

Your stake in science. Spring 1951

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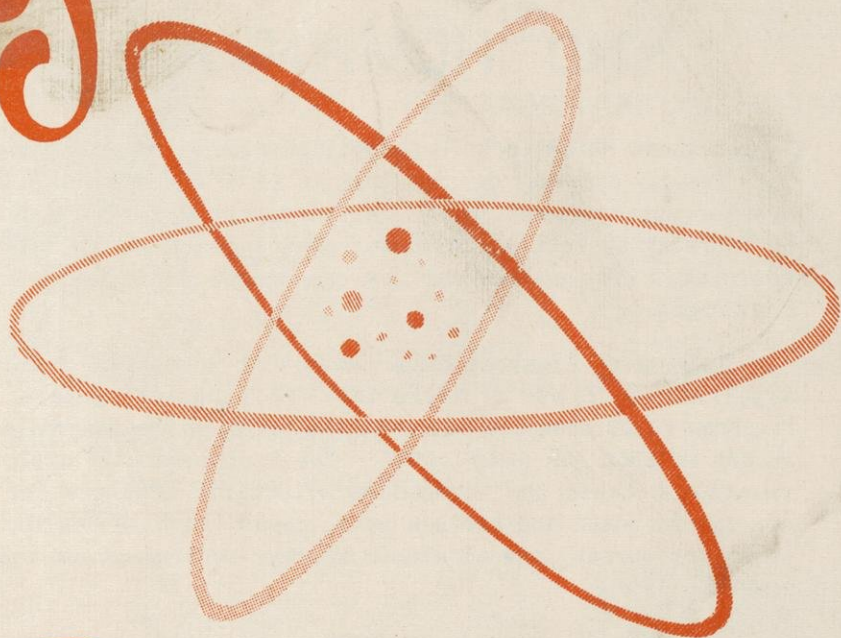
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Your Stake in



Science

THE UNIVERSITY OF WISCONSIN
FRESHMAN FORUM - SPRING 1951



MODERN SCIENCE AND HUMAN NEEDS

*F*reshman Forum is a lecture-discussion course that meets on Tuesday and Thursday mornings at 11:00 o'clock. A different speaker appears each week. On Tuesday he delivers a lecture; on Thursday he returns to answer questions raised by members of the class. The course carries one credit and is open only to Freshmen.

Each term, Freshman Forum deals with a theme of fundamental significance in our civilization. For the spring term, 1951, Freshman Forum presents sixteen scientists on the general subject MODERN SCIENCE AND HUMAN NEEDS. The lecturers will explore the relation between the tremendous scientific advances for which our age is noted and certain human needs, such as health, food, power, resources, use of atomic energy, control of environment, and the like.

The sixteen speakers on the program are distinguished professors on the staff of the University, most of whom have earned national and international fame with discoveries and contributions to the advancement of scientific knowledge.

Freshman Forum Committee

L. H. Adolfson
Dir., University Extension Division

E. P. Boardman (Chairman)
Ass't. Prof. of History

David Fellman
Prof. of Political Science

L. E. Luberg
Ass't. Vice-President of Academic Affairs

Frederick W. Haberman
Assoc. Prof. of Speech

H. B. Hill
Prof. of History

C. S. Liddle
Assoc. Prof. of Education



SCIENTIFIC HORIZONS IN MEDICINE

Dr. William S. Middleton, Dean, UW Medical School

Dean of the Medical school since 1935, Dr. Middleton took his M.D. degree at the University of Pennsylvania. His special fields, in which he has acquired an international reputation, are the cardio-respiratory system; blood and blood forming organs; and medical history and education. He holds the Sc.D. degree, and the Distinguished Service Medal, the Legion of Merit with Oak Leaf, the Order of the British Empire, and the Croix de Guerre with Palm. During World War II he was chief consultant in medicine in the European theater. In June of 1950, Dr. Middleton was awarded the honorary D.Sc. degree by Cambridge university in England.

CANCER: THE KNOWN AND THE UNKNOWN

Van R. Potter, Prof. of Oncology

In 1947 Dr. Potter was named one of the 10 outstanding biochemists in the U. S. and awarded the Paul-Lewis prize in Enzyme chemistry by the American Chemical Society. Two years before, the U. S. Junior Chamber of Commerce had named him one of 10 outstanding young men in the U. S. A B. S. degree from South Dakota State college in 1933 and a Ph. D. from Wisconsin in 1938 preceded his nationally-recognized research in the biochemistry of cancer. He has been UW professor of oncology since 1947.

PREVENTIVE PSYCHIATRY

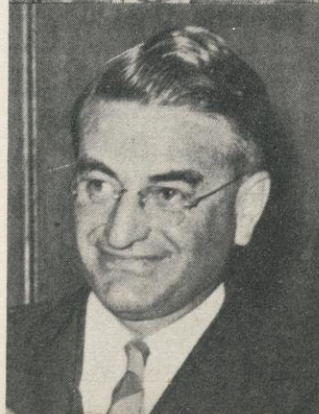
Dr. Annette C. Washburne, Prof. of Neuropsychiatry and Preventive Medicine

Dr. Washburne came to the University of Wisconsin in 1929 as an intern at Wisconsin General Hospital. Since 1937 she has been senior consultant in Neuropsychiatry in the Department of Student Health and Preventive Medicine, and a professor in the University Medical School. Dr. Washburne is a Fellow of the American Medical Assn., the American College of Physicians, and the American Psychiatric Assn. She is a member of the Central Neuropsychiatric Assn., the Milwaukee Neuropsychiatric Assn., and a Diplomate of the American Board of Neurology and Psychiatry.

IS THERE FUEL ENOUGH?

Farrington Daniels, Prof. of Chemistry

Prof. Daniels has been on the staff at Wisconsin since 1920, when he left his position as electrochemist with the U. S. Nitrogen Research laboratory to become assistant professor of chemistry. Educated at the University of Minnesota and Harvard, he has, since coming to the University, gained national recognition for his researches in chemical kinetics and nitrogen fixation. In 1945 - 1946, he was Director of the Metallurgical laboratory of the Manhattan Project, working on atomic energy. From 1946 to 1948, he was chairman of the board of the Argonne National laboratory.





CIVILIAN USES OF ATOMIC ENERGY

C. H. Sorum, Prof. of Chemistry

One of the most popular lecturers and public speakers at the University, Prof. Sorum has been affiliated with the chemistry department since 1927. He was educated at St. Olaf college, M.I.T., and the State University. His special fields of research are phase equilibria, colloids, and reaction mechanisms. He has written two textbooks, "Problems for General Chemistry and Qualitative Analysis," and "Introduction to Qualitative Analysis," in addition to numerous articles in scientific journals.



POWER IN MODERN LIFE

Ben G. Elliott, Prof. of Mechanical Engineering

Prof. Elliott learned about machines from the ground up working in railroad locomotive shops in his native Nebraska, in a foundry and steam turbine department, and as a machinist and road man. He studied at Rose Polytechnic Institute and at the University of Wisconsin, where he was Fellow in mechanical engineering in 1912-13, instructor in engineering for the UW Extension division, and since 1919, full professor. He is joint author of "The Gasoline Automobile," now in its fifth edition; and has written "Automobile Power Plants," "The Automobile Chassis," and "Automobile Repairing."

THE WORLD WITHIN THE WORLD

George P. Woollard, Prof. of Geology

An expert in oceanography and geophysics, the science that applies physics and mathematical principles to geological prospecting, Prof. Woollard came to Wisconsin in 1949. His B.S. and M.S. degrees were earned at Georgia Institute of Technology in 1932 and 1934. He also holds two degrees from Princeton University: M.A., 1935 and Ph.D., 1937. He has been awarded fellowships by Princeton, the American Geophysical Union, the National Research Council, and the Guggenheim Foundation. During the war he was in charge of research on sound transmission in shallow water and the analysis of the relation of oceanography to submarine warfare for the U.S. Navy.

CLIMATE AND MAN THROUGH THE AGES

Reid A. Bryson, Assoc. Prof. of Meteorology

The mysteries of weather and plant life are gradually being unravelled by Prof. Bryson and his fellow research-workers who are currently seeking precise measurements of the relation of weather to crops. A graduate of Denison university and the Universities of Chicago and Wisconsin, Prof. Bryson served with the Air Weather Service during WW II in the Pacific area. In 1945 he edited the "Introduction to Tropical Meteorology" for the USAAF weather service. He is a member of Phi Beta Kappa, the American Geophysical Union, the American Meteorological Society, Sigma Xi, and the AAUP.



THE CONTROL OF MAN'S ENVIRONMENT

Gerard A. Rohlich, Prof. of Civil Engineering

Prof. Rohlich was educated at the Cooper Union School of Engineering and the University of Wisconsin, where he acquired the B.S., the M.S., and the Ph.D. degrees in civil and sanitary engineering. He has taught at Pennsylvania State college and Carnegie Institute of Technology and has served as senior sanitary engineer for the Office, Chief of Engineers, U.S. War Department and as consultant in investigations of water supplies at army installations in Brazil.



SOIL RESOURCES: PRESENT AND FUTURE

Robert J. Muckenhirn, Prof. of Soils

Prof. Muckenhirn is best known for his research in erosion control and in soil survey and soil classification work. In 1937 he was chairman of the regional soil survey committee of the North Central states. He has earned three degrees at the University and has been on the faculty since 1936, as full professor since 1946. He has written numerous articles on land improvement, soil erosion, and kindred subjects. He is a member of the Soil Science Society of America, the American Society of Agronomy, Sigma Xi, Wisconsin Historical society, Wisconsin Academy of Sciences, Arts, and Letters, and the national Audubon society.



MAN'S RELATIONSHIP TO NATURE

John T. Curtis, Assoc. Prof. of Botany

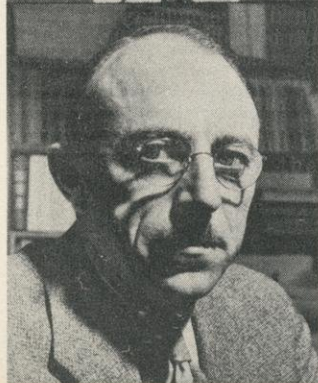
Prof. Curtis spent the years from 1942 to 1945 as research director for the U.S. Rubber Development Corp. in Haiti. Except for similar short leaves of absence he has been at the University of Wisconsin since 1935, when he completed work for his M.A. degree. Born in Waukesha, he attended Carroll college before enrolling at the State University for his higher degrees. He taught at the University of Pennsylvania in 1940, was Guggenheim Fellow at the University of Minnesota in 1941, and returned to the UW the following year. He has published numerous articles in Ecology, Bulletin of the Torrey Botanical Club, and the American Journal of Botany.



CAN THE WORLD FEED ITS PEOPLE?

Noble Clark, Assoc. Dir., Agr. Experiment Station

A nationally-known figure in agriculture, Prof. Clark received the B.S. and M.S. degrees from Wisconsin, and has served on the Experiment Station staff since 1927. He was leader of the UN agricultural mission to Poland in 1947, and later was deputy director-general of the UN Food and Agriculture Organization. From 1943 to 1947 he was chairman of the committee on agricultural policy created by the Association of Land Grant Colleges and Universities. In July, 1950, Prof. Clark was appointed by President Truman as a member of a special Commission on Migratory Labor.





OUR NUTRITIONAL NEEDS

Carl A. Baumann, Prof. of Biochemistry

For "exceptionally meritorious service in the European theater" Dr. Baumann holds the Medal of Freedom, the Order of the British Empire, and the President's Certificate of Merit. As a member of the "ALSOS Mission" Dr. Baumann followed the Allied forces across Europe to investigate captured research centers and report enemy progress. A native of Milwaukee, Dr. Baumann was educated at the Universities of Wisconsin, Heidelberg, Cambridge, and Copenhagen. His special fields are biochemistry, nutrition, and cancer, diet as it affects tumor development, biochemistry of carotene and vitamin A, and nutritional problems involving vitamins and amino acids.

THE HUMAN ANIMAL TODAY

W. W. Howells, Prof. of Anthropology

The Germans and the Japanese can now read in translation Prof. Howells' scholarly best-sellers: "Mankind So Far," and "The Heathens," published by Doubleday. He was educated at Harvard, where he earned the B.S., A.M., and Ph.D. Thereafter he spent eight years doing research at the American Museum of Natural History in New York. When the Integrated Liberal Studies course was founded at Wisconsin, Prof. Howells was selected to teach the anthropology course. He is editor of the American Journal of Physical Anthropology published by the American Association of Physical Anthropologists, and is president of the American Anthropological Assn. for 1951.

GENETICS IN HUMAN LIFE AND THOUGHT

James F. Crow, Assoc. Prof. of Zoology & Genetics

The genetic basis of evolution is Prof. Crow's special field of research, and his findings have been published in *Genetics*, *American Naturalist*, and bulletins of the University of Texas. He was graduated with high honors from Friends University, Wichita, Kans., and went on to take a Ph.D. degree at the University of Texas. Before coming to Wisconsin in 1948 he was tutor and research fellow in zoology at the University of Texas, and instructor and assistant professor of zoology at Dartmouth college. On the campus he teaches classes in heredity and human heredity. He is a member of Sigma Xi.

MODERN SCIENCE AND THE FUTURE

C. A. Elvehjem, Dean, Graduate School

"Since 1927, when he received his doctorate at the University of Wisconsin, Dean Elvehjem has contributed a vastly expanded knowledge of nutrition to medicine and science and has earned a place for all time beside the great laboratory fighters of the hidden hungers," *Science Digest* said of him recently. The magazine pointed out that his discoveries place him among the nation's science leaders. He holds the Willard Gibbs medal, the Mead-Johnson award, and the Osborne and Mendel award for his work with vitamins and amino acids. Wisconsin-educated Dean Elvehjem has published more than 500 papers in scientific journals.





Freshman Forum ON THE AIR

This course is being broadcast over the facilities of the Wisconsin State Broadcasting Service direct from the campus classroom on Tuesdays and Thursdays at 11:00 a.m. It is carried at these times by Stations WHA (AM), WLBL (AM), and the State FM Network. The Tuesday lecture is being rebroadcast on Thursday evenings at 8:00 p.m. over the State FM Network only.

Standard (AM)

WHA 970 kc.--Madison

WLBL 930 kc.--Auburndale

State FM Network

WHA-FM 88.7 mc.--Madison (Dane County)

WHAD 90.7 mc.--Delafield (Waukesha County)

WHKW 89.3 mc.--Chilton (Calumet County)

WHRM 91.9 mc.--Rib Mountain State Park (Marathon County)

WHWC 88.3 mc.--Colfax (Dunn County)

WHLA 90.3 mc.--West Salem (La Crosse County)

MODERATOR

Frederick W. Haberman, Assoc. Prof. of Speech

Prof. Haberman's teaching career began in 1930 at Harborcreek High school shortly after graduation from Allegheny college. Before coming to Wisconsin as assistant professor in 1947, he taught at Allegheny college and Cornell and Princeton universities. From 1943 to 1946 he was a Lieutenant in the Navy. Prof. Haberman's special fields of study are rhetorical theory and the history of oratory, and he has published numerous studies in those fields. He is a member of Delta Sigma Rho, honorary forensics fraternity, and the Speech Association of America. He is assistant editor of the *Quarterly Journal of Speech*, and a member of the editorial board of the Speech association committee preparing a volume on American Speech education.



SCHEDULE

MODERN SCIENCE AND HUMAN NEEDS

Frederick W. Haberman, Moderator

L. H. Adolfson, Associate Moderator

- | | | |
|---------------------------------------|-----------|---------------------------|
| I. Modern Science and Health | | |
| Scientific Horizons in Medicine | Tuesday, | February 6 Dean Middleton |
| | Thursday, | February 8 Discussion |
| Cancer: The Known and the Unknown | Tuesday, | February 13 Prof. Potter |
| | Thursday, | February 15 Discussion |
| Preventive Psychiatry | Tuesday, | February 20 Dr. Washburne |
| | Thursday, | February 22 Discussion |
| II. Modern Science and Energy | | |
| Is There Fuel Enough? | Tuesday, | February 27 Prof. Daniels |
| | Thursday, | March 1 Discussion |
| Civilian Uses of Atomic Energy | Tuesday, | March 6 Prof. Sorum |
| | Thursday, | March 8 Discussion |
| Power in Modern Life | Tuesday, | March 13 Prof. Elliott |
| | Thursday, | March 15 Discussion |
| III. Some New Developments in Science | | |
| The World Within The World | Tuesday, | March 20 Prof. Woollard |
| | Thursday, | March 22 Six Weeks' Exam. |
| Climate and Man through the Ages | Tuesday, | March 27 Prof. Bryson |
| | Thursday, | March 29 Discussion |
| The Control of Man's Environment | Tuesday, | April 3 Prof. Rohlich |
| | Thursday, | April 5 Discussion |
| IV. Modern Science and Our Resources | | |
| Soil Resources: Present and Future | Tuesday, | April 10 Prof. Muckenhirn |
| | Thursday, | April 12 Discussion |
| Man's Relationship to Nature | Tuesday, | April 24 Prof. Curtis |
| | Thursday, | April 26 Discussion |
| V. Modern Science and Food | | |
| Can the World Feed its People? | Tuesday, | May 1 Prof. Clark |
| | Thursday, | May 3 Discussion |
| Our Nutritional Needs | Tuesday, | May 8 Prof. Baumann |
| | Thursday, | May 10 Discussion |
| VI. Modern Science and Heredity | | |
| The Human Animal Today | Tuesday, | May 15 Prof. Howells |
| | Thursday, | May 17 Discussion |
| Genetics in Human Life and Thought | Tuesday, | May 22 Prof. Crow |
| | Thursday, | May 24 Discussion |
| VII. Modern Science and the Future | Tuesday, | May 29 Dean Elvehjem |