussion:** VICTOR ANDREWS, Georgia State University; RALPH SULTAN, Royal Bank of Canada

8:30 a.m. Hilton Le Petit Trianon **AFA**  Corporate Finance and Capital Budgeting

Chairman: JAMES VAN HORNE, Stanford University

Debt Management and the Form of Business Financing, WILLIAM L. WHITE, Harvard University

A Programming Model for Corporate Financial Management, STEWART C. MEYERS, Massachusetts Institute of Technology and JERRY A. POGUE, Baruch College, City University of New York

Capital Budgeting of Risky Projects With Imperfect Markets For Physical Capital, RICHARD ROLL and MARCUS BOGUE, Carnegie-Mellon University

**Discussion:** MARTIN WEINGARTNER, University of Rochester; RICHARD BOWER, Dartmouth College

8:30 a.m. Hilton Gibson Suite **ASGE, ES**  Measurement Issues in Grants Economics

Chairman: JANOS HORVATH, Butler University and Indiana University

Measuring the Grant Element of U.S. Direct Investments Overseas, GEORGE F. KOPITS, U.S. Department of Treasury

Grants-Exchange Factors in University Financing, THOMAS F. WILSON, Butler University

Externalities versus Grants in Intra-Urban Relocation, ISTVAN B'RACZ, Quinnipiac College

Measurement Problems in the Empirical Analyses of Intergovernmental Grants, CHARLES WALDAUER, Widener College

Discussion: JOHN A.T. MARLIN, Baruch College, City University of New York; ANITA B. PFAFF, Wayne State

University and the University of Augsburg; LYNN TURGEON, Hofstra University

8:30 a.m. Hilton Clinton Suite ES Methods of Estimation I: Cross Section Data

**Chairman:** MERTON J. PECK, Yale University

Quantitative Expectations From Qualitative Surveys: A Maximum Likelihood Approach, JOHN A. CARLSON, Purdue University and HARL E. RYDER, JR., Brown University

On the Statistical Theory of Unobserved Components, ROBERT E. HALL, Massachusetts Institute of Technology

Specification and Estimation of a Linear Scoring Model, SAUL H. HY-MANS and DANIEL L. RUBINFELD, University of Michigan

Estimating the Parameters of a Distributed Lag Model from Cross-Section Data: The Case of Hospital Admissions and Discharges, CHARLES R. NELSON. University of Chicago

**Discussion:** EDWARD KANE, Ohio State University; DENNIS AIGNER, University of Wisconsin

8:30 a.m. Hilton Madison Suite ES Topics in Economic Theory: Social Choice and Demand Theory

Chairman: CHARLES PLOTT, California Institute of Technology

Public Goods, Taxation, and the Distribution of Income Over Time: A Collective Choice Approach, WINSTON C. BUSH, ROBERT J. MACKAY, Virginia Polytechnic Institute & State University

A Mathematical Foundation of Neo-Classical Production and Utility Analysis — On Smoothness, SHO-ICHIRO KUSUMOTO, University of Rochester An Application of Formal Language and

Automata Theory to Social Choice, MARY LOUIS PICCOLI, Purdue University

**Discussion:** W. DAVID MONTGOMERY California Institute of Technology; S. SLUTSKY, Cornell University

8:30 a.m. Hilton Murray Hill B ES

#### **Urban Public Services**

**Chairman:** JAMES OHLS, Princeton University

An Economic Analysis of the Intracity Dispersion of Criminal Activity, MI-CHAEL W. SMITH, Center for Naval Analyses, Arlington and RONALD A. SCHRIMPER, North Carolina State University, Raleigh

A Police Service Production Function, WERNER HIRSCH, JEFFREY CHAP-MAN and SIDNEY SONENBLUM, University of California, Los Angeles

The Determinants of Demand for Heroin RONALD E. GREISON, Queens College of the City University of New York

An Empirical Investigation of the Externalities Associated with the Production and Consumption of Heroin, GEORGE F. BROWN, Naval War College, LESTER P. SILVERMAN and NANCY L. SPRUILL, Center for Naval Analyses

Hospital Behavior in a Spatial Economy WILLIAM HOLAHAN, University of Wisconsin

Exclusionary Zoning and Urban Resource Allocation, MICHELLE WHITE, University of Pennsylvania

Expenditures on Education and the Theory of Voting Behavior, WILLIAM COMANOR, Harvard University

**Discussion:** M. GETZ, Vanderbilt University; WILLIAM C. WHEATON, Massachusetts Institute of Technology

8:30 a.m. Hilton Murray Hill A ES

#### **Demand for Money**

Chairman: THOMAS CARGILL, University of Nevada

Price Expectation, The Real Rate of Interest, and The Demand for Money, CHARLES D. CATHCART, Pennsylvania State University and HERBERT KAUFMAN, Arizona State University

The Demand for Money in an Open Economy: Germany and the United Kingdom, MICHAEL J. HAMBURGER, Federal Reserve Bank, New York

Aggregation Over Time, the Supply and Demand for Money, and Monetary Policy, STANLEY W. BLACK, Vanderbilt University

A Financial Market Approach to the Demand for Money and the Implications for Monetary Policy, MYRON B. SLOVIN and MARIE SUSHKA, Federal Reserve Board

Cagen's Hyperinflation Model with Alternative Prior Structures: Bayesian Analysis for Four Countries, J. BISIGNANO, Federal Reserve Bank, San Francisco

Money Demand, Money Supply and the Interest Rate: The Role of Seasonality, HERBERT KAUFMAN, Arizona State University and RAYMOND LOMBRA, Federal Reserve Board

Seasonal Adjustment and Monetary Policy, RICHARD PORTER and DAVID PIERCE, Federal Reserve Board

The Substitutability of Money and Nearmoneys, JAMES BARTH, George Washington University; ARTHUR KRAFT, Ohio University and JOHN KRAFT, University of Florida

8:30 a.m. Hilton Nassau A ES The Provision of Public Goods

**Chairman:** DAVID F. BRADFORD, Princeton University

Pareto Optimality and Government Indivisible Investments, PATRICIA F. BOWERS, Brooklyn College of the City University of New York

Equilibrium in an Economy with Private and Spatial-Political Dimensions, ARTHUR T. DENZAU, Virginia Polytechnic Institute and R.P. PARKS, Washington University, St. Louis

The Specification and Application of a Shared Good Technology, ROBERT P. INMAN, University of Pennsylvania

Equity and Efficiency Rules for the Provision of Public Goods, PIERRE PESTIEAU, Cornell University

**Discussion:** MARTIN McGUIRE, University of Maryland; HIRUFUMI SHIBATA, University of Kentucky

8:30 a.m. Hilton Nassau B ES

#### **Economic Development III**

Chairman: MITCHELL HARWITZ, State University of New York, Buffalo

Interregional Loan Rate Differentials and Related Policies: Directing the Thrust of Economic Development, HELEN HILL UPDIKE, State University of New York, Stony Brook

The Employment Effects of the Green Revolution in Five LDC's, E. RAY CANTERBERY, Florida State University

Estimating the Risk of Alternate Techniques: The Use of Nitrogeneous Fertilizer in Philippine Rice Production, JAMES ROUMASSET, University of California, Davis

On Sources of Measured Technical Inefficiency: The Role of Information, Education and Economic Backwardness, JURGEN MULLER, International Institute of Management, Berlin, Germany and KENNETH H. SHAPIRO, Center for Research in Economic De-

velopment, University of Michigan

Tourism and Economic Growth: An Empirical Study, MOHEB A. GHALI, University of Hawaii

The Impact of New Industrial Towns on the Labor Market: The Mexican Experience, CALVIN D. SIEBERT, University of Iowa and MAHMOOD A. ZAIDI, University of Minnesota

Discussion: Discussion from the floor

8:30 a.m. Hilton Damon Runyon Suite URPE Open Session for Unscheduled Panels or Discussions

8:30 a.m. to 10:20 a.m. Americana Biarritz 44 Contributed Papers — Business and Economic Statistics Section-X

Chairman: JOHN A. GORMAN, U.S. Department of Commerce

- (8:35) Regressive Approaches to Temporal Disaggregation, KALMAN J. COHEN, New York University and MANFRED W. PADBERG, International Institute of Management, Berlin
- (8:50) Measuring Supply Wages: The Variation in Accuracy of Observed Wage Rates as Length of Employment Increases, ROBERT L. CROSSLIN, Mississippi State University and DAVID W. STEVENS, University of Missouri, Columbia
- (9:05) The Interaction Between Economic, Attitudinal and Spatial Variables in Determining Transport Modal Choice, PETER L. WATSON and RICHARD B. WESTIN, Northwestern University
- (9:20) Bayesian Analysis in Sequential Credit Management, L. WAKEMAN, International Institute of Management, Berlin
- (9:35) Aggregation of O.B.E. Input-Output Tables and the Linear Aggregation Coefficient, KERN O. KYMN and

J.R. NORSWORTHY, Virginia Polytechnic Institute and State University

(9:50) A Sufficient Condition for an Election Equilibrium and the Implications of Alternative Empirical Models, MELVIN J. HINICH and PETER C. ORDESHOOK, Carnegie-Mellon University

(10:05) An Econometric Model of the Canadian Textile and Clothing Industry, KEVIN L. REILLY and PETER TRYFOS, York University

8:30 a.m. to 10:20 a.m. Americana Buckingham Suite ASA

#### **Teaching Bayesian Statistics**

Chairman: DAVID L. WALLACE, University of Chicago

Bayesian Statistics for Education and Psychological Research, MELVIN R. NOVICK, American College Testing Program

Parallel Teaching of Bayesian and Sampling Theories of Inference, GEORGE C. TIAO, University of Wisconsin

Teaching Bayesian Inference and Decision Techniques in Econometrics, ARNOLD ZELLNER, University of Chicago

**Discussion:** From Panel and from the floor

8:30 a.m. to 10:20 a.m. Americana Chelsea Suite

# Contributed Papers-Statistical Computing Section-I

Chairman: RICHARD O. GILBERT, Battelle Northwest

(8:35) Estimating the Regression Coefficients When Variables are Subject to Errors with Non-Zero Sum. MIREK KARASEK, Ministry of Treasury Economics and Intergovernmental Affairs, Canada

(8:50) A Test of the Numerical Accu-

racy of Some Matrix Inversion Schemes Commonly Used in Least Squares Programs, JOHN DEEGAN, JR., Rice University

(9:05) Computing Maximum Likelihood Estimates for the Mixed A.O.V. Model Using the W transformation, W.J. HEMMERLE, University of Rhode Island and H.O. HARTLEY, Texas A&M University

(9:20) More Effective Computer Packages for Statistics, WAYNE NELSON, General Electric Company

(9:35) An Algorithm for Generating All Possible 2p-q Fractional Factorial Designs and Its Use in Scientific Experimentation, STEVEN M. SIDIK, National Aeronautics and Space Administration (9:50) Simulation, Statistics, and the Systemic Sciences, G. ARTHUR MIHRAM, University of Pennsylvania

(10:05) A Fixed Point Algorithm for Maximum Likelihood Estimation, LAW-RENCE E. SCHWARTZ, University of Utah

8:30 a.m. to 10:20 a.m. Americana La Loire 2 and 3

Confidence Intervals for System Reliability

Chairman: R.G. EASTERLING, Sandia Laboratories

The Noncentral Chi-Square Distribution and Insight Into the System-Reliability Confidence-Bound Problem, NANCY R. MANN, Rocketdyne/North American Rockwell

Transformations Accelerating Convergence to Normality of Maximum Likelihood Estimators of the Reliability of Complex Systems, ALAN WINTER-BOTTOM, City University, London

**Discussion:** RICHARD R. PRAIRIE, Sandia Laboratories; JOSEPH NAR-ESKY, Rome Air Development Center

8:30 a.m. to 10:20 a.m. Americana Regency Ballroom ASA Contributed Papers — Social Statistics-IV

Chairman: DWIGHT B. BROCK, Center for Health Statistics

- (8:35) Results of an Experiment in Using Alternate Respondent Rules in a Household Interview Survey, MARY GRACE KOVAR and ROBERT A. WRIGHT, National Center for Health Statistics
- (8:50) Availability of Family Planning Services at Institutions of Higher Learning, GLORIA HOLLIS and KAREN LASHMAN, National Center for Health Statistics
- (9:05) Post-Prison Success Prediction: A Preliminary Florida Study, ALLAN R. SAMPSON, Florida State University
- (9:20) Emotion, Reason and Risk, CLIFFORD J. MALONEY, Food and Drug Administration
- (9:35) Estimation of Hospital Cost Functions Controlling for Case-Mix Variation, HENRY W. ZARETSKY, California Hospital Association
- (9:50) A Model of Fertility Behavior in India, K.L. GUPTA, University of Alberta

(10:05) Contraception Strategies and Fertility Outcomes: Estimates of a Stochastic Model of Reproduction, JAMES J. HECKMAN and ROBERT J. WILLIS, National Bureau of Economic Research

8:30 a.m. to 10:20 a.m. Americana Regency Foyer ASA Contributed Papers — Business and Economic Statistics-XI

Chairman: ELEANOR S. DANIEL, Mutual Life Insurance Company of New York

(8:35) Relative Wage Rates and Minimum Wage Coverage in Retail Trade, PHILIP COTTERILL, Miami University

and WALTER J. WADYCKI, University of Illinois, Chicago Circle

(8:50) Estimating the Velocity of Money Circulation in a Local Community, CHANDER T. RAJARATNAM, University of Pennsylvania

(9:05) On Random Walks with Absorbing Barriers, THOMAS E. MORTON and WILLIAM E. WECKER, University of Chicago

(9:20) Production Costs in Commercial Bank Installment Lending, H.P. BEIGH-LEY, Northwestern University and A.S. McCALL, Federal Deposit Insurance Corporation

(9:35) Seasonal Borrowing Privilege: A New Dimension in Administration of the Federal Reserve Discount Window, VIRGINIA TIMENES and EMANUEL MELICHAR, Federal Reserve Board

(9:50) On Heteroscedasticity when the Regressand Can Take on Only a Finite Number of Values, HUNG CHAN and JACK HAYYA, Pennsylvania State University

(10:05) The Power of Various Tests of Autocorrelation in the Linear Regression Model: A Simulation Study, WILFORD L. L'ESPERANCE and DAN-IEL TAYLOR, Ohio State University

8:30 a.m. to 10:20 a.m. Americana St. James Suite ASA Content Quality of the 1970 Census Data

Chairman: JOSEPH WAKSBERG, Westat Research, Inc.

Accuracy of 1970 Census Population and Housing Characteristics, as Measured by Reinterviews, CHARLES JONES, HENRY WOLTMAN, KATHRYN THOMAS and OWEN CULLI-MORE, U.S. Bureau of the Census

Accuracy of Census Data as Measured

by the 1970 CPS-Census-IRS Matching Study, PAULA SCHNEIDER and JOSEPH KNOTT, U.S. Bureau of the Census

Enumerator Variance in the 1970 Census, BARBARA BAILAR and BENJA-MIN TEPPING, U.S. Bureau of the Census

**Discussion:** JAMES MORGAN, University of Michigan

8:30 a.m. to 10:20 a.m. Americana Monte Carlo 42 ASA, ENAR, WNAR

#### **Population Genetics**

Chairman: GARY CHASE, Johns Hopkins University

Effective Population Numbers and Their Interrelations, EDWARD POLLAK, Iowa State University

Statistical Consequences of Gene Segregation in Quantitative Traits, C.C. LI, University of Pittsburgh

**Discussion:** HOWARD LEVENE, Columbia University

8:30 a.m. to 10:20 a.m. Americana Malmaison 6 and 7 ASA, ENAR, WNAR, IMS

#### **Designs and Linear Models**

**Chairman:** WILLARD H. CLATWORTHY State University of New York at Buffalo

Partial Geometric Designs, R.C. BOSE, Colorado State University

On Randomization in Block Designs, JUNJIRO OGAWA, University of Calgary

On the Mixed Linear Model, J. SEELY, Oregon State University and GEORGE ZYSKIND, Iowa State University

**Discussion:** O. KEMPTHORNE, Iowa State University

10:30 a.m. Hilton Gramercy A AEA New Dimensions of Economic Inequality

**Chairman:** ROBERT J. LAMPMAN, University of Wisconsin

The Concentration of Personal Wealth, 1953-1969, JAMES D. SMITH, Pennsylvania State University

What Does the Overall Tax System Do to the Distribution of Income? JOSEPH A. PECHMAN and BENJAMIN OKNER, The Brookings Institution

An Appraisal of Income-Conditioning of Benefits as a Redistributive Strategy, LEONARD HAUSMAN, Brandeis University

**Discussion:** HOWARD M. WACHTEL, American University; HOWARD TUCK-MAN, Florida State University; GUY H. ORCUTT, Yale University

10:30 a.m. Hilton Trianon Ballroom **AEA, ASA** 

#### The World Dynamics of Economic Growth

**Chairman:** HAROLD BARGER, Columbia University

Sensitive Growth Models and Robust Conclusions, RICHARD F. KOSOBUD and WILLIAM D. O'NEILL, University of Illinois at Chicago Circle

The Economics of the Steady State, HERMAN DALY, Louisiana State University

Are There Ultimate Limits to Economic Growth? WILLIAM D. NORDHAUS, Yale University

**Discussion:** TJALLING C. KOOPMANS, Yale University; LEONARD ROSS, Columbia University Law School

10:30 a.m. Hilton Sutton South AEA, AFA, ASA International Trade and Finance-III: Balance of Payments and International Investment

**Chairman:** LAWRENCE B. KRAUSE, The Brookings Institution

LINK Model Simulations of International Trade: An Evaluation of the Effects of Currency Realignments, LAW-

RENCE R. KLEIN, University of Pennsylvania

The Balance of Payments and Policy Mix: Simulations Based on an Empirical U.S. Model, PETER B. KENEN, Princeton University

Direct Investments of Multinational Firms and U.S. Exports, MICHAEL ADLER, Columbia University and GUY V.G. STEVENS, Federal Reserve Board

**Discussion:** C. FRED BERGSTEN, The Brookings Institution; HELEN B. JUNZ, Federal Reserve Board

10:30 a.m. Hilton West Ballroom Foyer AEA, AREUEA

#### **Aspects of Property Taxation**

Chairman: DONALD PHARES, University of Missouri, St. Louis

Role of Property Tax Reform in School Finance Revisions, JOHN CALLAHAN and WILLIAM WILKEN, Georgia State University

Circuit-Breaker Legislation: Public Choice Effects on Community Selection, THOMAS IRELAND and WILLIAM MITCHELL, University of Missouri, St. Louis

The Property Tax and the Changing Structure of City Employment: Revenue Implications, ROY BAHL and DAVID GREYTAK, Syracuse University

**Discussion:** ROBERT SAUNDERS, Kent State University

10:30 a.m. Hilton Clinton Suite

#### **Finding Optimal Macroeconomic Rules**

Chairman: THOMAS J. SARGENT, Federal Reserve Bank, Minneapolis

Evaluating the Effectiveness of Monetary Reforms, ARTHUR ROLNICK, Federal Reserve Bank, Minneapolis

Optimal Stable Policies for Unstable Instruments, CHRISTOPHER SIMS, University of Minnesota

Stochastic Control in Macroeconometric Models: A Comparison of Two Techniques, DAVID KENDRICK and JOE MAJORS, University of Texas

**Discussion:** DONALD MULLINEAUX, Federal Reserve Bank of Philadelphia, ROBERT HOLBROOK, University of Michigan; GARY SKOOG, University of Minnesota

10:30 a.m. Hilton Gibson Suite **ES** 

#### Methods of Estimation II

**Chairman:** RICHARD E. QUANDT, Princeton University

Applications of Ridge Trace Analysis to Problems of Multicollinearity, ROB-ERT C. BUSHNELL and DAVID A. HUETTNER, Wayne State University

The Risk Function of the Preliminary Test Estimator of a Coefficient of a Structural Equation, DONG W. CHO, Wichita State University

Some Least Squares Procedures for Updating Econometric Models, J.W. FREEBAIRN, Department of Agriculture, Sydney, Australia and G.C. RAUSSER, University of Chicago

Preliminary Test and Stein Rule Estimators: A Comparison of Performance, G.G. JUDGE, T.A. YANCEY and M.E. BOCK, University of Illinois

**Discussion:** DAVID BELSLEY, Boston College; EDWARD LEAMER, Harvard University

10:30 a.m. Hilton Madison Suite ES

#### The Distribution of Unemployment

Chairman: LEONARD MIRMAN, University of Massachusetts

On the Incidence of Unemployment, COSTAS AZARIADAS, Carnegie-Mellon University

A Theory of Sorts (Work as a Pure Death Process), STEVE SALANT, Fed-

eral Reserve Board

Human Investment Decisions and Unemployment, GARY S. FIELDS, Yale University and JAMES R. HOSEK, Rand Corporation

**Discussion:** DALE MORTENSEN, Northwestern University; MICHAEL ROTHSCHILD, Princeton University; GEOFFREY WOGLOM, Boston College

10:30 a.m. Hilton Murray Hill A ES Econometric Studies in Industrial Organization

Chairman: ALMARIN PHILLIPS, University of Pennsylvania

Intertemporal and Interlocational Price Discrimination in Gasoline Marketing, FRED C. ALLVINE, Georgia Institute of Technology and ROBERT T. MASSON, Northwestern University

Corporate Diversification and Market Structure, CHARLES H. BERRY, Princeton University

Interindustry Differences in the Diffusion of an Innovation, ANTHONY A. ROMEO, University of Connecticut

The Measurement of Firm Size: Theory and Evidence for the United States and the United Kingdom, DAVID J. SMYTH, Claremont Graduate School, WILLIAM J. BOYES, Security Pacific National Bank and DENNIS E. PESEAU, Southern California Edison Company

**Discussion:** DARIUS GASKINS, University of California, Berkeley; PAUL JOSKOW, Massachusetts Institute of Technology

10:30 a.m. Hilton Murray Hill B ES Cost and Production Function Esti-

Chairman: GIORA HANOCH, Harvard University

Substitution Among Capital, Labor, and Natural Resource Products in

American Manufacturing, D.B. HUM-PHREY, J.R. MORONEY, Tulane University

A Bayesian Estimation of Macro and Micro CES Production Functions, H. TSURUMI, Queen's University, Kingston, Ontario and Y. TSURUMI, Harvard University

An Estimation of the Generalized Leontief Cost Functions of the Soviet Manufacturing Industries, 1960-1969, YASUSHI TODA, University of Western Ontario and Harvard University

Industry Disaggregation Effects on Production Function Estimates, JACOB SONNY, Hofstra University

Uncertainty, Permanent Demand and Investment Behavior, ELEANOR BIRCH and CALVIN D. SIEBERT, University of Iowa

10:30 a.m. Hilton Nassau A ES

#### General Equilibrium Theory II

Chairman: WALTER P. HELLER, University of Pennsylvania

On the Existence and Properties of a Solution to Monopolistic Games and Monopolistic Market Games, AMOZ KATS, Cornell University

Nonconvexity and Pareto Optimality in Large Markets, M. ALI KHAN and SALIM RASHID, Yale University

On the Core as a Foundation for Competitive Equilibrium, JOSEPH M. OSTROY, University of California, Los Angeles

Equity, Envy and Efficiency, HAL R. VARIAN, Massachusetts Institute of Technology

**Discussion:** JERRY GREEN, Harvard University; CINDY LEWIS, Yale University; EDMUND PHELPS, Columbia University

10:30 a.m. Hilton Nassau B ES Application of Global Analysis To Economics

Chairman: KENNETH J. ARROW, Harvard University

Global Analysis and Economics, STE-PHEN SMALE, University of California, Berkeley

Generalized Comparative Statics in the Large, ALOISIO ARAUJO and GRAC-IELA CHICHILNISKY, University of California, Berkeley and PETER J. KALMAN, State University of New York, Stony Brook

On the Smoothness of Production Sets, ANDREU MAS-COLELL, University of California, Berkeley

**Discussion:** LEONID HURWICZ, University of Minnesota; JOSE SCHEINK-MAN, University of Chicago; MORDE-CAI KURZ, Stanford University

10:30 a.m. Hilton Damon Runyon Suite URPE Concrete Struggles Against Racism: One of Three Sessions by the URPE Task Force on Racism

The Antioch Strike and the Struggle Against Financial Aid Cutbacks, ANDREW J. WINNICK, Antioch College The Future of the Universities and the Fight Against Racism, To be Announced

10:30 a.m. Hilton Le Petit Trianon URPE

#### Rank and File Union Struggles

To be Announced, Representatives from Union Rank and File Caucuses False Promises, STANLEY ARONO-WITZ, Staten Island Community College Conflicts Within the Working Class, Phila RELIN and MARTIN CARNOY.

BILL BEHN and MARTIN CARNOY, Stanford University

10:30 a.m. to 12:00 Noon Americana Georgian Ballroom Suite ASA, ENAR, WNAR, IMS, PAA General Methodology Lecture-III

Chairman: MARCUS FELDMAN, Stanford University

Is the Study of Evolution a Science? RICHARD C. LEWONTIN, Harvard University

12:00 Noon Americana F.C. Leone Suite ASA, ENAR, WNAR 1974 Program Committee — Meeting and Luncheon [By Invitation]

Chairman: JOAN R. ROSENBLATT, National Bureau of Standards

12:30 p.m. Hilton Don Marquis Suite American Economic Association Luncheon [By Invitation] [Fee Event]

1:30 p.m. Hilton Regent Room AEA, ES The Negative Income Tax Experiments: A Report of the Major Findings

Chairman: JAMES TOBIN, Yale University

Basic Labor Supply Response Findings from the Urban Experiment (New Jersey-Pennsylvania), GLEN CAIN and HAROLD WATTS, University of Wisconsin

Low Income Households and the Permanent Income Hypothesis: Implications of the Urban Experiment, CHARLES METCALF, University of Wisconsin

Economic Behavior of Households in the Rural Experiment (North Carolinalowa), D. LEE BAWDEN, University of Wisconsin

**Discussion:** ALBERT REES, Princeton University; ROBERT LEVINE, Rand Corporation

1:30 p.m. Hilton Gramercy A AEA, HERO Economic Analysis of Federal Health Policies

Chairman: DONALD E. YETT, University of Southern California

Economic Implications of Changes in Funding Mechanisms for Medical Education, JOHN E. KOEHLER and ALBERT P. WILLIAMS, JR., Rand Corporation

Health Professions Educational Assistance Act as It Applies to Dentistry, PAUL J. FELDSTEIN, University of Michigan

Impact of the Economic Stabilization Program in Controlling Health Costs, STUART H. ALTMAN and JOSEPH EICHENHOLZ, Cost of Living Council

**Discussion:** REUBEN A. KESSEL, University of Chicago; ALEX R. MAURIZI, U.S. Department of Labor; DAVID DRAKE, American Hospital Association; CHRIS N. THEODORE, American Medical Association

1:30 p.m. Hilton Beekman Room AEA, ASGE

#### Subsidies in International Trade

Chairman: MARTIN PFAFF, Wayne State University and University of Augsburg

Toward a Generalized Model of Export Subsidies, KANTA MARWAH, Carleton University and U.N.C.T.A.D.

On the Leverage of Subsidies as Policy Tools in East-West Trade Promotion, JANOS HORVATH, Butler University

Domestic Transfers and Price Distortions in International Trade, SIGHART NEHRING, University of Augsburg and FRANK WEISS, University of Augsburg and University of Pennsylvania

**Discussion:** BELA BALASSA, Johns Hopkins University; WITOLD TRZECI-AKOWSKY, Foreign Trade Research Institute, Warsaw; GERHARD FELS, Weltwirtschaftsinstitut, University of Kiel

2:00 p.m. Hilton Franklin P. Adams Suite **AREUEA** 

#### Institutional Innovation

**Chairman:** MAX BLOOM, Syracuse University

Variable Rate Mortgages, Their Use and Impact in the Mortgage and Capital Markets, RICHARD G. MARCIS, Fed-

eral National Mortgage Association Concentration of Ownership and Rental Housing Markets in Urban Areas, E.J. FORD, JR., University of South Florida

The Equilibrium Spread Between Variable and Fixed Rates, GEORGE M. VON FURSTENBERG, Indiana University

Tentative paper, Private Mortgage Insurance Agents, CHESTER RAPKIN, Princeton University

Discussion: To be Announced

2:00 p.m. to 3:50 p.m. Americana Monte Carlo 42 ASA Contributed Papers — Social Statistics-VII

Chairman: PETER B. IMREY, University of North Carolina

(2:05) Multivariate Analysis Through a Symmetric Partial Gamma, B. KRISHNA SINGH and J. SHERWOOD WILLIAMS, Virginia Commonwealth University

(2:20) Estimating the Variance of Sample Correlations, MASAO NAKAMURA and ALICE ORCUTT NAKAMURA, University of Alberta

(2:35) National Estimates of Narcotics Addiction, ALEX RICHMAN, Beth Israel Medical Center

(2:50) The Development of Computer Maps and Their Usage in Crime Analysis, RONALD D. SCHWARTZ, Criminal Justice Coord. Council of Greater Cleveland

(3:05) Consumer Attitudes Toward Governmental Safety Programs: A Cluster Analytic Approach, FREDERICK WISEMAN, ROBERT LIEB and MARK MORIARITY, Northeastern University

(3:20) Trend Surface Analysis as a Tool for Handling Spatially-Defined Non-Coincident Data, DAVID L. SJOQUIST, LARRY D. SCHROEDER and FRANK P. JOZSA, Georgia State University

(3:35) A Test for the Validation of a Petition, J.J. SHUSTER, University of Florida

2:00 p.m. to 3:50 p.m. Americana Biarritz 44 ASA

#### Contributed Papers — Social Statistics-VIII

Chairman: RICHARD SCHACHTMAN, University of North Carolina

(2:05) Small Sample Comparison of Likelihood-Ratio and Pearson Chi-Square Statistics, KINLEY LARNTZ, University of Minnesota

(2:20) Clustering by Scenario with Special Application to Two-Way Tables of Counts, DANIEL A. RELLES, Rand Corp. and WILLIAM S. CLEVELAND, Bell Laboratories

(2:35) A Regression-Type Estimator Based on Preliminary Test of Significance, J.E. GRIMES and B.V. SUK-HATME, Iowa State University

(2:50) Some Ratio-Type Estimators, R.P. CHAKRABARTY, University of Georgia

(3:05) The Moments and Distribution of the Ratio of Two Gamma Variables, JOHN A. FLUECK and BURT S. HOL-LAND, Temple University

(3:20) On the Efficiency of the Simple Least Squares Estimator in the Linear Model under C(V) — C(X), RICHARD A. STEIN, University of Arizona

2:00 p.m. to 3:50 p.m. Americana Buckingham Suite ASA

#### Contributed Papers — Business and Economic Statistics-XII

Chairman: ARTHUR BRICKNER, Savings Banks Association of New York State

(2:05) Estimating Contributions of a Water Project to Regional Economy, CHONG KIEW LIEW, University of Oklahoma

(2:20) Linear Models and Linear Filters in the Analysis of Seasonal Time Series, DAVID A. PIERCE and RICHARD D. PORTER, Federal Reserve Board

(2:35) Model Building in Multiple Linear Regression, LALITHA SANATHANAN, University of Illinois, Chicago Circle

(2:50) The Economics of Crime: An Econometric Investigation of Auto Theft in the United States, WALTER VANDAELE, University of Chicago

(3:05) Computer Simulation in Varying Parameter Regression Models, ARCH-ER McWHORTER, W. ALLEN SPIVEY and WILLIAM J. WROBLESKI, University of Michigan

(3:20) Differential Impacts of Countercyclical Policy Actions, TIMOTHY D. HOGAN, Arizona State University

(3:35) The Forward Exchange Rate: Its Determination and Behavior as a Predictor of the Future Spot Rate, DAVID L. KASERMAN, University of Florida

2:00 p.m. to 3:50 p.m. Americana Chelsea Suite ASA

#### Contributed Papers — Business and Economic Statistics-XIII

Chairman: VAN FENSTERMAKER, University of Mississippi

(2:05) On the Small Sample Properties of Estimators in the Regression Model with Autocorrelated Errors, ROGER PFAFFENBERGER, Pennsylvania State University

(2:20) Testing the Equality Between Sets of Coefficients in Linear Regression Equation for Manufacturing Inventory Investment, STEVEN D. GROSS-MAN, Northeastern University

(2:35) The Interaction Between Local Educational Efforts and State and Federal Subsidies to Education, MICHAEL S. BROIDA, Miami University

(2:50) Sample Design for Ratio Estimation with Serially Correlated Intertem-

poral Strata, ROGER L. WRIGHT, University of Michigan

(3:05) The Effectiveness of MDTA Institutional Training Over Time and in Periods of High Unemployment, MICHAEL E. BORUS and EDWARD PRESCOTT, Michigan State University

(3:20) Using Multiple Regression Analysis and Multiple Logistic Analysis on Horse Race Betting, JAMES N. ARVESEN, Pfizer Pharmaceuticals, Inc. and BERNARD ROSNER, Harvard Medical School

(3:35) Public Income-Maintenance Programs and State Per Capita Incomes Equalities, FENG-YAO LEE, University of Tennessee

2:00 p.m. to 3:50 p.m. Americana Malmaison Suite

#### Contributed Papers — Physical and Engineering Sciences-IV

Chairman: RAMON C. LITTELL, University of Florida

(2:05) Stagraphical Analysis of Food Chains, M. CAPOBIANCO, St. John's University

(2:20) Logical and Probability Analysis of Systems, MITCHELL O. LOCKS, Oklahoma State University

(2:35) On Principal Component Analysis with Missing Data, RICHARD R. SCOTT, Eastman Kodak Company

(2:50) One-Sided Tolerance Limits Based on Censored Samples, IRVING J. HALL, Sandia Laboratories

(3:05) On the Distribution of the Non-Linear Classification Statistic T(X): Critical Region, Power, and Percentage Points, ABDUL W. HAMMOOD, Ohio University

(3:20) On the Use of Goodness of Fit Tests, ROBERT G. EASTERLING, Sandia Laboratories

(3:35) Erreur de Finklestein et Schafer, EUGENE H. LEHMAN, University du Quebec

2:00 p.m. to 3:50 p.m. Americana Malmaison 8 Some Non-Health Services Determinants of Health Levels

Chairman: STEPHEN A. RICHARDSON Albert Einstein College of Medicine Workload and Health, SIDNEY COBB,

Workload and Health, SIDNEY COBB, Brown University

Financing Mechanisms and Health, SELMA J. MUSHKIN, Georgetown University

The Relative Contributions of Health Care and Social Factors to Health: Public Policy Implications, MONROE LERNER, Johns Hopkins University

**Discussion:** BERTON H. KAPLAN, University of North Carolina

2:00 p.m. to 3:50 p.m. Americana Monte Carlo 43 ASA

#### Contributed Papers — Statistical Computing-II

Chairman: KENNETH E. ROWE, Oregon State University

(2:05) The Application of Statistical Sampling Techniques to the Acquisition of Computer Performance Measurements, WILLIAM C. SUHLER, IBM Corporation

(2:20) Comparison of Several Algorithms for Computing Sample Means and Variances, ROBERT F. LING, Clemson University

(2:35) Tests of the Robustness of Multiple Regression with Artificial Data, ALDEN SPEARE, JR. and ROBERT CORNO, Brown University

(2:50) How Does the Customer Know If We're Right? DOUGLAS A. SAMUELSON, Fair, Isaac and Company, Inc.

(3:05) Formulation and Evaluation of Cluster-Stopping Rules for the Maxof

Clustering Model, RICHARD MOJENA, University of Rhode Island

(3:20) On the Approximate F-Statistics Involved in a Three-Factor Factorial Design Experiment, Fixed, Random, and Mixed Model, STEPHEN N. HU, Michigan Blue Shield

(3:35) A Comparison of Several Analysis of Variance Programs, IVOR FRANCIS, Cornell University

2:00 p.m. to 3:50 p.m. Americana Regency Ballroom ASA

# Contributed Papers — Training-II: Computers and Other Aids in Teaching Elementary Statistics

Chairman: RICHARD B. McHUGH, University of Minnesota

(2:05) Teaching Statistics by Computer Sampling, KENNETH E. JAMES, BY-RON W. BROWN, JR. and BRUCH G. BUCHANAN, Stanford University

(2:20) Density Plots of Noncentral Distributions, KENNETH J. LEVY, SUBHASH NARULA, RICHARD N. SCHMIDT and STEVEN SAFRAN, State University of New York, Buffalo

(2:35) A Guide to Computer Assistance in the Instruction of Elementary Statistical Methods, JOHN T. SENNETTI, Texas Tech University

(2:50) Simple: A Radical Teaching and Computer Program for Statistics, JU-LIAN L. SIMON and DAN WEIDEN-FELD, University of Illinois

(3:05) Modularization and Inquiry in Teaching Elementary Statistics, TONY HAWORTH, California State College, Bakersfield

(3:20) A Videotaped Course in Statistical Methods for Staff Training, HAROLD A. GROSSMAN, Social Security Administration

2:00 p.m. to 3:50 p.m. Americana La Loire 2 and 3 ASA, ENAR, WNAR

Contributed Papers — Biometrics-VI

**Chairman:** JAMES WARE, National Heart and Lung Institute

(2:05) On the Detection of Many Outliers, B. ROSNER, Harvard University

(2:20) Transitions in Trinomial Data, A Method for Medical Judgment, TUR-KEN E. KUMBARACI, Pfizer Inc.

(2:35) Alpha Errors and the Sex Ratio Literature, C.R. BUNCHER, University of Cincinnati

(2:50) A Monte Carlo Study of the Variances of Sample Correlations Between Pairs of Unrelated Auto-Correlated Series, A. NAKAMURA and M. NAKAMURA, University of Alberta and G.H. ORCUTT, Yale University

(3:05) Regression Methods for Testing Slopes Among Several Linear Models, J.E. DUARTE, Abbott Laboratories

(3:20) Evaluating Laboratory Performance in Syphilis Serology Testing: Effects of Reducing the Number of Specimens from 65 to 20, D.V. CICCHETTI, West Haven VA Hospital, P. KEITGES, University of Kansas City and R.N. BARNETT, Norwalk Hospital

(3:35) The Expected Number of Matches and Its Variance for Matched Pair Designs, SONJA M. McKINLAY, Boston University

2:00 p.m. to 3:50 p.m. Americana Regency Foyer ASA, SA

#### **Actuarial Credibility Theory**

Chairman: JAMES C. HICKMAN, University of Wisconsin

Some Comments on Dividends and Experience Rating, HANS U. GERBER, University of Michigan

Extension of Credibility Theory, WIL-

LIAM S. JEWELL, University of California, Berkeley

Bayesian Estimation and Credibility, ROBERT B. MILLER, University of Wisconsin

Discussion: J. ERNEST HANSEN, Insurance Company of North America

2:00 p.m. to 3:50 p.m. Americana St. James Suite IMS

#### **Miscellaneous Invited Papers**

Chairman: To be Announced

Recent Developments in Goodness of Fit Tests, MICHAEL A. STEPHENS, McMaster University

Search Designs, J.N. SRIVASTAVA, Colorado State University

A Predictive Approach to the Random Effect Model, SEYMOUR GEISSER, University of Minnesota

A Vector Valued Multivariate Hazard Rate-II, N.L. JOHNSON, University of North Carolina and S. KOTZ, Temple University

2:30 p.m. Hilton Clinton Suite ES

#### Methods of Estimation III

**Chairman:** STEPHEN M. GOLDFELD, Princeton University

On the Estimation of Markets in Disequilibrium, MICHAEL J. HARTLEY, State University of New York, Buffalo

Limited Dependent Variable Methods for the Estimation of Markets in Disequilibrium, G.S. MADDALA and FOR-REST D. NELSON, University of Rochester

Asymmetrical Partial Adjustment Models, DALE J. POIRIER, University of Illinois at Urbana-Champaign

Prior Information When the Disturbance Covariance Matrix is Unknown, WIL-LIAM E. TAYLOR, Cornell University

**Discussion:** TAKESHI AMEMIYA, Stanford University; JERRY HAUSMAN, Massachusetts Institute of Technology

2:30 p.m. Hilton Gibson Suite

#### **Consumer Expenditure Systems**

Chairman: ROBERT POLLAK, Wharton School

Expenditure, Savings and Habit Formation, CONSTANTINO LLUCH, International Bank for Reconstruction and Development

Estimation of the Demand System Generated by the Gorman Polar Form, C. BLACKORBY, Southern Illinois University; R. BOYCE, Institute of Policy Analysis; D. NISSEN, Resource Management Corporation and R. RUSSELL, University of California, San Diego

The Generalized Cobb-Douglas Indirect Utility Function: An Application to Canadian Data, E. BERNDT and W.E. DIEWERT, University of British Columbia and E. DIANE CUMMINGS, Department of Manpower and Immigration, Vancouver

**Discussion:** HOWARD HOWE, Federal Reserve Board; MARILYN MANSER, State University of New York; ROGER BETANCOURT, University of Maryland

2:30 p.m. Hilton Madison Suite ES

Monetary Theory: Micro Approaches

Chairman: ROBERT CLOWER, University of California, Los Angeles

Output and Employment in a Model with Discrete Transactions Costs, ROBERT J. BARRO, University of Chicago and ANTHONY M. SANTO-MERO, University of Pennsylvania

Comparative Statics and General Equilibrium in a Money Economy, RICHARD DUSANSKY and PETER J. KALMAN, State University of New York, Stony Brook

Money and the Production Function, STANLEY FISCHER, Massachusetts Institute of Technology

Equilibrium in a Money Economy with Non Convex-Transactions Costs, WAL-TER P. HELLER, University of Pennsylvania and ROSS STARR, Yale University

Discussion: THOMAS R. SAVINGS, Texas A&M College Station; CLIFF LLOYD, Simon Fraser University, Burnaby, B.C.; MORDECAI KURZ, Stanford University; JOSEPH OSTROY, University of California, Los Angeles

2:30 p.m. Hilton Murray Hill B ES

#### **Distortions in the Labor Market**

Chairman: RICHARD FREEMAN, Harvard University

Discrimination, Labor Turnover and Racial Unemployment Differentials, ROBERT J. FLANAGAN, University of Chicago

The Profit Motive and Labor Market Discrimination, WILLIAM J. HALEY, Michigan State University and J. PAUL COMBS, Appalachian State University

The Impact of Unionization on Real Factor Rewards in General Equilibrium, SUSAN ALEXANDER and PEGGY SWANSON, Southern Methodist University

**Discussion:** DONALD PARSONS, Ohio State University; FRANCINE BLAU, Trinity College; J. HUSTON McCULLOCH, Boston College

2:30 p.m. Hilton Nassau A ES

#### Aspects of Investment

Chairman: DALE HENDERSON, Federal Reserve Board

A Coherence Effect of Monetary Policy on Local Housing Cycles, LARRY J. KIMBELL, University of Southern California, Los Angeles

Investment in Industrial and Other Construction, U-JIN JHUN, State University of New York, Oswego

Number of Bidders and Inefficiency in the Sale of New Municipal Bonds, MICHAEL HOPEWELL and GEORGE KAUFMAN, University of Oregon

Money and Stock Prices: An Investigation of Two Theories and Evidence, MICHAEL ROZEFF, Albion College

Intertemporal Stability of the Interest Rate-Price Relationship, T.F. CARGILL, University of Nevada and R.A. MEYER, University of California, Berkeley

2:30 p.m. Hilton Nassau B FS

#### **Spatial Models of Land Use and Transportation**

Chairman: BRITTON HARRIS, University of Pennsylvania

A Simultaneous Approach to Intra Urban Location, DONALD STEINNES, University of Illinois, Chicago

Residential Dynamics and Assignment Games, JAMES T. LITTLE, Washington University, St. Louis

The Impact of Transportation Investment on Land Rents, MALCOM GETZ, Vanderbilt University

Urban Structure and Alternative Transportation Systems, JOSEPH HARING and THOMAS SLOBKO, Occidental College and JEFFREY CHAPMAN, University of California, Los Angeles and University of Southern California

The Efficiency of Speculation in Urban Land, DENNIS CAPOZZA and CARL HAMILTON, University of Southern California, Los Angeles

A Generalization of Location and the Theory of Production, AMIR KHALILI, VIJAY K. MATHUR and DIRAN BODEN-HORN, Cleveland State University

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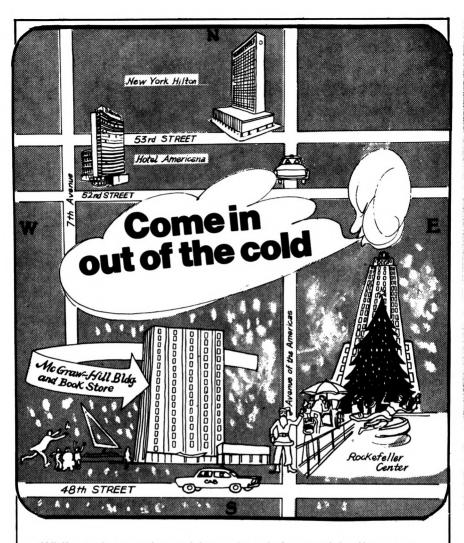
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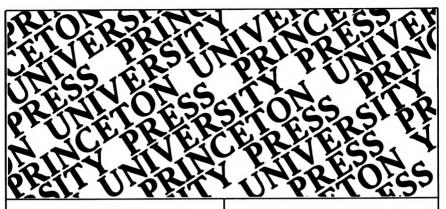
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