

THE  
1969  
ANNUAL  
REPORT

INSTITUTE  
OF  
BEHAVIORAL  
RESEARCH

THE ORGANIZATION

The Institute was founded in 1962 to carry out a diverse, interdisciplinary program of research in the behavioral sciences. Closely integrated with the academic programs of the University, particularly in psychology, research and graduate training are considered a joint enterprise and the participation of graduate students is encouraged in all research programs.

Organizationally, the Institute reports to the Vice Chancellor for Advanced Studies and Research, but the policy of joint appointments of staff members in academic departments has been encouraged. The participation of regular faculty members in ongoing projects and in interdisciplinary teams has added to the posture of the organization to undertake a wide range of studies.

## THE INSTITUTE PROGRAM

The principal function of the Institute is basic and applied research in the behavioral sciences. However, the Institute also sponsors training activities, including the Research Training Program in Psychology related to Heart Disease, Stroke, and Cancer, and the TCU Management Seminar.

The areas of research pursued during the past few years reflect staff interests in both basic and applied scientific research on problems in personality, social behavior, aerospace psychology, personnel selection and training, health-related problems including illness behavior and narcotic addiction, mental health, psychopharmacology, management and organizational behavior, human ecology, and multivariate statistical analysis.

## THE STAFF

Full time staff with faculty rank	8
Other full time research staff	5
Consultants and part-time	
regular staff	7
Research fellows	19
Research assistants	12
Supporting staff	13
Undergraduate assistants	<u>35</u>
Total personnel	99

## THE INSTITUTE FACILITIES

Buildings. The Institute is located in two buildings on the East Campus which together provide approximately 8000 square feet in office, laboratory, library, and administrative space. The main building is a handsome Armco Steel, one-story structure completed in 1968, housing offices of the director, administrative staff, Multivariate Behavioral Research, research staff members, programming staff, and the IBR Technical Library. The Annex is a refurbished World War II, frame building, scheduled to be supplemented by an Armco Steel building similar to the main building, in 1971. The Annex houses research staff, graduate research fellows, the Psychophysiology Laboratory, and secretarial offices. Document storage facilities are maintained in both buildings.

Library. The IBR Technical Library has an extensive collection of over 3000 reference and text books in psychology and behavioral sciences, 40 journals, many complete back to the 1930's, Air Force, Army, Navy, NASA, and other Technical Report Series, and reprints. This library is used primarily by IBR staff and graduate students, but is available to the University community.

Psychophysiology Laboratory. This specially equipped laboratory is located in the Annex (Building 4). It includes an isolated, electrically shielded, sound-proof test room adjacent to a fully equipped control room. The control room has visual access to the test room by way of a one-way mirror. The test room is equipped with a modified dentist-type chair, a projection screen, a dual-channel model oscilloscope for presentation of visual displays, and a complete interface system for connection of the various physiological measurement transducers. The control room contains a completely equipped E & M Physiograph, with a six-channel capability. In addition to the physiograph, the control area contains a unique interface system that converts the physiograph pen voltages to a standard  $\pm 10$  volt format, and a Raytheon A/D converter and multiplexer system that scans up to 16 analog values every 1/20th of a second, converts these to IBM 360-50 compatible code, and then outputs them to a peripheral Equipment Corporation 800 BPI, 9 track incremental digital recorder. These data tapes can then be processed directly by the IBM 360-50 digital computer. Thus, a complete, computer-processable record is kept of all relevant variables within any particular study. In addition to this data acquisition system, the control room contains several auxiliary items of equipment. Included are 10 operational amplifiers (Philbrick-Nexus model RP analog manifolds), a relay-type logic network, various power supplies, a tone generator, a four-track audio tape recorder, oscilloscopes, and Esterline-Angus Milliampere Recorder, and a Sanborn 151 single-channel recorder.

Data Processing. The Institute has equipment for key punching and verifying program and data card decks. Computations are carried out using IBM 1800, 1401, and 1620 computers on campus, the IBM 360-50 computer at the University of Texas at Dallas, and other off-campus equipment, as needed.

The extensive and well-documented IBR Program Library is maintained in the main building and is available to research workers without restriction. The Program Library is a collection of statistical programs which complements the program library files maintained by the TCU Computer Center. The programs in the library can be easily adapted to meet most project requirements.

## PUBLICATIONS

IBR Report Series. The Institute maintains an IBR Technical Report Series, based on research completed under grants, contracts, and independent study by staff members and students. These are distributed to a regular mailing list and in most cases are condensed for more formal publication. A number of books published by the TCU Press and by IBR are also distributed through the Institute..

Multivariate Behavioral Research. This quarterly journal, published by the Society for Multivariate Experimental Psychology through the TCU Press, was founded in 1966. Volume 4, 1969 was distributed to over 700 subscribers in the United States and over 40 foreign countries. The offices of the Managing Editor and Business Manager are housed at IBR.

# 1969 RESEARCH AND TRAINING BUDGET

	Awards	Expenditures
Rehabilitation Services Administration. Research Training Grant RH-2	\$472,806	\$108,320
U.S. Office of Education. Critical Appraisal of Research in the Personality-Motivation-Emotion Domain. No. OEG-0-70-2665(508)	26,848	3,993
National Center for Health Statistics. Development of Objective Scales for the TAT used in the National Health Examination Survey, Contract No. PH-109-66-75	96,057	13,539
National Institute for Mental Health. Taxonomic Study of Narcotic Addiction Treatment Programs. Grant No. MH-14230-01	189,970	69,368
National Institute for Mental Health. Development of a Narcotic Addict Reporting System, Contract No. 42-69-6	37,623	28,932
National Aeronautics and Space Administration. Social Structure and Group Behavior in Extended Space Missions. Grant No. NGR 44-009-008	87,781	24,590
Office of Naval Research. Situational Factors Accounting for Behavior Variance, Contract No. Nonr 3436(00)	61,850	6,417
TCU Research Foundation. Biomedical Research Support	17,758	17,758
American Airlines. Personnel Research	30,825	11,447
Eastern Airlines Training Research	6,000	3,000
Selection Research	58,439	26,246
Humble Oil and Refining Company	16,522	4,545

## PROGRAM DESCRIPTIONS

### Research Training in Medical Psychology

Rehabilitation Services Administration Grant No. RH-2

June 1, 1966 - continuing (\$472,806)

Program Director, S.B. Sells, Ph.D.

Program Coordinator, R.G. Demaree, Ph.D.

Program Staff Associate, G.W. Joe, Ed.D.

This five-year program to train research psychologists in behavioral research related to illness and illness behavior has been supported under a broad government policy related to strategies for coping with the major "killers", heart disease, stroke, and cancer. This Program is conducted jointly with the Department of Psychology and has had ten predoctoral fellows enrolled, seven of whom are scheduled to receive their Ph.D. degrees in 1970.

A major study completed under this grant during 1969 involved the evaluation of the stroke rehabilitation of the San Antonio Rehabilitation Center. Other studies are listed in the bibliography.

### Critical Appraisal of Research in the Personality-

Emotion-Motivation Domain

Grant No. OEG-9-70-2655(508)

December 4, 1968 - continuing (\$26,848)

Principal Investigator, S.B. Sells, Ph.D.

Research Fellow, Sam H. Lane III

The general purpose of this study is to accomplish a critical review of research needs related to the concepts of personality, emotion, and motivation, which identify a domain of major importance to education and human affairs. Currently, the diversity of theoretical orientations, terminology, conceptualization, methods and goals of investigation, theorizing, and application are confusing to the critical student.

The strategy adopted was that of assigning small groups of outstanding contributors, who were currently working in fairly specific problem areas, to carry out the following tasks in their respective areas: (1) specify needed research and research approaches, and



(2) describe specific theoretical and methodological problems related to that research. The emphasis is on new knowledge that is needed to clarify present information or to fill in hiatuses in present knowledge. The major effort of this project during 1969 was completion of a planning study and development of plans for the evaluative effort.

Development of Objective Scoring Scales for the  
Thematic Apperception Test Included in the  
Health Examination Survey, Cycles II and III  
of the National Health Survey

National Center for Health Statistics PH-109-66-75  
July 1967 - continuing (\$96,057)  
Principal Investigator, S.B. Sells, Ph.D.  
Research Associate, Thomas S. Brown

A five card, individually administered, tape recorded version of the Thematic Apperception Test was included, along with the Vocabulary and Block Design subtests of the Wechsler Intelligence Scale for Children, the Reading and Arithmetic Subtests of the Wide Range Achievement Test, and the Draw a Person Test, in the psychological test portion of Cycles II and III of the Health Examination Survey, involving national probability samples of over 7000 subjects. Cycle II included children in the 6 to 11 age range and Cycle III, youth, 12 to 18. Under a previous contract study, a series of age-related language scales was developed for a Cycle II sample. The present contract involved a replication of the original study on a carefully selected national probability sample drawn from the total survey sample and verified the content and scaling of the language scales. It also produced a factor-analytically derived affective scale, but this was not correlated with independent adjustment criteria. Further related research is in progress on the adolescent sample of Cycle III.



Taxonomic Study of Narcotic Addict Treatment Programs

NIMH Grant No. MH 14230-01

June 15, 1967 - August 31, 1970 (\$189,974)

Principal Investigator, S.B. Sells, Ph.D.

Research Associates, C.W. Harrison, Ph.D.,

Harry Wexler, M.A., Deena Watson, M.A.,

Henry Kaplowitz, M.A.

This study was undertaken in June, 1967, to accomplish two major goals: 1) to compile comprehensive information on the entire effort of public and private organizations in the United States related to the treatment of narcotic addiction, and 2) to create a taxonomy of narcotic addiction treatment organizations as a basis for theory development and research design.

The field survey was accomplished by mail and telephone search for appropriate agencies to include in the survey and by staff visits to program sites.

Over 120 narcotic addiction treatment programs were visited by professional staff members and consultants. Information on several hundred additional agencies was obtained by correspondence. The field interviews with program directors, professionals, and ex-addict staff members focused on each agency's (1) organizational philosophy and history; (2) legislative authority, auspices, and administration; (3) location, physical facilities, staffing, and financial support; (4) beliefs regarding causes of addiction and addicts' needs; (5) numbers of addicts in the program and their demographic characteristics; (6) treatment services, emphasis, and rationale; (7) admission criteria and social and legal constraints; (8) relationships with cooperating agencies and provisions for addicts' re-entry into the community; and (9) record keeping procedures, as well as research and program evaluation activities.

Field reports were edited and approved by agency directors in all cases. Profile summaries and narrative descriptions were prepared for inclusion in a national directory of treatment programs. In all, data were

gathered for 373 narcotic addiction treatment, referral, rehabilitation, and information agencies, as well as four major governmental systems administering treatment programs.

The taxonomic study was planned to be completed in 1970. Data for hierarchical cluster analysis were prepared from the agency profiles included in the Directory.

#### Narcotic Addict Reporting System

NIMH Contract No. 42-69-6

December 2, 1968 - continuing (\$37,623)

Principal Investigator, S.B. Sells, Ph.D.

Program Director and Chief Programmer, Anne Curby, B.A.

Research Consultant, George W. Joe, Ed.D.

This project involves the design, maintenance, and research analysis of a computerized data bank on the treatment of narcotic addiction for the purpose of evaluating various treatment approaches. The reporting system involves a comprehensive admission report, a case history on every patient admitted to treatment, and bimonthly status evaluation reports that continue until a patient terminates. Started in 1968 with six agency programs funded by NIMH under NARA, Title IV, the reporting system was extended in 1969 to ten additional agencies funded by NIMH under the Community Mental Health Services Act. The IBR staff monitors reports received, updates the computer file with each increment of admission and status evaluation forms, and carries out evaluative research related to the outcomes of various treatment approaches in relation to a wide variety of social, psychological and medical information available in the file. Major emphasis during 1969 has been on the establishment of the file and development of reliable reporting procedures by the participating organizations. In preparation for the analytic phases, plans and computer programs for data analysis have been developed and tested.

## Social Structure and Group Behavior in Extended

### Duration Space Missions

NASA Grant No. NGR 44-009-008

June 1, 1965 - continuing (\$87,781)

Principal Investigator, S.B. Sells, Ph.D.

Research Associate, James F. Rawls, Ph.D.

Research Fellows, Ronald Trego and Charles McGaffey

The broad research objectives have focused on environmental, organizational, interpersonal, and individual factors related to the effectiveness of space crews in extended-duration missions, such as space stations, interplanetary missions (Mars), and other situations involving group behavior under prolonged isolation and confinement. Research completed and in progress include the following: development and implementation of a social system model for the extended-duration space ship and crew, laboratory studies of the nature and correlates of personal space, historical studies of naval problems and solutions related to shipboard effects of prolonged isolation and confinement, reviews of isolation and confinement, and consultation with other NASA contractors on design and applications problems. The Principal Investigator has been a member of the National Academy of Sciences Committee on Long Duration Space Missions and was chairman of a panel to advise on crew selection for the McDonnell-Douglas 90-day simulation mission.

## Situational Factors Accounting for Behavior Variance

Contract No. Nonr 3436(00)

February 6, 1961 - December 31, 1969 (\$61,850)

Principal Investigator, S.B. Sells, Ph.D.

Initiated in 1961 and concluded in 1969, this program supported a series of pioneering studies in environmental and ecological psychology. The principal focus was on the identification and quantification of environmental and situational variables that account for behavior variance irrespective of the characteristics or viewpoint of the participating individuals. A symposium volume, Stimulus Determinants of Behavior (S.B. Sells, Editor, Ronald Press, 1964) outlined the program that followed numerous intriguing and productive leads, including taxonomic studies of

environmental factors, studies of environmental stress, studies of organizational characteristics and organizational climate, studies of effects of weather on individual behavior and on police incidents in a large city, and studies of isolation and confinement. Several papers resulting from this research program have been reprinted in anthologies and books of readings in psychology.

Airline Personnel and Organizational Research  
January 1, 1965 - continuing (\$95,584)  
Principal Investigator, S.B. Sells, Ph.D.  
Principal Research Assistant, Lee B. Murdy, B.A.

For the past five years, the IBR has enjoyed a close research and consulting relationship with a number of United States airline companies, principally American Airlines and Eastern Airlines. The research has involved principally the development and validation of personnel selection batteries for a wide range of airline personnel (pilots, stewardesses, mechanics, agents, unskilled and semiskilled employees, and others). In addition surveys of organizational climate, attitude surveys, and surveys of training needs have been carried out. Current projects involve most of the areas mentioned.

Management Personnel Prediction Study  
Humble Oil and Refining Company  
August 1, 1968 - continuing (\$16,522)  
Principal Investigator, Robert G. Demaree, Ph.D.  
Research Associate, George W. Joe, Ed.D.

Analyses have been conducted under this project of the attainments of technical-professional employees. Success-related variables have been compared among different groups of employees, as well as from one year to another. These studies are being conducted in support of the Personnel Research Group.

A Taxonomic Study of Personality  
O.E. 5-10-296  
U.S. Office of Education  
March 1, 1965 - March 31, 1968 (\$40,031)  
Principal Investigator, S.B. Sells, Ph.D.  
Co-Investigator, R.G. Demaree  
Research Assistant, Donald P. Will, Jr.

The purpose of this study was principally to clarify the relationship of the personality factor systems developed by J.P. Guilford and R.B. Cattell by incorporating markers of both systems in a conjoint matrix and analyzing the factor structures of the respective items. With the collaboration of both principals, an inventory of 600 items, representing 15 Guilford factors and 17 Cattell factors, arranged in uniform format and scorable by binary digits, was assembled and administered to approximately 2500 airmen in basic training at Lackland AFB, Texas.

The entire matrix of 600 items was factored (PFA) and rotations by Varimax and Promax methods were performed on matrices of 15 and 18 factors. Each 300 item source matrix was similarly factored, 12 and 11 factors respectively similarly rotated, and factor loadings of each "other" matrix estimated by the Dwyer extension. Each matrix was then residualized by removing the variance attributed to the "other" item loadings, with rotations of 8 and 7 extracted factors, respectively.

Most of the factors derived were found to be source-factor-heterogeneous, but content-homogeneous, the former reflecting the fact that neither complete system had previously been factored at the item level. Blind comparison of 142 extracted factors from all analyses by congruence coefficients and cluster correlation coefficients with source factors revealed 1) that Promax results were very similar to those obtained by Varimax, but were preferred principally because they assigned smaller proportions of variance to the earlier, large factors; 2) for the Total matrix, the first 12 factors of the 15 and 18 factor rotations were closely matched; the 18-factor results were selected for interpretation; 3) seven of the 18 factors were considered inadequately established in terms of both variances and marker items; 4) of the 11 factors retained, five were judged to be common



to both source systems, three to be principally Guilford factors, and the remaining three to be principally Cattell factors.

The technical report is available from IBR and as a USOE-ERIC reprint. The first of a series of papers summarizing the research is in press in Multivariate Behavioral Research. Additional technical reports are in preparation.

Psychopharmacology Research

September 1, 1969 - December 31, 1969 (\$5,586)

Principal Investigators, Malcolm D. Arnoult, Ph.D. and S.B. Sells, Ph.D.

The IBR has carried out studies during the past year to evaluate effects of experimental drugs on behavior. Professors Malcolm D. Arnoult, chairman of the Department of Psychology and S.B. Sells have collaborated in research on an experimental psychoactive drug prepared by the Sterling-Winthrop Research Institute of Rensselaer, New York. Further studies of this nature are contemplated. All projects in this area are reviewed by the University Committee on Safeguards in Human Research and principles adopted by the American Psychological Association and the National Institutes of Health are carefully followed. In addition, medical colleagues in the community participate as consultants and collaborators.



## STAFF ROSTER

### Full-time Staff.

S.B. Sells, Ph.D., Research Professor and Director  
R.G. Demaree, Ph.D., Research Scientist, Professor of Psychology  
George W. Joe, Ed.D., Associate Research Scientist, Assistant Professor  
Thomas Brown, M.A., Assistant Research Scientist  
Anne Curby, B.A., Assistant Research Scientist  
Deena Watson, M.A., Assistant Research Scientist  
C.W. Harrison, Ph.D., Associate Research Scientist, Assistant Professor (Terminated, August, 1969)<sup>1</sup>  
A.W. Johnson, Ph.D., Associate Research Scientist, Assistant Professor (Terminated, August, 1969)<sup>2</sup>  
Donna J. Rawls, Ph.D., Associate Research Scientist, Assistant Professor (Terminated, August, 1969)<sup>3</sup>  
James R. Rawls, Ph.D., Associate Research Scientist, Assistant Professor (Terminated, August, 1969)<sup>3</sup>  
Hugh V. Angle, Ph.D., Associate Research Scientist (Terminated July, 1969)<sup>4</sup>  
Harry Wexler, M.A., Associate Research Scientist, Assistant Professor (Terminated, October, 1969)<sup>5</sup>  
Henry Kaplowitz, M.A., Assistant Research Scientist (Terminated January 1, 1970)

### Consultants and Part-time Staff.

Carl Anderson, Ph.D., Consultant  
C. Gunnar Blomqvist, Ph.D., Consultant  
Paul Minton, Ph.D., Consultant  
Carl Peters, B.A., Consultant  
Helen F. Sells, A.B., Research Editor and Business Manager of  
Multivariate Behavioral Research  
Virginia Vollmer, Ph.D., Consultant  
James Wicker, M.A., Consultant

### Research Fellows.

Lester Barnett, Research Fellow (RSA)  
Ludy T. Benjamin, Research Fellow (RSA)  
Gary E. Brown, Research Fellow (RSA)

<sup>1</sup> now at Northern Arizona University, Flagstaff, Arizona

<sup>2</sup> now at V.A. Hospital, Danville, Illinois

<sup>3</sup> now at Vanderbilt University, Nashville, Tennessee

<sup>4</sup> now at University of Missouri School of Medicine, St. Louis, Missouri

<sup>5</sup> now at Phoenix House, New York, New York

Edwin Cornelius, Research Fellow (EAL)  
Larry R. Jernigan, Research Fellow (RSA)  
Sam H. Lane, Research Fellow (RSA)  
Dorothy Lothar, Research Fellow (NIMH)  
Lee B. Murdy, Research Fellow (EAL)  
Charles N. McGaffey, Research Fellow (NASA)  
Allan F. Neil, Research Fellow (RSA)  
Ronald Neman, Research Fellow (RSA)  
Henry Orloff, Research Fellow (RSA)  
John Porter, University Fellow  
Dennis D. Simpson, Research Fellow (RSA)  
Ronald Trego, Research Fellow (NASA)  
Art Woodward, Graduate Assistant (Humble)  
Charles T. Bisbee, NDEA Fellow (Terminated, August, 1969)  
Sarah C. Marlow, Research Fellow (NIMH) (Terminated, June, 1969)  
Henry Tjahjono, University Fellow (Terminated, August, 1969)

Research Assistants.

Sandra Barnett, HSM  
Jerry Cornelius, AAL, EAL  
Candy Greer, B.A., NIMH  
Garland Jones, Computer Coordinator  
May D. McReynolds, A.B., AAL, EAL  
Janice Neman, A.B., HSM, NASA  
Ann Thom, A.B., NIMH  
Donald P. Will, Jr., A.B., Senior Programmer  
Hideo Asato, M.A., Biomedical Project (Terminated, June, 1969)  
James Budros, B.B.A., (Terminated, June, 1969)  
James V. Kuykendall (Terminated, November, 1969)  
Joyce Munro, NIMH, PH (Terminated, November, 1969)  
Chris L. Murdy, B.S., NIMH, PH (Terminated, August, 1969)

Supporting Staff.

Jan Fox, IBR Secretary  
Mary Ann Harris, Programmer  
Joy Heiliger, Secretary  
Virginia Lederer, Secretary  
Mary Louise McQuade, Secretary  
Robin McReynolds, Secretary  
Becky Millican, Secretary  
Jan Bretell, Key punch Operator  
Mickey Kleinman, IBR Secretary (Terminated, September, 1969)

Sandre Erwin, Typist (Terminated, May, 1969)  
Patricia Fisher, Secretary (Terminated, December, 1969)  
Sally F. Wilson, IBR Secretary (Terminated, June, 1969)  
Gail Anderson, Programmer (Terminated, February, 1969)

Undergraduate Assistants.

Maelynn Baird, Typist  
Susan Beard, Library Clerk  
Patricia Bollinger, Typist  
Dixie Lee Cody, Typist  
Sandra Cotton, Typist  
Dee Ann Demaree, Key punch Operator

Marta Demaree, Library Clerk  
Martha Digby, Secretary  
Vicki Dublin, Statistics Clerk  
Susan Farmer, Statistics Clerk  
Susan Gargiulo, Statistics Clerk  
Stephanie Hall, Typist

Cheryl Holsinger, Typist  
Sandy Lasley, Accounts Secretary  
Frederick Maddux, Statistics Clerk  
Kenny McQuade, Clerk  
Barbara Miles, Secretary  
Daniel Miller, Programmer

Ed Millican, Clerk  
David Mueller, Programmer  
Cynthia Mullen, Statistics Clerk  
John Norman, Statistics Clerk  
Richard Norton, Programmer

Renee Paul, Key punch Operator  
Deborah Raines, Clerk  
John Santosa, Library Clerk  
Cheryl Shackleford, Statistics Clerk  
Susan Stallard, Key punch Operator

Cheryl R. Stevenson, Key punch Operator  
Peggy Tharp, Typist  
Lucy Turner, Typist  
Susan Turpin, Clerk  
Jo Ann Wier, Statistics Clerk

## PUBLICATIONS AND REPORTS 1969

### BOOKS:

Sells, S.B. The Definition and Measurement of Mental Health. Washington, D.C.: National Center for Health Statistics, Health Services and Mental Health Administration, PHS, 1968, 280 p., \$3.00. (Published by the U.S. Government Printing Office in November, 1969.)

### CONTRIBUTIONS TO BOOKS:

Sells, S.B. Computer applications in the behavioral sciences. In Lindsey, J.F. and Townsend, J.C. (Eds.) Medical Research and Computer Applications in Manned Space Flight. Washington, D.C.: National Aeronautics and Space Administration, in press.

Sells, S.B. Personality. In Ebel, R.L. (Ed.) Encyclopedia of Educational Research. Fourth Ed., New York: The MacMillan Company, Inc. 1969, pp. 935-946.

Sells, S.B. Symposium Summary, evaluation, and moderators' recommendations to the National Center for Health Statistics. Chapter 11 in Sells, S.B., (Ed.) The Definition and Measurement of Health. Washington, D.C.: National Center for Health Statistics, Health Services and Mental Health Administration, PHS, 1968, pp. 235-267.

Sells, S.B. and Rawls, James R. Effects of isolation on man's performance. Bioengineering and Cabin Ecology, 20, Science and Technology Series, 1969, 89-116. Report of NASA Grant No. NGR 44-009-008.

### REVIEWS:

Sells, S.B. Book Notes and Reviews in Psychology in the Schools, 1969.

### PERIODICAL ARTICLES:

Cleland, Charles C. and Neman, Ronald. Experience and executive motivation. Personnel, 1969, 46, 64-67.

Hill, Suzanne and Barnett, Lester W., Jr. A comparison of visual and factual discrimination learning of the retarded and schizophrenic children. Journal of Special Education, 1969, 3, 417-424.

Joe, George W. Comment on Overall and Spiegel's "Least squares analysis of experimental data." Psychological Bulletin, 1969, in press.

Joe, George W. and Anderson, Harry E., Jr. Mean differences and association. Multivariate Behavioral Research, July, 1969, 379-389.

Neman, Ronald. Word association sets in children at age eight. Journal of Developmental Psychology, 1969, 1, 180.

Scucchi, Gerald D. and Sells, S.B. Information load and three-man flight crews: an examination of the traditional organization in relation to current and developing airliners. Aerospace Medicine, 1969, 40, 402-406.

#### IBR Technical Reports.

##### RSA-RH-2

Brown, T.S., Lane, S.H., Sells, S.B., Jordan, E.D., Conroy, Dolores, A.C.S.W., Sanders, Albert. Social and Demographic Factors Associated with Effects of Stroke Therapy. Initial Report of the Evaluation of the Stroke Program of the San Antonio Rehabilitation Center. IBR Research Report No. 69-5, RSA Research Training Grant No. RH-2, June, 1969, 173.

Bersted, Chris Thor. Heart Rate Change, Need for Achievement and Fear of Failure. IBR Research Report, No. 69-3, RSA Grant No. RH-2, May, 1969.

Demaree, R.G. Criterion Factorization. IBR Research Report, No. 69-13, RSA Grant No. RH-2, July, 1969.

Lane, Sam H. An Examination of Some Factors Which Have Been Associated with the Risk of the Occurrence of Coronary Heart Disease. IBR Report No. 69-2, RSA Grant No. RH-2, May, 1969.

Simpson, D.Dwayne. Variables Influencing the Relationship Among Cancer Danger Signal Items. IBR Report, No. 69-1, RSA Grant No. RH-2, April, 1969.

##### O.E. 296

Sells, S.B. Critical Review of Research in the Personality-Emotion-Motivation (PEM) Domain. Report of a Planning Conference. Institute of Behavioral Research, Texas Christian University. Final Report of O.E. Contract No. 9-8013, 15 p.

## NASA

Day, Ronald M. Ships' Laws: Normative Structure for Isolated Groups. NASA Grant NGR 44-009-008, Technical Report No. 11, June 1969.

Rawls, James R., Hopper, A.E., and Rawls, Donna J. Variables Thought to Determine Personal Space: An Opinion Sample. NASA Grant NGR 44-009-008, Research Note No. 12, July, 1969.

Rawls, James R., McGaffey, Charles N., Trego, Ronald E., and Rawls, Donna J. Personal Space and Its Effect upon Performance Under Different Degrees of Closeness. NASA Grant NGR 44-009-008, Technical Report No. 13, April, 1969.

Rawls, James R., Trego, Ronald E., and McGaffey, Charles N. Personal Space and Its Effect upon Performance of Three Psychomotor Tasks under Three Degrees of Closeness. NASA Grant NGR 44-009-008, Technical Report No. 10, April, 1969.

Sells, S.B. The Taxonomy of Man in Enclosed Space. NATO Symposium on Man in Enclosed Space and/or Isolation, Consiglio Nazionale delle Ricerche, Rome, Italy, October, 1969, 34 p.

Trego, Ronald E. Personal Space and Size of Environmental Setting. NASA Grant NGR 44-009-008, Technical Report No. 9, March, 1969.

## OTHER

Joe, George W. A Strategy for the Definition of Criterion Groups from m-Variables with the Effects of s-Variables Partialled Out. IBR Research Note, No. 69-4, May, 1969.

Rawls, Donna J. Selection of Managers: A Review of the Literature. IBR Report No. 69-12, July, 1969.



## PAPERS PRESENTED AT MEETINGS

Benjamin, Ludy T. . "Fear of Death: An Approach to Experimental Validation." Sixteenth Annual Meeting of the Southwestern Psychological Association in Austin, Texas, April, 1969.

Dillehay, R.C. and Jernigan, L.R. "The Biased Questionnaire in Inducing Opinion Change." Western Psychological Association Meeting, 1969.

Jernigan, L.R. "The Construction of Biased Questionnaires and a Demonstration of their Efficacy in Eliciting 'Desired' Responses." Sixteenth Annual Meeting of the Southwestern Psychological Association, Austin, Texas, April, 1969.

Joe, George W. "A Strategy for the Definition of Criterion Groups from m-Variables with the Effects of s-Variables Partialled Out." Sixteenth Annual Meeting of the Southwestern Psychological Association, Austin, Texas, April, 1969.

Simpson, D.Dwayne. "Variables Influencing the Relationship Among Cancer Danger Signal Items." Sixteenth Annual Meeting of the Southwestern Psychological Association, Austin, Texas, April, 1969.

Sells, S.B. "Capsule Society, Isolation and Confinement." Manitoba Psychological Society, Manitoba, Canada, February, 1969.

Sells, S.B. "The Taxonomy of Man in Enclosed Space." NATO Symposium on Man in Enclosed Space and/or Isolation, Consiglio Nazionale delle Recherche, Rome, Italy, 1969.

## MEETINGS ATTENDED

Ludy T. Benjamin -	Academy of Psychosomatic Medicine, October 23-24, Shreveport SWPA, April 17-19, Austin
Gary Brown -	MPA, April 20, Cincinnati
Thomas S. Brown -	SWPA, April 17-19, Austin
R.J. Demaree -	Conference on Strokes, Rehabilitation Services Administration, September 19-20, Austin
Larry R. Jernigan -	APA, September 2-4, Washington, D.C. SWPA, April 17-19, Austin
George W. Joe -	SWPA, April 17-19, Austin
Sam H. Lane -	APA, September 2-4, Washington, D.C. MPA, April 20, Cincinnati WPA, April 14-15, Los Angeles
Henry Orloff -	APA, September 2-4, Washington, D.C.
S.B. Sells -	U.S.O.E., January 22-24, Washington, D.C. Chairman of Panel of Consultants on Review of Proposal and Addenda: Cross National Study of Educational Achievement in Six Subject Areas House Committee on Science and Astronautics Panel on Science and Technology, February 4-6, Washington, D.C. Manitoba Psychological Society, February 20-21, Manitoba, Canada, Invited Address: Cap- sule Society, Isolation and Confinement Chairman of Panel Meeting with Dr. R.T. Saucer and Staff to Design and Select Procedures for McDonnell-Douglas 90-day Manned Simulation Study, March 20-21, Langley Research Center, Newport News, Virginia Special Review Panel Meeting, U.S.O.E., April 17-18, Washington, D.C. Principal Speaker at Waxahachie High School Career Day, May 15, Waxahachie NASA Conference, May 21-23, Institute of Behavioral Research, Texas Christian University

Navy Medical Neuropsychiatric Research Unit,  
 June 23-24, San Diego, California  
 1969 TCU Management Seminar, July 6-12  
 Review Panel Meeting, U.S.O.E. Regulation  
 Office, July 27, Dallas  
 APA, September 2-4, Washington, D.C.  
 National Academy of Sciences, Committee on Long  
 Duration Space Flight, September 9-10,  
 Houston  
 Meeting with Representatives of Five Airlines  
 (American, Eastern, Pan American, Trans-  
 world, United) to Discuss Organization of  
 a Research Consortium, September 16-17,  
 Bermuda  
 NATO Symposium: Man in Enclosed Space and/or  
 Isolation, October 20-24, Rome  
 Second National Methadone Conference, October  
 26-27, Rockefeller University, New York  
 Society for Multivariate Experimental Program  
 Annual Meeting, November 6-7, Morgan-  
 town, West Virginia  
 Meeting of Affective Studies Panel, December  
 2-4, Washington, D.C.

D. Dwayne Simpson -	Academy of Psychosomatic Medicine, October 23-24, Shreveport SWPA, April 17-19, Austin
Donald P. Will, Jr -	APA, September 2-4, Washington, D.C.

## VISITING LECTURERS AND CONSULTANTS

- January 9 - Marcus Fuhrer, Ph.D., Associate Professor  
Department of Rehabilitation and Psychiatry  
Director of Research, Texas Institute for Rehabilitation  
and Research  
Baylor University College of Medicine  
Cognitive Processes in Differential GSR Conditioning
- January 30 - Delwin D. Cahoon, Ph.D.  
Auburn University  
Behavior Modification
- February 6 - Mrs. Marian Breland  
Hot Springs, Arkansas  
Misbehavior of Organisms
- February 27 - Donald W. MacKinnon, Ph.D.  
University of California at Berkeley  
Some Reflections on the Current Status of Personality  
Assessment
- March 13 - John E. Overall, Ph.D., Research Professor  
Department of Neurology and Psychiatry  
The University of Texas Medical Branch  
A General Linear Model for Analysis of Variance  
Bayesian Concepts in the Design of Experiments
- March 20 - Robert E. Harris, Ph.D., Professor of Medical Psychology  
School of Medicine and Department of Psychiatry  
University of California  
San Francisco Medical Center  
Stress-Personality-Central Nervous System-Cardiovascular  
Relations
- April 10 - Stephen S. Baratz, Ph.D.  
Center for Studies of Metropolitan and Regional Mental  
Health Problems, NIMH  
Washington, D.C.  
Sociocultural Differences in Language and Their Implica-  
tions for Research and Education
- April 16 - Harry E. Anderson, Jr., Ph.D.  
College of Education  
University of Georgia  
The Selection of Predictor Variables

- April 16 - Marvin S. Arffa, Ed.D., Chairman  
Department of Applied Behavioral and Social Sciences  
Northeastern University  
Boston, Massachusetts  
The Influence of the Physical Environment on Behavior:  
Possible Implications for the Rehabilitation of Stroke  
and Chronic Illness
- May 8 - Leonard Diller, Ph.D., Chief, Behavioral Science  
Institute of Rehabilitation Medicine  
New York University Medical Center  
Rehabilitation as a Field Setting for the Study of the  
Disabled
- May 12 - Commander Paul Nelson, Ph.D.  
Bureau of Medicine and Surgery  
Department of the Navy  
Washington, D.C.  
Human Performance under Adverse, Isolated Conditions  
in Antarctica
- May 26 - Frank Logan, Ph.D.  
Professor of Psychology  
University of New Mexico  
Albuquerque, New Mexico  
Dominance and Peer Avoidance Behavior of Rats
- July 31 - Karl U. Smith, Ph.D.  
Professor of Psychology  
University of Wisconsin  
Experimental Social Feedback Analysis in Learning and  
Rehabilitative Processes
- September 25 - Paul Minton, Ph.D.  
Chairman, Department of Statistics  
Southern Methodist University  
Dallas, Texas  
Applications of Statistical Methods to Psychological and  
Physiological Data
- September 30 - Desmond Cartwright, Ph.D.  
Professor of Psychology  
University of Colorado  
Boulder, Colorado  
Group Properties and Gang Behavior

- October 3 - Ernest S. Barratt, Ph.D., Research Professor and Director  
Behavioral Science Laboratory  
University of Texas, Medical Branch  
Some Recent Psychophysiological Findings Relevant to  
Personality Theory
- October 9 - Paul Horst, Ph.D., Professor of Psychology  
University of Washington  
Some Perspectives on Factor Analysis
- October 16 - Richard Benton, Ph.D.  
Vocational REACT Center  
University of Texas Medical Branch  
Galveston, Texas  
A Program Which Emphasizes New Approaches to the  
Evaluation and Realization of the Employability  
Potential of Rehabilitation Clients
- October 24 - Robert C. Bolles, Ph.D.  
University of Washington  
Seattle, Washington  
Species-specific Defensive Reactions
- October 30 - Alex J. Cade, Ph.D., Professor of Education  
Director of Upward Bound  
Michigan State University  
East Lansing, Michigan  
Psychological Implications of Some Present-Day  
Crises
- November 14 - Richard I. Evans, Ph.D., Professor of Psychology  
University of Houston  
Psychological Research in Real-Life Settings: Ready  
or Not, We Are Involved  
B.F. Skinner: The Man and his Ideas
- November 24 - Charles Wrigley, Ph.D., Director  
Computer Institute for Social Science Research  
Michigan State University  
Rigour or Reality? A Problem for the Experimental  
Psychologist
- December 4 - Raymon W. Bortner, Ph.D.  
College of Human Development  
Pennsylvania State University  
Pattern A Revisited