

TEXAS CHRISTIAN UNIVERSITY
INSTITUTE OF BEHAVIORAL RESEARCH

ANNUAL REPORT

1968

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INSTITUTE OF BEHAVIORAL RESEARCH

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.

Programs. Although the principal function of the Institute is research, it 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, management and organizational behavior, human ecology, and multivariate statistical analysis.

Staff.

Full time staff with faculty rank	7
Other full time research staff	8
Part-time regular staff	3
Office and supporting staff	7
Graduate research fellows	19
Graduate research assistants	5
Undergraduate research assistants	10
Undergraduate typists and clerks	<u>4</u>
Total personnel	63

Facilities. The Institute is located in two buildings on the East Campus which together provide approximately 8,000 square feet of occupiable space. The main building is a handsome new Armco Steel, one-story structure, 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 replaced by an Armco Steel building, similar to the main building, in 1970. The Annex houses research staff, graduate research fellows, the Psychophysiology Laboratory, computing equipment, and secretarial offices. Document storage facilities are maintained in both buildings.

The IBR Technical Library has an extensive collection of over 2000 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.

The Psychophysiology Laboratory consists of a shielded room equipped with a six-channel E & M Physiograph VI and special auxiliary equipment for human psychophysiological research, and a control-observation room, the two separated by a one-way viewing window. Recording apparatus, for analog to digital computer conversion, are in the process of purchase and installation. Plans for computer terminals in the control-observation room are presently under consideration.

The Institute has equipment for key punching and verifying program and data card decks and an old IBM sorter, with bin counters. A Control Data G-15 computer has been used for experimental work, but is to be replaced by a solid state computer. Computations are carried out using IBM 1401, 1620, and 1800 computers on campus, the IBM 360 - 50 computer at the Southwest Center for Advanced Studies, 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.

Publications. 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 distributed through the Institute. In addition, the journal, Multivariate Behavioral Research, published by the Society for Multivariate Experimental Psychology through the TCU Press, has its Business Office at IBR.

1968 Research and Research Training Budget.

Rehabilitation Services Administration. Research Training Grant RH-2	\$104,580.
U.S. Office of Education. Taxonomic Study of Personality, Contract No. OE 296	20,000.
U.S. Office of Education. Evaluation of Research in the Affective Domain, Contract No. OE 9-8013	2,400.
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	20,000.
National Institute for Mental Health. Taxonomic Study of Narcotic Addiction Treatment Programs. Grant No. MH-14230	70,000.
National Institute for Mental Health. Development of a Narcotic Addict Reporting System, Contract No. HSM-42-69-6	39,000.
National Aeronautics and Space Administration. Social Structure and Group Behavior in Extended Duration Space Missions. Grant No. NGR 44-009-008	30,000.
Office of Naval Research. Situational Factors Accounting for Behavior Variance, Contract No. Nonr 3436(00)	5,000.
TCU Research Foundation. Biomedical Research Support	18,700.
American Airlines. Personnel Research	15,000.
Eastern Airlines. Personnel Research	30,000.
Humble Oil and Refining Company. Personnel Research	13,500.

STAFF ROSTER:

S. B. Sells, Ph.D., Research Professor and Director
 R. G. Demaree, Ph.D., Research Scientist, Associate Professor of
 Psychology
 C. W. Harrison, Ph.D., Associate Research Scientist, Assistant
 Professor
 A. W. Johnson, Ph.D., Associate Research Scientist, Assistant Professor
 Donna J. Rawls, Ph.D., Associate Research Scientist, Assistant
 Professor of Psychology
 James R. Rawls, Ph.D. Associate Research Scientist, Assistant Professor
 Harry Wexler, M.A., Associate Research Scientist, Assistant Professor
 Hugh V. Angle, Ph.D., Associate Research Scientist

Carl Anderson, Ph.D., Consultant
 Helen F. Sells, A.B., Research Editor and Business Manager of Multi-
 variate Behavioral Research
 Virginia Vollmer, Ph.D., Consultant

Henry L. Kaplowitz, M.A., Associate Research Scientist
 Marcia Barbour, A.B., Programmer (terminated March, 1968)
 James V. Kuykendall, Senior Programmer
 May D. McReynolds, A.B., Research Assistant
 Janice Neman, A.B., Research Assistant
 Deena Watson, M.A., Research Assistant
 Donald P. Will, Jr., A.B., Senior Research Assistant
 Donald S. Willis, A.B., Senior Research Assistant

Adena Beck, Secretary
 Sandra Cotton, Typist
 Martha Digby, Secretary
 Donna Haanan, IBR Secretary (terminated August, 1968)
 Lowell Kettler, Secretary (terminated September, 1968)
 Virginia Lederer, Secretary
 Barbara Miles, Secretary
 Mary Louise McQuade, Secretary
 Sally F. Wilson, IBR Secretary

Lester Barnett, Research Fellow (RSA)
 Ludy T. Benjamin, Research Fellow (RSA)
 Charles T. Bisbee, (NDEA Fellow)
 Gary E. Brown, Research Fellow (RSA)
 Thomas S. Brown, Research Fellow (RSA)

Donald Hastings, (University Fellow) (terminated May, 1968)
 Margaret Hastings, Research Fellow (PH 109) (terminated May, 1968)
 Larry Jernigan, Research Fellow (RSA)
 Sam H. Lane, Research Fellow (RSA)
 Kenneth Liljestrang, Research Fellow (ONR) (entered Army, April, 1968)
 Sarah C. Marlow, Research Fellow (NIMH)
 Lee B. Murdy, Research Fellow (EAL)
 Charles N. McGaffey, Research Fellow (NASA)
 Allan F. Neil, Research Fellow (RSA)
 Henry Orloff, Research Fellow (RSA)
 Dennis D. Simpson, Research Fellow (RSA)
 John Thielen, Research Fellow (RSA) (terminated June, 1968)
 Henry Tjahjono, (University Fellow)
 Ronald Trego, Research Fellow (NASA)

Hideo Asato, Research Assistant (Biomedical Project)
 James Budros, Research Assistant (M.B.A., August, 1968) (AAL)
 Sandra Copeland, Research Assistant (terminated June, 1968)
 Edwin T. Cornelius, Research Assistant (EAL)
 Victor Vazquez, Research Assistant (completed M.A., August, 1968) (NIMH)

Joan Anderson, Undergraduate Assistant (terminated March, 1968) (EAL)
 Susan Beard, Undergraduate Assistant (Library Clerk)
 Sharon Berliner, Undergraduate Assistant (terminated August, 1968) (PH 109)
 Dee Ann Demaree, Undergraduate Assistant (Keypunch Operator)
 Marta Demaree, Undergraduate Assistant (terminated September, 1968)
 Susan Farmer, Undergraduate Assistant (Statistical Clerk) (EAL)
 Stephanie Hall, Undergraduate Assistant (Typist) (PH 109)
 Linda Havins, Undergraduate Assistant (Programmer)
 Robin McReynolds, Undergraduate Assistant (Statistical Clerk) (EAL)
 Joyce Porter, Undergraduate Assistant (Keypunch Operator) (terminated August, 1968)
 Ann Post, Undergraduate Assistant (Statistical Clerk) (terminated August, 1968)
 John Santoso, Undergraduate Assistant (Library Clerk)
 Susan Stallard, Undergraduate Assistant (Keypunch Operator) (EAL & AAL)
 Susan Stroud, Undergraduate Assistant (Typist) (terminated January, 1968) (RSA)

PUBLICATIONS AND REPORTS, 1968

BOOKS:

Sells, S. B., Ed. The Definition and Measurement of Mental Health. Washington, D.C.: National Center for Health Statistics, 1968, in press.

CONTRIBUTIONS TO BOOKS:

Sells, S. B., Computer applications in the behavioral sciences. In Lindsey, J. F., & Townsend, J. C., (Eds.), Medical Research and Computer Applications in Manned Space Flight. Washington, D. C.: National Aeronautics and Space Administration, 1968, in press.

Sells, S. B., An approach to organizational climate. In Tagiuri, R., & Littwin, G., (Eds.), Organizational Climate. Harvard University Press, 1968.

Sells, S. B., Personality. In Ebel, R. L. (Ed.), Encyclopedia of Educational Research. New York: The MacMillan Company, Inc., 1968, in press.

Sells, S. B., On the nature of stress. Chapter 9 in J. E. McGrath (Ed.), Social and Psychological Factors in Human Stress. New York: Holt, Rinehart, and Winston, 1968.

Sells, S. B., General Theoretical Problems Related to Organization Taxonomy: A Model Solution. In Indik, B. P., & Berrien, F. K., (Eds.), People, Groups and Organizations. New York: Teachers College Press, Columbia University, 1968.

PERIODICAL ARTICLES:

Brown, T. S., & Sells, S. B. Divisional structure of the APA in relation to identity and professional activities. San Francisco, American Psychological Association Proceedings of the 76th Annual Convention, 1968.

Roff, M., & Sells, S. B. Juvenile delinquency in relation to peer acceptance-rejection and socio-economic status. Psychology in the Schools, 1968, 5.

Scucchi, Gerald D., & 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, in press.

REPRINTS:

Sells, S. B. Ecology and the science of psychology. Multivariate Behavioral Research, 1966, 1, 131 - 144. (Reprinted in Vinacke, J. E., (Ed.), Readings in General Psychology, American Book Co., February, 1968, and in Williams, E., (Ed.), Naturalistic Methods of Research, Holt, Rinehart, and Winston, Inc., 1968.)

Sells, S. B. A model for the social system for the multiman extended duration space ship. Aerospace Medicine, 1966, 37, No. II, 1130 - 1135. Report of NASA Grant NGR 44-009-008. (Reprinted in Vinacke, J. E., (Ed.), Readings in General Psychology, American Book Co., February, 1968.)

Woodworth, Robert S., & Sells, S. B. An atmosphere effect in formal syllogistic reasoning. Journal of Experimental Psychology, 1935, 18, 451 - 460. (Reprinted in Spielberger, Charles D., Fox, Robert, & Masterson, Bruce, (Eds.), Contributions to General Psychology, The Ronald Press Co., 1968.)

IBR TECHNICAL REPORTS

RSA-RH-2

Benjamin, Ludy T. Measurement of Fear of Death: An Approach to Experimental Validation. IBR Research Report No. 68-7, August, 1968.

Brown, Gary E. Methods for Analyzing Autonomic Changes. IBR Research Report No. 68-6, July, 1968.

Brown, Thomas S. Physical Activities, Attitudes, and Therapeutic Classification of Coronary Heart Patients. IBR Research Report, August, 1968.

Institute of Behavioral Research. Medical Psychology Research Training Program. Research Training Grant No. RH-2, January 15, 1968.

Jernigan, Larry R. The Development of an Instrument for Assessing Attitudes Toward Cancer. IBR Research Report No. 68-5, July, 1968.

- Jernigan, Larry R., & Demaree, Robert G. The Development of a Scale for Measuring Attitudes Toward Cancer. IBR Research Report, March, 1968.
- Johnson, A. W. A Factor Analytic Study of Disease Concepts. IBR Research Report No. 68-1, April, 1968.
- Orloff, Henry. Psychological Aspects in the Etiology of Heart Disease: A Review of the Literature. IBR Research Report No. 68-3, September, 1968.
- Simpson, D. Dwayne. The Development of a Cancer Information Questionnaire. IBR Research Report No. 68-4, July, 1968.
- Simpson, D. Dwayne, & Demaree, Robert G. An Illustration of Differing Characteristics of True and False Keyed Items. IBR Research Report, March, 1968.

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- Sells, S. B., Demaree, R. G., & Will, D. P. A Taxonomic Investigation of Personality. Conjoint Factor Structure of Guilford and Cattell Trait Markers. August, 1968.

NASA

- Rawls, James R., McGaffey, Charles N., Trego, Ronald E., & Sells, S. B. Some Determiners of Interpersonal Climate in Relation to Long-Duration Space Missions: A Review of Constructs and Research. NASA Grant NGR 44-009-008, Technical Report No. 5, June, 1968.
- Rawls, James R., Trego, Ronald E., & McGaffey, Charles N. A Comparison of Personal Space Measures. NASA Grant NGR 44-009-008, Technical Report No. 6, October, 1968.
- Rawls, James R., Trego, Ronald E., & McGaffey, Charles N. Correlates of Personal Space. NASA Grant NGR 44-009-008, Technical Report No. 7, December, 1968.
- Sells, S. B., & Rawls, James R. Effects of Isolation on Man's Performance. NASA Grant NGR 44-009-008, Report No. 8, December, 1968.

PAPERS PRESENTED AT MEETINGS

- Brown, Thomas S., & Sells, S. B. "Divisional Structure of the APA in Relation to Identity and Professional Activities." American Psychological Association Proceedings of the 76th Annual Convention, San Francisco, California, August-September, 1968.
- Demaree, R. G. "Removal of Bias in Factor Loadings." Fifteenth Annual Meeting of the Southwestern Psychological Association in New Orleans, Louisiana, April, 1968.
- Johnson, A.W. "A Factor Analytic Study of Disease Concepts." Southwestern Psychological Association, New Orleans, Louisiana, April, 1968.
- Johnson, A.W. "Reliability of a Short-Form TAT." Rocky Mountain Psychological Association, Denver, Colorado, May, 1968.
- Johnson, A.W. "Verbal Conditioning and Social Learning." Southwestern Psychological Association, New Orleans, Louisiana, April, 1968.
- Rawls, D.J. "The Use of the BIE in the Identification of College Seniors with Managerial Potential." American Psychological Association, San Francisco, California, August, 1968.
- Rawls, D. J., & Rawls, J. R. "Differences in Personality Characteristics and Personal History Data between Successful and Less Successful Executives." Southwestern Psychological Association, New Orleans, Louisiana, April, 1968.
- Rawls, J. R. "Personal Space, A Useful Concept in Long-Duration Space Flight?" Tarrant County Psychological Association, Fort Worth, Texas, December, 1968.
- Rawls, D. J., Rawls, J. R., & Harrison, C. W. "An Investigation of Psychosomaticism in Six to Eleven Year Old Children." Rocky Mountain Psychological Association, Denver, Colorado, May, 1968.
- Rawls, D.J., Rawls, J. R., & Harrison, C. W. "An Investigation of Success Predictors in Graduate School in Psychology." Rocky Mountain Psychological Association, Denver, Colorado, May, 1968.
- Rawls, D. J., Rawls, J. R., & Harrison, C. W. "Differences between Leaders and Non-Leaders in Six to Eleven Year Old Children." Southwestern Psychological Association, New Orleans, Louisiana, April, 1968.

Sells, S. B., Demaree, R. G., & Will, D. P. "A Taxonomic Investigation of Personality. Conjoint Factor Structure of Guilford and Cattell Trait Markers" and "Supplementary Appendix." Society for Multivariate Experimental Psychology, Austin, Texas, November, 1968.

Sells, S. B., & Rawls, J. R. "Effects of Isolation on Man's Performance." American Astronautical Society Symposium on Cabin Ecology, Dallas, Texas, December, 1968.

VISITING LECTURERS AND CONSULTANTS

Colloquium Speakers:

- January 16 - Jose M. R. Delgado, Ph.D., Professor of Physiology
(Psychiatry)
Yale University School of Medicine
Psychophysiological Research in Primates
Social Behavior and Brain Manipulation
- March 7 - Jerry Fodor, Ph.D., Professor of Psychology
Massachusetts Institute of Technology
Some Current Psycholinguistic Perplexities
- October 10 - Milton Rokeach, Ph.D., Professor of Psychology
Michigan State University
Attitude Change, Value Change, and Behavioral Change
- December 5 - Joseph E. McGrath, Ph.D., Department of Psychology
University of Illinois
The P-B-S Matrix: An Approach to Longitudinal Study of
Social Process

RSA-RH-2 Seminars:

- January 11 - Richard Burk, M.D., Chairman, Department of Physical
Medicine and Rehabilitation
The University of Texas Southwestern Medical School
Medical and Psychological Aspects of Stroke
- January 18 - John Moncur, Ph.D., Director
Callier Speech and Hearing Clinic
Aphasia

- February 1 - Robert Brown, Ph.D., Psychology Department
The University of Texas Southwestern Medical School
Intellectual and Personality Assessment of the Stroke
Patient
- February 8 - Lester Lamb, M.S.W.
Caruth Rehabilitation Center
Family and Community Aspects of Stroke
- February 15 - Donald Pool, Ph.D., Department of Physical Medicine
and Rehabilitation
The University of Texas Southwestern Medical School
Vocational Rehabilitation of the Stroke Patient
- March 26 - I. D. Rotkin, Ph.D., Director, Cancer Research Project
Kaiser Foundation Research Institute
Multivariate Ecologic Modifiers of Cervical Cancer Risk
- April 4 - David Mechanic, Ph.D., Professor of Sociology, Director
of Graduate Training in Medical Sociology and
Mental Health
University of Wisconsin
General Medical Practice in England and Wales: Its
Organization and Future
- April 25 - A. W. Knox, Ph.D., Chief, Audiology and Speech Services
Veterans Administration Hospital
Current Implications for Research on Recovery Potential
- May 9 - Rue L. Cromwell, Ph.D., Professor of Clinical Psy-
chology in Psychiatry, Division of Research
Vanderbilt University School of Medicine
Stress, Nursing Care, and Personality in Myocardial
Infarction
- June 3-4 - C. G. Gunn, M.D., Professor of Physiology, Associate
Professor of Medicine
The University of Oklahoma Medical Center
The Relevance of Psychosocial Forces to Chronic Diseases
of the Cardiovascular System
- June 3-4 - Meyer Friedman, M.D., Director, Harold Brunn Institute
Mount Zion Hospital and Medical Center
Classification of Individuals as Types A & B and the Pre-
dictors Reported in Research Using This Classifi-
cation.

- October 3 - Norman C. Bourestom, Ph.D., Senior Research Associate,
Institute of Gerontology
The University of Michigan
Correlates of Recovery in Hemiplegic Patients
- October 24 - Harris Kahn, Ph.D., Department of Psychology
University of Connecticut
Research Training Program at the University of Connecticut
- November 7 - Robert A. Keith, Ph.D., Professor of Psychology
Claremont Graduate School and University Center
Physical Rehabilitation: Is It Ready for the Revolution?
- November 20 - K. Warner Schaie, Ph.D., Chairman and Professor,
Department of Psychology
West Virginia University
Strategies for Short-Term Longitudinal Research
- December 13 - Carl Eisdorfer, Ph.D., Research Coordinator, Center for
the Study of Aging and Human Development
Duke University Medical Center
Aging, Performance, and Autonomic Arousal: What Does
It All Mean?
- December 18 - George W. Joe, Ph.D.
University of Georgia
Mean Differences and Association