centage is due in a large measure to the educational campaign conducted by the American Chemical Society with the active cooperation of the Selective Service System constituted by law for such purposes, as its name implies.

Having outlined the problem and recorded two and one-half years of experience, I can reply now to the questions you have propounded.

If your suggested committee is to handle and give advice regarding the classification of chemists and chemical engineers, essentially the same as the committee which has been formed to advise in cases of physicists (Local Board Release 159), the American Chemical Society is prepared to function. We can readily present to you suggestions for its make-up from among the best chemists and chemical engineers in America—men who will serve without compensation from the War Manpower Commission or from the Government.

However, if it is the War Manpower Commission's proposal to form a committee of heterogeneous "engineers" to function for all "engineers," including those specifically trained chemically, we prefer to continue to serve America and the country's qualified chemical engineers as we have been doing. We do not believe that a heterogeneous committee of electrical, mechanical, civil, radio, sanitary and other engineers can hope to envision the problems of the chemical industry or those of the chemical engineers themselves, as could a committee composed of members of the chemical profession; nor do we believe that the War Manpower Commission or Selective Service itself would have equal confidence in its findings.

THE COPERNICAN QUADRICENTENNIAL

AT the celebration in New York City on May 24 of the four hundredth anniversary of the death of Copernicus, messages were read from President Roosevelt and the President of Poland, Wladyslaw Raczkiewicz, now in London. Copernican citations were conferred upon a group of pioneers in science and civilization, nine of whom were Americans and one Chinese.

President Roosevelt's message was read by Professor Harlow Shapley. The President wrote:

Not only must great men and great nations be allowed to attain freedom. Liberty must be made progressively available to small states, to communities, and to the individual himself if humanity is to march forward into light and life. We must always remember that the creation and sweep of great liberalizing ideas may be the work of a single isolated individual, as in the case of Copernicus.

Dr. James Rowland Angell, president-emeritus of Yale University, was chairman of the committee on citations. Those honored with citations were:

Dr. John Dewey, "who has stimulated and enriched the thinking of his time in education, philosophy and in all arts of life."

Walter (Walt) Disney, "whose animated cartoons have delighted audiences the world over."

Professor Albert Einstein, "whose revolutionary concept of space, time and energy has transformed both science and philosophy."

Henry Ford, "for opening a new horizon to manufacture."

Dr. Ernest O. Lawrence, of the University of California at Berkeley, "inventor and builder of the most powerful engine of transmutation of the elements."

Dr. Thomas Hunt Morgan, of the California Institute of Technology, "author of a revolution in our knowledge of the causes and mechanisms of inheritance."

Igore I. Sikorsky, "pioneer aeronautical engineer who has created a helicopter of revolutionary implications."

Dr. Wendell M. Stanley, of the Rockefeller Institute at Princeton, N. J., "discoverer of a crystalline protein having all the characteristics of disease-producing virus, a concept revolutionary for the study and control of virus disease."

Orville Wright, "who fashioned wings for man and showed him how to navigate the ocean of the air."

Dr. James Y. C. Yen, of Chungking, who invented "a simple, easily mastered system of written Chinese whereby the book of knowledge has been opened to millions of previously illiterate minds."

PRESENTATION OF THE FIRST CHARLES L. MAYER AWARD

PRESENTATION of the first Charles L. Mayer Award of $2,000 was made to Dr. Charles Huggins at the annual dinner meeting of the Board of Directors of the National Science Fund of the National Academy of Sciences, which was given on May 19 at the University Club, New York City. Dr. William J. Robbins, chairman of the fund, presided at the dinner and, following the citation for the award made by Dr. Peyton Rous, Dr. Frank B. Jewett, president of the National Academy of Sciences and a director of the fund, presented the award to Dr. Huggins. The citation reads:

The work for which Dr. Huggins is to receive the first Charles L. Mayer Award makes possible the alleviation of cancer of the human prostate in a large proportion of instances, with perhaps a permanent control in some cases. But its implications are more than practical; they stress a principle which has been little regarded. In searching for means to combat cancer most workers strive to exploit the difference of tumor cells from normal ones, and sometimes with success, as in the treatment of cancers of the skin by Roentgen rays, the tumor cells succumbing to exposures which healthy elements survive. Dr. Huggins has proceeded in the diametrically opposite way; he has played upon what is normal in the malignant cells, the remaining good in them as one might say, and they have responded. This response is a fact which reveals. Hence, with your permission, I will speak briefly concerning it. And with apologies to Dr. Huggins, for there are few occasions which put a scientist more justifiably on tenterhooks than when another attempts in his presence to point to the place in nature of his discoveries.

Research workers found out a long while ago that they could induce cancers to appear in animals by irritating the tissues with various physical or chemical agents. The agents which do this, the carcinogens, call forth benign growths as well, tumors doing no harm other than that which may result from their bulk. And they not only bring cancers into being which are capable of slaying the host but others which need aid if they are to progress and which, in the lack of it—as when the carcinogen is discontinued—dwindle and vanish. The occurrence of such hesitant cancers, forced upon the organism under the exaggerated conditions of experiment, was first noted in 1915; but almost no attention has been paid to them for the reason that in human beings one seldom sees them, or rather, seldom perceives them for what they are. The growths which drive people to seek medical attention have already been tried out by circumstances, they are the fit which have emerged, they are going concerns. Yet if pathologists had only searched they might long ago have seen that the prostates of many men over forty contain tentative cancers, which come to nothing as statistics show, being still microscopic nodules in old age. It is the exceptional prostatic cancer which extends beyond the capsule of the organ. All this is very recent knowledge.

The gross differences in the behavior of human cancers, including the prostatic, are of course merely the expression of difference in cell capability and form. Cancer cells are popularly supposed to be in a state of anarchy, but this is seldom the actual case. Nearly always they are more like delinquents which make attempts in their poor way to carry out the accustomed tasks of entities of their sort. Some of those arising from glands deviate so little from the normal as still to produce secretions in line of duty, and often they build glandular structures as they proliferate, though crazy structures to be sure. More important in the present relation, they respond in greater or less degree to the influences affecting normal cells. Only in extreme instances do they wholly disregard the laws of organism. Most tumor cells appear to do the best they can with their disturbed abilities, differentiating and functioning so far as their abnormal state will let them and the urge that is on them to multiply.

It was upon these facts that Dr. Huggins acted. He was aware, partly through his own researches, that the activities of normal prostatic cells are maintained by the male sex hormones, substances elaborated in the testicles. What he attempted was to learn whether any prostatic cancers are still sufficiently like normal gland tissues to undergo involution with the latter when the stimulation by hormones is withdrawn. Putting aside the assertions of the text-books that castration had no useful effects in such respect he removed the testes of patients with hopeless prostatic cancers, after obtaining their consent. Dramatic happiness followed of which he will tell you.[1] They throw a far light.

That Dr. Huggins should be a surgeon is one of the happy circumstances of his achievement. Surgeons of all men have most direct access to tumors—I do not mean to play on words—yet it is their sardonic fate to have to employ their energies mostly in taking growths out, not in reasoning why as concerns them. Dr. Huggins, like the great surgeons of the past, has proved stronger than the demands of his vocations, and most rewardingly has he reasoned.

There is no natural phenomenon which challenges scientists in a more peremptory way than cancer. To layman and scientist alike it will seem fitting that the first prize administered by the National Science Fund, the Charles L. Mayer Award, should have been offered for "a contribution to our knowledge of factors affecting the growth of animal cells, with particular reference to human cancer." I am privileged in presenting Dr. Huggins for this prize. For his is more than a contribution to knowledge; it is an immediate gift to the welfare of man.

SCIENTIFIC NOTES AND NEWS

A TESTIMONIAL dinner to Dr. Walter S. Landis, vice-president of the American Cyanamid Company, was given on the evening of May 15 at the twenty-first annual meeting of the American Institute of Chemists. The gold medal of the institute was presented to him in recognition of his contributions to the field of chemistry. Speakers at the dinner were: Dr. Gustav Egloff, president of the institute and research director of the Universal Oil Products Company; Harry L. Derby, president of the American Cyanamid Company; and Maximilian Toch, president of Toch Brothers, Inc. Dr. Landis gave an address entitled "The Personal Service of the Chemist to the Nation."

DR. GUSTAV EGLOFF was the recipient of the Columbia University Medal of Merit for 1943, which is awarded annually to "an outstanding scientific or technological leader in industry." The medal was presented on June 1 at the convocation of the university.

L. M. PIDGEON, of the National Research Council of Canada, has been awarded the platinum medal of the International Nickel Company by the Canadian Institute of Mining and Metallurgy and the special merit medal of the Professional Institute of the Civil Service of Canada for his development of a successful method of producing metallic magnesium.

THE annual award of the President and Visitors Research Prize of the Virginia chapter of the Society of Sigma Xi this year was made at the twentieth annual meeting on May 25 to Dr. Gordon T. Whyburn for his work in the field of topology. At this meeting there were initiated two alumni, two faculty members, ten members from the Graduate Department and nineteen associates from the college, graduate and professional schools of the University of Virginia.

THE Ohio State University at its commencement exercises on June 11 will confer the doctorate of laws

[1] This address will be published in SCIENCE.