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<i>The Harvard Tercentenary Conference of Arts and Sciences</i> .....	311	<i>Reports:</i>	
<i>A Stratigraphic View of Geography: PROFESSOR EUGENE VAN CLEEF</i> .....	313	<i>Awards of the Ella Sachs Plots Foundation</i> .....	330
<i>Obituary:</i>		<i>Special Articles:</i>	
<i>George Williamson: GORDON GUNTER. Recent Deaths</i> .....	317	<i>The Ability of Rats to Discriminate between Diets of Varying Degrees of Toxicity: DR. KURT W. FRANKE and VAN R. POTTER. Submerged Valleys on Continental Slopes and Changes of Sea Level: PROFESSOR H. H. HESS AND PAUL MACCLINTOCK</i> .....	330
<i>Scientific Events:</i>		<i>Scientific Apparatus and Laboratory Methods:</i>	
<i>Committee on Forestry of the National Research Council of Canada; The Federal Water Conservation Program; Appointment of Dr. James T. Jardine as Director of Research of the U. S. Department of Agriculture; Awards of the Medals of the Franklin Institute</i> .....	318	<i>Measurement of the Area of Attached and Detached Leaves: DR. JOHN W. MITCHELL. A Simple Quartz Mercury Arc: DR. A. J. ALLEN</i> .....	334
<i>Scientific Notes and News</i> .....	321	<i>Science News</i> .....	8
<i>Discussion:</i>			
<i>Observations on the Cultivation of Poliomyelitis Virus: DR. FREDERICK EBERSON. The Vitamin C Content of Apples and Its Relation to Human Welfare: DR. W. FRANKLIN DOVE and ELIZABETH MURPHY. Determination of the Chloroplast Pigments of Plants: PROFESSOR A. E. MURNEEK. Vertebrate Localities in South Park, Colorado: PROFESSOR J. T. STARK AND OTHERS. Occurrence of the Malone and Torcer Faunas at the Base of the Arizona Comanchean: PROFESSOR A. A. STOYANOW</i> .....	324		
<i>Scientific Books:</i>			
<i>Anatomy of Vertebrates: PROFESSOR L. B. AREY. Zoology: PROFESSOR A. S. PEARSE</i> .....	328		

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## THE HARVARD TERCENTENARY CONFERENCE OF ARTS AND SCIENCES

A DISTINGUISHED gathering of learned men will take place at Harvard University from August 31 to September 12, when seventy-five scientific men and scholars, including fourteen Nobel laureates, will meet for the Harvard Tercentenary Conference of Arts and Sciences. Announcement of the program was made on March 26 by Jerome D. Greene, director of the Tercentenary Celebration.

Daily sessions will be held for two weeks, at which leaders in the physical sciences, biological sciences, social sciences and humanities will speak. They will address themselves chiefly to the fundamental problems of science and society rather than to particular aspects of applied learning.

Since the American Mathematical Society, the Mathematical Association of America, the Institute of Mathematical Statistics and the American Astronomical Society will hold meetings in Cambridge as

guests of Harvard University during the first week of September, the sections of the Tercentenary Conference which deal with mathematics, astronomy and cosmogony will be coordinated with their meetings.

Europe will be represented by forty-seven of the speakers, the United States by twenty-one, and Japan, China, Argentina, Canada and Australia, combined, by seven. The number from each country is: United States, 21; England, 12; Germany, 10; France, 6; Switzerland, 5; Italy, 4; Japan, Denmark, Scotland, Sweden and Canada, 2 each; and Holland, Argentina, Norway, Czechoslovakia, Australia, China and Austria, one each. The Harvard faculties, as hosts, will not be included among the speakers.

Nobel laureates taking part in the conference are Albert Einstein, physics, United States; Niels Bohr, physics, Denmark; Hans Fischer, chemistry, Germany; Arthur H. Compton, physics, United States;

Sir Frederick G. Hopkins, physiology and medicine, England; Robert A. Millikan, physics, United States; Friedrich Bergius, chemistry, Germany; August Krogh, physiology and medicine, Denmark; Theodor Svedberg, chemistry, Sweden; Otto Warburg, physiology and medicine, Germany; Karl Landsteiner, physiology and medicine, United States; Hans Spemann, physiology and medicine, Germany; Edgar D. Adrian, physiology and medicine, England, and Werner Heisenberg, physics, Germany.

In the symposium on the physical sciences and to some extent on the biological sciences, the sections have been determined by the subject-matter of recent research by the contributors. The third symposium, on "Factors Determining Human Behavior," enlists the collaboration of the biological sciences, the social sciences and the humanities on different aspects of a stated problem. The remaining symposia, on "Authority and the Individual" and on "Independence, Convergence and Borrowing in Institutions, Thought and Art," will likewise draw contributions from the social sciences and humanities.

A particular effort to avoid traditional and artificial barriers of specialized university study will be made during the symposium on human behavior on September 7. This part of the program will present the conclusions of eight workers in the fields of physiology, history, biochemistry, philosophy, education, anthropology and psychology.

Professor Edgar D. Adrian, University of Cambridge, will open this symposium with a discussion of the influence of the nervous system on human behavior. "Psychological Factors" will be treated by Professor Carl G. Jung, Technische Hochschule, Zurich; "Hormones," by Professor James B. Collip, McGill University; "Logic," by Professor Rudolph Carnap, Deutsche Universität, Prague, and "Culture," by Professor Bronislaw Malinowski, University of London.

At the same symposium, Dr. A. Lawrence Lowell, president-emeritus of Harvard University, will give "An Example from the Evidence of History"; Professor Pierre Janet, Collège de France, will tell of "La force et la faiblesse psychologique"; and Professor Jean Piaget, University of Geneva, will discuss "The Principal Factors Determining the Intellectual Evolution from Infancy to Adult Age."

The conference will open on August 31, with a lecture by Professor Ronald A. Fisher, University of London, before the section of mathematics of the symposium on physical sciences. This section will be in session until September 3, and will hear Professor Godfrey H. Hardy, University of Cambridge; Professor Elie J. Cartan, University of Paris; Professor

Leonard E. Dickson, University of Chicago, and Professor Tullio Levi-Civita, University of Rome.

A physical science section on astronomy, on September 3, will include a paper on the "Temperature Scale of the Stars," by Professor Antonie Pannekoek, University of Amsterdam, and one on "The Composition of the Stars," by Professor Henry N. Russell, Princeton University. The following day, Sir Arthur S. Eddington, University of Cambridge, will address the section on cosmogony on "The Cosmical Constant and the Recession of Nebulae," and Professor Levi-Civita will discuss "Astronomical Consequences of the Relativistic Problem of Several Bodies."

Professors Einstein (Institute for Advanced Study), Bohr (University of Copenhagen) and Heisenberg (University of Leipzig) will conduct part of a section on theoretical physics, on September 7, relating their latest findings. Sir Arthur Eddington will also address this group on "The Constitution of the Stars."

Recent work on cosmic ray research will be reported on by Professors Millikan (California Institute of Technology) and Compton (University of Chicago), in a special section on this topic on September 8. Nuclear physics, involving the problems of isotopes and atomic transformations, will be the subject of meetings on September 8 and 9, at which fifteen investigators, whose names are yet to be announced, will present original papers.

The concluding sections of the symposium on physical science will be devoted to geology and geophysics, chemistry, industrial chemistry and communication engineering. "The Laws of Mammalian Evolution" will be treated by Dr. William B. Scott, professor emeritus, Princeton University; Professor Hans Fischer, Technische Hochschule, Munich, will report his work on "Chlorophyll"; and Professor Leopold Ruzicka, Technische Hochschule, Zurich, will speak on research on "The Male Sex Hormones."

Other speakers in these sections will include Professor Edward B. Bailey, University of Glasgow; Dr. Andrew C. Lawson, professor emeritus, University of California; Dr. Norman L. Bowen, Carnegie Institution, Washington, D. C.; Professor Peter Debye, University of Leipzig; Professor Friedrich Bergius, Deutsche Bergin-Aktiengesellschaft, Heidelberg, and Dr. Frank B. Jewett, Bell Telephone Laboratories, New York.

Recent progress of university laboratories in the study of life and disease will be described by thirteen leading scientific men in a symposium on biological sciences to be held from September 8 to 10. The sections of this symposium will deal with "The Applications of Physical Chemistry to Biology," parasitism and experimental morphology. In a special

meeting at the Harvard Medical School on September 8, various aspects of biology will be discussed.

The biological program includes a paper on "Protein Molecules," by Professor Theodor Svedberg, University of Upsala; a lecture by Professor Kiyoshi Shiga, University of Tokyo, on "The Trend of Prevention, Therapeutics, and Epidemiology of Dysentery since Discovery of its Causative Organism"; and a report by Sir Joseph Barcroft, University of Cambridge, on "The Genesis of Respiratory Movements in the Foetus." Also outlining their recent work will be Professor August Krogh, Rockefeller Institute for Medical Research; Professor Otto Warburg, Kaiser Wilhelm-Institut für Zellphysiologie; Dr. Karl Landsteiner, Rockefeller Institute for Medical Research; Professor Ross G. Harrison, Yale University; Professor Hans Spemann, University of Freiburg; Sir Frederick Hopkins, University of Cambridge; Professor Bernardo A. Houssay, University of Buenos Aires; Professor Filippo Silvestri, Regia Scuola Superiore di Agricoltura, Portici, Italy, and Professor Johan Hjort, University of Oslo.

The conference on "Authority and the Individual," on September 8 and 9, will be taken part in by sixteen authorities in economics, public finance, history, politics, philosophy, jurisprudence, international law, classical philology, sociology, literature and music. The lectures will be grouped into four sections, "The State and Economic Enterprise," "Stability and Social Change," "The Place and Functions of Authority" and "Classicism and Romanticism."

Dr. John Dewey, professor emeritus, Columbia University, will address this symposium on "Authority and Resistance to Social Change"; Professor William E. Rappard, University of Geneva, will discuss "Economic Nationalism"; Professor Corrado Gini, University of Rome, will speak on "Authority and the Individual during the Different Stages of Evolution of the Nations," and Professor Charles McL. Andrews, emeritus, Yale University, on "Conservative Factors in Early Colonial History."

Other speakers include Professor Wesley C.

Mitchell, Columbia University; Dr. Dennis H. Robertson, University of Cambridge; Professor Douglas B. Copland, University of Melbourne, Australia; Professor John H. Clapham, University of Cambridge; Professor Hans Kelsen, Institut Universitaire des Hautes Etudes Internationales, Geneva; Professor Werner W. Jaeger, University of Berlin; Professor Friedrich Meinecke, University of Berlin; Professor Paul A. M. Hazard, Collège de France; Professor Howard M. Jones, University of Michigan, and Professor Edward J. Dent, University of Cambridge.

Concluding the conference, sixteen authorities in archeology, history, philology, law, divinity, literature and philosophy will deliver papers on September 10 and 11 before the symposium on "Independence, Convergence and Borrowing in Institutions, Thought and Art." Of particular interest in this symposium is a section on "East and West," with addresses on the relations of different cultures by Professor Hu Shih, National University of Peiping; Professor Masaharu Anesaki, emeritus, Imperial University of Tokyo, and Professor Paul Pelliot, Collège de France.

Cultural and institutional relations between Europe and the Near East will be the topic of another section of this final symposium. Before this group, Professor Michael I. Rostovtzeff, Yale University, will speak of "Parthian Art"; Professor Tow J. E. Andrae, University of Upsala, will lecture on "Christianity and Early Islam," and Professor Louis Ginsburg, Jewish Theological Seminary of America, will discuss "Folklore: East and West." Other speakers will be Professor Vere G. Childe, University of Edinburgh; Professor Eduard Norden, University of Berlin; Professor Leopold Wenger, University of Vienna; Professor Rene Maunier, University of Paris, and Professor Charles H. Dodd, University of Cambridge.

In a third section of this symposium, various aspects of the Middle Ages will be treated by Professor Frederick M. Powicke, University of Oxford; Dr. Henry Osborn Taylor, New York City; Professor Adolph Goldschmidt, University of Berlin; Professor Charles Bedier, Collège de France, and Professor Etienne Gilson, director of the Institute of Medieval Studies, Toronto, Canada.

## A STRATIGRAPHIC VIEW OF GEOGRAPHY

By Professor EUGENE VAN CLEEF

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SINCE the days of the brilliant Aristotle and the scholarly Eratosthenes, both of whom have been credited with having first used the term "geography," geographers have been attempting to define the scope of their field of investigation. The Greek philoso-

phers, steeped more or less in the realm of mathematics, emphasized the descriptive aspects of geography but did not overlook that which we refer to to-day as regional. If Greek supremacy could have continued well into the first centuries A. D. and per-