NEWS AND NOTICES

Readers are invited to submit to the Secretary of the Institute news items of interest

Personal Items

T. A. Bancroft, director of the Statistical Laboratory, Iowa State College, has been in Mexico from midAugust to early October on behalf of the Food and Agriculture Organization, UN. His assignment was to advise the Government of Mexico and FAO on the present status of the use of experimental designs and survey techniques in Mexico and to help prepare for the 1956 FAO-sponsored training center in Mexico.

R. E. Beckwith has left the Operations Research Group, Case Institute of Technology, to join the staff of the Statistical Laboratory, Purdue University, Lafayette, Indiana.

Dr. Charles B. Bell, Jr., formerly research engineer at Douglas Aircraft Company, has been appointed Assistant Professor of Physics at Xavier University, New Orleans, Louisiana.

Dr. Ernest P. Billeter has left the Statistical Office of the City of Zurich to become a Scientific Assistant to the Bank for International Settlements (BIS) in Basel.

Benjamin Buchbinder is now a statistician in the Commissioned Corps of the U. S. Public Health Service, assigned to the Division of Nursing Resources of the Department of Health, Education and Welfare in Washington, D. C.

Donald L. Burkholder, who received his Ph.D. in mathematical statistics at the University of North Carolina in 1955, is now an Assistant Professor in the Department of Mathematics of the University of Illinois.

Theodore Colton is now a statistician in the Commissioned Corps of the U. S. Public Health Service in the Program Evaluation and Reports Branch of the Division of Hospital and Medical Facilities.

John H. Cover has joined the HRAF South Asia Project at the University of California until June 30, 1956, at which time he will return to his position with the Bureau of Business and Economic Research at the University of Maryland.

Don A. Davis of Seattle, Washington, is temporarily located at 145-C Baker Village, Columbus, Georgia, where he is with the Army at Fort Benning.

Claude de Courval is now with the Institut de Microbiologie de l'U. de Montreal, in Montreal, Que., Canada.

Professor Robert Dorfman has been appointed as Associate Professor in the Department of Economics, Harvard University.

Benjamin Epstein has been promoted to a full professorship at Wayne University. During the 1955–56 academic year he is on Sabbatical leave at Stanford University.

W. T. Federer returned to Cornell University in September, 1955, after one year, from Honolulu, Hawaii, where he was head of the Department of Experimental Statistics, Experiment Station, Hawaiian Sugar Planters' Association and a consultant in Statistics for the Pineapple Research Institute.

Dr. Rudolf J. Freund, who received his Ph.D. degree in statistics at North Carolina, has joined the staff of the Department of Statistics as Associate Professor at the Virginia Polytechnic Institute.

Research Professor Bernard Friedman of New York University is on leave of absence and has been appointed to a visiting professorship at the University of California, Berkeley.

After receiving a Ph.D. in Statistics from the University of North Carolina June 1955, Seymour Geisser was at the Statistical Engineering Laboratory, N.B.S. Washington, D. C., before accepting a commission with the U. S. Public Health Service four months later. He is now with the N.I.H. at Bethesda, Maryland.

Leo A. Goodman, formerly Associate Professor, has been promoted to Professor of Statistics and Sociology at the University of Chicago.

Earl L. Green has returned to his position as professor of genetics at Ohio State University after being on leave of absence for two years while serving as Geneticist, Division of Biology and Medicine, U. S. Atomic Energy Commission.

Bernard Harris is on leave from his position as mathematician, Defense Department, and Instructor in Statistics, George Washington University, and will be at the Stanford University Applied Mathematics and Statistcs Laboratory for one year.

Paul G. Homeyer has been in Mexico for most of the fall quarter of 1955 as agricultural statistician with the Food and Agriculture Organization, United Nations. He returns to the Statistical Laboratory, Iowa State College, in December.

Robert H. Hoskins of the John Hancock Mutual Life Insurance Company recently received an appointment as Assistant Group Actuary.

Dr. Stanley Isaacson has resigned his position as Assistant Professor of Statistics at Iowa State College in order to accept a position as a Statistician with the Semiconductor Department of Westinghouse Electric Corporation.

Dr. Koichi Ito, formerly of Institute of Statistics, University of North Carolina, returned to Japan in August, 1955, and is now Lecturer in Statistics at Nanzan University, Nagoya, Japan.

Ralph B. Johnson resigned from Clemson College and accepted a position as Assistant Professor of Mathematics at Catawba College, Salisbury, North Carolina.

After receiving his masters degree from Iowa State College August 1955, Lawrence F. Jones accepted a position in the Statistical Control Section of the Semiconductor Department of the Westinghouse Electric Corporation.

Dr. Tosio Kitagawa joined the Statistical Laboratory of Iowa State College as visiting professor for the fall quarter of 1955. He has been on leave from the position of professor of theory of probability and mathematical statistics at Kyusyu University, Fukuoka, Japan, since last summer.

Dr. Morris Krauss has begun postdoctoral research at the National Bureau

of Standards. He is one of seven young graduate scientists to be selected for the Postdoctoral Research Associateship program sponsored by the National Academy of Sciences-National Research Council and the Bureau.

Boyd Ladd has been appointed research manager of Southwest Research Institute's department of industrial economics.

Ferdinand Lemus, formerly a graduate assistant at the Statistical Laboratory, Iowa State College, has accepted a position with the Experimental Design and Statistical Analysis Group of Westinghouse Electric Corporation, Pittsburgh, Pennsylvania.

Craig A. Magwire has joined the staff of the Department of Mathematics and Mechanics at the U. S. Naval Postgraduate School, Monterey, California, as Associate Professor of Mathematics.

Allen L. Mayerson has completed his year as a Fullbright scholar at the Sorbonne, and has returned to his position as Principal Actuary of the N. Y. State Insurance Dept. While abroad he was elected a member of the Swiss Actuarial Society and of the French Institute of Actuaries, and did some research into European actuarial practices, in addition to his mathematical studies at the Sorbonne.

Franklin S. McFeely has completed the work for the Ph.D. in Statistics at Virginia Polytechnic Institute and is now on the staff of the University of Colorado School of Medicine.

Mrs. Mary G. Natrella has rejoined the Applied Mathematics Division of the National Bureau of Standards where she will serve on the staff of the Statistical Engineering Laboratory.

Joseph A. Navarro received his Ph.D. in mathematical statistics from Purdue University in August 1955 and is at present employed at the General Electric Advanced Electronics Center in Ithaca, New York.

John Neter, formerly of Syracuse University, has accepted an appointment as Associate Professor in the School of Business Administration, University of Minnesota, Minneapolis, Minnesota.

Dr. Richard E. Nettleton has begun postdoctoral research at the National Bureau of Standards. He is one of seven young graduate scientists to be selected for the Postdoctoral Research Associateship program sponsored by the National Academy of Sciences-National Research Council and the Bureau.

Bernard Ostle has been promoted to Professor of Mathematics and Statistics at Montana State College.

Gilbert I. Paul, formerly a student at N. C. State College, Raleigh, N. C. , is now teaching courses in statistics and in statistical genetics at McGill University, Montreal, Canada.

Dr. Dayle D. Rippe has accepted a position as Operations Research Analyst in the General Office of General Mills, Inc., Minneapolis. During the three years prior to this he was an Operations Analyst with the Strategic Air Command, Omaha, Nebraska.

Jagdish Sharon Rustagi has completed his work for Ph.D. degree in Statistics

at Stanford University, California, and has a teaching job in the Department of Mathematics, Carnegie Institute of Technology, Pittsburgh, Pennsylvania, for the academic year, 1955–56.

Richard H. Shaw resigned from the U. S. Naval Ordnance Plant in Indianapolis, to take a position with General Dry Batteries, Inc., in Cleveland.

Jack Silber of Roosevelt University spent the summer of 1955 as Consultant to the Operations Analysis Office at the U. S. Air Force Missile Test Center, Patrick AFB, Florida.

Upon completion of his Ph.D. in the Dept. of Mathematics at Purdue University, John A. Tischendorf received an appointment with the Commissioned Corps of the U. S. Public Health Service. He is now stationed at Boston, Massachusetts, serving as statistician on a study conducted by the Chronic Disease Program.

Donald R. Truax has been appointed Research Fellow in Mathematics at the California Institute of Technology after receiving his Ph.D. in statistics at Stanford University.

Howard G. Tucker received his Ph.D. at the University of California in June, 1955, and is now Assistant Professor of Mathematics at the University of Oregon.

Mr. Robert S. Walleigh has rejoined the staff of the National Bureau of Standards as Assistant Director for Administration. In this position, he will serve as the Director's principal staff advisor on management matters, and supervise the operation of the administrative divisions that support the Bureau's technical program.

Dr. R. Lowell Wine, who received his Ph.D. degree in statistics in June 1955 from the Virginia Polytechnic Institute, has joined the staff there in the Department of Statistics as Associate Professor.

Hans-Joachim Zindler has been appointed as consultant for Mathematical Statistics in the "Statistisches Bundesant" Abteilung VIII, in Wiesbaden, Germany.

New Members

The following persons have been elected to membership in the Institute

August 6, 1955 to November 9, 1955

Anderson, Allan G., Ph.D. (University of Michigan), Mathematician, Jones and Laughlin Steel Corporation, Research Center, 900 Agnew Road, Pittsburgh 30, Pennsylvania.

Baldwin, Roger R., M. A. (Columbia University), Graduate Student, Princeton University, Mathematics Department, Fine Hall, Princeton, New Jersey, *282 W. 11th Street, New York 14, New York.*

Banerjee, D. P., D.Sc. (Dacca University) Department Head of Mathematics, Meerut College, Meerut U.P., India.

Bessler, Stuart Alan, Bachelor of Industrial Engineering and Bachelor of Business Administration (University of Minnesota), Graduate student and instructor, Depart-

ment of Economics, School of Business Administration, University of Minnesota, Minneapolis 14, Minnesota, *3922 Basswood Road, Minneapolis 16, Minnesota.*

Bissinger, Barnard Hinkle, Ph.D. (Cornell University), Chairman Mathematics Dept., Lebanon Valley College, Annville, Pennsylvania.

Brenna, Leroy S., M.S., (Kansas State College), Industrial Engineer, Eastman Kodak Company, 343 State Street, Rochester, 4, New York, *Strathmore Circle, Bldg. 6, Apartment 3, Rochester 9, New York.*

Busch, Sister Mary Constance, C.S.A., B.S. in Ed. (Marian College), Math. Instructor, Marian College, 30 East Division Street, Fond du Lac, Wisconsin.

Dempster, Arthur P., M.A. (Univ. of Toronto), Student, Princeton Univ., Dept. of Mathematics, Fine Hall, Box 708, Princeton, New Jersey.

Drenick, Rudolf F., Ph.D. (Univ. of Vienna), Manager Analytical Group, Radio Corporation of America, Bldg. 10-8, Camden 2, New Jersey.

Ferris, George Emery, M.A. (Columbia Univ.), Graduate Assistant, Cornell University, Ithaca, New York, *114 Eddy Street, Ithaca, New York.*

Feyerherm, Arlin M., Ph.D. (Iowa State College), Assistant Professor of Mathematics, Kansas State College, Manhattan, Kansas.

Fiske, Edwards N., B.S. (Roanoke College), Graduate Student, Virginia Polytechnic Institute, Blacksburg, Virginia, *Box 3611, Virginia Tech. Station V, Blacksburg, Virginia*

Gregoire, Jean (Mr.), B.Sc. (Laval University), Graduate Student and assistant, University of Manitoba, Winnipeg, Manitoba, Canada, *389 6th Avenue, Grand Mere, Que. Canada.*

Hadley, Hershel N., B.A. (Whitman College), Head, Statistical Division, Inspection and Test Department, Naval Powder Factory, Indian Head, Maryland, *5706 Fortieth Avenue, Hyattsville, Maryland.*

Helms, Lester L., M.S. (Purdue Univ.), Mathematician, Operations Research Group, Convair, Pomona, California.

Hermann, Philip, M.S. (Case Institute of Technology), Supervisor Applied Mathematics, Jones and Laughlin Steel Corporation, No. 3 Gateway Center, Pittsburgh, Pa.

Kassler, Raymond, B.A. (Brooklyn College), Research Engineer, Boland and Boyce, Inc., Belleville 9, New Jersey, *P.O. Box 441, Camden 1, New Jersey.*

Keats, Mortimer B., M.A. (George Washington University), Head, Statistics and Analysis Division, Quality Surveillance Department, U. S. Naval Powder Factory, Indian Head, Maryland, *2354 Skyland Place, S.E., Washington 20, D. C.*

Miller, Rupert Griel, Jr., A. B. (Princeton), Student, Stanford University, Statistical Lab., Sequoia Hall, Stanford, California.

Ogawa, Junjiro, Ph.D. (Osaka University), Asst. Prof., Department of Mathematics, Faculty of Science, Osaka University, Japan, *% The Dept. of Statistics, Univ. of North Carolina, Chapel Hill, N. C.*

Remmenga, Elmer E., Ph.D. (Purdue Univ.) Asst. Prof., Department of Mathematics, Colorado A. and M., Fort Collins, Colorado., *1821 Crestmore Place, Fort Collins, Colorado.*

Roberts, Howard R., B.Sc. (George Washington Univ.) Graduate Teaching Assistant, George Washington University, Department of Statistics, Washington 6, D.C., *2022 G Street, N.W. Washington 6, D. C.*

Romani Miquel, José, Dipl. en Estadistica (Madrid Univ.), Colaborador, Instituto de Investigaciones Estadisticas, Serrano 123, Madrid, Spain, *Harzenbusch 5, Madrid, Spain.*

Ryan, John M., Ph.D. (University of North Carolina), Mathematical Economist, United Gas Corporation, P. O. Box 1407, Shreveport, Louisiana.

Sakaguchi, Minoru, (Tokyo Institute of Technology), Lecturer, Department of Mathematics, University of Electro-communication, Kojima-cho 14, Chohu, Tokyo, Japan.

Schmid, Paul, Diplom der ETH (Eidg. Anstalt fur das forstliche Versuchswesen), Research

Assistant ETH, Dipl. Math. ETH, Mathematician, Eidg. Anstalt fur das forstliche Versuchswesen, Tannenstr. 11, Zurich 6, Switzerland.

Siegel, Sidney, Ph.D. (Stanford Univ.) Asst. Prof., Department of Psychology, Pennsylvania State University, University Park, Pennsylvania.

Shtulman, Sidney, BBA (College of City of New York), Analytical Statistician, The Theory and Analysis Division of the Computation and Ballistics Department Federal Civil Service, Dahlgren, Virginia, *Naval Proving Ground, Dahlgren Va.*

Siller, Harry, Ph.D. (New York University), Asst. Professor, Department of Mathematics, Hofstra College, Hampstead, New York, *1139 Beach Channel Drive, Far Rockaway, New York.*

Snell, James Laurie, Ph.D. (Univ. of Illinois), Asst. Prof., Department of Mathematics, Dartmouth College, Hanover, N. H., *23 S. Park St., Hanover, N. H.*

Stenwick, Fern Caroline, Mathematician, David Taylor Model Basin, Carderock, Maryland, *1039 Columbia Drive, Bucknell Manor, Alexandria, Virginia.*

Taylor, Robert J., M. S. (Virginia Polytechnic Institute), Mathematician, Naval Research Laboratory, Washington 25, D. C., *4761-B S. Capitol Terrace, S. W., Washington 24, D. C.*

Thomas, Raymond E., B. A. (George Washington University), Student, Graduate Assistant, George Washington University, Washington 6, D. C., *4249 Hildreth St., S. E., Washington 19, D. C.*

Trinkl, Frank N., A. M. (University of Michigan), Student, Graduate Assistant, Stanford University, Stanford, California, *213-14 Stanford Village, Stanford, Calif.*

Turner, Nura Dorothea, M.S. (State Univ. of Iowa), Asst. Prof., Department of Mathematics, New York State College for Teachers, Albany, New York.

Wolinez, G., M.Sc. (Hebrew University), Research Worker, Government of Israel, Hahiriah, Tel-Aviv, Israel, *Dizzengoff 204, Tel-Aviv, Israel.*

Cooperative Graduate Summer Sessions in Statistics

The University of Florida, North Carolina State College, Virginia Polytechnic Institute and the Southern Regional Education Board are jointly sponsoring a series of cooperative summer sessions in statistics.

The third of these summer sessions will be held at North Carolina State College, June 11–July 20, 1956. A session is scheduled to be held at Virginia Polytechnic Institute in 1957 and at the University of Florida in 1958. Each summer session lasts six weeks and each course carries approximately three semester hours of graduate credit.

The 1956 session will be held jointly with the Institute in Quantitative Research Methods in Agricultural Economics, sponsored by the Social Science Research Council. Several statistics courses will be oriented towards economic applications.

The combined faculty for the 1956 summer session and Institute at North Carolina State College will include: Professor R. L. Anderson, North Carolina State College; Professor Gertrude M. Cox, North Carolina State College; Professor David B. Duncan, University of Florida; Professor Alva L. Finkner, North Carolina State College; Dr. Arnold H. E. Grandage, North Carolina State College; Professor Robert J. Hader, North Carolina State College; Assistant Professor Cleon Harrell, North Carolina State College; Professor Earl O. Heady,

Iowa State College; Professor Clifford G. Hildreth, Michigan State University; Professor Jack Levine, North Carolina State College; Professor Robert J. Monroe, North Carolina State College; and Assistant Professor Walter L. Smith, University of North Carolina.

Courses to be offered this summer are: Statistical Methods I, Statistical Methods II (Design of Experiments), Statistical Theory I (Probability and Parent Distribution), Statistical Theory II (Sampling Distributions and Inference), Sample Survey Designs, Advanced Analysis II, Advanced Calculus for Statistics, Stochastic Processes, Econometric Methods and Linear Programming. Lectures on Linear Equations (Matrix Algebra) and Production Functions will be given in the Institute program.

Inquiries should be addressed to:

> Professor J. A. Rigney
> Department of Experimental Statistics
> North Carolina State College
> Raleigh, North Carolina

Summer Sessions at Berkeley, California

The 1956 summer program in the Department of Statistics of the University of California, Berkeley, California, will consist of two sessions: June 18 to July 28 and July 30 to September 8. The faculty of the summer sessions will include Professor D. R. Cox of the University of North Carolina, Professor Grace E. Bates of Mount Holyoke College, and Professor David Blackwell and Mr. T. S. Ferguson of the Department of Statistics of the University of California.

The program includes two of the usual undergraduate courses in each session, adapted primarily to meet the needs of students transferring from other centers who would like to undertake advanced study at the University of California during the regular academic year. Also a graduate seminar will be conducted by Professor Blackwell. This seminar will allow for individual consultation for students working toward higher degrees.

Fellowship in Experimental Statistics

The Department of Industrial and Engineering Administration of the Sibley School of Mechanical Engineering at Cornell University announces a graduate fellowship in the area of experimental statistics, sponsored by the Standard Oil Company of Ohio. This fellowship carries a stipend of $2,250 for the academic year and is to be used to support work toward either the M.S. or Ph.D. degree.

Applicants are expected to have suitable undergraduate preparation in some branch of engineering or in the physical sciences, but undergraduate training in statistics is not a prerequisite. The holder of the fellowship will be expected to

take courses in both applied and mathematical statistics selected from among the offerings of the members of the Cornell Statistics Center.

Interested persons who desire additional information concerning this fellowship may write to Professor Robert E. Bechhofer at the above address. Application forms for this fellowship and for admission to the graduate school may be obtained from the Graduate School, 125 Edmund Ezra Day Hall, Cornell University, Ithaca, New York, and should be filed not later than February 17, 1956, for April 1 award. Late applications will be considered only if an award has not been made by April 1.

REPORT OF THE NEW YORK MEETING OF THE INSTITUTE OF MATHEMATICAL STATISTICS

The sixty-eighth meeting of the Institute of Mathematical Statistics and the eighteenth annual meeting was held at the Hotel Biltmore, New York City, on December 27–30, 1955, in conjunction with the national annual meeting of the American Statistical Association and the Biometric Society (ENAR). A number of the sessions were joint with these two organizations. A Special Invited Paper entitled *Stochastic Approximation* was presented by Professor Cyrus Derman of Columbia University. The Rietz Lecture, entitled *Probability in Statistics*, was given by Professor William Feller of Princeton University. The following members of the Institute attended:

Forman S. Acton, Beatrice Aitchison, William Robert Allen, John E. Alman, Richard L. Anderson, Theodore W. Anderson, Fred C. Andrews, Harvey James Arnold, Herbert E. Arnold, Kenneth J. Arnold, Kenneth J. Arrow, Max Astrachan, R. R. Bahadur, J. C. Bain, Roger Raushenbush Baldwin, James B. Bartoo, Grace E. Bates, Geoffrey Beall, Helen P. Beard, Robert E. Bechhofer, Gordon H. Beckhart, Agnes Berger, Abraham J. Berman, A. T. Bharucha-Reid, Arnold M. Binder, Richard S. Bingham, Allan Birnbaum, Z. William Birnbaum, David Blackwell, Archie Blake, Chester I. Bliss, Aaron Block, Julius R. Blum, Isadore Blumen, Robert M. Blumenthal, Paul Boschan, Raj. C. Bose, Albert H. Bowker, Ralph Allan Bradley, A. E. Brandt, Irwin D. J. Bross, Benjamin Buchbinder, Robert Wilbur Burgess, Paul J. Burke, Lyle D. Calvin, Mavis B. Carroll, Maria Castellani, Douglas G. Chapman, A. Charnes, Herman Chernoff, John T. Chu, Ira H. Cisin, Willard H. Clatworthy, Paul C. Clifford, William G. Cochran, Theodore Colton, William Stokes Connor, Jerome Cornfield, Louis J. Cote, David R. Cox, Edwin Lory Cox, Gertrude M. Cox, Paul Charles Cox, Cecil C. Craig, Jean B. Crockett, Edwin Louis Crow, Lee Crump, Phelps P. Crump, Paz B. Culabutan, Joseph Francis Daly, Cuthbert Daniel, Reed B. Dawson, Jr., Besse B. Day, Ralph A. DeMarr, Francis R. Del Priore, Lucile Derrick, James L. Dolby, Thomas Donnelly, Robert Dorfman, Joseph Abraham Dresner, Acheson J. Duncan, David B. Duncan, Mary T. Dunleavy, Charles

William Dunnett, David Durand, Arthur M. Dutton, Meyer Dwass, A. Ross Eckler, George L. Edgett, Sylvain Ehrenfeld, Harvey Eisenberg, Harry Eisenpress, Henry Ellner, Daniel R. Embody, Benjamin Epstein, Robert Marvin Exselsen, Walter T. Federer, William Feller, Thomas S. Ferguson, Robert Ferber, George Emery Ferris, John W. Fertig, Edwards Ned Fiske, John C. Flanagan, Lester R. Frankel, David Frazier, Spencer M. Free, Jr., Harold A. Freeman, John E. Freund, Henry D. Friedman, Milton Friedman, Fred Frishman, L. A. Gardner, Jr., Norman Robert Garner, Murray A. Geisler, Seymour Geisser, J. Lincoln Gerende, Dorothy M. Gilford, Leon Gilford, Ruth L. Gold, Leo A. Goodman, Nathaniel R. Goodman, Mina Haskind Gourary, Franklin A. Graybill, Bernard G. Greenberg, Samuel W. Greenhouse, Joseph A. Greenwood, Geoffrey Gregory, Thomas N. E. Greville, Harold Gulliksen, Emil J. Gumbel, Lee Gunlogson, Paul Gunther, Margaret Gurney, Robert John Hader, John S. Hagan, Keet W. Halbert, William Jackson Hall, Max Halperin, E. Cuyler Hammond, James F. Hannan, Morris H. Hansen, Gordon M. Harrington, Theodore E. Harris, Boyd Harshbarger, Herman O. Hartley, David G. Hays, William Carleton Healy, Jr., Ernest Earl Heinbach, Paul Heit, Leon H. Herbach, G. Ronald Herd, Philip Hermann, Irene Hess, Werner Hochwald, William Hodgkinson, Jr., Wassily Hoeffding, Paul G. Homeyer, William C. Hood, Robert Hooke, John W. Hopkins, Daniel G. Horvitz, Harold Hotelling, Earl E. Houseman, William Gerow Howe, J. Stuart Hunter, Frederick Vincent Hurst, Jr., Paul E. Irick, Nathan Jaspen, Raymond J. Jessen, Milton Vernon Johns, Jr. Howard L. Jones, Hyman B. Kaitz, Edward L. Kaplan, A. E. Karp, Marvin Aaron Kastenbaum, Leo Katz, Lester S. Kellogg, Oscar Kempthorne, Robert W. Kennard, George H. Kennedy, Jack C. Kiefer, Allyn W. Kimball, Bradford F. Kimball, Leslie Kish, Tosio Kitagawa, Tjalling C. Koopmans, Richard L. Kozelka, Charles H. Kraft, Evelyn Lucille Kramer, William Henry Kruskal, Roy R. Kuebler, Jr., Thomas E. Kurtz, Jack Laderman, Helen Humes Lamale (Mrs.), Andre G. Laurent, Fred Charles Leone, Howard Levene, Edward Abraham Lew, Everett Vernon Lewis, Gerald J. Lieberman, Gilbert Lieberman, Jacob E. Lieberman, Julius Lieblein, Rensis Likert, Richard F. Link, Benjamin Lipstein, Sebastian B. Littauer, Eugene Lukacs, Robert James Lundegard, George F. Lunger, Philip J. McCarthy, Brockway McMillan, Robert G. McMillan, Gertrude A. McQuaid, Ralph L. Madison, Benjamin Malzberg, John Mandel, Joseph Mandelson, Herbert Marshall, Frank J. Massey, Paul Meier, W. J. Merrill, Herbert A. Meyer, Paul L. Meyer, Paul D. Minton, Irwin Miller, Robert Mirsky, Azizali Farrukh Mohammed, Edward C. Milina, A. M. Mood, Milton Morrison, Norman Morse, Joseph Edward Morton, Lincoln E. Moses, Jack Moshman, Frederick Mosteller, Shu-Teh Chen Moy, Merv E. Muller, Ray B. Murphy, Luis F. Nanni, Tadepalli Vankata Narayana, Mary G. Natrella, Joseph Anthony Navarro, M. R. Neifeld, A. Carl Nelson, Jr., Morton J. Netzorg, Robert Joseph Nichol, George E. Nicholson, Jr., Wesley L. Nicholson, Nicholas Nikitich, Harold Nisselson, Lionel MacLean Noel, Gottfried E. Noether, Monroe L. Norden, Nilan Norris, Horace W. Norton, James Norton, Jr., Junjiro Ogawa,

Carl Reading Ohman, Edwin G. Olds, Ingram Olkin, Paul S. Olmstead, A. L. O'Toole, Donald B. Owen, William R. Pabst, Jr., Emanuel Parzen, Robert E, Patton, Edward Burton Perrin, John K. Perrin, Eusche W. Pike, John W. Pratt, Lila Knudsen Randolph, Bayard Rankin, Stanley Reiter, George J. Resnikoff, Joseph S. Rhodes, Wyman Richardson, Donald L. Richter, Paul R. Rider, William L. Roach, Jr., Herbert E. Robbins, Helen Murray Roberts, Selby Lemley Robinson, Douglas S. Robson, Robert Roeloffs, Albert C. Rohloff, Charles F. Roos, John H. Roseboom, David Rosenblatt, Harry M. Rosenblatt, Joan Raup Rosenblatt, Judah Isser Rosenblatt, Murray Rosenblatt, Willard C. Ross, S. N. Roy, Jagdish S. Rustagi, John Morris Ryan, David Sachs, Jerome Sacks, Daniel E. Sands, F. E. Satterthwaite, L. J. Savage, Edward Sax, Henry Scheffé, Marvin A. Schneiderman, Elizabeth L. Scott, Hilary Seal, Oliver Abbott Shaw, Richard H. Shaw, Sidney Shtulman, Elizabeth Anna Shuhany, Sidney Siegel, Walter R. Simmons, Monroe Gilbert Sirken, Rosedith Sitgreaves, Morris Skibinsky, Hugh Fairfield Smith, John H. Smith, Walter Laws Smith, Jean F. Smolak, James L. Snell, Milton Sobel, Herbert Solomon, Paul N. Somerville, Frederick A. Sorensen, D. E. South, Mortimer Spiegelman, B. Ralph Stauber, George Powell Steck, Robert G. D. Steel, Arthur Stein, Frederick F. Stephan, Leo Eugene Storm, Fred W. Strodtbeck, Hale C. Sweeny, Zenon Szatrowski, Francis B. Taylor, Henry Teicher, Dan Teichroew, Milton E. Terry, Gerhard Tintner, Hebert C. S. Thom, Donovan J. Thompson, William Rae Thompson, Leo J. Tick, Mary Newton Torrey, Chia Kwei Tsao, Albert William Tucker, John W. Tukey, Charles R. M. Tuttle, M. C. K. Tweedie, Jose Vergara, D. F. Votaw, Jr., Helen M. Walker, David L. Wallace, W. Allen Wallis, Sidney Weiner, Harry Weingarten, Eleanor S. Weiss, Irving Weiss, Lionel Weiss, Oscar Wesler, Phillips Whidden, John S. White, Alfred G. Whitney, Frank Wilcoxon, Martin B. Wilk, R. Lowell Wine, B. J. Winer, Gerald Winston, William Wolman, Max A. Woodbury, Charles Ashley Wright, John William Youden, Samuel Zahl, Royal Keith Zeigler, Marvin Zelen.

The program follows:

TUESDAY, DECEMBER 27, 1955

9:00 a.m. Contributed Papers I

Chairman: ROSEDITH SITGREAVES, Teachers College, Columbia University

Papers: 1. *The Midrange of a Sample as an Estimator of the Population Midrange*, PAUL R. RIDER, Wright-Patterson Air Force Base.

2. *Distribution of the Product of Maximum Values in Samples from a Rectangular Population*, PAUL R. RIDER, Wright-Patterson Air Force Base, (By title).

3. *A Note on Non-recurrent Random Walks*, CYRUS DERMAN, Columbia University, (By title).

4. *Statistical Spectral Analysis, I: Consistent Asymptotically Normal Estimates of the Covariance Function and Spectral Averages*, EMANUEL PARZEN, Columbia University, (By title).

5. *Statistical Spectral Analysis, II: Asymptotic Mean Square Error of a Class*

    of Estimates of the Spectral Density, EMANUEL PARZEN, Columbia University.

6. *A Central Limit Theorem for Multilinear Stochastic Processes*, EMANUEL PARZEN, Columbia University, (By title).

7. *An Extension of Cramer's Theorem 20.6 to Random Functions with Values in a Metric Space*, EMANUEL PARZEN, Columbia University, (By title).

8. *Orthogonality and Fractional Replication of Factorial Experiments*, ALLAN BIRNBAUM, Columbia University.

9. *On the Second Sample Size Function of a Bayes Two-Stage Test for the Mean*, MORRIS SKIBINSKY, Purdue University.

10. *A New Estimation Procedure for a Linear Combination of Exponentials (Preliminary Report)*, RICHARD G. CORNELL, Oak Ridge National Laboratory and Virginia Polytechnic Institute.

11. *A Note on Weighted Randomization*, D. R. COX, University of North Carolina.

12. *On the Analysis of Incomplete Block Designs*, MARVIN ZELEN, National Bureau of Standards.

13. *A Remark on Wald's Paper, "On a Statistical Problem Arising in the Classification of an Individual into One of Two Groups,"* JUNJIRO OGAWA, University of North Carolina.

14. *Consistency and Optimum Properties of Some Two-Sample Tests*, JULIUS R. BLUM, Indiana University, and LIONEL WEISS, University of Virginia.

11:00 a.m. Probability and Statistics in Genetics. With Biometric Society (ENAR)

Chairman: OSCAR KEMPTHORNE, Iowa State College

Papers: 1. *Some Problems of Stochastic Processes in Genetics*, M. KIMURA, University of Wisconsin.

        2. *Estimation of Parameters in Genetic Models*, HOWARD LEVENE, Columbia University.

        3. *Sequential Tests for Detection of Linkage in Man*, NEWTON E. MORTON, University of Wisconsin.

2:00 p.m. Contributions of M. A. Girshick to Mathematical Statistics. With American Statistical Association

Chairman: HENRY SCHEFFÉ, University of California

Papers: 1. *Multivariate Analysis*, HAROLD HOTELLING, University of North Carolina.

        2. *Sequential Analysis*, EDWARD PAULSON, Queens College, New York City.

        3. *Decision Theory*, DAVID BLACKWELL, University of California.

4:00 p.m. Extreme Value Theory

Chairman: SEBASTIAN B. LITTAUER, Columbia University

Papers: 1. *Statistical Theory of Fatigue Failure and Breaking Strength*, E. J. GUMBEL, Columbia University.

        2. *On the Problem of Forecasting Extreme Values from a Curve Fitted to the Type I Extreme Value Distribution*, BRADFORD F. KIMBALL, New York State Public Service Commission.

        3. *Developments in the Application of Extreme Value Theory*, JULIUS LIEBLEIN, National Bureau of Standards.

Discussion: BENJAMIN EPSTEIN, Wayne University and Stanford University, C. H. S. THOM, Advisory Committee on Weather Control

4:00 p.m. Components of Variance. With the American Statistical Association

Chairman: C. W. DUNNETT, American Cyanamid Company

Papers: 1. *Components of Variance, Finite Populations, and Statistical Inference*, H. F.
             SMITH, North Carolina State College.
          2. *Non-additivity in a Latin Square Design*, M. B. WILKA nd O. KEMPTHORNE,
             Iowa State College.
Discussion: JOHN TUKEY, Princeton University

6:00 p.m. 1955 Council Meeting

Chairman: HENRY SCHEFFÉ, President

WEDNESDAY, DECEMBER 28, 1955

9:00 a.m. Contributed Papers II

Chairman: M. VERNON JOHNS, Columbia University

Papers: 1. *Remarks on Characteristic Functions*, EUGENE LUKACS, Catholic University
             of America and Office of Naval Research.
          2. *The Limiting Distribution of Serial Correlation Coefficient in the Explosive
             Case*, JOHN S. WHITE, University of Manitoba.
          3. *The Distribution of the Ratio of Two Measures of Normal Dispersion*, H. O.
             HARTLEY, Iowa State College.
          4. *Estimating a Linear Functional Relation*, H. FAIRFIELD SMITH, North
             Carolina State College.
          5. *Asymptotic Distribution of Roots of Certain Determinantal Equations*, R.
             GNANADESIKAN, University of North Carolina, (By title).
          6. *Investigation of the Possibility of Using Likelihood Ratio Tests of Certain
             Multivariate Hypotheses for Obtaining Confidence Bounds*, R. GNANADESI-
             KAN, University of North Carolina, (By title).
          7. *Asymptotic Efficiencies of a Nonparametric Life Test for Investigating Smaller
             Percentiles of a Gamma Distribution*, JOHN E. WALSH, Lockheed Air-
             craft Corporation, (By title).
          8. *A Test of Judge Concordance for Paired Comparison Designs (Preliminary
             Report)*, J. W. WILKINSON, University of North Carolina, (By title).
          9. *On the Efficiency of Certain Classes of Tests Based on the U-Statistics*, JOAN
             RAUP ROSENBLATT, National Bureau of Standards.
         10. *The Dynamic Statistical Decision Problem when the Component Problem
             Involves a Finite Number, m, of Distributions*, JAMES F. HANNAN, Michigan
             State University.
         11. *On Certain Systems of Experiments as Interdependent Stochastic Processes
             (Preliminary Report)*, DAVID ROSENBLATT, American University, (By
             title).
         12. *A Spherically-Symmetric Order Statistic r, (Preliminary Report)*, BRIAN
             GLUSS and FRED L. STRODTBECK, University of Chicago.

11:00 a.m. Statistical Studies of Accident Proneness and Contagion of Accidents. With the Biometric Society (ENAR)

Chairman: M. VERNON JOHNS, Columbia University

Papers: 1. *General Review of Recent Results on Accident Proneness and Contagion*, J.
             NEYMAN, University of California.

2. *Asymptotic Tests and Power of Tests of Certain Hypotheses Regarding Contagion in Accidents*, CHARLES H. KRAFT, University of California.
3. *A Limit Theorem on Conditional Distributions Related to Studies of Accident Proneness*, G. P. STECK, Sandia Base.

2:00 p.m. Rietz Lecture

Chairman: J. NEYMAN, University of California

Paper: *Probability in Statistics*, WILLIAM FELLER, Princeton University.

4:00 p.m. Acceptance Sampling Plans

Chairman: GERALD J. LIEBERMAN, Stanford University

Papers: 1. *Some Continuous Sampling Plans for Complex Items*, GEORGE RESNIKOFF, Stanford University.
2. *An Economic Approach to the Choice of Continuous Sampling Plans*, GEOFFREY GREGORY, Stanford University.
3. *On the Construction of Optimum Double Sampling Plans*, ALLAN BIRNBAUM, Columbia University.

6:00 p.m. Business Meeting

Chairman: HENRY SCHEFFÉ, President

8:30 p.m. Council Meeting

Chairman: DAVID BLACKWELL, President

THURSDAY, DECEMBER 29, 1955

9:00 a.m. A Training Program Leading to Contributions in Experimental Design

Chairman: CHURCHILL EISENHART, National Bureau of Standards

Papers: 1. *Who Makes Designs*, W. J. YOUDEN, National Bureau of Standards.
2. *The Construction of Fractional Factoral Designs for the 2^n Series*, F. L. MILLER, JR., Purdue University and National Bureau of Standards.
3. *The Use of the 2^n Fractional Factorial Designs for Factors at 4 Levels*, H. PETTIGREW, George Washington University and National Bureau of Standards.
4. *Some Combinatorial Relationships Arising in the Dualization of Incomplete Block Designs*, R. BURTON, National Bureau of Standards.

Discussion: GERTRUDE M. COX, North Carolina State College.

11:00 a.m. Statistics in Medical Experimentation. With the Biometric Society (ENAR)

Chairman: LINCOLN E. MOSES, Stanford University

Papers: 1. *Elimination of Selection Bias in Medical Experimentation*, DAVID BLACKWELL and J. L. HODGES, Jr., University of California.
2. *Estimation of Bacterial Densities*, THOMAS S. FERGUSON, University of California.
3. *On Comparing Survival Rates*, AGNES BERGER, School of Public Health, Columbia University.

2:00 p.m. Special Invited Paper

Chairman: HERMAN CHERNOFF, Stanford University

Paper: *Stochastic Approximation*, CYRUS DERMAN, Columbia University.

4:00 p.m. Recognized Needs for Mathematical Tables among Statisticians

Chairman: ALBERT BOWKER, Stanford University and Columbia University

Discussion Session

4:00 p.m. New Developments in Experimental Social Science. With the Social Statistics Section of the American Statistical Association

Chairman: FRED L. STRODTBECK, University of Chicago

Papers: 1. *Monte Carlo Methods in an Experimental Test of an Interaction Model*, DAVID G. HAYES, The RAND Corporation.
2. *Some Theoretical Problems of Lexico-Statistics*, MORRIS SWADESH, Denver, Colorado. (Presented by Joseph H. Greenberg, Columbia University.)
3. *Mathematical Models for the Empirical Study of Decision-Making*, PATRICK SUPPES, Stanford University.

Discussion: HERBERT SOLOMON, Columbia University
LEONARD J. SAVAGE, University of Chicago
DAVID R. COX, University of Cambridge.
JOSEPH H. GREENBERG, Columbia University.

9:30 p.m. Informal Party. With American Statistical Association

FRIDAY, DECEMBER 30, 1955

9:00 a.m. Contributed Papers III

Chairman: S. N. ROY, University of North Carolina

Papers: 1. *Generalized Normalization Polynomials*, D. TEICHROEW, University of California at Los Angeles.
2. *Tables for Computing Bivariate Normal Probabilities*, DONALD B. OWEN, Sandia Corporation.
3. *Bounds and Approximations for Constants Used in Quality Control*, J. T. CHU, University of North Carolina and Case Institute of Technology.
4. *Four Streams of Traffic Converging on a Cross-Road*, BRIAN GLUSS, University of Chicago, introduced by FRED L. STRODTBECK, University of Chicago, (By title).
5. *Markov Processes Arising in Learning Models*, JOHN G. KEMENY, and J. L. SNELL, Dartmouth College.
6. *On a Decision Rule for Selecting a Group Containing the Population with the Largest Mean (Preliminary Report)*, R. C. BOSE and S. S. GUPTA, University of North Carolina, (By title).
7. *Recurrent Values of Sums of Independent Random Variables (Preliminary Report)*, LOUIS J. COTE and HENRY TEICHER, Purdue University.
8. *A Problem Involving the Distribution of Shadows (Preliminary Report)*, HERMAN CHERNOFF, Stanford University, and JOSEPH F. DALY, National Bureau of the Census.
9. *Note on Two-Stage Test Procedures*, S. G. GHURYE, Lucknow University, (By title).
10. *Some Properties of Generalized Sequential Probability Ratio Tests*, J. KEIFER, Cornell University, and LIONEL WEISS, University of Virginia.
11. *Sequential Decision Problems for a Class of Stochastic Processes. Testing Hypotheses (Preliminary Report)*, A. T. BHARUCHA-REID, University of California.

12. *Note on a Markov Chain with Matrix States and Some Applications*, A. T.
    BHARUCHA-REID, University of California, (By title).
13. *On the Comparison of Two Stochastic Epidemics*, A. T. BHARUCHA-REID,
    University of California, (By title).
14. *A Sequential Multiple Decision Procedure for Ranking Means of Normal
    Populations with a Common Unknown Variance (Preliminary Report)*,
    R. E. BECHHOFER, Cornell University, and M. SOBEL, Bell Telephone
    Laboratories, (By title).
15. *A Scale-Invariant Sequential Multiple Decision Procedure for Ranking
    Variances of Normal Populations (Preliminary Report)*, R. E. BECH-
    HOFER, Cornell University, and M. SOBEL, Bell Telephone Laboratories,
    (By title).
16. *Exact Probabilities in a Test for Markoff Dependency*, REED B. DAWSON,
    JR., Dept. of Defense.
17. *A Problem in Combinatory Analysis and its Applications to Probability
    Theory*, T. B. NARAYANA, Institut H. Poincare and McGill University,
    introduced by HAROLD HOTELLING.
18. *The Bayesian Inference Problem in Stochastic Systems*, MAX A. WOODBURY,
    George Washington University.

10:30 a.m. Methodology of Studying Motivation. With American Statistical Association

Chairman: FREDERICK MOSTELLER, Harvard University

Papers: 1. *Some Statistical Aspects of the Q Technique*, R. R. BAHADUR and D. L.
               WALLACE, University of Chicago.
            2. *Industrial Mobility of Labor as a Probability Process*, ISADORE BLUMEN,
               MARVIN KOGAN, and PHILIP McCARTHY, Cornell University.
Discussion: WILLIAM STEPHENSON, Greenwich, Connecticut, ANDREW BAGGALEY, Uni-
            versity of Wisconsin, LEO GOODMAN, University of Chicago

11:00 a.m. Unpublished Mathematical Tables of Interest to Statisticians

Chairman: DAN TEICHROEW, National Cash Register Company, Dayton, Ohio

Discussion Session

2:00 p.m. Contributed Papers IV

Chairman: EMANUEL PARZEN, Columbia University

Papers: 1. *Some Nonparametric Generalizations of Multivariate Analysis and Analysis
               of Variance*, S. N. ROY, University of North Carolina.
            2. *"No Interaction" in a Three-Way Table*, MARVIN A. KASTENBAUM, Uni-
               versity of North Carolina.
            3. *On Bartlett's Test of Complex Contingency Table Interaction*, SUJIT KUMAR
               MITRA, University of North Carolina, (By title).
            4. *A Theorem in Minimum Chi Square*, SUJIT KUMAR MITRA, University of
               North Carolina, (By title).
            5. *Sequential Estimation from a Finite Population*, HERBERT DAVID and
               INGRAM OLKIN, University of Chicago.
            6. *Further Remarks on Measures of Association for Cross-Classifications*,
               LEO A. GOODMAN, University of Chicago, and WILLIAM H. KRUSKAL,
               Universities of California and Chicago.

7. *Uniformly Consistent Sequences of Multiple-Decision Rules*, WILLIAM HALL, University of North Carolina, (By title).

8. *Some Hypergeometric Series Distributions Occurring in Birth-and-Death Processes at Equilibrium (Preliminary Report)*, WILLIAM HALL, University of North Carolina, (By title).

9. *Some General Aspects of Stochastic Approximations*, TOSIO KITAGAWA, Iowa State College.

10. *The Analysis of Incidence Rates under Multiple Classifications of the Population (Preliminary Report)*, WYMAN RICHARDSON, University of North Carolina.

11. *Estimation of Percentiles by Order Statistics*, A. E. SARHAN, University of North Carolina, (By title).

12. *On Renewal Theory, Counter Problems, and Quasi-Poisson Processes*, WALTER L. SMITH, University of North Carolina, (By title).

13. *On the Construction of Significance Tests on the Circle and the Sphere*, G. S. WATSON, The Australian National University, Canberra, A.C.T., Australia, (By title).

14. *Estimation of Individual Variations in an Unreplicated Two-Way Classification (Preliminary Report)*, THOMAS S. RUSSELL and RALPH A. BRADLEY, Virginia Polytechnic Institute, (By title).

15. *Empirical Bayes Estimation (Preliminary Report)*, M. V. JOHNS, JR. Columbia University.

A. BIRNBAUM
Associate Secretary

MINUTES OF THE ANNUAL BUSINESS MEETING, 1955

A business meeting was called to order at 6:15 p.m., December 28, 1955 in the Music Room of the Biltmore Hotel, New York City by President Henry Scheffé. Approximately 96 members were present. John Tukey reported on the activities of the Institute Committee on Mathematical Tables. An ad hoc committee to acquaint statisticians with the use of high speed calculators for statistical analysis was announced. R. L. Anderson is chairman of this committee. The Treasurer's report was presented and approved. The Secretary's report was presented and approved. The tellers were instructed to accept ballots from members who had not returned them by mail. The Editor's report was presented and accepted The President presented his report and turned over the chair to the new president, David Blackwell. President Blackwell thanked the outgoing president for his work for the Institute during the past year. A discussion of the advisability of holding Institute of Mathematical Statistics meetings in hotels was conducted as new business. The President was instructed to appoint a committee or to take such other action as he deems suitable to improve physical facilities if meetings are held in hotels.

The tellers announced the election of the following:

President Elect

Alexander M. Mood

Members of IMS Council for term 1955–1958

R. C. Bose   Oscar Kempthorne

Churchill Eisenhart   W. J. Youden

The meeting was adjourned at 7:15 p.m.

G. E. NICHOLSON, JR.,
Secretary

REPORT OF THE PRESIDENT OF THE INSTITUTE FOR 1955

The Institute of Mathematical Statistics has by tradition made the last task of the retiring President a review of the year's activity by our society. In 1955 we held in the United States two national and two regional meetings. Besides the present national meeting in New York another was held at Ann Arbor in August and September. An Eastern regional meeting was held at Chapel Hill in April, and a Western regional meeting at Berkeley in July during the time of the Third Berkeley Symposium on Mathematical Statistics and Probability. Because of the Ann Arbor meeting no Central regional meeting was held, but the Central Regional Program Committee worked on plans for a meeting in Chicago in April, 1956. The Program Committees for these meetings are listed with other committees in the appendix to this report; their chairmen, who bore so much of the responsibility, were Herbert Solomon for this meeting, Carl F. Kossack for the Ann Arbor meeting, G. E. Noether for the Chapel Hill meeting, and Herman Rubin for the Berkeley meeting; Theodore A. Bancroft was chairman of the Central Regional Program Committee. Our meetings and the *Annals of Mathematical Statistics* are enriched by Special Invited Papers; the chairman of the Committee that selects authors for these was Herman Chernoff. A new service to our profession may be offered at future meetings in the form of an employment register; the question has been studied by a committee under the chairmanship of Gerald J. Lieberman.

A new policy on meetings was adopted by the Council in September. A Committee to Explore the Desirability of Changing the Time of Winter meetings had been set up last year under the chairmanship of C. C. Craig in response to dissatisfaction expressed by some of our members. On the basis of a sample survey of our North American members the committee judged there was very strong support among our members in all parts of North America for all four of the following propositions: (1) There should be only one national meeting a year. (2) This should alternate between the meeting places of national meetings of the American Mathematical Society and the American Statistical Association. (3) There should be a strengthened program of regional meetings. (4) The preferred

time of meeting is in the first half of September. The Council adopted a tentative policy for the next three years embracing these four propositions.

Since abstracts heretofore have been published in connection with meetings, the new policy implying fewer and more irregularly timed meetings raised questions about separating the publication of abstracts from meetings. This problem has been considered by a committee under the chairmanship of Howard Levene. Their recommendations have been adopted by the Council and include publication of abstracts in every issue of the *Annals*, soon after their receipt.

This year our society organized its first Summer Statistical Institute. It was on the topic "Statistical inference in stochastic processes," was also held in Berkeley during the time of the Third Symposium, and was financed by the National Science Foundation. The idea of the Summer Institutes is to bring together a number of researchers on some specialty for an extended time, to interact with each other to the advancement of the specialty. The benefits hoped for are long range, there being no publications by the Summer Institute as such. David Blackwell was chairman of the Organizing Committee for the 1955 Summer Institute. We hope to run another in 1957.

Discussion of the 1955 Volume of the *Annals of Mathematical Statistics* and its outlook for 1956 I have left to the report by our Editor, T. E. Harris.

Another publishing activity of which we can be very proud is the preparation of the Wald Memorial Volume. This collection of papers by Abraham Wald was published under our sponsorship by the McGraw-Hill Book Company. Chairman of the Editorial Committee for the book was T. W. Anderson.

A further publishing activity has been under consideration by the Committee on Activities and Development under the chairmanship of T. W. Anderson: The University of Chicago is contemplating publication of a series of monographs on mathematical statistics, and our committee has studied possible forms of cooperation by the Institute.

You have heard about our growth in membership during the year and about our financial state in the reports by our Secretary, George E. Nicholson, Jr., and our Treasurer, Albert H. Bowker. Our Individual Memberships Committee under the chairmanship of Eugene W. Pike has been successfully active, campaigning this year especially for graduate students. We gathered no new Institutional Memberships; I suggest every member of the Institute ask himself whether or not he is in a good position to promote one of these, and then follow his conscience.

The former Advisory Committee on Statistical Computations was rejuvenated this year and renamed the IMS Committee on Mathematical Tables. This large committee has been very active under the chairmanship of John W. Tukey in exploring plans for new kinds of service to statisticians. The problems concern the kinds of tables needed, who might compute them, and forms of publication; you will continue to hear about them through this committee. An offshoot will be a new committee on fast machines.

Of especial interest to our members in government service and to those training statisticians is the work of the Committee on Professional Standards of Statis-

ticians in Government Service under the chairmanship of Bradford K. Kimball. The committee is drafting a proposed letter to state personnel boards from the committee, suggesting schedules of duties that can be performed by statisticians at various levels, and corresponding schedules of qualifications.

A Committee to Study the Possibilities of Closer Cooperation with Other Societies under the chairmanship of Samuel S. Wilks has made various specific suggestions, including some about more joint meetings, which will come before the new Council.

The two members who did the most for our society in the last three years, both in volume and importance of their work, retired from office last summer. They are Kenneth J. Arnold, our ex-Secretary-Treasurer, and Erich L. Lehmann, our ex-Editor. Their achievements were memorialized by resolutions passed at the Ann Arbor meeting, which are printed in this issue of the *Annals*. I might add that Arnold is in effect being replaced by three people, our Secretary, George E. Nicholson, Jr., our Treasurer, Albert H. Bowker, and our Program Coordinator, Leo Katz. Beginning this year the Council separated the position of Program Coordinator from that of Program Chairman of the Annual Meeting, with the intention of somewhat lightening the Secretary's burden: The Program Coordinator acts as a kind of secretary for meetings in general. The Council also decided to make the Program Coordinator an Associate Secretary, thus including him in the Council. Our new Editor, T. E. Harris, was the happy choice of a committee under the chairmanship of Samuel S. Wilks, which canvassed the possibilities, personal and institutional, for the Editorship. We are grateful to Michigan State University, the University of California, the University of North Carolina, Stanford University, and The RAND Corporation for encouraging Arnold, Lehmann, Nicholson, Bowker, and Harris to accept these offices, for providing space, and for other forms of assistance.

The Committee on Fellows, under the chairmanship of William G. Madow, in addition to its usual work prepared a report to the Council on standards for election to fellowship. I am pleased to announce that on nomination by this committee the Council has elected the following members to be Fellows:

> K. J. Arnold
> G. E. P. Box
> Gustav Elfving
> M. H. Quenouille
> Murray Rosenblatt
> Herbert Solomon

As the next Nominating Committee I have appointed the following members, who have accepted:

> Frederick Mosteller, Chairman
> Jerome Cornfield
> Harald Cramér
> David G. Kendall
> Brockway McMillan

I take this opportunity to express my thanks, personally and in behalf of our society, to all those who have faithfully served the Institute: the other officers, the Council members and committee members, our representatives, and the referees for the *Annals*. The referees are listed in the report of the Editor, the others in the following appendix.

HENRY SCHEFFÉ
President

December 28, 1955

Appendix. Committees of the Institute, 1955

I. The Council and Committees of the Council

  (a) *Elected members of the Council*

Term expires 1955	Term expires 1956
W. G. Cochran	T. W. Anderson, Jr.
Churchill Eisenhart	Joseph Berkson
Henry Scheffé	Z. W. Birnbaum
J. W. Tukey	David Blackwell
	W. G. Madow

Term expires 1957
R. L. Anderson
Leo Goodman
P. G. Hoel
L. J. Savage
Herbert Solomon

  (b) *Executive Committee*

    President: Henry Scheffé
    President-Elect: David Blackwell
    Secretary: K. J. Arnold (term expired June 30, 1955)
    George E. Nicholson, Jr., (term began July 1, 1955)
    Treasurer: K. J. Arnold (term expired March 31, 1955)
    Albert H. Bowker (term began April 1, 1955)
    Editor: E. L. Lehmann (terminated July 31, 1955)
    T. E. Harris (term began August 1, 1955)

  (c) *Committee on Fellows*

Term expires 1955	Term expires 1956
W. G. Madow, *Chairman*	David Blackwell
Edward Paulson	Howard Levene

Term expires 1957
M. S. Bartlett
L. J. Savage

  (d) *Associate Secretaries*
    Evelyn Fix
    W. H. Kruskal
    Lionel Weiss

  (e) *Associate Treasurer*
    E. S. Pearson

  (f) *Associate Editors*
    Z. W. Birnbaum (term began August 1, 1955)
    David Blackwell (term expired July 31, 1955)
    Herman Chernoff (term began August 1, 1955)
    H. E. Daniels (term expired January 1, 1956)
    W. J. Dixon (term began August 1, 1955)

J. L. Hodges, Jr. (term expired July 31, 1955)
J. M. Hammersley (term began January 1, 1956)
Wassily Hoeffding (term expired July 31, 1955)
W. G. Madow (term expired July 31, 1955)
L. J. Savage (term began August 1, 1955)
J. Wolfowitz

II. Editorial Committee
  (a) T. E. Harris, *Editor*
  (b) *Associate Editors*, listed immediately above
  (c) *Cooperating Members*

Z. W. Birnbaum	D. A. Darling	G. E. Noether
R. C. Bose	J. L. Doob	M. Peisakoff
G. E. P. Box	T. E. Harris	H. E. Robbins
Herman Chernoff	Paul G. Hoel	L. J. Savage
Kai Lai Chung	J. Kiefer	Charles M. Stein
D. R. Cox	William H. Kruskal	Lionel Weiss
J. F. Daly	Solomon Kullback	Max A. Woodbury

Appointed Committees

III. Program Committees
  (a) December Meeting—New York City

Herbert Solomon, *Chairman*	Donald A. S. Fraser
Milton V. Johns, Jr., Asst. Sec.	Oscar Kempthorne
Kenneth J. Arrow	Melvin P. Peisakoff
	S. N. Roy

  (b) September Meeting—Ann Arbor

Carl F. Kossack, *Chairman*	Horace W. Norton
W. H. Kruskal, Assoc. Sec.	Paul R. Rider
P. S. Dwyer, Asst. Sec.	Murray Rosenblatt
Henry B. Mann	

  (c) Eastern Region

G. E. Noether, *Chairman*	Ralph A. Bradley
Lionel Weiss, Assoc. Sec.	Glenn L. Burrows
Wassily Hoeffding, Asst. Sec.	J. Edward Jackson
Robert E. Bechhofer	

  (d) Central Region

Theodore A. Bancroft, *Chairman*	Donald A. Darling
Allen T. Craig	Henry Teicher

  (e) Western Region

Herman Rubin, *Chairman*	W. J. Dixon
Evelyn Fix, Assoc. Sec.	Theodore E. Harris
Charles H. Kraft, Asst. Sec.	Stanley W. Nash
Z. W. Birnbaum	

  (f) Program Coordinator: Leo Katz, (ex officio member of all Program Committees)
  (g) Special Invited Paper Committee

Herman Chernoff, *Chairman*	Frederick Mosteller
Theodore E. Harris	Max A. Woodbury
Wassily Hoeffding	E. L. Lehmann (ex officio)
	G. E. Nicholson, Jr. (ex officio)

IV. Promotional Committees
  (a) Individual Memberships

Eugene W. Pike, *Chairman*	James L. Dolby
W. D. Baten	Harry M. Hughes
Carl A. Bennett	

   (b) Academic Institutional Memberships
      Boyd Harshbarger, *Chairman*   Herbert Robbins
      Gerald J. Lieberman   Murray Rosenblatt
   (c) Non-Academic Institutional Memberships
      Brockway McMillan, *Chairman*   F. W. Dresch
      Cuthbert Daniel   Alexander M. Mood

V. Other Committees
   (a) Nominating Committee
      (Appointed by 1954 President E. G. Olds)
      W. J. Dixon, *Chairman*   H. B. Mann
      M. A. Girshick   H. Nisselson
      M. G. Kendall   A. W. Tucker
   (b) Committee on Mathematical Tables
      John W. Tukey, *Chairman*   W. J. Dixon
      Albert H. Bowker, *Vice-Chairman*   J. L. Hodges, Jr.
      D. Teichroew, *Secretary*   William Kruskal
      R. L. Anderson   H. O. Hartley
      Robert E. Bechhofer   J. W. Hopkins
      C. I. Bliss   Jack Moshman
                                   Max A. Woodbury

   (c) Committee on Activities and Development
      T. W. Anderson, *Chairman*   William Kruskal
      Joseph Berkson   Samuel S. Wilks
      Albert H. Bowker
   (d) Committee to Nominate a New Editor
      Samuel S. Wilks, *Chairman*   T. W. Anderson
      Mina Rees
   (e) Committee to Explore the Desirability of Changing Time of Winter Meetings
      C. C. Craig, *Chairman*   Carl F. Kossack
      R. L. Anderson   R. B. Murphy
      J. L. Hodges, Jr.
   (f) Committee on Professional Standards of Statisticians in Government Service
      B. F. Kimball, *Chairman*   A. S. Householder
      Robert W. Burgess   Joseph Lev
      Besse B. Day   Herbert Marshall
      Churchill Eisenhart   Robert E. Patton
      G. M. Harrington   John E. Walsh
   (g) Committee to Study the Possibilities of Closer Cooperation with Other Societies
      Samuel S. Wilks, *Chairman*   Edwin G. Olds
      William G. Cochran
   (h) Committee on Committee Procedures
      Horace W. Norton, *Chairman*   Morris H. Hansen
      K. J. Arnold   G. E. Nicholson, Jr. (ex officio)
      Leo A. Goodman   Frederick F. Stephan
   (i) Committee to Consider the Feasibility of Keeping an Employment Register at
      IMS Meetings
      Gerald J. Lieberman, *Chairman*   I. R. Savage
      David Blackwell
   (j) Committee to Study the Possibilities of Arranging a U. S. Visit by Russian
      Probabilists
      David Blackwell, *Chairman*   Jerzy Neyman
      J. L. Doob   Herbert Robbins
      Eugene Lukacs

(k) Organizing Committee for Summer Statistical Institute in 1955
 David Blackwell, *Chairman*   Herbert Robbins
 T. E. Harris
(l) Planning Committee for a Summer Statistical Institute in 1956
 Herbert Robbins, *Chairman*   Milton Sobel
 Jerzy Neyman   John W. Tukey
 L. J. Savage
(m) Committee to Consider Desirability of a Summer Statistical Institute in 1956
 Frederick Mosteller, *Chairman*   John W. Tukey
 Cuthbert Daniel   D. F. Votaw, Jr.
 Wassily Hoeffding   William J. Youden
 L. J. Savage
(n) Editorial Committee for the Wald Memorial Volume
 T. W. Anderson, *Chairman*   E. L. Lehmann
 Harald Cramér   Alexander M. Mood
 Harold A. Freeman   Charles M. Stein
 J. L. Hodges, Jr.
(o) Committee to Consider Policy on Publishing Abstracts
 Howard Levene, *Chairman*   Wassily Hoeffding
 T. W. Anderson   Jack C. Kiefer
(p) Finance Committee
 Mortimer Spiegelman, *Chairman*   A. H. Bowker (ex officio)
 K. J. Arnold (ex officio)   John E. Walsh
(q) Advisory Committee on Physical Facilities for Meetings
 Z. W. Birnbaum, *Chairman*   George E. Nicholson, Jr.
 Leo Katz (Program Coordinator)
(r) Committee on Exchanges
 Paul S. Dwyer, *Chairman*   G. E. Nicholson, Jr. (ex officio)
 K. J. Arnold (ex officio)   Albert H. Bowker (ex officio)
 E. L. Lehmann (ex officio)   T. E. Harris (ex officio)
(s) Committee to Re-examine the Constitution and By-Laws
 William G. Cochran, *Chairman*   Tjalling C. Koopmans
 T. W. Anderson   Henry Scheffé (ex officio)
 Arnold Court   Samuel S. Wilks
(t) Committee to Consider the Format of the *Annals*
 Paul G. Hoel, *Chairman*   Alexander M. Mood
 George W. Brown

Representatives of the Institute for 1955

To the American Association for the Advancement of Science
 Harold Hotelling
To the National Research Council, Division of Mathematics
 Samuel S. Wilks
To the Policy Committee for Mathematics
 Joseph F. Daly
To the Advisory Committee of American Standards Association concerning ISO/TC 69, Statistical Treatment of Series of Observations
 Howard Raiffa
To the Inter-Society Committee on the Mathematical Training of Social Scientists
 W. G. Madow, T. W. Anderson

RESOLUTIONS OF THE INSTITUTE

The following resolutions were voted at the Ann Arbor meeting of the Institute of Mathematical Statistics, September 1, 1955.

1) WHEREAS, Kenneth J. Arnold has ably and faithfully served the Institute of Mathematical Statistics in the dual capacity of Secretary-Treasurer from July 1952 through June 1955, and has now retired from this position; and

WHEREAS, in performing the duties of this office Professor Arnold has made great personal sacrifices; and

WHEREAS, besides handling the duties of Treasurer with diligence and foresight, and performing the regular Secretarial duties with competence, tact, and sympathetic consideration for the positions of others, Professor Arnold has made a signal contribution to the efficient operation of the Institute by preparing a *Codification of Actions of the Council* and a *Manual for the Guidance of Officers, Standing Committees, and Representatives* of the Institute: Therefore be it

RESOLVED, that Members of the Institute of Mathematical Statistics at this Sixty-seventh Meeting record their gratitude and appreciation of the high-efficiency, faithfulness, good will, and vision with which Professor Arnold discharged the duties of Secretary-Treasurer; and be it

RESOLVED further, that the President of the Institute of Mathematical Statistics be instructed to forward a copy of this Resolution to John A. Hannah, LL.D., President of the Michigan State University of Agriculture, and Applied Science.

2) RESOLVED, that the membership of the Institute of Mathematical Statistics expresses its thanks to the retiring editor, Erich L. Lehmann, for his able discharge of the difficult and time-consuming duties of his office, and for the continuing development of the *Annals of Mathematical Statistics* under his leadership.

RESOLVED further, that the President of the Institute of Mathematical Statistics be instructed to forward a copy of this Resolution to Dr. Clark Kerr, Chancellor of the University of California at Berkeley.

REPORT OF THE SECRETARY OF THE INSTITUTE FOR 1955

During 1955 the Institute held its sixty-fifth through sixty-eighth meetings. Business meetings were held during the sixty-seventh (seventeenth summer) meeting and the sixty-eighth (eighteenth annual) meeting. The Program Committees are to be congratulated on the excellent programs which have been arranged under the immediate direction of T. A. Bancroft, Carl F. Kossack, G. E. Noether, Herman Rubin and Herbert Solomon with the overall guidance of our

Program Coordinator, Leo Katz. The Assistant Secretaries, P. S. Dwyer, Wassily Hoeffding, Milton V. Johns, Jr., and Charles H. Kraft, are to be congratulated on the physical arrangements, and the Associate Secretaries, Allan Birnbaum, Evelyn Fix, and W. H. Kruskal, on their performance of the duties of the Secretary with respect to these meetings.

In November a supplement to the directory of October 15, 1954, including changes of address and new members as of October 15, 1955, was issued.

G. E. NICHOLSON, JR.,
Secretary

December 28, 1955

REPORT OF THE EDITOR OF THE ANNALS FOR 1955

The 1955 volume of the *Annals* contained 76 papers, of which 16 were notes. This brought the total number of pages, counting miscellaneous material, to 785, a decrease of 41 pages below the previous year. The number of papers submitted in the year ending November 1, 1955, was the same as the number submitted in the preceding twelve-month period. The backlog of accepted manuscripts has grown and now amounts to about one and one-half issues, with some possibility of further growth. It therefore seems desirable, in spite of the rise of printing cost rates in 1955, to use about 900 pages in 1956.

In accordance with a Council decision, the *Annals* will cease to be copyrighted in 1956. Beginning with the March or June issues, names of previous Editors will be listed on the front inside cover, and certain other changes in the inside cover format may be made.

The Editor wishes to thank the previous Editor, E. L. Lehmann, for his generous cooperation, and to acknowledge gratefully the work of David Blackwell, H. E. Daniels, J. L. Hodges, Jr., Wassily Hoeffding, W. G. Madow, and J. Wolfowitz who have continued to act as Associate Editors on manuscripts submitted during the previous term.

Many thanks are due to the Cooperating Members, old and new, and to the following people, (other than Cooperating Members) for very generous refereeing assistance, with apologies to any who are inadvertently omitted: R. L. Anderson, T. W. Anderson, R. R. Bahadur, G. Baxter, R. Bechhofer, A. Birnbaum, J. Blum, D. Chapman, W. Conner, D. R. Cox, G. B. Dantzig, M. Donsker, M. Dwass, C. Eisenhart, B. Epstein, T. Ferguson, Evelyn Fix, D. Fraser, I. J. Good, L. Goodman, H. Kahn, E. Kaplan, O. Kempthorne, D. G. Kendall, L. LeCam, J. Lieblein, E. Lukacs, H. B. Mann, A. Marshall, B. McMillan, E. Paulson, R. L. Plackett, E. S. Pearson, J. Putter, D. Ray, J. Riordan, Joan R. Rosenblatt, M. Rosenblatt, H. Rubin, H. Scheffé, M. Sobel, F. Spitzer, D. Truax, H. Tucker, J. Tukey, A. M. Walker, D. Wishart.

The Editor is especially indebted to Patricia Rice for secretarial work, and to

Berniece Johnson, Dorothy Stewart, and Helena Williams for carrying out the editorial work.

<div align="right">

T. E. HARRIS
Editor

</div>

December 28, 1955

PUBLICATIONS RECEIVED

French Bibliographical Digest (Part I: Pure Mathematics), Series 2, No. 14, July, 1955, The Cultural Division of the French Embassy, New York, 128 pp. (Free of charge upon request).

KLEIN, L. R. AND GOLDBERGER, A. S., *An Econometric Model of the United States 1929–1952*, North-Holland Publishing Co., Amsterdam, 1955, xv + 165 pp., $4.50.

Mathematical Models of Human Behavior (Proceedings of a Symposium), 1955, Dunlap and Associates, Inc., Stamford, Connecticut, vii + 103 pp.

MILLER, HERMAN P., *Income of the American People*, John Wiley and Sons, Inc., New York, 1955, 206 pp., $5.50.