

This symposium deals with many—not all—aspects of bone as studied by the physical anthropologist. This 1968 summary of our position should tell us where we have been, where we are, and point to where we are going.

J. L. Mathews, Mildred Trotter, Richard B. Mazess, John R. Cameron, James A. Sorenson, Francis E. Johnston, George J. Race, Claud A. Bramblett, Robert M. Malina.

Environment and Prehistory from Woodlands to Desert (28 Dec.)

Arranged by E. Mott Davis and Dee Ann Story.

The symposium will consist of a series of studies on environmental influences on prehistoric cultures in the changing area from the woodlands of Arkansas across the prairies and plains of Oklahoma and Texas to the desert of southwestern Texas and northern Mexico. Current archeological research throughout this area is increasingly emphasizing the ecological approach. These papers will summarize current knowledge of the interrelations of culture and environment in an area sufficiently varied to permit studies through space and time.

Frank Schambach, Michael P. Hoffman, George F. Carter, Reid A. Bryson, David A. Baerreis, Kenneth H. Honea, Vaughn M. Bryant, Jr., Charles Douglas, T. N. Campbell, Jeremiah F. Epstein, Charles R. Nance, Joel F. Shiner, Ernest L. Lundelius, Jr., Donald A. Larson.

Culture Contacts in the Southwest (29 Dec.)

Arranged by George L. Trager.

Culture contact, and acculturation by accretion and subsequent resystematization, has characterized the Southwest from prehistoric times to the present. The Chairman will introduce the subject by a brief historical introduction. The six papers will present details in their respective special areas. Brief comment and discussion will take place after each paper. The Chairman will summarize the presentations, adding pertinent data from his own investigations at Taos Pueblo.

Ronald K. Wetherington, Edward A. Dozier, Felicia Harben Trager (assisted by William L. Leap), M. Estelle Smith, John J. Bodine, Thomas Maloney.

Ideology and Social Change in Latin America (30 Dec.)

Arranged by June Nash.

Clark Reynolds, Gilbert Merckx, Helen Safa, E. J. Hobsbawm, Frank J. Moreno, Anthony Leeds.

PSYCHOLOGY (I)

Compounding and Stimulus Selection and Classical Conditioning (29 Dec.)

Chairman: William E. Collins.

Speaker: Delos D. Wickens.

New information based on recent findings in several research disciplines will relate, in an integrated fashion, psychological, physiological, and neurological data to human performance at simple and complex tasks. Changes in psychophysiological responses as a function of certain characteristics of the performance-tasks and indications of ex-

citatory and inhibitory physiological processes which occur during task-learning will be examined. The possibility of training subjects to detect self-behavior (on the molecular level) which is ordinarily observable only by instrumental means will be evaluated from the viewpoint of applying the methodology to such problems as myoelectric control of prostheses, motor rehabilitation of disabled persons, and even a finer tuning of precision in the performing arts. The influence of brain damage, personality characteristics, stress, sleep loss, and circadian rhythmicity in psychophysiological activity (such as EEG, heart rate, GSR, blink rate, body temperature, finger volume, pulse wave amplitude, basal skin resistance), information processing, ability to perform various tasks (e.g., vigilance, reaction time, tracking behavior, and simple sensory-motor tasks), and on short-term physical disease processes which induce performance degradation will be discussed in detail.

Control of Human Behavior (29 Dec.)

Arranged by Delos D. Wickens.

This symposium reviews the application of behavior analysis to the control of human behavior. Models and techniques, largely derived from operant behavior procedures, are applied to human behavior in education, rehabilitation, and psychotherapy.

About twenty-five percent of institutionalized mental retardates have been reported to engage habitually in self-injurious behavior. In the past this behavior has been controlled by placing these retardates in strait jackets, sometimes for a lifetime. An alternate treatment, drawn from the experimental analysis of behavior, consisted of six successive programs which reduced self-injurious behavior.

In early education three related studies are reported which show modification of the syntax of spontaneous speech, the establishment of the correspondence between verbal and non-verbal behavior, and the improvement of the effectiveness of standard teaching procedures involving delayed imitation in culturally deprived pre-school children.

In psychiatry, the effectiveness of ward treatment techniques depends on the flow of information from the ward milieu to staff so that treatment procedures can be modified to shape patient behavior. Data indicate that the operant model and "point" economy treatment method provides a superior information system for direct measurement and feedback of patient and staff behavior. Information feedback to staff is discussed in terms of its effects on personal interactions between staff and patients.

An explicit program has been developed which eliminates stuttering in the laboratory and replaces it by rapid and fluent speech which carries over outside as well. Stuttering is treated as learned behavior which is maintained by its effects on others, and the implications of this approach are considered for other psychological problems, with regard both to their analysis and to suggested intervention procedures.

In higher education the application of operant procedures is illustrated by a description of an experimental college course designed to develop and demonstrate solutions to four major problems. These problems are (1) student achievement, (2) large student/faculty ratio, (3) the high cost of education, and (4) the common complaint that academic education is irrelevant to the world of affairs.

Mark F. Lewis, Lee Meyerson, Todd R. Risley, Arthur D. Colman, Israel Goldiamond, Richard W. Malott, Edward S. Sulzer.

Psychophysiological Correlates of Human Performance (29 Dec.)

Arranged by Delos D. Wickens.

William E. Collins, Richard I. Thackray, Norman T. Welford, Ralph F. Hefferline, Thomas W. Frazier, Neil Robinson Burch, Harold L. Williams, Orvis H. Rundell, Mary T. Spence, and Boyd K. Lester, Oscar A. Parsons, Robert Roessler, W. Dean Chiles.

Sensory Feedback in Human Behavior (30 Dec.)

Arranged by J. Donald Harris.

This symposium of psychologists, speech scientists, and speech pathologists will have the general purpose of bringing together current work and thought on the development and control of human motor response by a variety of sensory feedbacks. The human motor response emphasized often will be speech. The human perception of space will be treated. Sensory feedbacks will be discussed both in the normal condition and subjected to artificial distortions such as time delay, amplitude modulation, etc. Similarities and analogies with physical servomechanisms will be discussed. The development of children's speech through closed and open feedback loops will be traced, and an analysis provided of certain speech and language disorders in terms of feedback circuitry.

Robert Milisen, Courtney Stromsta, Newman Guttman, Robert Milisen, Karl U. Smith, Raymond S. Karlovich.

The Scope and Future Direction of Developmental Psychobiology (30 Dec.)

Arranged by Howard Moltz.

If organisms are to survive, they must be adapted to their environments. Such adaptation is achieved in a variety of ways, the particular mechanisms employed varying widely among the different species. However, in every species and indeed in every individual organism, this process of adjustment and accommodation to the environment involves both biological and behavioral determinants, each interacting with the other in subtle and diverse ways. How these multi-form interactions function and come to develop, is the proper subject matter of psychobiology.

As an area of study and research, Psychobiology intersects Biology and Psychology, reflecting interests common to both disciplines. In pursuit of these interests, Psychobiology calls upon the systematist for knowledge of taxonomy and evolution, upon the geneticist for an understanding of inter-organismic and inter-specific variability, and upon the endocrinologist for information concerning the role of hormonal mechanisms in species reproduction and maternal care. To the same degree, it must call also upon the neuropsychologist, the neurophysiologist, and the neuropharmacologist, for essential to the process of behavioral adaptation are neuronal and biochemical mechanisms operating at different levels of complexity. Psychobiology has roots extending into different disciplines. It has the singular task of attempting to understand how biological and psychological events coact to enable species to develop and reproduce, each in its own environment.

Peter Marler, Leonard Rosenblum, Donald Pfaff, Ethel Tobach, Gilbert Meier.

SOCIAL AND ECONOMIC SCIENCES (K)

Comparative Sociology and Contemporary Social Issues (28-30 Dec.)

Arranged by Reuben Hill.

This symposium offers to its interdisciplinary audience both a view of sociologists at work appraising the issue of theory in comparative sociology and the adequacy of its central method of cross-cultural comparisons and the application of this method to three of the most critical of contemporary social issues; civil unrest, persisting poverty, and the rejection of achievement values. The presentations and discussions for each session are designed to carry the perspective on the issue in question beyond the American scene to assess its incidence in other societies and to search for explanations which hold up cross-nationally.

Guy E. Swanson, Allen Grimshaw, Frederick Waisanen, Charles Kadushin, John P. Clark, Richard Flacks, Eugen Lupri, James C. Kimberly, Alex Inkeles, Paul Hollander, Leonard Broom, Robert F. Winch, Bernard Rosen, Wayne H. Holtzman, Murray A. Straus.

Science and Public Policy Workshop (30 Dec.)

Arranged by Eugene B. Skolnikoff.

This workshop will be concerned with the development of academic programs that focus on science and public policy studies. A brief report on the creation of an organizational affiliation for academic activities in this area will be presented. The substantive discussion will center on the roles of social and natural scientists in academic science and public policy studies, and on the problems involved in genuine research and teaching collaboration.

Criminology and Corrections and Research Papers in Juvenile Delinquency (28 Dec.)

Arranged by Donal E. J. MacNamara.

The American Society of Criminology, meeting jointly with the American Association for the Advancement of Science and with its social and behavioral science colleagues among the membership of the affiliated societies, will address itself to two major areas within its discipline. The morning session under the chairmanship of sociologist Edward Sagarin of the City University of New York, will discuss research papers on such themes as the conduct and success of jail inmates released to work within the open community, certain problems relating to the discipline and morale of uniformed correction officers, and *ultra vires* attitudes and conduct of uniformed police officers and its impact on the police-public relationship. The afternoon session under the chairmanship of psychologist, Louis Berkowitz of the Educational Alliance, will concern itself with juvenile delinquency, economic factors in delinquency vulnerabilities, medical services in juvenile detention facilities, and problems in juvenile court administration and operations. The American Society of Criminology emphasizes the multi-disciplinary (eclectic) approach to the problems of crime, delinquency, and related phenomena and encourages the widest latitude in both its formal presentations and the ensuing discussion periods.

Edward Sagarin, T. C. Esselstyn, Alvin Rudoff, George

Science

PSYCHOLOGY (I)

Science **162** (3858), 1167-1168.
DOI: 10.1126/science.162.3858.1167

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