

TWENTIETH ANNUAL ALUMNI SEMINAR - SATURDAY, APRIL 6, 1957

8:30-9:15 A.M.—REGISTRATION
Dabney Hall of the Humanities

MORNING PROGRAM

9:30-10:20 A.M.

One of the following:

A. VIRUSES AND CANCER

Harry Rubin, Senior Research Fellow in Biology

It has been demonstrated repeatedly that certain viruses can cause cancer in animals. Very recent developments in the techniques of laboratory biology now make it possible to study the relationship between viruses and cancer in a precise way. Dr. Rubin will discuss the questions that have been raised in the field of viruses and cancer and the prospects for answering these questions with the new tools and knowledge now available.

B. FLOODS! ARE WE PREPARED?

Norman H. Brooks, Assistant Professor of Civil Engineering

The danger of loss of life and property from floods has been greatly increased by man's encroachment on river flood plains. Although the southern California area has not suffered severe flood damage within the past two decades, threat of disaster is present every year. Studies of flood behavior have led to construction and design of improved control projects and to new techniques in the forecasting of flood levels. Flood damage and the operation of flood control facilities will be vividly illustrated with photographs taken during recent disastrous floods including those which occurred in northern California in December 1955.

10:20-10:50 A.M.—COFFEE TIME

Served in the patio between Arms and Mudd

10:50-11:40 A.M.—

One of the following:

A. LIFE AT A QUARTER MILLION g's

Jerome Vinograd, Research Associate in Chemistry

The centrifugal field associated with fast spinning rotors provides a new world in which objects may increase in weight by a quarter of a million times, a force field equivalent to that found on white dwarf stars. Dr. Vinograd will discuss the phenomena associated with modern ultracentrifuge investigations.

B. BROADCASTS FROM THE STARS

John G. Bolton, Senior Research Fellow in Physics and Astronomy

In the past ten years, radio observations have made great contributions to the study of the sun, external galaxies and interstellar gas. The number of "radio" observatories is rapidly approaching that of conventional observatories. A large observatory with two 90-foot radio telescopes is being built for the Institute near Big Pine in the Owens Valley. A description of this project and the aims of the research program will be given.

11:55-12:45 P.M.—

One of the following:

A. NEW CARS AND NEW POLITICS

James C. Davies, Associate Professor of Political Science

The American public is more interested today in new cars than new politics. In the midst of world crises we are turning away from politics. This political lethargy can last too long. The violent rebirth of anti-white feelings in Asia and Africa may make our faces turn red even if the non-white world does not. Professor Davies will discuss the significance of our politics to our world position.

B. REVOLUTION IN AERONAUTICS

Clark B. Millikan, Director, Guggenheim Aeronautical Laboratory, CIT

Speeds previously attained only by bullets have recently become commonplace for manned aircraft and complex guided

missiles. This remarkable change has been made possible by the development of power plants considered exotic 10 years ago. Revolutionary solutions have been found to almost insurmountable problems encountered in the fields of aerodynamics, structures, materials, guidance and control. These solutions suggest that even more spectacular flights than those now being attained will be possible in the near future.

1:00-2:00 P.M.—LUNCH—Student Houses

AFTERNOON PROGRAM

2:15-3:45 P.M.

THE NEXT HUNDRED YEARS—A SYMPOSIUM

In 1956 a team of faculty members of the Institute arranged a series of discussions with leaders of American industries. Conferences were held with board members and top executives of about thirty of our largest corporations. The future of the earth's natural resources in relation to man and his technology was discussed. The Alumni Seminar is fortunate in being able to present this exciting and thought-provoking profile of the future.

Speakers:

James F. Bonner, Professor of Biology

John R. Weir, Associate Professor of Psychology

Chairman:

Chester M. McCloskey, Director, Industrial Associates

The interrelationships between man and his resources in terms of raw materials, products, manpower, brainpower, and processes have recently been systematically explored. In the light of the facts revealed, an attempt is made to forecast the future of our industrial civilization—beginning with the years just ahead, in which steps will be taken that affect us far into the future. What is the future likely to be? How rapidly can we expect industrial civilization to spread throughout the world? How large will human populations grow and how rapidly? What are the available raw materials which man can use? Can agricultural productivity be brought abreast of world requirements? Are our technical manpower resources adequate for the inevitable evolution? The factors involved will be brilliantly analyzed by this select panel.

3:45 P.M.—COFFEE TIME

Served in patio between Arms and Mudd

OTHER EVENTS

4:15 P.M.

Tour through Southern California Cooperative Wind Tunnel, 950 South Raymond. Tour is limited to 150 people and will take about one hour.

OR

For those who prefer the out-of-doors, the swimming pool will be open from 2:00 to 5:00. Bring your own suit and towel. Aqualungs and fish-spears will be prohibited.

EVENING PROGRAM

Dinner Hour: 6:30 P.M. (Bar opens 5:30)

Elks Club, 400 W. Colorado Street, Pasadena

Dress—Informal

AFTER DINNER

Introductions by L. Ford Etter '31, General Chairman, Alumni Seminar Day. Remarks by Albert B. Ruddock, Chairman, Board of Trustees, California Institute of Technology.

Guest Speaker—RAY E. UTEREINER

His Subject—"CALIFORNIA UTILITIES AND THE COMMISSION"

Many alumni who have heard Dr. Utereiner know that he is a very entertaining speaker. He has been on leave from the Caltech faculty since October, 1954 to serve as a Commissioner of the State of California Public Utilities Commission working in your interest. We are fortunate that his plans allow his return to address us on this occasion.