matic study on flicker fusion frequency as a test of fatigue.[21]

In the early stages of the development of the laboratory full-time participation of all staff members in the research program was necessary. It would appear advantageous that senior staff members of the laboratory should have formal appointments on a part-time basis in the respective departments of their basic interests. Such arrangements have now been made so that the senior biochemist devotes one fourth of his time to teaching responsibilities in the department of biochemistry, and so on. In addition, the laboratory as a unit should have certain definite teaching responsibilities. Through teaching a wider range of topics is covered than in specialized research and this helps to keep open the intellectual horizon. Then, too, a more direct contact with members of the "home" department should provide opportunity for further intellectual stimulation. The spirit of interdisciplinary research work, on the other hand, can be best transmitted to the students by persons who live and breathe in a cooperative atmosphere. Arrangement for internships and participation of graduate students in the research should be facilitated in this way.

An institute organized along the lines of this laboratory may play a particularly significant role in medical education. Organization of research and teaching in medical schools obstinately tends to follow the departmental structure. Also, the research is frequently limited by dependence on facilities supplied primarily for pedagogical purposes in the basic science departments and for direct diagnostic and therapeutic purposes in the clinical departments. Medical schools are commonly very inadequately equipped and methodologically not prepared for the study of important behavioral aspects of human adjustment mechanisms. This is partly due to the fact that in the orthodox medical curriculum there is, for the most part, no provision for the study of the individual human organism as an integral of anatomical and histological structures, biochemical reactions, biophysical processes, psychological motives and conditioned responses.

In the fundamental sciences the medical student is encouraged to think in terms of quantitative data, controlled conditions and experimental approach. The variables are well isolated and behave pretty much as the textbook suggests. When the student is faced with the complex organism he is apt to overcompensate for the feeling of inadequacy by calling too readily upon "intuition" when the situation calls logically for a simultaneous application of different methods covering many variables. It is realized that the step from the formal, rather abstract knowledge in the fundamental sciences to the scientific analysis and grasp of the complex problems of the patient is a difficult one. The staff of an interdisciplinary laboratory can be of much service in providing integrative lectures and seminars and detailed demonstrations. Such a laboratory presents opportunities to interested advanced students for more realistic laboratory work than is customarily available in physiology, biochemistry and psychology. Participation of graduate students and of medical graduates in the work of the laboratory should be very useful as a final preparation for both teaching and research.

Conclusions

The interdisciplinary approach is becoming one of the prominent characteristics of experimental human biology and represents a synthesizing trend which focuses the specialized research techniques on problems common to a number of separate disciplines.

Such a cooperative research has to overcome serious obstacles when operating within the existing departmentalized framework of the universities. It appears that real progress in this direction will be made in institutions which are organized on a permanent and frankly cooperative basis.

Psychologically, interdisciplinary research requires not only abstract, theoretical intelligence (and, frequently, manipulative skill) but also "social intelligence." Cooperative work is a social art and has to be practiced with patience. A team of research workers representing various disciplines can be welded into a fully integrated unit only on the basis of extensive experience of working and thinking together.

In the training program three points deserve emphasis: (1) facilities for getting acquainted with the problems and methods of the neighbor fields, (2) study of the "science of science" which provides the necessary philosophical perspective, and (3) development of social skills required for a stimulating and efficient scientific cooperation.

OBITUARY

I. HUANG

A CABLEGRAM reports the recent death of I. Huang, professor of psychology in the National University of Chekiang, Tsunyi, Kweichow, China. This brings to an untimely close a valiant career which achieved much under great obstacles and which promised yet more for the New China and for intercultural relations with America.

[21] J. Brozek and A. Keys, *Jour. Indust. Hyg. Toxicol.*, 26: 169–174, 1944.

Dr. Huang was born in Amoy, China, on November 8, 1903. He attended Tsing Hua College in Peking and South Eastern University in Nanking. At the age of twenty-two he came to California, attended Leland Stanford University, obtaining a master's degree in 1927, after graduate work under Terman and Miles. An interest in child psychology brought him to Yale University, where he secured his doctorate in 1930. As a student he displayed keen powers of analysis and a scholarly mind. He had an extraordinary command both of spoken and written English. The experimental as well as philosophical aspects of Gestalt theory attracted him and under the supervision of the late Kurt Koffka he carried out a doctoral research on "Children's Explanations of Strange Phenomena," published in *Psychologische Forschungen* (1930). This was the forerunner of a series of experimental studies now appearing in *The Journal of Genetic Psychology* on children's conception of physical causality; the role of repetition, organization and intention to learn in rote memory; abstraction of form and color in children; the size-weight illusion, and child animism. A monograph on "The Psychology of Children's Drawings" which showed impressive resemblances between the artistic productions of western and Chinese children was published in Chinese in 1938 (Shanghai Commercial Press). In addition to his teaching, lecturing and research, Dr. Huang established an experimental nursery school in Hangchow in 1935.

All these activities were carried on under almost incredible hardships. They coincided with the ruthless invasion by Japan. The University of Chekiang became a nomadic university forced to move from Hangchow to I-Shan, Kwangsi; to Tu Yun, Kweichow; and finally to Tsunyi. In the last removal, one thousand human beings and two thousand boxes of books and scientific apparatus had to be transported over one of the most uninhabitable and mountainous regions of the world, with gasoline at ten Chinese dollars per gallon! Under such conditions, personal savings melted away, and normal home life vanished. Dr. Huang and his family lived in a mud hut with straw roof, bamboo doors and holes for windows—and often in bombed areas. In spite of all difficulties, he pursued his scholarly work writing letters to America in quest of bibliographic and other details. A single page of one letter described the terrible realities of bombing, but went on to discuss "the question of perceptual constancies emphasized by the Gestaltists"! The scholar in Dr. Huang prevailed until he was overtaken by a painful and devastating illness.

Here we glimpse at once the amazing character of the Chinese people and the valor of this scientist's life. He was admired by his native colleagues and was held in affection by his students. Those who knew him in America remember his keen intelligence, his sense of humor and a certain playfulness of spirit, combined with a philosophic caste of mind.

ARNOLD GESELL

RECENT DEATHS

DR. HERBERT H. WHETZEL, professor of plant pathology at Cornell University and from 1906 to 1922 head of the department, died on November 30 at the age of sixty-seven years.

DR. CHARLES PETER SIGERFOOS, professor emeritus of zoology of the University of Minnesota, died on November 26 at the age of seventy-nine years.

PHILIP AINSWORTH MEANS, formerly associate in anthropology at the Peabody Museum of Harvard University, died on November 24 at the age of fifty-two years.

LYSTER HOXIE DEWEY, from 1890 to 1935 botanist in charge of fiber-crop investigations of the U. S. Department of Agriculture, died on November 27. He was seventy-nine years old.

WARREN L. BEUSCHLEIN, professor of chemical engineering at the University of Washington, died on September 15.

SCIENTIFIC EVENTS

THE PROPOSED BRITISH AERONAUTICAL COLLEGE

PLANS for the establishment in Great Britain of an aeronautical college at a cost of £2,610,000 in capital outlay and calling for an annual expenditure of £360,000 are given in the report of the Interdepartmental Committee on the Establishment of a School of Aeronautical Science, published on November 6. Sir Stafford Cripps, the Minister of Aircraft Production, states that the Government has accepted in principle the recommendations of the committee. According to the plan, which is described in *The Times*, London, the primary purpose of the college will be to provide high-grade engineering, technical and scientific training in aeronautics to fit students for leadership in the aircraft industry, civil aviation, the services, education and research. It is also proposed to provide shorter courses for specialists in particular subjects, refresher courses and a general "staff course" aimed at giving a broad knowledge of aeronautics.

The college would be planned on the basis of an entry of fifty students annually on a two-year course, and two hundred students on shorter courses—a total of three hundred at any one time. The instruction