

# Share the Ne

The state of science, as unrolled on the giant screen of the AAAS annual meeting in Denver, should be a firstrate reference for that favorite of science fiction: a more highly developed intelligence elsewhere in the galaxy, tuning in occasionally to decide whether contact across the light years seems either possible or desirable.

The celestial observer would note some sharp differences between this and the first mile-high meeting more than a half century ago, when 311 scientists gathered in a Denver high school auditorium to review such matters as the geology of ore deposits and the phylogenetic relations of vertebrates. In the 1961 array of over 300 scientific sessions scheduled to occupy most of the public meeting space in Denver's four largest hotels, at which some 2000 scientists will present 1500 papers, even an advanced intelligence would have a hard time deciding where and how to sample. It would, however, note rather quickly that while part of the giant spectacle still presents the astonishing diversity and mutual irrelevance of ex-

Instruments that can probe 4 billion light years into space and reveal events at the molecular level are disclosing the fundamental patterns of nature and uniting the analytic specialties around a common focus. One example of the many results of the great instruments at Caltech and the Carnegie Institution's Mount Wilson-Palomar laboratories is the photographic record made last year by Rudolph Minkowski of the most distant galaxy so far measured, a cluster 4 billion light years distant and initially located by radio telescope. The photograph above is familiar North American nebula.

Molecule of heredity in Diplococcus pneumoniae is revealed by M.I.T.'s C. E. Hall in the electron micrograph shown here (about × 81,000). The micrograph is part of the evidence for a recent report by Hall and I. F. Cavalieri that DNA in this bacterium occurs as two double helixes as compared to one double helix of the Watson-Crick model. Lying side by side, two double helixes are apparently able to transfer information to adjacent particles.



# Focus: 128th Annual Meeting

hibits in a Victorian museum, some 40 symposia as well as other sessions compose the nub of a developing pattern: these are the forums where the specialists meet to talk across the walls that for a long time have divided their observations.

But all the wonderfully assorted raw materials of science will be there, too. Scientific observers will report on matters ranging from acquisition of speech in the mynah bird to decision-making in international political crises, from the private life of a cat to mimicry of honey bees by syrphid flies. In the sessions of the many scientific societies which will join with the annual meeting there will be consideration of the parental drive of fish, management games as instruments for teaching system principles, neuro-endocrine control of mating behavior in cockroaches, women in prison, sleep deprivation in rats, the architecture of the pineal gland, and literally a thousand other things. Not much of this colorful harvest would as yet be pieced together, but, among the bewildering variety, a careful auditor might discern new clues to the "grand recurrences" that science finds in the natural world. And in sessions on the computer and the human brain he might find hope that, as Robert Morison said recently, the "technology of data gathering and processing will help to free us from the burdens of specialization."

The interdisciplinary symposia, however, will consider, not raw facts, but facts already fabricated into major building blocks of such clarity that half a dozen specialists can at last agree on their dimensions. The new ability of the specialists to talk to each other is in part attributable, as Frank Horsfall has pointed out, to the greatly extended reach of the new instruments of science, most of them the result of a half century of diligent specialization.

When biochemists, geneticists, practicing physicians, immunologists, microbiologists, and biophysicists sit down to examine deoxyribonucleic acid, the ma-

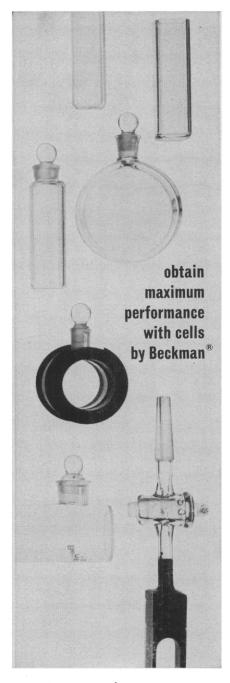
terial that set off the current revolution in the life sciences, they will all be using the same focus, and the focus will be at the molecular level. When, at this Medical Section symposium on human genetics, R. L. Sinsheimer, for example, describes finding single-strand DNA in a phage of Escherichia coli and goes on to tell what light this new structure gives on the key question of how the master molecule of life duplicates itself, he will be able to show electron micrographs as part of the evidence. When R. Ceppellini of the University of Turin tells how he thinks the nucleotide code of DNA may mold the uniquely specific antibodies that protect each of us, he will be able to draw on a half dozen lines of physicochemical evidence, most of them centering around the forces that shape and break molecular bonds. The new common focus, and to a surprising extent, common language may make it possible for these men to jointly mount a new attack on such unsolved questions as: How do the nucleic acids shape the 700 cellular enzymes known in the human species whose presence or absence is the difference between bodily health and disease? How do adaptive mutations originate?

There will probably be echoes of some of these questions at two generalsession symposia on divergent subjects. At the interdisciplinary symposium on the first 5 billion years of geochemical evolution, geochemist Philip Abelson. exploring the influence of primitive environment in shaping the origin of life, may throw some light on whether life began in the random encounter of a giant DNA molecule with a reactive protein. Here astronomer G. R. Burbidge, chemist Harold C. Urey, and geologist Albert Engel will join in exploring the origin of the chemical elements, of the atmosphere of planets, and of the earth's crust.

The DNA molecule will appear again at the interdisciplinary symposium on existing levels of radioactivity. Among the many sorts of cellular damage that may result from ionizing radiation, mutilation of the genetic template is, of course, the effect that will pass along the cost of current nuclear testing to generations yet unborn. Of those now alive, an unknown fraction may count the cost as DNA damage or a life shortened by cancer. New facts on the latter can be expected from P. R. J. Burch, who will come from the University of Leeds in England to discuss the relationship of existing radiation levels to carcinogenesis.

While an extraterrestrial observer might find in this symposium some indication of whether the human species is likely to survive its own experiments, he would want to check this by reference to the address of Atomic Energy Commissioner Glenn Seaborg, who will report on how one of the two dominant political forces now influencing species survival is running its atomic arsenal. Other indications may come from the special symposium on problems of survival, arranged by the AAAS Committee on Science in the Promotion of Human Welfare and from Bentley Glass's talk on the biology of nuclear war.

If prospects thus surveyed seem less than encouraging, we can shift from the somewhat dreary outlook for our own species to the grand spectacle of continuing evolution on a galactic scale. Mt. Wilson's Halton Arp, who recently showed how to use chemical analysis with new precision in calculating the age of stars, will describe the long evolution of stars and galaxies in a Moving Frontiers of Science lecture. And we will probably want to follow Matthew Stirling 1000 years back in time and into the sacred well of Chichén Itzá, where the Mayas sacrificed the flower of their youth, by means of the annual National Geographic Society lecture and color film. Margaret Mead, presiding, will be there to remind us that the Age of Anxiety is, after all, not a bad trade for the Ages of Terror that preceded it.



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## **Program Summary**

## Anthropology (H)

Program chairman: David M. Pendergast, University of Utah, Salt Lake City.

#### Thursday 28 December

The Concept of Race. Symposium arranged by Jack Kelso, University of Colorado, who will preside. A history of the concept of race, B. M. Alfred. Race as a problem in classification, Donald R. Ackerman and Jack Kelso. Race as a sociological concept, Edward Rose. Race as an evolutionary episode, Frederick S. Hulse. Geographic and microgeographic races, Marshall T. Newman. Review and comments, Walter Weir.

#### Friday 29 December

Civilizations in Desert Lands. Symposium arranged by Richard B. Woodbury, University of Arizona, who will preside. Evaluations of dry-land environments by societies at different levels of technical competence, Homer Aschmann. Role of natural forces in the ancient Indus Valley and Baluchistan, George F. Bales, Jr. Synopsis of the historical demography and ecology of the Diyala River basin, central Iraq, Robert M. Adams. Social responses to the problems of the distribution of irrigation water, René Millon.

Early Man in the Western United States: Cultural Continuities. Concurrent symposium arranged by Richard D. Daugherty, who will preside. Early man's utilization of the Great Plains environment, Fred Wendorf. An approach to early cultures in northwestern America, Earl Swanson. The Rawlings, Wyoming, mammoth kill, George A. Agogino and Henry and Cynthia Irwin. Early man in British Columbia, Charles Borden. Cultural relationships between the Plateau and the Great Basin, Richard D. Daugherty. The earliest cultures in the western United States, Alex D. Krieger.

The Wetherill Mesa Project. Concurrent symposium arranged by Douglas Osborne, supervisory archeologist, Wetherill Mesa Archeological Project, Mesa Verde National Park, Colorado, who will preside. History, organization, and program of the Wetherill Mesa Archeological Project, Douglas Osborne. Archeological survey of Wetherill Mesa, Alden C. Hayes. Excavation of Long House, Wetherill Mesa, George S. Cattanach. Excavation of Mug House, Wetherill Mesa, Arthur H. Rohn. Operation of the Wetherill Mesa Laboratory, Richard P. Wheeler. Plant ecological studies on Wetherill Mesa, James Erdman. The environmental measurements program and animal ecological studies, Charles Douglas and Mark Paddock. Palynological studies, Paul S. Martin and William Byers. Dendrochronological studies and sampling, Marvin Stokes and Tom Harlan. Dendrochronological dating of Wetherill Mesa archeological sites, Robert F. Nichols. Soil studies at Wetherill Mesa, Orville Parsons. Agricultural plants of Wetherill Mesa, Hugh Cutler. Nonagricultural plant identification, Stanley Welsh. Trace element studies on Wetherill Mesa fecal material, Bruno Sabels. Mesa Verde surveys. Emma Lou Davis and James Winkler. Oral tradition studies, Keres, Florence Ellis. Oral tradition studies, Tanoan, Mr. and Mrs. Kenneth E. Knudson. Museum studies of early Mesa Verde collections, Carolyn M. Osborne. Physical anthropology of Wetherill Mesa burials, Fred Hulse. Pathology of the Wetherill Mesa burials, James S. Miles. Parasitological studies of Wetherill Mesa fecal material, Robert Samuels. Orthodontic studies of Wetherill Mesa burials, J. M. Mc-Canlies. Petrologic studies of Wetherill Mesa cultural materials, Charles B. Hunt. Entomological studies on Wetherill Mesa, Samuel A. Graham, Animal bones from the Wetherill Mesa excavations, Thomas Mathews. Summary and critique, Richard B. Woodbury, University of Arizona.

Anthropologists' Dinner. James L. Giddings, Haffenreffer Museum, Brown University, secretary of Section H, presiding.

#### Saturday 30 December

Applied Anthropology. Concurrent symposium arranged by Harold L. Amoss, acting director, Office of International Education, University of Colorado, who will preside. Importance of ethno-historic data for studies of acculturation, Omer C. Stewart. Agricultural extension and sociological reality in Brazil, Sydney M. Greenfield. Successful transiency-some findings from the Page, Arizona, community research project, Henry H. Frost. Some contributions of recent research to applied anthropology, Theodore D. Graves.

Role of Animals in Human Ecological Adjustments. Concurrent symposium

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## HYLAND LABORATORIES

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arranged by Anthony Leeds, research specialist, Pan American Union. Andrew P. Vayda, assistant professor of anthropology, Columbia University, presiding. Introduction, Andrew P. Vayda. Athabaskan horse and sheep herding and contrasting social institutions, Peter Kunstadter. Reindeer herding and Chuckchi social institutions, Anthony Leeds. Pigs, dogs, and children in a Melanesian economy, Anne Chowning. East African livestock, society, and economy, Harold K. Schneider. Llamas in Inca social and political organization, John V. Murra. Camel pastoralism in North Arabia and the minimal camping unit, Louise E. Sweet.

Discussion, Homer Aschmann. Conclusion, Andrew P. Vavda.

Incest in Cross-Species Perspective. Concurrent symposium arranged by Margaret Mead, American Museum of Natural History, who will preside. Film: The Private Life of a Cat, by Alexander Hammid. Sex dynamics within kinships of free-ranging wild ungulates, Margaret Altmann. Brother and sister in social structure and fantasy in Zuni, Ruth Bunzel. A hypothesis for the genetic basis of the universality of the incest taboo and its relation to kinship organization, Yehudi Cohen. Grounds for incest, Gregory Bateson. Early adolescent friendship patterns as a con-

structive handling of the incest barrier (film), Rhoda Métraux.

Interdependence of Archeology and Ethnology. Concurrent symposium arranged by Warren L. D'Azevedo, University of Utah, who will preside. The ethno-history of the Eastern Shoshone: a problem in the use of archeological and ethnographic data, Donald D. Fowler. A joint archeological and ethnological approach to the development of southwestern Pueblo social organization, Edward P. Dozier. Archeology and ethno-history in Africa, Creighton Gabel. Trait distribution and archeology in Polynesia, Robert C. Suggs. The interpretation of Paleolithic art: uses and abuses in the methodology of ethnographic comparison, Morton H. Levine. The relations of archeological and ethnological theory, Walter W. Taylor. Discussants: René F. Millon, Richard B. Woodbury, and Jesse D. Jennings.

Section H is a cosponsor of the foursession symposium, Physiological and Biochemical Aspects of Human Genetics, of Section N-Medical Sciences.

### Psychology (I)

#### Friday 29 December

Aspects of Sleep. Symposium arranged by Wilse B. Webb, University of Florida, who will preside. Sleep, environmental control, and timing behavior, Neal M. Burns. Arousal aspects of sleep, Bryce O. Hartman. Current research on sleep and dreams, Chester Pierce. Eye movements and electroencephalograms during sleep in monkeys, Elliott Weitzman. Effects of prolonged sleep deprivation on rats, Wilse B. Webb.

Goals of Psychotherapy—Approaches to Research and Clinical Application. Symposium in two parts. Program of AAAS Section I-Psychology, cosponsored by the Rocky Mountain Psychological Association, the Colorado Psychological Association, and the Colorado Society of Psychologists in Private Practice. Arranged by Alvin R. Mahrer John R. Thompson, Denver Veterans Administration Hospital. Alvin R. Mahrer, presiding. Speakers: William H. Brown, Victor C. Raimy, Harold D. Locketz, and Morris Parloff. Discussants: Frank J. Rubenstein, Stuart Boyd, John R. Thompson, and Sherman Nelson.

Contributed Papers. Sensory factors related to appetitive behavior and food acceptance. Carl Pfaffmann, Brown University, will preside.

Second Printing July 1960

AAAS Symposium Volume No. 52

# EVOLUTION OF NERVOUS CONTROL FROM PRIMITIVE ORGANISMS TO MAN

Editor: Allan D. Bass

1959, 240 pp. \$5.75, AAAS members' prepaid orders \$5.00

From a review in the Psychiatric Quarterly, January 1960:

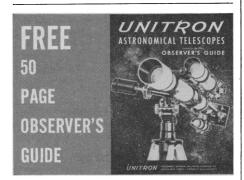
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#### Saturday 30 December

Sensory Factors in Appetitive Behavior and Food Acceptance. Symposium arranged by Carl Pfaffmann, Brown University. Samuel A. Goldblith, Massachusetts Institute of Technology, will preside. Appetitive behavior and chemoreception in invertebrates, David R. Evans. The organization of hypothalamic feeding areas and the role of gustatory factors, P. J. Morgane. Regulation of intake and magnitude of reinforcement, George Collier. Sensory factors in food acceptance in man, Francis J. Pilgrim. Discussants: John Falk, University of Colorado, and Roland Harper, University of Leeds.

Vice Presidential Address. Frank W. Finger, University of Virginia, secretary of Section I, presiding. Physiological and behavioral studies of the sense of taste, Carl Pfaffmann, Brown University, vice president for Section I-Psychology.

Control of Verbal Behavior. Symposium arranged by Israel Goldiamond. Arizona State University, who will preside. Measurable dimensions of vocal behavior, John A. Starkweather. Experimental shaping of the prosodic features of speech with an autoinstructional device, Harlan Lane. Problems related to the acquisition of speech in the mynah bird, Joseph Grosslight. Control of interview behavior, Joseph D. Matarazzo. Verbal behavior in schizophrenia, Ogden R. Lindsley. Verbal conditioning of formal linguistic structures, Arthur J. Bachrach. Effect of drugs on verbal behavior, Kurt Salzinger, Stephanie Pison, Richard S. Feldman, and Pauline M. Bacon. Self- and experimentercontrol of disrupted and fluent reading behavior, Israel Goldiamond. Interaction between verbal and nonverbal behavior, Ivar Lovaas.

Section I is the cosponsor of the following programs: the two-session symposium of the American Psychiatric Association, Genetics and Evolution in Relation to Human Behavior; three sessions for contributed papers on animal behavior and sociobiology; and the symposium, Evolutionary Changes in the Hormonal and Neural Bases of Reproductive Behavior, jointly sponsored by the American Society of Zoologists and the Ecological Society of America; and a joint symposium with the Cooperative Committee on the Teaching of Science and Mathematics and Section A: Teaching Machines and Mathematics Programs.

# Social and Economic Sciences (K)

#### Wednesday 27 December

Current Problems in Social-Behavioral Research. Symposium. Program of AAAS Section K-Social and Economic Sciences, cosponsored by the American Statistical Association and the National Institute of Social and Behavioral Science. Arranged by Donald P. Ray, National Institute of Social and Behavioral Science, Washington, D.C. Fitzhugh L. Carmichael, University of Denver and the American Statistical Association, will preside. Vice Presidential Address of Section K. Social statistics and the prediction of human behavior, Frederick F. Stephan. Some notes on sociology in the U.S.S.R., Robert K. Merton, Political science: pure or applied? Duncan MacRae, Jr.

Section K is a cosponsor of the Interdisciplinary Symposium in the Social Sciences: Water and Climate.

#### **American Economic Association**

#### Tuesday 26 December

The Economics of Knowledge and Information. Program of the American Economic Association, cosponsored by AAAS Section K-Social and Economic Sciences. Arranged by Kenneth E. Boulding, University of Michigan. Leslie Fishman, University of Colorado, will preside. Knowledge as a commodity, Kenneth E. Boulding. The productivity and efficiency of investment in education, Fritz Machlup. Information input overload: features of growth in communications-oriented institutions, Richard L. Meier.

# American Political Science Association

#### Wednesday 27 December

International Relations. Invited papers. Program of the American Political Science Association, cosponsored by Section K-Social and Economic Sciences. Arranged by Josef Korbel, Social Science Foundation, University of Denver, who will preside. Soviet policy in the United Nations toward the underdeveloped countries, Richard Rosser. Commentator: Joe R. Wilkinson. Decision-making in international political crises, James A. Robinson. Commentator: George Codding, Jr.

#### American Society of Criminology

Friday 29 December

**Annual Business Meeting** of the Society.

Annual Awards and Memorial Meeting. Donal E. J. MacNamara, dean, New York Institute of Criminology, and president, American Society of Criminology, chairman. Presentation of the annual award for 1961. Address, Orlando W. Wilson, superintendent of police, Chicago, Ill. Presentation of the August Vollmer Award for 1961. Address: Pathways to improved sentencing, Sheldon Glueck, professor of criminology, Harvard University Law School.

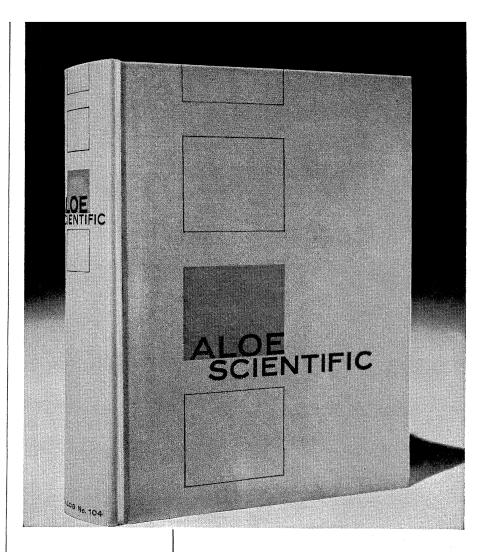
#### 28 and 29 December

Crime, Police, and Prison Problems in Contemporary Society. A four-session program of the American Society of Criminology cosponsored by the American League to Abolish Capital Punishment, New York Institute of Criminology, and the American Academy of Criminalistics.

Rural Crime Control. Symposium arranged by Gordon H. Barker, chairman, department of sociology, University of Colorado, and vice president, American Society of Criminology. Gordon H. Barker, chairman. Crime and delinquency in rural areas—the difficulties and possibilities of legislation, H. Ted Rubin. Problems in the police control of rural crime, Vernon Hastings, Jr. Examples of Indian criminality. Omer C. Stewart. Problems of judges and prosecutors in rural areas, Charles J. Simon. Crime among minorities in rural areas, W. Thomas Adams. Evaluation, Clyde Vedder.

Problems in Contemporary Penology. James M. Reinhardt, professor of criminology, University of Nebraska, chairman. Discussion leader: C. R. Jeffery. Women in prison, Isabel Gauper. The pre-sentence investigation, Leslie C. Reed. The warden's obligations to prisoners from rural areas, Maurice Sigler. Underworld, conventional, and ideological crimes: three points on a continuum of rejection, tolerance, rejection, Ruth Shonle Cavan. Men in prison, Harry C. Tinsley. Observations on narcotics addiction in Hong Kong, Albert Hess.

Research and Experimentation in Criminology. Marcel Frym, University of Southern California, chairman. Discussion leader: Charles Newman. Toward improving the identification of young delinquents, Eleanor T. Glueck.



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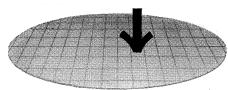
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Predicting criminal behavior, Alfred C. Schnur. The reinforcement theory and criminal behavior, C. R. Jeffery. Delinquency and mental inferiority, Clara Chassell Cooper. Increases in crimes in the underdeveloped countries, Walter Lunden. Delinquent behavior in currently respectable adult males, Sophia M. Robison. Methodological problems in measuring delinquency, M. E. Wolfgang.

Problems and Controversies in Twentieth-Century Policing. John P. Kennedy, police commissioner, Los Angeles, California, chairman. Discussion leader: Anthon S. Cannon, University of Utah. State standards for local police recruitment, training, and promotion, G. D. Gourley. Role of the police periodical, Lee Lawder. The case against police juvenile bureaus, August Flath. A philosophy of police management training, Ray Galvin. Value conflicts in law enforcement, Jacob Chwast.

#### American Sociological Association

#### Friday 29 December

Sociology of Medicine: Problems and Prospects. Symposium. Program of the American Sociological Association, cosponsored by AAAS Section K-Social and Economic Sciences. Arranged by Conrad Taeuber, Bureau of the Census, Washington, D.C. Ozzie G. Simmons, University of Colorado, will preside. Biosocial aspects of disease, Edmund H. Volkart. The relationship of research methodology to problems in the health fields, Odin W. Anderson. Helping medicine fulfill its social functions, Cecil G. Sheps. The place of the sciences of administration in medical care, Nicholas J. Demerath.

#### American Statistical Association

#### Friday 29 December

Problems of the American Highway Operation. Symposium. Program of the American Statistical Association, cosponsored by AAAS Section K-Social and Economic Sciences, and the Biometric Society, WNAR. Arranged by the Colorado-Wyoming Chapter of the American Statistical Association. Edward C. Bryant, Westat Research Analysts, Tempe, Arizona, will preside. Statistical design and analysis at the AASHO road test, Paul E. Irick. Problems of national highway allocation study, G. P. St. Clair. Economic prob-

Program notes for some sections have appeared in previous issues of *Science*: "Chemistry" and "Mathematics and Related Programs," 27 October, page 1376; "Physics" and "Astronomy," 3 November, page 1438; "Agriculture" and "Geology and Geography," 10 November, page 1534; and "Zoological Sciences," "Botanical Sciences," "Medical Sciences," "Dentistry," and "Pharmacy," 17 November, page 1630.

On page 1710 of this issue appears a coupon which readers can mail in to obtain a complete program of the annual meeting.

lems of the national highway program, Richard M. Zettel. Problems in costing highway service, Clifton M. Grubbs. Critique and discussion, R. E. Livingston.

#### Saturday 30 December

Government Price Statistics. Program of the American Statistical Association, cosponsored by AAAS Section K-Social and Economic Sciences and the Biometric Society, WNAR. Arranged by James A. Niederjohn, Ideal Cement Company, Denver; president, Colorado-Wyoming Chapter, American Statistical Association. Donald Bentley, Colorado State University, will preside. Significance of urban retail structure for price and welfare indexes, Leland L. Howell. Welfare versus market-basket price indexes, Leslie Fishman.

The ASA is also a cosponsor of the program of the Biometric Society, WNAR.

#### Institute of Management Sciences

#### Friday 29 December

Management Science. Symposium. Joint program of the Institute of Management Sciences and AAAS Sections P-Industrial Science and A-Mathematics. Arranged by Merrill M. Flood, Mental Health Research Institute, University of Michigan. James R. Jackson, Western Management Science Institute, Graduate School of Business Administration, University of California, Los Angeles, will preside. New analytical methods in management science, Robert R. Singleton. Econometrics and statistics in management science, Satya S.

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Address

Sengupta. Recent mathematical developments of importance in management science, George B. Dantzig.

The Institute of Management Sciences is a cosponsor of the program of the Philosophy of Science Association: Law, Science and Decision Making.

#### **Metric Association**

#### Thursday 28 December

Business Meeting. Arranged by Robert P. Fischelis, president elect, Metric Association.

#### National Institute of Social and **Behavioral Science**

The National Institute of Social and Behavioral Science is a cosponsor of Section K's symposium, Current Problems in Social Behavioral Research.

#### Forthcoming Events

#### December

6-8. Electrical Furnace Steel Conf., 19th, American Inst. of Mining, Metallurgical and Petroleum Engineers, Pittsburgh, Pa. (Scientific Liaison Office, Natl. Research Council, Sussex Dr., Ottawa, Canada)

6-8. Latin-American Congr. of Pathological Anatomy, 3rd, Medellín, Colombia. (A. C. Henao, Laboratorio de Anatomía Patológica, Rua Botucatu 720, São Paulo, Brazil)

6-8. National Institutes of Health Symp. on Neuroendocrinology, Miami, Fla. (A V. Nalbandov, 102 Animal Genetics, Univ. of Illinois, Urbana)

6-12. American Acad. of Optometry, Chicago, Ill. (C. C. Koch, 1506-08 Foshay Tower, Minneapolis 2, Minn.)

6-16. Food and Agriculture Organization of the U.N. World Health Organization, Nutrition Conf. for the Far East, 5th, Hyderabad, India. (Intern. Agency Liaison Branch, Office of Director General, FAO, Viale delle Terme di Caracalla, Rome, Italy)

6-16. Food and Agriculture Organization of the U.N., Far East Meeting on Animal Production and Health, 3rd, Bangkok, Thailand. (Intern. Agency Liaison Branch, Office of Director General, FAO, Viale delle Terme di Caracalla, Rome, Italy)

7-8. Symposium on Sintered High-Temperature Oxidation-Resistant Materials, London, England. (S. C. Guilan, Powder Metallurgy Joint Group, Inst. of Metals, 17 Belgrave Sq., London)

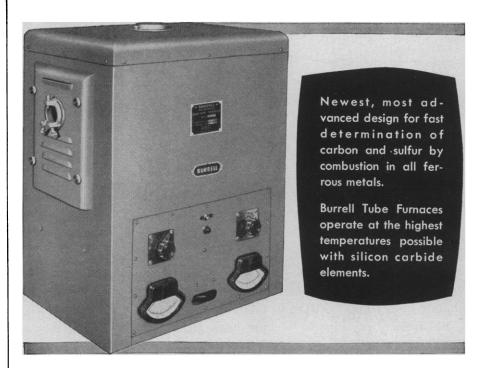
7-9. American Chemical Soc. Southwest-Southeast regional meeting, New Orleans, La. (P. D. Accardo, California Chemical Co., Oronite Div., Belle Chasse,

7-9. New York Acad. of Sciences Conf.



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