

The Inauguration of
WILLIAM VERMILLION HOUSTON
As President of The Rice Institute



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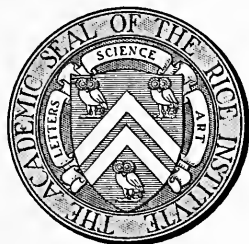
THE INAUGURATION OF
WILLIAM VERMILLION HOUSTON



WILLIAM V. HOUSTON

The Inauguration of
William Vermillion Houston
As President of
The Rice Institute

*On April Tenth,
Nineteen Hundred and Forty-seven*



THE RICE INSTITUTE

HOUSTON, TEXAS, U.S.A.

MCMXLVII

INAUGURATION CEREMONY

IN THE COURT OF THE CHEMISTRY LABORATORIES
AT ELEVEN O'CLOCK IN THE MORNING

PROGRAM

DR. EDGAR ODELL LOVETT, PRESIDENT EMERITUS, PRESIDING

PROCESSION

VENI CREATOR SPIRITUS
CHOIR OF TRINITY EPISCOPAL CHURCH

INVOCATION

THE REV. DR. A. FRANK SMITH
BISHOP OF THE METHODIST EPISCOPAL CHURCH

ADDRESS: "DYNAMIC EDUCATION"

DR. KARL TAYLOR COMPTON
PRESIDENT OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

INTRODUCTION OF THE PRESIDENT

MR. HARRY CAROTHERS WIESS
VICE-CHAIRMAN OF THE BOARD OF TRUSTEES

RESPONSE

PRESIDENT HOUSTON

AMERICA

CHOIR AND ASSEMBLY

BENEDICTION

BISHOP SMITH

RECESSION

LUNCHEON IN THE COMMONS FOR THE
OFFICIAL DELEGATES AND THE
RICE INSTITUTE FACULTY

AT ONE O'CLOCK

DR. HAROLD ALBERT WILSON, PROFESSOR OF PHYSICS, PRESIDING

ADDRESS: "MEN WANTED"

DR. LEE ALVIN DUBRIDGE
PRESIDENT OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY

RECEPTION FOR DELEGATES AND
INVITED GUESTS

IN COHEN HOUSE ON THE CAMPUS

AT FOUR-THIRTY

DINNER IN HONOR OF
PRESIDENT AND MRS. HOUSTON

For Official Delegates and Invited Guests

IN THE CRYSTAL BALLROOM OF THE RICE HOTEL
AT SEVEN O'CLOCK

MR. GEORGE RUFUS BROWN, VICE-CHAIRMAN OF THE BOARD
OF TRUSTEES, TOASTMASTER

GRACE

THE REV. DR. CHARLES LEONIDAS KING
PASTOR OF THE FIRST PRESBYTERIAN CHURCH

ADDRESSES

"Lone Star and Constellation"

DR. DIXON WECTER
CHAIRMAN OF THE RESEARCH GROUP
THE HUNTINGTON LIBRARY, SAN MARINO, CALIFORNIA

On Behalf of the Alumni

MR. CARL MILHAM KNAPP
PRESIDENT OF THE ASSOCIATION OF RICE ALUMNI

On Behalf of the People of Texas

THE HON. JESSE HOLMAN JONES

INFORMAL RESPONSE OF THE PRESIDENT

INAUGURATION CEREMONY

ADDRESS OF WELCOME*

MR. Chairman, Mr. President, Ladies and Gentlemen, Guests and Friends of the Rice Institute: John Masefield has said: "The days that make us happy make us wise." By that criterion, the Rice Institute has waxed mightily in wisdom in these latter days. To this consummation many moving circumstances have contributed. Some of them, for example, are manifested in the courage, imagination, understanding, and resourcefulness of a new Board of Trustees, in the stature, vision, zeal, and leadership of the new President, and in the further exaltation of hope and joy induced by subsequent benefactions of immediate availability and most generous dimensions.

Southerners and Texans take their history straight. It is taught to youth as a moving example. It dwells with their elders almost like a living memory. It colors their views and influences their judgments on current affairs, local, national, or international, of church, state, or university.

In the history of this institution three names stand out in burnished gold: William M. Rice, 1816-1900, the founder; James A. Baker, Jr., 1857-1941, son and namesake of the founder's attorney-at-law; and William M.

*By Dr. Edgar Odell Lovett, President Emeritus.

INAUGURATION CEREMONY

Rice, Jr., 1857-1944, nephew and namesake of the founder. The last two were named in the last will and testament of the founder as co-executors of that instrument. Each of the two served the institution faithfully and efficiently for more than fifty years. And they endured, never through short cuts, but trusting the slow processes of time, justice, and truth.

President Houston and the trustees have accorded me the privilege, the honor, and the pleasure of extending a most cordial welcome to all guests who lend their presence and distinction to this most auspicious occasion. I speak in the name of the founder, and of all past and present members of the Board of Trustees, of the faculty, and of the student body. We are most grateful to each and every one of you for your kindness in taking the trouble to come. We should very much like to think that the day may prove so interesting to you that you will be returning here soon again, and often. "We came to Oxford, a very sweet place," wrote Samuel Pepys, "a mighty fine place, well seated, with cheap entertainment." I earnestly hope that many of you may come to think somewhat the same of this place. In terms of a well-known line of Homer I venture to make for you and for us a further wish: May all of you continue to do well, and may you remember all of us in after time. And may every one of the present assembly arranged in honor of President Houston live long in the enjoyment of Virgil's encomium so abundantly exemplified in Dr. Houston's career: Happy is the man who has been able to under-

ADDRESS OF WELCOME

stand the causes of things, and who has put under his feet all fear, and inexorable fate!

History, they say, sometimes repeats itself, though usually with a difference. Several historical repetitions of arresting and auspicious sameness, however, spring to mind. Charles W. Eliot left the newly established Massachusetts Institute in Boston to spend his working days in making a new Harvard in Cambridge; Daniel Coit Gilman left Yale to carry science to the University of California in its infancy, and later recrossed the continent to spend his working days in building Johns Hopkins in Baltimore; William Rainey Harper carried light and truth from Yale to the west to spend his working days in building the new University of Chicago; David Starr Jordan carried science from Indiana University to the coast to spend his working days in building Leland Stanford in Palo Alto; and now William V. Houston has come from the California Institute in Pasadena to spend his working days in the making of a new Rice in Houston. Eliot, Gilman, Harper, Jordan, Houston! Is it not a goodly company!

In the brief span of one swift year at this institution President Houston has gained the confidence and good will of campus, city, and commonwealth. In teaching, research, and administration, in student and alumni activities, in the coöperation of the trustees and the faculty, and in personal and public relations: on all these scales he has been weighed, found overweight, and carries it lightly. He has been tried out. He has met success-

INAUGURATION CEREMONY

fully every test. And in Texas and perhaps farther afield a historical tradition still persists that if a man has been tried out in Texas he is tried out. That triumph, wrought through his kindliness, courage, tact, and common sense, is at once the best of good omens and a sure guarantee that President Houston will be going strong in Houston, Texas, forty years on.

President Compton has been doing well, very well, excellently well. He got a good start in life. By environment and rearing, by training and education, he was predestined to the extraordinary career he has been achieving. He has proved in his own experience that no opportunity for service within the gift of God to man is superior to that afforded by the presidency of an institution of higher learning in the United States of America. He has attained and long held a position of highest eminence, and to that peak he has led the institution over which he presides.

Wherever men congregate for thought and action on ways and means to organization and administration, Dr. Compton is the first to be called in and the last to be released. For manifold services in war and in peace, and again in war and in peace, he has received world-wide acclaim and acknowledgment. He is at home in every continent and on all the seven seas. Nor is the floor of the ocean or flight beyond the stratosphere strange to him. And, with great respect, one may confidently anticipate that so soon as transportation facilities become

ADDRESS OF WELCOME

available Dr. Compton will be sent for to dedicate a physics laboratory on one side or the other of the moon, and to inaugurate an interplanetary scientific congress on Mars on his way back home.

More soberly, and indeed most seriously, Dr. Compton is in the prime of his remarkable powers of expression, anticipation, persuasion, and execution. In the exercise of these cardinal qualities the genius of the man has focused the eyes of the world upon the institution he heads. And he himself is always away out in front ahead of the institution. Thus he has brought to all his colleagues opportunities for the unimpeded activity of their highest faculties. And this, to my mind, is a supreme achievement. But best of all, those colleagues say of him as Dante in the *Paradiso* says of Romeo: "If the world might know the heart he has within him, much as it praiseth, it would praise him more"; and as Schiller in *The Lay of the Bell*: "Where the strong and the tender, the mild and the stern, are blent, then rings the metal true."

Ladies and Gentlemen, President Karl Taylor Compton, of the Massachusetts Institute of Technology, who will speak on "Dynamic Education."

DYNAMIC EDUCATION*

MANY ties with the Rice Institute combine to give me particular interest and pleasure in the opportunity to participate in this happy ceremony. I was a graduate student in Princeton when Dr. Lovett, of its mathematics department, was inaugurated the first President of the Rice Institute; and I recall many enthusiastic reports of the formal opening ceremonies from President Lovett's Princeton friends who attended that notable celebration.

The distinguished head of your physics department, Professor H. A. Wilson, is brother-in-law of O. W. Richardson under whom I was then studying at Princeton. The two other early members of your physics department were Claude Heaps, who was with me as a graduate student under O. W. Richardson, and A. L. Hughes, whose research work ran strikingly parallel with mine during our early professional careers.

The former head of your history department and Dean, Robert G. Caldwell, is a lifelong friend, who lived in my home while for a year he substituted for my father on the faculty of the College of Wooster. It was Caldwell who persuaded me to go to Princeton for graduate work, and who, after the Rice Institute and an intervening period in the diplomatic service, is now Dean of Humanities at the Massachusetts Institute of Technology.

*Address by Dr. Karl Taylor Compton, President of the Massachusetts Institute of Technology.

ADDRESS BY DR. COMPTON

But most significant of all ties is my long friendship with, and professional admiration for, the man whom you are inaugurating today. As a theoretical physicist he has gained world-wide recognition for both creative achievements and interpretive skill. As an administrator he did a notable job of steering and coördinating one of the most important new weapon developments of World War II.

So I have special personal reasons for congratulating the Rice Institute and for wishing President Houston a full measure of success and satisfaction as head of this fine institution. Also, officially, I bring congratulations and best wishes from the sister institution which I serve.

In selecting "Dynamic Education" as the subject of my address, I had in mind the manner in which the forces generated within an educational institution and the forces at play in the surrounding social environment can react on each other. For dynamics is the science of interacting forces. Dynamics differs from statics in that statics deals with stationary systems, whereas dynamics deals with the changes produced by forces.

In physics or engineering there are very precise laws of dynamics and of the forces, masses, motions, and energies with which the science of dynamics is concerned. But, with looser definitions, the concepts of dynamics and statics are carried over by analogy into the realm of human affairs. So let us consider static versus dynamic education.

Most natural instincts, but fortunately not all, tend

INAUGURATION CEREMONY

to perpetuate the past. It is easier to use again last year's textbook or lecture notes or class exercises than to prepare new ones. The curriculum has served well in the past; why bother to change it, especially if it has been "accredited" by some official agency? The "classics" have enriched men's spirits and disciplined their minds for centuries and many would see them continue as the basis of any "liberal" education. Even in technological education we are all too prone to give training in the arts of the past instead of the present, and to overlook the fact that we should be preparing our students for the future. And, in any case, change involves risk as well as effort.

Against this background let me suggest a few of the forces which today require of our educational institutions careful consideration and evaluation, and probably some positive action. As we enter the postwar era and reconvert from war to peace, the time is opportune to see if our methods and curricula can be more effectively designed to educate men and women for better living and better service in the world, not of the Victorian era or the booming "twenties," but in the world of today and of the next generation. Stated in another way, how can the influence of our educational institutions be exerted on their students and on the community to accomplish two practical purposes: to solve advantageously the most important problems facing our society and to take advantage of great opportunities which lie ahead? Certainly we shall have failed in our mission if we fail to contribute importantly to these two objectives. Let me

ADDRESS BY DR. COMPTON

therefore mention a few of the problems and opportunities which seem to me to constitute the dynamical system of social forces on which our educational institutions must react.

I. IDEOLOGICAL FORCES OF SOCIAL DISRUPTION WHICH LOWER STANDARDS OF LIVING

Any one of us could point to various attitudes or trends in thought and action in our society which make for disruption and failure to achieve the high standard of living for all. I shall mention three such trends which seem to me to be especially serious. They are: frictional losses; perpetuation of obsolescence; and the philosophy of "me first," or "something for nothing."

Frictional losses in dynamics always involve loss of power. So it is also in the social or economic field. The most serious of these frictional losses today is in the area of labor-management relations. Strikes have been causing tremendous loss of employment and wages to labor, have seriously weakened the financial structure of industry, have stopped or postponed many desirable new industrial enterprises, and have deprived the public of many products. The whole procedure, if viewed by a man from Mars, or from Russia, or from the thoughtful ranks of our own public, seems wasteful and stupid. Why cannot a more sensible way be found to settle jurisdictional or labor-management disputes than by stopping production until one side or the other is worn out and both sides, as well as the public, have suffered loss?

INAUGURATION CEREMONY

Part of the trouble may lie with the legislation which governs labor disputes. The Congress is tackling this problem, and we hope that it will find a legislative solution which will be wise, fair, and effective. But the root of the difficulty lies deeper than legislation; it lies in certain widely prevailing attitudes and misconceptions. One of these unfortunate attitudes is the emphasis on differences instead of on common objectives. If employees realized that efficient production and good profits are the real basis for securing their employment and wages, and if management were alert and anxious to give labor its generous share of these profits, together with attractive working conditions, then much of the wasteful friction would be avoided. The ideal situation would be one in which every employee was proud of his company and felt himself to be part of a team, along with his fellow workers and with management; and in which the profits from every improvement in efficiency were split three ways—to the employees as increased wages, to the owners as profits, and to the public as decreased prices.

Many industrial companies have achieved this happy situation and all undoubtedly desire it. I recently returned from a trip during which I spent some time on a ship and then at a hotel, where, in both cases, the employees had come back after the war to their former jobs and where their enthusiasm for their ship or their hotel was so obvious that it was a pleasure to see them. While there were divisions of responsibility between the man-

ADDRESS BY DR. COMPTON

agement and the employees, there seemed to be no division of interest.

Unfortunately, this happy situation does not always exist. It is harder to achieve in large organizations than in small ones. Certain features of current legislation emphasize the differences rather than the common interests of management and labor, and put a premium on selfish efforts to drive a wedge between them.

About a dozen years ago I happened to be at a dinner seated beside the head of the organizing committee of one of the great industrial labor unions. I had read the pamphlet which set forth the objectives of this union. This pamphlet emphasized just the points which I have mentioned as desirable: the common interest of labor and management in the success of the company, the need for efficiency and coöperation, and so forth. I told this labor leader that I was gratified to see the statement of such a constructive program, but asked why there was so often such a wide discrepancy between these fine ideals and the actual actions of some unions. He replied that it was a question of education and leadership, and explained that the program of organized labor involved two stages. The first stage was the struggle to secure union recognition against the inertia and opposition based on tradition or on the old policy of exploiting labor. When arguments failed to secure this recognition, force was resorted to and this required a tough and ruthless leadership. Once union recognition was achieved, the second stage of constructive coöperation with management

INAUGURATION CEREMONY

could be entered, and it was this stage which was described in the pamphlet which had caught my attention. He said that organized labor's major problem was now to shift from the rough, two-fisted leadership by educating a new group of leaders to replace the old, and by educating the masses of labor to follow the more constructive programs of the new leaders when installed.

Certainly in many cases this second stage has not yet been reached; in some cases the progress seems to be backward. In any case it is evident that conflict instead of teamwork among the various groups comprising American industry is a very serious frictional loss in our economy.

Perpetuation of obsolescence is another factor which holds down our standard of living. It appears in so many forms and places that it is evidently based on rather fundamental causes. A plumbing code requires a certain number of joints between a bathroom fixture and the sewer, even though new production designs could substitute a single pipe fitting more cheaply and at least as satisfactorily. A union rule will not permit spray painting of a wall, even though this may be much faster and cheaper and as good as brush painting. A government subsidizes farming or commerce under relatively inefficient conditions, in order to permit this inefficient production to compete with others more efficient. A few years ago I heard a number of thoughtful British leaders say, independently of each other, that they had become convinced that Britain's traditional policy of subsidiz-

ADDRESS BY DR. COMPTON

ing its foreign commerce in order to compete with other nations in world trade had, in the long run, operated to encourage British industry to continue with production methods which had fallen far behind those developed in countries where free enterprise and ingenuity were whetted by competition to develop more efficient methods as the price of survival. These Englishmen viewed the American more highly competitive system with envy, but I had, in honesty, to tell them that we also had some laws, codes, union rules, and management practices which prevented us from doing as well as we know how to do.

In a way it is like the farmer to whom an agent was trying to sell a subscription to a farm magazine. "If you read this magazine," said the agent, "it will teach you to farm twice as efficiently as you do now, and you can double your crops." "That doesn't interest me," replied the farmer. "I only farm half as well as I know how, as it is." But we are worse than this farmer. He did less well than he knew how to do because he was lazy or indifferent; but we actually make regulations, or permit others to make regulations, which prevent us from doing our best.

Here again, the man from Mars, taking a fresh look at us, would think: "How foolish these earthlings are to make rules which prevent them from doing what they want to do in the easiest and cheapest way!"

We would all grant the justification of temporary restrictions or subsidies for the purpose of permitting an infant industry to become established, or to cushion the

INAUGURATION CEREMONY

shock on capital and labor of a sudden technological change, or to maintain an activity essential to our national security but not otherwise economically justified. But somehow, if we are to enjoy the full benefits which our skill and ingenuity can contribute to the general welfare, we must not act to perpetuate obsolescence, but rather to encourage improvement.

Philosophy of "me first," or "something for nothing." My father used to say that the desire to get something for nothing was, in his judgment, the most prevalent and serious sin. The more I have thought about it, the more I have become convinced that this is true. If I were called upon to propose an "eleventh commandment," it would be: "Thou shalt not try to get something for nothing." Perhaps it would better fit the facts to say: "You shall not try to get as much as you can in return for as little as you can give." Just think of the multitude of actions which are detrimental to society that are included in this type of sin—for I would call anything a sin whose social consequences are harmful.

Stealing and cheating are two obvious examples on the individual scale. So is gambling, at least if done for gain and not for fun. Graft and racketeering are examples of more complicated type. Sale of worthless stocks, and sharp practices which through legal trickery or complicated reorganizations of business enterprises freeze out honest investors for the profit of those who manipulate the deals, are in the same category. Pressure blocs which strive through political action to gain selfish advantage

ADDRESS BY DR. COMPTON

out of proportion to value given, or to the legitimate interests of other groups, are all too common phenomena. If industrial management tries to squeeze the maximum of work out of its employees for a minimum of wages and consideration, as was an unfortunate practice which is largely responsible for the revolt and unionization of labor for its own collective protection, then management commits this sin. Conversely, if labor attempts to "hold up" the companies for whom it works, or to "hold up" the public, by demands and strikes for advantages which are out of line with the value of its services in relation to the general economic level, then labor is similarly guilty of a crime against society. Finally, if a country seizes territory or resources of another country by military conquest or by the more devious routes of sabotage and political infiltration, it puts this crime on an international scale.

The common factor in all these social crimes is selfishness: a desire to get something by taking it away from someone else, often coupled with the urge to grab it before anyone else has a chance. This is not a pretty ideological picture of the behavior of a so-called civilized people. Furthermore, it is an unintelligent attitude to which could be applied the slogan: "Crime does not pay." For every one of these social crimes brings, directly or indirectly and sooner or later, its punishment. Every one of them sets up forces of social reaction which ultimately wipe out the ill-gotten gains.

I have mentioned three categories of forces of social

INAUGURATION CEREMONY

disruption which lower the standards of living: frictional losses arising from group conflicts, perpetuation of obsolescence, and the effort to get something for nothing. All of these are of ideological character, involving attitudes, motives, and ethics of people. They are all, therefore, problems whose basic solution can come only through education—education of leaders and education of the masses of the people. It is trite to say that this is a challenge to our educational institutions, but here it is. The rise or fall of our civilization may well depend on success or failure to handle these problems successfully, and surely a substantial portion of this responsibility rests on our educational system.

II. IDEOLOGICAL FORCES OF SOCIAL PROGRESS WHICH RAISE STANDARDS OF LIVING

What specifically can our educational institutions, like the Rice Institute or the Massachusetts Institute of Technology, or any other, do to help in this educational problem? It seems to me that, besides bringing about a more general understanding of the facts and training in analyzing the various implications of these facts, we can do a positive job of developing attitudes and ideals which will be constructive. How each institution will do this is a matter for its own study and decision. Perhaps the emphasis on subject matter given in certain courses will help. Certainly the attitude and example of the teachers is important. With desire and skill, effective means can doubtless be devised. But in any case here are three posi-

ADDRESS BY DR. COMPTON

tive antidotes to the three destructive ideologies which we have been discussing.

The first of these is to *preach the gospel of coöperation*. Coöperative effort is natural. It is the basis of all team play to which we Americans take so naturally in youth. It is the spirit which carries us through great emergencies like those of disaster and war. It is only when selfishness or prejudice drives a wedge between people that the natural spirit of coöperation is replaced. Furthermore, there is double satisfaction in coöperative achievement, because to the personal satisfaction that comes with achievement is added the glow of mutual pride. Never was there a truer saying than "United we stand, divided we fall." There will always be an important place for individual genius and effort, but more and more the great problems of society, whether technological or economic or political, require the coöperative constructive attention of all concerned.

The second constructive attitude is that of encouraging *technological progress* and making full use of the advantages to be gained therefrom. The times are propitious for the widespread adoption of this ideology. The effectiveness of scientific developments during the war was so striking that the general public may almost be said to have been shocked into recognition of the power of science to achieve desired results. Consequently we have unprecedentedly generous support of scientific research by industry, by Army and Navy, and soon, we hope, by Congress through the establishment of a National

INAUGURATION CEREMONY

Science Foundation along the general lines of the Smith bill now before the Senate and its companion bill in the House. These bills have bipartisan support and represent the joint efforts of scientific and political leaders to activate a conviction which has grown steadily, but with accelerated pace in the war years, in the public mind. The conviction is this: that scientific progress is essential to the maintenance of a rising standard of living; that the public therefore has a great stake in scientific work; that the public interest therefore demands increased support of scientific research and of its practical applications.

Most important of the constructive attitudes which can be developed by education and by example might be termed the *philosophy of service*. To find pleasure in doing things which are useful; to respond promptly to the call of duty or a call for help; to take pride in doing more and better work than the minimum which is required; to find satisfaction in good craftsmanship, whether it be in production, or management, or professional service—these are positive attitudes which give greater and longer satisfaction than comes from any selfish gain—and they create a better society.

I believe that long-term practical experience proves that the soundest policy for any organization, be it of business or politics or education, is to make best service to the public the criterion for, and objective of, all important decisions. I am sure of the deep truth of Christ's saying that "whosoever would be first among you, shall be servant of all."

ADDRESS BY DR. COMPTON

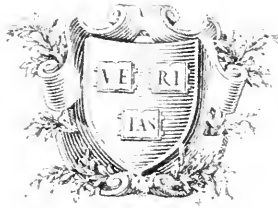
So I commend, as positive forces for good, reliance on coöperative effort as opposed to frictional losses from group conflicts; active faith in technological progress as contrasted with faith in policies which perpetuate obsolescence; the philosophy of service instead of trying to get something for nothing.

These are some of the factors which most critically affect the trend of our national life. They are forces whose direction and effect depend on the education of the public—leaders and followers alike. Therefore, if our educational institutions are to be dynamic influences for good and not static shelters for sterility, they must seek to develop attitudes of awareness and understanding of, and constructive reaction to, these aspects of successful living in our society.

This is a period of postwar reconstruction in which many college faculties are revising their educational programs better to meet the needs and opportunities of the years ahead. I assume that every engineering faculty is competently improving its engineering curriculum, every physics department is planning better educational offerings in nuclear science and electronics, every economics department is giving greater consideration to the role of organized labor and political action in setting economic trends, etc. I hope that I should be the last to belittle such planning, for I deem it of very great value. But, while this is being done, I venture to suggest that we examine also our teaching methods, materials, and objectives and staffs to see whether we cannot more ef-

INAUGURATION CEREMONY

fectively develop in our students those wholesome attitudes toward living and working among men which will lead to greater effectiveness and harmony. Whether as direct educational objectives or as by-products, such attitudes are critically needed in these days. This is what I have hoped to suggest by the title "Dynamic Education."



President and Fellows of Harvard College
TO
The Rice Institute

GREETING: Gladly availing ourselves of your kind invitation
to Harvard University to be represented at the Inauguration of

WILLIAM VERMILLION HOUSTON

as President of The Rice Institute on Thursday the tenth of April, we have
appointed as our Delegate ALAN DUGALD MCKILLOP, Ph.D. ☞ Our
Delegate has been charged to convey to The Rice Institute the congratu-
lations of Harvard University and best wishes for the success and happiness
of the new administration.

*Given at Cambridge, Massachusetts, this fourteenth day of March, in the Year of
Our Lord the one thousand nine hundred and forty-seventh, and of Harvard
College the three hundred and eleventh.*

PRESIDENT AND FELLOWS OF HARVARD COLLEGE

Attest:

Secretary to the University

INTRODUCTION OF MR. WIESS*

DR. Johnson had finally completed his famous Dictionary. His publisher wrote: "Andrew Millar presents his compliments to Mr. Samuel Johnson with the money for the last sheet of the Dictionary, and thanks God he has done with him." Whereupon Dr. Johnson wrote: "Samuel Johnson returns his compliments to Mr. Andrew Millar, and is pleased to find, as he does by his note, that Andrew Millar has the grace to thank God for anything."

Thankfulness, admiration, praise, and the like, are the only terms in which I can think of Mr. Harry Carothers Wiess. One has but to meet him and talk with him to understand why: the light in his eye like the first star of evening or the last one of morning, the smile that is all sunshine always, and his dogged determination to get to the bottom of things that brings out the stars at noon-day. He personifies that "stellar and undiminishable something" which was Emerson's definition of greatness. And to this institution in time of transition he has been in light and leading a beacon on the hill and a pilot on the prairie.

Mr. Wiess's father, William Wiess, of Beaumont, was a Texas pioneer in industry. The son has followed in his father's footsteps. All his life Harry Wiess has been pioneering in the employment of the methods of pure and applied science for the invention and development of

*By Dr. Edgar Odell Lovett, President Emeritus.

INAUGURATION CEREMONY

practicable and profitable industrial operations and processes. These significant contributions to science, learning, industry, engineering, and technology have brought to Mr. Wiess, among other dignities, his present responsibilities as President of the Humble Company, term member of the Corporation of the Massachusetts Institute, charter trustee of Princeton University, and life trustee of the Rice Institute.

I am satisfied that in meeting these several responsibilities, in Cambridge and in Princeton, no less than in Houston, Mr. Wiess has kept steadfastly in view such fundamental objective principles as are expressed, first, in Aristotle's contention that competent observation and impartial discussion constitute the sovereign method of discovery in the search for truth; second, in Plato's ideal that the search for truth is at once the noblest occupation and the highest pleasure of life; and third, in an ancient Sanskrit dictum that to have a great and good library is to be a great and good educator. There are no finer tributes to scientist or scholar, to educator or engineer.

Of the glorious happenings since the coming of President Houston to Houston and of the magnificent participation of Mr. Wiess in those happenings, it is not mine to speak today.

Ladies and Gentlemen, Vice-Chairman Harry Carothers Wiess, of the Board of Trustees of the Rice Institute, who will introduce the President.

INTRODUCTION OF THE PRESIDENT*

DISTINGUISHED Guests, Ladies and Gentlemen: One of the friendships that I cherish most highly is my long friendship with Dr. Lovett. It has been my good fortune to know this gentleman, who has just introduced me in such undeserved terms, since 1908 when I was a student at Princeton. I appreciate his generous remarks and feel inspired to greater efforts in behalf of the Rice Institute by the example he has set as well as by what he has said.

Dr. Lovett was elected President of the Rice Institute in 1908, four years before the first building was finished and classes were started. He has dedicated his life with singleness of purpose to planning, building, and guiding this Institute. He launched the new institution in 1912 on a carefully planned course which he described by saying that it aspired to university standing of the highest grade and hoped to achieve its earliest claims to distinction in those fields where the methods of modern science are more directly applicable. At a time when the importance of science was not as fully realized as it is today, he envisioned a proper balance between the humanities and science and the opportunity for the development of scientific research and instruction in keeping with the changing needs of the world. It is a high tribute to Dr. Lovett that a re-examination today of the role of the Rice Institute in this modern world demonstrates that it

*By Mr. Harry Carothers Wiess, Vice-Chairman of the Board of Trustees.

INAUGURATION CEREMONY

was launched upon and has been following the most advantageous course throughout its history.

Dr. Lovett has mentioned three men whose names shine with particular brilliance in the history of the Rice Institute. To that distinguished group, the alumni and friends add by acclaim the name of Dr. Edgar Odell Lovett, the luster of whose brilliance and the greatness of whose contribution stand pre-eminent. These men had a vision of a great institution in this area, and that vision was translated into a reality by Dr. Lovett. He assembled a distinguished faculty and created high standards which he maintained with courage and determination. It may be said, fairly and accurately, that Dr. Lovett is a symbol and a synonym for the Rice Institute and that the fine reputation of the Institute is a reflection of his high character, integrity, and scholarship. His success is evident in the fine reputation which the Rice Institute enjoys among the universities of the nation and in the achievements of its graduates. Dr. Lovett has contributed so greatly to the creation, guidance, and success of the Rice Institute that his name will always be associated with it in the minds and hearts of the alumni.

Education today faces a tremendous challenge and has a thrilling opportunity with respect to the future course of civilization. The world is in the midst of a crucial transition. The success or failure of mankind in dealing with the staggering problems involved is dependent in a large measure upon the work of the educational system

INTRODUCTION OF THE PRESIDENT

throughout the world, and particularly upon the institutions of higher learning. The problems confronting humanity today are greater and more complex than ever before in the history of the world, and the rate of change has been vastly accelerated. Our chief hope of coping effectively with these difficulties lies in an objective search for truth, in the conformity of our actions with truth and moral principles, and in a proper respect for the relationships between men.

The role of universities and the importance of science in the modern world have been emphasized by the recent war. National security and welfare depend on new discoveries, but each discovery creates additional problems as well as greater opportunities. Comprehensive research is essential if we are to contend successfully with rapid developments. The great universities have a responsibility to the nation and to their local areas to provide leadership and inspiration. The industrial growth of this area provides a particularly fertile field in which the Rice Institute can play a leading role comparable with that of the outstanding educational and scientific institutions which it seeks to emulate.

The Rice Institute faces a responsibility commensurate with its opportunity in the educational affairs of the Southwest. This responsibility lies not only in educating and training students for a useful life, but also in assisting in the study and solution of all modern problems which confront the world. To an increasing extent, men and women turn to the centers of learning for truth

INAUGURATION CEREMONY

and enlightenment. Under these circumstances, the role of a university in the objective search for truth and the application of knowledge for the benefit of mankind becomes of profound significance.

In his inaugural address at Princeton University, Woodrow Wilson said that "an age of science has transmuted speculation into knowledge, and doubled the dominion of the mind." Events have fully borne out this keen observation. Let us hasten, before it is too late, to channel our expanded knowledge into constructive achievements, and to apply our minds to the building of a better world.

The trustees of Rice were faced with an especially difficult problem in finding a new President to carry on the splendid tradition of scholarship and achievement established at the Institute. They spent several years in their search and countless hours evaluating scores of men who were considered for the position. The standards set by the trustees in coöperation with the faculty naturally were high. The search was delayed by the war because so many of the leading educators and scientists were engaged in war activities and were not available. Finally, after much deliberation, the trustees decided upon a man whom they wanted to assume the presidency of the Rice Institute. They did not know then whether he would accept, but they made careful plans to create a good impression upon him and his family when they came to visit the Rice Institute and Houston, so that he might be persuaded to leave his established connections and to cast his fortune with us.

INTRODUCTION OF THE PRESIDENT

The trustees consider themselves very fortunate in having the man they selected, Dr. William V. Houston, accept the presidency of the Rice Institute. Dr. Houston has an outstanding record in science and education. He has specialized in physics and is a member of the National Academy of Sciences. He was a professor at the California Institute of Technology from 1927 to 1945, and for part of that time he was Chairman of the Division of Physics, Mathematics, and Electrical Engineering. During the war he did important research work for the government in the development of underwater sound equipment and torpedoes. He continues to devote part of his time to instruction and research in physics, as he indicated in accepting the position as President that he would wish to do.

Dr. Houston came to the Rice Institute a year ago. In that brief period of time he has lived up to the high expectations and hopes of the trustees, and he and his family have won a place for themselves in the community. Dr. Houston has been in full accord with the program of the Institute, as carried out through the years and reaffirmed by the trustees in 1945, and is a firm believer in the Rice Institute's emphasis on high educational standards. He has demonstrated broad vision and leadership, and inspired the faculty with his enthusiasm. He has won the admiration and respect of students and alumni. In addition to his educational activities, he has taken an active role in civic affairs and served as an ambassador between the Rice Institute and the people of Houston

INAUGURATION CEREMONY

and Texas. He has stimulated an interest on the part of the community in the Rice Institute which should serve to enlarge its scope of service. In brief, Dr. Houston has measured up to every expectation created by his character, his educational attainment, and his scientific record.

Thirty-five years ago a group of distinguished educators from leading universities assembled on this campus to dedicate a new center of higher education, the Rice Institute, and to install its first President. Today, on another happy and momentous occasion we are gathered to install the second President destined to guide the administration of the Rice Institute. The Board of Trustees has assigned to me the pleasant duty of introducing the new President. It is a privilege and an honor to introduce to this audience a brilliant scientist, a distinguished scholar, and a cultured gentleman—Dr. William V. Houston.



The President and Trustees of Dartmouth College

To:

Rice Institute

ON THE OCCASION OF

The Inauguration of William Vermillion Houston
As President of the Rice Institute

Greeting: Dartmouth College sends sincere felicitations on this occasion and her cordial good wishes for a new era of true prosperity and distinguished achievement.

The Delegate of Dartmouth College has now been appointed to deliver this GREETING and to express the sympathetic co-operation of Dartmouth College in the services and the ideals to which your work is dedicated.



Given at HANOVER, New Hampshire, on the third day of April
in the year of our LORD, nineteen hundred and forty-seven and of Dartmouth College, the
one hundred and seventy-seventh.

Swight J. Edson
DELEGATE

John Sloan
PRESIDENT

RESPONSE OF THE PRESIDENT

M^{R.} Wiess, Dr. Lovett, and Distinguished Guests: It is a great privilege and a grave responsibility to accept the honor of this post. I am sure the minds of many of you are turning back this morning to that day almost thirty-five years ago when a group very like this distinguished audience today, gathered here to launch a new enterprise. Founded by William Marsh Rice, and dedicated by him to the advancement of letters, science, and art, its destinies were entrusted to the able hands, and heart, of its first President, Dr. Edgar Odell Lovett. Dr. Lovett permitted no narrow interpretation of its function to limit the possibilities of the Rice Institute. From the four corners of the earth he brought together men whose scholarship, ability, and ideas were those he envisioned for this new center of higher learning. Steadfast to his vision, with unexcelled devotion and fidelity, he has guided the Rice Institute to its present position in the heart of this community, and to its present standing in academic circles throughout the world. Those of us entrusted with the opportunity and the responsibility of trying to follow in this high tradition can do no more than undertake to interpret these early goals, in the light of present-day demands.

As a private institution the Rice Institute has the opportunity to chart its own course, to define its own academic aims. Such aims are so immediately associated with the hopes and aspirations of each individual among

INAUGURATION CEREMONY

us that they are difficult to formulate, and still more difficult to attain. But it is a continuing obligation laid upon us to study carefully our purposes and the means we may adopt to further them. In recent times the number and variety of institutions for higher education have increased as never before. Their objectives are diverse, and often confused. Perhaps above all we have at the Rice Institute the necessity to follow a clearly defined and limited course, and to resist the pressures of multiplicity and immediacy which would divert us from it.

In the charter, the purpose of the Rice Institute is stated to be the advancement of letters, science, and art. Such a phrase covers a wide variety of activities and confers a great freedom of action on the trustees. One might think first of a purely research institute, where scholars are enabled to carry on creative work in letters, science, and art in the most favorable possible surroundings. But Dr. Lovett, and the others responsible for setting the course of the young institution, saw quite clearly that the advancement of letters is intimately tied up with their dissemination; that the advancement of science involves its spread as well as its development. And so the needle of the compass guiding the Institute has pointed toward teaching and research, intimately intertwined, and frequently indistinguishable.

The educational objectives of a college or university are the subject of much discussion throughout the world. There is a growing belief that such institutions must pro-

ADDRESS BY THE PRESIDENT

vide both general education and professional education.

During the past year the Rice Institute faculty has given much careful consideration to the question of general education. The men of the faculty have agreed that the work of a student must be so directed as to make him conscious of all phases of the world in which he lives. Many students respond eagerly to the beauties of the material world, and find great pleasure in understanding it. Others require some prodding to dispel their essential indifference to its operation. To some students the world of humanity is the source of never-ending interest. So a reasonable balance of the two must be effected to broaden the student's horizons before he is encouraged to select a field of specialization.

Mastery of the material world is becoming an increasingly important aspect of our lives. But the world of humanity presses in upon us with a continuously greater force as our physical universe grows smaller and smaller. Not only an understanding of the physical world we live in, but also some understanding of the hopes and aspirations of all peoples, must be included in the purposes of a general education.

Above all, the objectives of education cannot be selfish; they cannot be principally to give the student advantage in a competitive world. He must learn that opportunities bring obligations, and he must be prepared to assume them. Although our Institute is a private one, its objectives must always be directed toward the public good.

INAUGURATION CEREMONY

It is obviously easier to discuss the objectives of a general education than to attain them. A good deal more is involved than the reorganization of curricula, than the renaming of courses of study. The whole institution, faculty and students alike, must become imbued with a spirit of the unity of scholarship, first within our own group, and then throughout the whole world. With full recognition of the difficulties, but with the firm belief that progress can gradually be made, the Rice Institute faculty has attempted during the past year to provide for more emphasis on diversity and breadth as essentials to a good general education.

The second aspect of the educational program is the professional one. Universities are traditionally the centers of training for the long-established professions of law, medicine, theology. But today many new types of activity are taking on the status of professions, and are demanding recognition as such. Mathematicians, physicists, chemists, biologists, and engineers are becoming increasingly important in our civilization, and increasing demands are being made for their proper professional preparation. The training of mathematicians and scientists follows fairly well-defined lines, in the philosophical tradition. Since its founding the Rice Institute has emphasized advanced training in these fields of mathematics and science, and has granted the degree of Doctor of Philosophy to scores of candidates, who have gone on to positions of distinction.

The profession of engineering is now in the process of

ADDRESS BY THE PRESIDENT

making its own traditions. For only a little over a century has it been associated with schools and universities, and the general pattern of engineering training has not yet been stabilized. Amid the changes now going on, two things stand out with some clarity. First, an engineer needs an extensive general education; he must be prepared to take his place in the world as a responsible and influential citizen. He cannot evade this responsibility; he must be trained to understand and expect it, and to discharge it properly. Second, the engineer must become more proficient in the application of scientific principles, rather than dependent upon rules based on limited experience alone. He must be able to pioneer in new directions and into new fields, with his feet on solid scientific ground.

By looking at the nature of the training for medicine and for law one can anticipate that engineering training may ultimately be divided into three parts. First may come a pre-engineering course of three or even four years, followed later by the detailed study of engineering principles. After all of this may come a period of apprenticeship similar to the internship of the physician. For there is much of the art of engineering that cannot be taught in school. It must be learned by experience, and supervised or directed experience can avoid much of the waste of this method.

The Rice Institute faculty has been studying this problem very intensively this year with a view to making the best possible provisions for the first two of these parts.

INAUGURATION CEREMONY

The proposed course of study for engineers includes three years of study in basic science and in the humanities, where the emphasis is on a general education. In a fourth and a fifth year comes the more specialized technical work, but even here the importance of the humanities is not forgotten. This is not at all a novel idea. It is in accord with practices in other leading engineering schools, and the faculty believes it to be the next logical step in the course of this Institute.

But the general and professional training of students is only one aspect of the Institute's activities. There must be active study, and the advancement of knowledge which we call research. A man who teaches only what he learns from books cannot be the master teacher. Teaching and learning are so intertwined that a student can absorb much merely by being associated with those engaged in the discovery of new knowledge in any field.

This is no new idea at the Rice Institute. When I first examined the President's Office a little over a year ago, I found on the shelves seventy-four volumes written by members of the Rice faculty as the record of their scholarly activity. And this is only a part of it. A much larger part is recorded in the pages of the various scientific and technical journals that publish the results of research. Such activity must certainly continue on an enlarging scale. For the coming year new research in physics at very low temperatures will begin; and additional research in organic chemistry will be undertaken. Research on engineering problems is next on the program. In the se-

ADDRESS BY THE PRESIDENT

lected fields in which professional training is to be given, we all hope and believe that the Rice Institute will be an increasingly significant center in the developing fields of knowledge.

A program of teaching and research, of the advancement of letters, science, and art, can be carried forward only with the enthusiastic support of many different groups of people. Almost two years ago the trustees formulated a long-range program of twelve points which they believed necessary to the continued progress of the Rice Institute. In this program they recognized the urgency of increasing the size of the faculty and holding the student body to such size as can be given the training deserved. They recognized the need for more buildings in which to carry on the work. Significant headway has already been made along this line, as you all can see.

But in addition to careful planning on the part of the trustees, and in addition to brilliant and efficient work on the part of the faculty and students, the attainment of the aims of the Rice Institute depends upon the enthusiastic support of this community. If the citizens of Houston and of Texas believe the program is worth while and is being approached in the right way, its successful execution is assured.

During the short year I have been in Houston, the evidences of this support have been overwhelming. The generous gift of Mrs. Fondren and her children has assured the building of the Fondren Library, construction of which has just started. I am sure that most of you

INAUGURATION CEREMONY

know of the recently announced gift of the Abercrombie family, providing for a new engineering laboratory, on which construction will begin this summer. And the development of engineering and science research is assured by the timely and deep interest of Mr. and Mrs. Wiess.

Not in themselves alone, but in the assurance they give of widespread community support for the Institute's program, these gifts encourage us in the belief that our work will be effective.

At the beginning of any voyage the mariner must always be assailed by some fears and some misgivings. Indeed, many a man, because of timorousness, will not set sail at all. The destination cannot be seen, and the best that one may do is to take a compass reading now and then to determine the right direction, and see if one is on the course.

There is a word of counsel in the *Dialogues* of Plato which gives courage to any man who sets forth on a new venture. First he suggests the futility of delaying for lack of complete knowledge. For the far shore is never completely shown to any mariner. "Rather let him take the best and most inviolable of human knowledge . . . and let this be the raft on which he sails through life."

The important thing in our plans for the years ahead is, clearly, to embark, with full faith in each other, and in our ultimate goals.

The University of Iowa extends its congratulations to The Rice Institute on the inauguration of William Vermillion Houston as President on April tenth nineteen hundred and forty-seven and on this occasion desires to express its good will toward an institution which is so devoted to the cause of education



*The University takes pleasure
in naming as its representative
Samuel Rhodes Dunlap, B.A. Rice Institute, 1931;
M.A. 1932; B.Litt. Oxford, 1938; D.Phil. 1939*

Ungel M. Hancher

P R E S I D E N T

LUNCHEON IN THE COMMONS

DR. HAROLD A. WILSON—Ladies and Gentlemen: Since the opening in 1912 the Rice Institute has made considerable progress towards becoming a place of education, learning, and research worthy of the high ideals of the founder, William Marsh Rice. We owe this progress very largely to our retiring President, Dr. Edgar Odell Lovett.

It is reported that some of our trustees went to see the president of a very old university and read out to him a long list of the qualifications they thought necessary for the new president of Rice. The president thought for a while and then said, "Gentlemen, there ain't no such animal." Nevertheless, the trustees persevered and finally found a man with all the qualifications. Dr. Houston has now been with us for a year, and speaking for the faculty I can say that we are all agreed that a better choice could not have been made.

President Houston is a distinguished physicist. Lest our foreign visitors should get a wrong impression, I should like to say that not all university presidents in America are distinguished physicists, not yet anyway—probably because there are not enough distinguished physicists to go around.

We have the honor of having with us today the President of the Royal Society, Sir Robert Robinson, who has very kindly agreed to say a few words. Sir Robert is

LUNCHEON IN THE COMMONS

the Waynflete Professor of Chemistry in the University of Oxford and one of the world's leading scientists.

When I was at Cambridge a list of courses on "Chemistry and other branches of physics" was published every term. I suppose at Oxford they probably have a similar list of courses on "Chemistry and other branches of philosophy." We may say, then, that Sir Robert is not only a chemist but also a physicist and a philosopher.

In the presence of a representative of Oxford University, the Rice Institute seems a very young institution. I believe Oxford claims to be about twenty-five years older than Cambridge, but I will let that pass. A very charming French lady once told me that when she was sixteen her parents got her engaged to a man of thirty-two whom she did not like. She cried herself to sleep that night thinking how awful it was, because when she was fifty her husband would be a hundred—and she ran away the next day with a very young mathematician. I am afraid that according to this French way of reckoning it is going to take Rice a very long time to catch up with Oxford.

I have very great pleasure in introducing Sir Robert Robinson, the President of the Royal Society.

Sir Robert Robinson spoke extemporaneously.

DR. WILSON—Our next speaker is the Hon. Alfred Charles Bossom, Member of Parliament, who is the delegate from the Royal Society of Arts.

INFORMAL ADDRESSES

Mr. Bossom is a distinguished architect, and has designed many important buildings in the United States and in many countries of Europe. He was the architect for the Petroleum Building in Houston. He has been decorated by the governments of many countries for his services to them.

I have great pleasure in introducing the Hon. Alfred Charles Bossom, delegate from the Royal Society of Arts.

The Honorable A. C. Bossom spoke extemporaneously.

DR. WILSON—Our next speaker is President DuBridge of the California Institute of Technology. President DuBridge is a distinguished physicist. I have often heard him referred to as having all the qualifications of a university president except one. The one he was not supposed to have was that of wanting to be a university president. I should like to congratulate the California Institute on having succeeded in getting President DuBridge to change his mind.

President DuBridge will speak on "Men Wanted." This reminds me of a story about a Rice graduate during the great depression. This young man, Billy Jones, was hitchhiking about the country desperately in need of a job. He got to New Orleans, where there was a circus performing. On the tent door there was a notice: "Man Wanted." He went in and was told the lion had died and they wanted a man to dress up in the lion's skin and impersonate the lion. He agreed and dressed up, and was

LUNCHEON IN THE COMMONS

taken to the cage, but was horrified to see there was a lion in it. He tried to back out, but they opened the cage door and pushed him in. He crawled into a corner as far from the lion as he could get. The lion gave out an angry roar and rushed at him, and whispered in his ear, "It's all right, Billy—I'm a Rice man myself."

I have great pleasure in introducing President Du-Bridge of the California Institute of Technology, who will speak on "Men Wanted."

MEN WANTED*

IT is a privilege indeed to be able to participate in this important event in the history of the Rice Institute, and particularly to congratulate the Institute on acquiring William V. Houston as its new President.

I must confess that I feel personally cheated, however, by Rice's good fortune. For Dr. Houston slipped away from the California Institute just before I got out there. I shall always feel that if I had arrived in Pasadena a little sooner, I might have been able to persuade my good friend to remain there. This would have made Pasadena skies even brighter, for we miss him sorely. But this is idle speculation, for it is certainly presumptuous of me to think my feeble words could have matched the tremendous attraction of this great institution. And though I am sure he is tired of hearing this, it is evident that Houston and Houston were meant for each other.

And so I am glad to be here to welcome Dr. Houston to the growing company of physicists who have gone astray. Actually he went astray before I did, but somehow he postponed this official and final admission of his waywardness somewhat longer. So, Dr. Houston, I can welcome you officially on the occasion of your downfall—and congratulate you that you didn't fall any farther than you did.

We are both fortunate to have with us today the char-

*Address by Dr. Lee Alvin DuBridge, President of the California Institute of Technology.

LUNCHEON IN THE COMMONS

ter member of the clan of downfallen physicists, Dr. Compton. I really blame him for starting the whole thing. And he is so shameless in his enthusiasm for the clan that he recently helped initiate his own brother into it. At least, Bill, you and I will never sink to that! Little did we ever think that we would live to see the day when, as soon as a physicist begins to sprout gray hairs, his friends would start telling him it is time for him to be hunting up a nice college to be president of. But physics is a *young* man's game nowadays, and maybe it is just as well that the college president's shelf now provides us old folks with a convenient place to sit and proclaim loudly that the only reason we don't understand the meson theory is that we just don't get a minute to spare to look into such things any more.

And so, Dr. Houston, Karl Compton and myself and our other fellow members of the clan gladly move over to make room for you to join us on this congenial shelf—and, whatever else we may have to tell each other, we can at least keep assuring ourselves that we are in good company.

Having got these frivolities out of the way, I'd like to turn serious for a few moments and ask just why it is that we college presidents have let ourselves get into such a predicament. Why is it that we, who were presumably smart enough to be asked to become college presidents, were dumb enough to accept?

I have a hunch that the reason is that we have all seen, in our mind's eye, emblazoned on the walls of every

ADDRESS BY DR. DuBRIDGE

worth-while institution or agency, private, industrial, or governmental, throughout this country, the great sign "Men Wanted."

Yes MEN, real men—and women too—are wanted—are sorely needed—everywhere we look. In science, in industry, in government, in medicine, engineering, law, business, education, politics, *men* are needed. Not just ordinary men, but leaders of men; not common men, but uncommon men are needed.

Where are they coming from? Where indeed if not from the halls of learning of this and other countries? That, Dr. Houston, is the challenge that you and Karl Compton and the rest of us must try to meet.

We have our work cut out for us! For illustration, let us look for a moment at the field of science and engineering.

During the war we witnessed in this country and England the greatest and most effective mobilization of scientific effort the world has ever seen. Scientists and engineers in all fields were organized, supplied with superb facilities, and thrown into a concentrated effort aimed at a relatively small number of specific military problems—radar, the proximity fuse, rockets, the atomic bomb, penicillin, to name a few.

The success of this effort was electrifying. It was so great that the public—and even many scientists—were misled. "At last," they said, "we have discovered how to make science effective. If we can solve problems of war this way, we can solve problems of peace, too.

LUNCHEON IN THE COMMONS

Build great laboratories, hire lots of scientists, and soon we shall have cures for cancer and polio, safe and sure air travel, cheap atomic energy to light our homes and run our factories, television with commercials you can see as well as smell.”

But we haven't got these and other things yet. What's more, we are not going to have them this year or next year or in some cases for many, many years. We are not going to be able to organize peacetime science on a war-time basis. Why not?

Men are wanted!

We have discovered now what most scientists knew all along, that we were successful during the war because we were spending our capital. Now spending your capital is a fine way to have a big spree, but it's not too sound as a permanent policy.

We spent, or failed to replenish, our capital in two ways: first, by using up our store of scientific knowledge and not extending it; second, by using our store of trained men and drying up the sources from which they came—the universities.

This was probably all very necessary during a time of national crisis. But we shouldn't have kidded ourselves into thinking that we could keep on going at that pace or that our capital was not being sadly depleted.

The scientists did not kid themselves. When the war ended they dropped their tools of war and headed for home so fast that few people realized what had happened. Most of the great laboratories and war research centers

ADDRESS BY DR. DuBRIDGE

simply vanished into thin air. Others, such as those devoted to atomic energy and some of the permanent Army and Navy laboratories, are struggling along with skeleton crews.

Where did everyone go? Mostly back to peacetime jobs—to education and research. Back to the task of rebuilding our capital scientific knowledge and manpower. And now we find there are not enough men even to do that, to say nothing of adequately staffing many other important enterprises. So over the door of every university and industrial laboratory hangs the sign “Men Wanted.” And over the doors of all the imaginary laboratories that we would like to see extending the bounds of science and applying it to meet man’s urgent needs hangs the ghostly sign “Men Wanted.”

Bluntly speaking, we simply do not have the scientific manpower to push forward adequately on all the important fronts: national defense and security, national health and welfare, industrial development, basic science, and education. Some of these fields are going to suffer. Or rather, all will suffer, for the available manpower will be spread so thin that no field can progress adequately and well. We have tremendous hopes and ambitions but not enough men to fulfill them.

This may sound like a strange situation for this great country to be in with our great educational system, high level of intelligence, technical know-how, and all the rest. How did it happen? There are, of course, many factors. In the first place, we used to depend heavily on Euro-

LUNCHEON IN THE COMMONS

pean scientific centers for important advances in basic science. The United States is relatively new to the scientific field. In the days when Newton, Faraday, Gilbert, Helmholtz, Maxwell, Pasteur, Dalton, and many others were flourishing in Europe, the United States was just emerging from its pioneering days and the number of outstanding scientists here was small indeed. Even as late as 1930, although the United States had produced men like Michelson, Millikan, Morgan, the Comptons, and many others, the galaxy of European stars, Einstein, Bohr, Rutherford, Schroedinger, Lorentz, had still accounted for a lion's share of the really basic new advances in pure science. It's true that the United States had come to a leading place in industrial research—in the applied sciences, including medicine—and in the exploitation through marvelous experimental techniques of the new ideas which frequently came from Europe. But we were still an importing nation as far as basic science was concerned.

But this can no longer continue. The European centers are largely out of action—except in England, where they work under grave difficulties. Contact with the Continental laboratories, such as they are, has not been re-established for political, economic, and security reasons. Though this, we hope, is temporary, it is clear that the center of gravity of science has shifted to this side of the Atlantic—partly because we have now produced more outstanding scientists, partly because a large number of Europe's great scientists have moved here, and partly

ADDRESS BY DR. DuBRIDGE

because war devastation has thoroughly disrupted science abroad. World leadership in science has been thrust into our hands. Can we live up to the responsibility?

Our leadership in technology, which is unquestioned, does not automatically insure leadership in science; in fact, even the reverse may be true. Our technological superiority is based on ingenuity, inventiveness, enterprise, organizational ability, and wealth—all typically American characteristics. And many more men who can lead in technological progress will be needed in coming years.

But leadership in basic science, as in many other fields of human endeavor, requires more than these qualities. It requires profound contemplative thinking, philosophic insight, patient, unhurried grappling with most abstruse concepts, powers of keen analysis, imaginative synthesis. I think you will agree that these are not characteristics which anyone would call typically American. They do not flourish in the hurly-burly of modern American life—or in most American educational institutions.

Though I have been talking about science, because in that field I can speak with some confidence, you will recognize at once that in facing the grave problems of our social and economic world, of the worlds of education, government, international relations, our needs are the same.

In America our watchwords are likely to be enterprise, action, achievement. But what the world needs today are these combined with clear thinking, comprehension, thoughtfulness, a sense of responsibility.

This is what our "Men Wanted" signs really mean.

LUNCHEON IN THE COMMONS

We shall need, of course, and our educational system will produce, thousands, hundreds of thousands of competent scientists, engineers, doctors, lawyers, and business men. But can we be sure that we can produce even a hundred men whose profound powers of thought will add significantly to mankind's understanding of the world—and hence guide mankind more effectively toward a better world?

I don't know—but we must try. Maybe such men are born—not made. But if our educational system does no more than encourage and stimulate those so born, it will have done much. And in the process of seeking to develop the great powers of a few we may also significantly add to the powers of the many.

Let me make some of these needs for men a bit more specific. What are some of the things at which we must aim?

First, we must recognize that in coming years a tremendous effort must be expended on our elementary and secondary educational system. Our public schools at their worst are a disgrace, at their best are falling short of their own ideals. One could discourse at length on this subject—but I will leave that to others more qualified than I.

Second, in the field of general college education we have far to go. The country and the world have critical need for a host of educated men and women who have a background enabling them to understand the critical modern problems in the fields of economic, social, political, and industrial affairs, and who have learned to think clearly and broadly.

ADDRESS BY DR. DuBRIDGE

Third, our graduate schools will have the responsibility for training scholars whose forward-looking studies will clarify our understanding of the world of nature and of man. A thriving civilization depends not only on its educated citizens but also very critically on its scholars—the men whose quiet and often unheralded work advances the bounds of knowledge and educates the younger generation.

Although the burden and the responsibility of our elementary, secondary, and higher educational facilities have grown enormously, the task of our graduate schools has grown relatively even more. As modern civilization grows more complex, our educational base needs not only to be broadened, but its peak must also be heightened. We need not only millions who are well educated, but also thousands who are superbly trained. They must be trained to work at the very frontiers of knowledge.

If our educational system can do all this, our “Men Wanted” signs may some day, not soon, be less numerous. Some day there will be enough men to rebuild and extend our intellectual capital, and other men who will apply knowledge to meet man’s urgent needs and desires so that our capital will pay dividends in human welfare.

The task before us, Dr. Houston, is a tremendous and an urgent one. The rise or the fall of our civilization may depend on how it is accomplished. I know that you and the Rice Institute will play an important role in seeing that job is well done.

DINNER IN HONOR OF
PRESIDENT AND MRS. HOUSTON

M^{R.} GEORGE R. BROWN—Ladies and Gentlemen, Guests of the Rice Institute, President and Mrs. Houston: You have done the Rice trustees a great honor in accepting attendance at this testimonial dinner. In my opinion it becomes a most appropriate ending of a perfect day. I deeply appreciate the compliment Chairman Hanszen has paid me in handing me the gavel on this most happy occasion. I now lay it down until all of you have partaken of the meal which the trustees hope you will thoroughly enjoy.

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The first speaker was born in Houston, graduated from Baylor, and was started on his way to Oxford by a committee that met at the Rice Institute. He did not let the warnings of Samuel Johnson concerning the ills which assail the scholar's life stop him in becoming a noted historian and author. After being the first professor of American History in Sydney, Australia, at the University, he became Chairman of the Research Group of the Henry E. Huntington Library in San Marino, California. It gives me great pleasure to introduce to you one of the three speakers to deliver formal addresses tonight—Dr. Dixon Wecter.

NATIONAL ACADEMY OF SCIENCES

OFFICE OF THE PRESIDENT
2101 CONSTITUTION AVENUE
WASHINGTON D. C.

The Officers, Council, and Members of the National Academy of Sciences extend to The Rice Institute and to Dr. William Vermillion Houston sincere felicitations on the occasion of Dr. Houston's inauguration as President of the Institute.

Accompanying these felicitations are best wishes to the Institute and to President Houston for continuation and advancement, under his guidance, of the long and distinguished services to the causes of education and scholarship which have raised The Rice Institute to a place of high eminence in the field of American education.

Arad. E. Wright

Home Secretary

G. B. Foust

President



April tenth
1946

LONE STAR AND CONSTELLATION*

I SUPPOSE hardly one Texan in ten thousand would enjoy seeing his state claim its unique right, under terms of its admission to the Union, to divide itself like a paramecium. Physical size has too long been a topic for wonder, pride, and jovial exaggeration, the yardstick by which citizens like to measure the virtues and potentialities of this commonwealth. One would have had no trouble in guessing the nativity of Admiral Nimitz from his remark, "Texas is the only state whose size is exceeded only by its importance." Were Texas ever to suffer five-fold fission, the symbols of her past and traditions could hardly be parceled out, and at an early date this difficulty was fully appreciated. "Who will be willing to give up the name of Texas?" asked the *Texas State Gazette*, in October, 1852. "Which State would yield the emblem of a single star? . . . Who will give up the blood-stained walls of the Alamo?" Such inheritances are clearly indivisible.

Yet one is struck by another fact, namely that Texas, like a long bridge, vibrates in sections. Its unity is grounded upon the piers of tradition and sentiment, not the mandates of economic geography.

My personal conviction is largely the result of first-hand observation many years past, but I think still valid. I was born in this city forty-one years ago and spent

*Address by Dr. Dixon Wecter, Chairman of the Research Group of the Huntington Library, San Marino, California.

DINNER

every summer of my youth with grandparents—Houston's summer climate being justly celebrated. But between this metropolis of the Southwest (for filial piety forbids my silence on that point) and the region where I grew up during the rest of each year, Brewster County on the Rio Grande (the largest county, I am constrained to add), there is no more resemblance than between Alabama and Arizona. Houston then seemed a fragment of the Old South—dreamy, languorous, subtropical, just beginning to feel the tug of world commerce but not yet swept into the main stream. Today, of course, thanks to the prodigal wealth of petroleum and sulphur, the ship channel, the proliferation of industry and new enterprises (for each war we have fought decentralizes more and more the manufacturing monopoly of the Northeastern states), Houston has become part of the major industrial structure of the United States, along with Pittsburgh, Cleveland, Kansas City. Houston is now much too prosperous and cosmopolitan to qualify as a nostalgic outpost of the Confederacy, or claim sisterhood with Richmond, Natchez, and Mobile. This city, like most of Texas, is living far less in the aura of a Lost Cause than in that of the main chance and a still more expansive tomorrow.

Yet upon certain social, political, and cultural levels the region dominated by Houston—East Texas—is bound at least sentimentally to the South, and here to my mind arises the split personality symbolized by two great founders, Stephen F. Austin and Sam Houston. Austin,

ADDRESS BY DR. WECTER

small of build and fastidious in dress, was temperamentally prone to the aristocratic way of life—hence his knack for getting on with the hidalgos and hierarchy of Mexico City. In establishing his fellow colonists along these rich river valleys, Austin bowed to the planters' desire to erect a cotton and sugar economy on the base of slavery, carefully shielding the South's "peculiar institution" from abolition. He himself loved the lush country of heavy forest and rainfall, and after a glimpse of the plains country beyond San Antonio called it the "poorest I ever saw in my life." He also detested the Comanches and other nomadic, buffalo-hunting warriors who bore little resemblance to the amiable agricultural Indians along the Gulf coast, from whom came the word *tejas*, meaning, as we all know, "friend."

A greater American, Sam Houston, though likewise Virginia-born, belonged in heart to the broad Southwest—with his Scotch-Irish ancestry and rangy, rawboned physique, his horsemanship and magnificent courage, his tutelage under the buckskin democracy of Andrew Jackson, and his wise understanding of the Indian. With that touch of drama, an innate flair for dressing the part which characterizes the plainsman and cowboy even today, Sam Houston (you recall) delivered his second inaugural address in 1841 clothed in hunting shirt and pantaloons—a gesture whose ghostly survival may be noted in the preference of Texas politicians for the Stetson hat. Houston disliked slavery and secession, raising his voice against both with equal fearlessness whether at home or in the

DINNER

Senate chamber in Washington. He sought grimly to keep this state from joining the Confederacy, paying the price of being repudiated by his people—although he loved Texas too dearly to accept Lincoln's offer of Federal military aid in maintaining himself in office, and thus precipitate a civil war within a Civil War. Surely, if Austin's labor built up the Southern wing of Texas tradition, that of Sam Houston powerfully reinforced the Western.

There was reason, however, why Texas, which then meant the thickly-settled Gulf coast and river bottoms, should "respond to the movement of South Carolina with votes, with men, or with gunpowder," as the *Houston Telegraph* expressed it in January, 1861, adding shortly afterwards when recruiting began (with a touch of bullishness that bears the unmistakable local hallmark): "We think Harris County has done enough. . . . We think, under the circumstances, it will be but right to ask the remainder of our volunteer forces to stay at home and give the rest of the State a chance." Texans came preponderantly from the South in that day, when (it is said) many a farmhouse door bore chalked upon it the universally-understood initials "G. T. T."—"Gone to Texas." Four out of five signers of the Texas Declaration of Independence were from the future secession states and Missouri, and the census of 1850 showed three out of four of the non-native population as stemming from that region. Yet to me, whose Alabama and Texas grandfather fought in the Confederate Army, the Civil War

ADDRESS BY DR. WECTER

has never seemed matter for very passionate concern. Texas, alone among the states of the Confederacy, was not overrun, and though Reconstruction left scars and irritations, on this soil it proved comparatively mild. Many Texans have a romantic feeling about the Bonny Blue Flag—perhaps because they are rebels by temperament, and have always chafed a little under the Federal harness—but by and large our citizens, far more than in the Deep South, are less interested in dwelling in the twilight of a past, romanticized and often quite unreal, than in shaking hands with tomorrow. Texans are extroverts more than sentimentalists, and far less on the defensive. Yearly we grow farther away from the dualism of the Old South—its glamour and squalor, the hookworm and the honeysuckle.

Surely this is a healthy attitude—as one concludes after thinking how often the legend of the War Between the States has been decked out in some regions as a perennial excuse for slovenliness, failure, and prejudice; for the poor schools and high infant mortality, bankrupt acres and sharecrop poverty, and racial discrimination—all vaguely regarded as the chain-reaction of circumstance because the Yankees won the war. O blessed alibi! Don't mistake me; certain so-called "Yankees" have something to answer for, in respect to later attitudes in regarding the South, the Southwest, and West as colonies for absentee ownership and exploitation—and in any unprosperous milieu, under competition for the lean pickings left, among other unfortunate results race fric-

DINNER

tion tends to be aggravated everywhere along the lines of each section's pet prejudice, victimizing the Negro in East Texas, the Mexican in the Southwest, the Oriental in the Far West. Here none of us is wholly innocent. We Americans like to think of ourselves as just and fair—men of good will. Yet each bears within himself the dormant virus of race cruelty, intolerance, and hatred. Only a healthy state of mind, among individuals and communities alike, can keep these germs from multiplying.

To return to cultural geography. The western half of Texas—in some ways spiritually Sam Houston's Texas—lies beyond, say, the ninety-eighth meridian, where the cotton kingdom yields to the wheat and then the cattle kingdom; the piney woods and sweet gum to a middle zone of mesquite, and along the watercourses cottonwood and hackberry, and thence to greasewood, sage, and cactus. Between East Texas and West, passing tensions have arisen during the years, the latter's complaint once being that its tax revenues and public lands went largely to support state enterprises like colleges and universities and eleemosynary institutions, or subsidize railroad-building, in remote and more favored regions. Fortunately that tension has eased since my Brewster County boyhood, when there was bold talk about a "State of Jefferson," largely for its nuisance value—which has since borne practical fruit in a flourishing institution like the Texas Technological College.

This interior Texas is the result of the longest exposure to the frontier to which any part of the nation has

ADDRESS BY DR. WECTER

been subjected, a toughening process stretching from Spanish and Mexican days down through the Republic and early statehood, the regression of Civil War and Reconstruction when with virtual disbandment of the Rangers the Indian frontier was pushed back to the line where it had started a generation before, thence to the wars over fence-cutting and cattle-drives, brands and water-rights, battles with Pancho Villa, drought and duststorm, and in recent years an economic life poised between range cattle and oil—two of the roughest yet most picturesque endeavors known to man. If this exposure has not bred a hardy race, like the Comanches and Apaches of a century ago against the farming Caddos and Nacogdoches of the river bottoms, it would be surprising. Even the soil has played its part, according to Professor Albrecht of the University of Missouri, who observes that while East Texas shares the dominant (and now somewhat depleted) red and yellow soils of the South, the high plains have a very different soil akin to all the Western prairies, whose wealth of minerals like magnesium and calcium has not been leached out by heavy rains, but is transmitted to the “hard” wheat grown there and also to the grasses and hence into beef. Early settlers are said to have noted the effect of its pastures in converting old horses into mettlesome bronchos, and along this line Dr. Albrecht writes that “the state’s dauntless and aggressive people are a consequence, in part at least, of her great area of prairie soils.”

The precise correlation between minerals and manli-

DINNER

ness, vitamins and virtues, I leave to scientists of the Rice Institute; but it seems patent that the character of Texans in general and plainsmen in particular bears a stamp universally recognized, formerly through the Union, and now since the war including Iceland, Pantelleria, and Rangoon, not to mention Tarawa, Arawe, and other beachheads where the Lone Star Flag was planted before the Stars and Stripes. Following the good example of Captain John W. Thomason, one of the best publicists that Texas and the Marine Corps ever had, natives of this state were between two and three times more numerous in that Corps than the population ratio warranted; and in the Army apparently the commonest of all nicknames was "Tex," because not only of frequency but of conspicuousness as well. A Texan (so outside impression runs) is expected to identify himself upon sight, and to talk freely of his origins as if the miracle of his genesis had left him somewhat dazed.

An Englishwoman visiting this city in 1843, by name Mrs. Matilda Houstoun—probably the first Houstoun to visit Houston—drily remarked that among these people "the bump of invention" was well developed. The first legendary hero of Texas, Davy Crockett, that old ring-tailed roarer, passed on his mantle or coonskin cap not only to Pecos Bill, Bigfoot Wallace, Gib Morgan, and Strap Buckner, but it would seem in a measure to the whole citizenry. This heritage comes of course straight from the frontier, where a man had to be tall, or think himself very tall, when he stood alone against Nature

ADDRESS BY DR. WECTER

and all comers. But from a Texan it has grown to be the expected thing, along with any behavior which is a shade unusual. The eccentricities of a gentleman who used to stand on his head in places like the foyer of the Metropolitan Opera were satisfactorily explained in the New York press by the circumstance that he came from Texas.

Texans in general and plainsmen in particular, if often more easygoing, self-assured, and nonchalant than Far Westerners, are more democratic than Southerners. They are more spontaneously hospitable and generous, more interested in individuals and less in background and great-grandfathers, than is common in the Old South. As somebody has said, it really is more important to be an ancestor than a descendant. Perhaps this dates from a day when it was bad form, not to say slightly dangerous, to scrutinize the antecedents not of the F. F. V. but of the G. T. T. The ways of Texas justice are cast in the same mould of individualism—whether one takes a saying of Captain Bill McDonald of the Rangers, “No man in the wrong can stand up against a fellow that’s in the right, and keep on a-comin’,” or that of a well-known local jurist, “In Texas the first question to be decided by a jury in any homicide case is, ‘Should the deceased have departed?’”

Some aspects of the code of Texas behavior, however, are occasionally puzzling even to a native son, explicable upon no ground save the split personality I have mentioned. As an instance of the old-fashioned simplicity of Texas ways, I quote a sentence from the *Hesperian*

DINNER

Magazine in 1838, reported by a correspondent from Houston: "Nothing was regarded as a greater violation of established etiquette, than for one who was going to drink not to invite all within a reasonable distance to partake; so that the Texans, being entirely a military people, not only fought, but drank, in platoons." Yet to-day, after many experiments noble and otherwise, over half the counties in the state are once more technically dry. I find it very hard to square this vicious circle, unless one concludes that many Texans vote with the Southern Bible Belt and then to ease their consciences drink with the plainsman, or that an infiltration of Kansas farmers has altered the balance of opinion out there in the open spaces. No matter; whatever his paradoxes, the Texan has a logic all his own.

The great tradition of this commonwealth, which to my way of thinking is more Western than Southern, takes rather less stock in the middle-class urban virtues—thrift, prudence, diligence—than in the more heroic ones: loyalty, courage, and patriotism. If Coolidge's famous query upon his visit to Texas, "And what *is* the Alamo?" confirmed Texans' worst suspicions about the inadequacy of Republican Presidents, the approved attitude is one I overheard some three years ago on my last visit there, when one of three GI's from the East, lately returned as casualties from the South Pacific, tried to tell his friends out of a considerable ignorance of Texas history just what had happened, but wound it up well enough by saying, "And those boys were fightin' suckers!"

ADDRESS BY DR. WECTER

Early in the war I heard a soldier getting on the train remark, "All I want is to get back just so's I can take another look at this Texas country"—the country, outside the train window, being a barren and wintry plain, a plain (as somebody has said) that seems as illimitable as the ocean, and while it inspires in the plainsman a nostalgia like that of the old salt for the blue, upon the newcomer may act as a depressant almost like seasickness. Pride of place is something which, along with most good things, can be perverted into a silly chauvinism or booster's reflex as meaningless as the knee-jerk; but at its best—and there is plenty of reason for honest pride—it causes the Texan to carry himself with dignity, act with a sense of responsibility, and (in Emerson's phrase) treat with other men "as sovereign state with sovereign state."

Sovereignty, in fact, is in the Texas air. This is, of course, the only state which as an independent nation entered the Union by treaty, and the elixir of self-sufficiency leaves a long after-taste. In this respect Texas is not quite unique. For fourteen years, prior to its absorption into the Union in 1791, Vermont kept its status as an autonomous republic and has never been able wholly to forget that fact; three months before Pearl Harbor, for example, the Vermont legislature found that a state of war existed with Hitler's Germany. California's three weeks under the Bear Flag in 1846 seems rather less impressive than Texas' ten years, to all save the most delirious Sons of the Golden West, but that flag is still dis-

DINNER

played beside the Stars and Stripes on all occasions. All three states exhibit what might be called the secondary symptoms of nationalism, and when ill winds blow from Washington or Wall Street they feel twinges of irritation shooting through the long-missing limb of their autonomy. This self-sufficiency clearly should find expression in useful and creative ways more profitable than either boasting or grumbling. Back in 1871, in the gloomy days of Reconstruction, the mayor of this city, returning from a trip East, reported: "Some New York capitalists have Texas 'on the brain' and if we of Houston had the same confidence in its growth and prosperity that many sagacious capitalists and business men outside of Texas have, we would go to work and improve the city." Much vexation over absentee control, justifiable as it is *per se*, should not overlook its roots in local negligence of opportunity.

Being by profession no economist but a writer on cultural history, I cannot forbear hoping at this point that the cultural resources of Texas—the folklore and folk music, the annals and traditions, the epic of cattle and the epic of oil, the stuff of imagination and the inspiration for art—will be discovered and gleaned increasingly by her own people, who in past days have often been blind to their matchless opportunities here also. Texas has not yet produced any important body of literature, although a recent article in the magazine *Holiday* goes much too far in announcing boldly that the state has only one considerable writer, J. Frank Dobie. One thinks immediately of his running-mate Walter Webb, of bright

ADDRESS BY DR. WECTER

young men like George Sessions Perry, Henry Nash Smith, and Edwin Lanham, of able women like Laura Krey and Mary King, and the most distinguished short-story writer now at work in the United States, Katherine Anne Porter, along with a galaxy of workmanlike contributors to the *Southwest Review*. In literature, as in the fine arts, the contemporary Texas record is not matter for complacency but for hearty encouragement.

Such developments hinge vitally upon the future course of higher education. And here the Rice Institute, even though its major stress by intention falls upon pure and applied science, has proved and will continue to prove of enormous value in buttressing the humanities—since the concept of quality is interchangeable, and the maintenance of high levels by an institution blessed with a generous private endowment and a distinguished faculty, able to restrict its students to the very best, is of almost immeasurable help in raising standards which elsewhere too often have been lax and merely quantitative. In Texas it is often well to remind oneself that there are other yardsticks besides magnitude, other magic than that of numbers. If enrollment in Texas colleges and universities increased nearly six hundred per cent in the first quarter alone of this century, while the population grew only a little more than fifty, still more gratifying is the qualitative record—the contrast, let us say, between the Rice Institute of today and the first Texas institution to offer laboratory work in science, the so-called University of San Augustine, which in 1842 picked as its first

DINNER

President the Reverend Marcus Montrose, a Scotch Presbyterian fresh from Edinburgh. The deliberation of its trustees is related by George L. Crocket, in his *Two Centuries in East Texas*:

It was evident that no one in town was adequate to the examination of so learned a man. The committee, consisting of I. D. Thomas, Mathew Cartwright, and Phillip A. Sublett, decided to make it a mere matter of form. Mr. Thomas asked, "Can you figure?" Mr. Montrose, who was a master of calculus, modestly admitted that he thought he could, and Mr. Thomas announced that he was satisfied. Mr. Cartwright then asked, "Can you calculate interest?" Mr. Montrose thought he would be equal to that task, and Mr. Cartwright declared himself satisfied. Mr. Sublett then asked [alluding to a well-known gambler's card shuffle], "Can you turn the grandmother's trick?" This puzzled the worthy Scot and he had to admit his ignorance. "Then I am satisfied," exclaimed Mr. Sublett and Mr. Montrose was accordingly employed.

To borrow a familiar metaphor, the eyes of the nation have been upon Houston during the past fortnight, educationally speaking, since announcement of the unparalleled endowment given by your townsmen, the Cullens, to the municipal university, to medical research and professional training. With these new resources on the one hand and the senior experience and prestige of the Rice Institute upon the other, no city in the land would seem to have a brighter educational future. In these days when the largest educational institutions in this state are in the ferment of factionalism, I should like to quote the sensible words of that great American and Kansas Republican, William Allen White, concerning a similar issue at his own state university: "If everybody agreed

ADDRESS BY DR. WECTER

about everything it would not be a university. It would be a cannery."

Texas politics probably suffers also from an enforced uniformity which is more apparent than real. Believing as I do that Texas is actually something of a Western state disguised in Confederate gray, with economic problems coming to be more and more identical with those of the farther West—as extractive and manufacturing industries, diversified agriculture and innovations in chemistry, take the place once occupied by the single-crop cotton economy and its diminishing returns—I wonder how long Texas will retain the allegiance voiced in 1845 by Guy M. Bryan, "We are all Democrats in Texas." There was a time, in the generation after the Civil War, when the simple rule of Texas politics was, "Vote as you shot!" But time passes, scars heal, the Negro population declines from a third in 1870 to less than a seventh today, commercial alignments shift, the cattle industry tends to go more protectionist than the Southern farm bloc, New Deal cleavages persist, urbanization and war industry create on the one hand more union labor and on the other more open-shop legislation in Texas, and so the state tends increasingly to assume the bipartisan political texture of a Western neighbor like California.

In the past twenty years we have had "Constitutional Democrats," "Hoovercrats," perhaps a sprinkling of Liberty Leaguers, and rather more "Regulars"—not to mention about 200,000 faithful Republicans. The loneliness of the Republican minority in Texas, through these

DINNER

many years, brings to mind a story I heard during my years in Colorado. In the autumn of 1874 a dubious trapper and guide named Alfred Packer undertook to conduct a party of five Hinsdale County miners into new mountain territory. The snows fell early that year, heavy and devastating, and the party was given up for lost. But when spring appeared, down from the mountains came Alfred Packer, sleek and fit as a fiddle, cheerfully reporting his companions had perished. When investigation disclosed, not their bodies, but a cairn of gnawed bones, horror swept over the state and he was arrested and tried for murder. He still insisted that they had died of natural causes but admitted he had kept alive at their posthumous expense. He was convicted in the court presided over by Judge M. B. Gerry, an old-line Southern Democrat, who before passing sentence is reported to have said with utter disgust, "Stand up, Alfred Packer, you man-eating son of a gun. Before pronouncing your doom I want to remind you that there used to be six Democrats in Hinsdale County—but now *you've* eaten five of 'em."

There are two names (in my modest opinion) from which Texans need not shy away—"Republican" and "liberal"—yet in many circles both are regarded with equal horror. Why not a flourishing Republican party in Texas, healthy enough to include grassroots as well as country-club turf? Its effect in creating open debate, hard-hitting and aboveboard, and putting candidates on their mettle until after the November frost—this would

ADDRESS BY DR. WECTER

seem salutary. Personally I've never voted the Republican ticket and don't know how it feels; I'm inclined to agree with an advocate of two-party government, lately quoted by Allen Duckworth of the *Dallas News*, who said: "It is like a bunch of kids wanting to play cowboy and Indian. All want to be cowboys. I think we need more Texas Republicans but I don't want to be one!" In the second place I am not sure that in this chaotic world one can mark the line where Democrats leave off and Republicans begin; ever since the 1936 campaign, a Republican politician seems to be a man who promises the more abundant life at bargain rates. A few, like Representative Knutson, appear to promise just the bargain rates.

As of April 10, 1947, ours is a motley political circus, which would certainly shock Governor Hogg and even startle Andrew Mellon—with a Democratic President trying to save the country from deficit financing at the hands of the Republican majority, and the latter emerging as the champions of states' rights against the Federal authority. But I have a notion that more intelligent bipartisan debates in Texas, less lip-service to the Solid South, would aerate the political soil and crop unhealthy mushrooms that sometimes spring in the shadow of Southern demagoguery—such, for example, as those self-publicists who are nothing if not the hillbilly's friend, and they are not the hillbilly's friend.

The second word from which Texans need not flinch is "liberal." But I am also at a loss to define this word. Recently I saw quoted three attempts to do so. The first

DINNER

was a liberal's own: one whose thinking can encompass changes beneficial to the greatest number of people. Another was a neutral's: a liberal is a young conservative; the third, a conservative's: a liberal is a man who has both feet firmly planted in the air. This last seems to describe all too vividly Mr. Henry Wallace's brand of thinking, but it by no means represents the field. In its best sense, I think, liberalism signifies neither the crackpot nor the man (as Shaw once described him) whose mind is so open there is nothing left but a draft. It means the man or woman young enough to believe that the human race can really make headway, spiritual as well as material, through safeguarding the integrity of the individual—against pressure groups from the right and left, against shapes of monopoly, authoritarianism, prejudice, and coercion. To lump indiscriminately all varieties of so-called "liberal" opinion—let us say the believer in co-operatives or in the TVA, the friends of group medicine or state health insurance or Federal aid to education—and pour them all into the same bin with the Communists, is of enormous help to the latter in the perfection of their camouflage.

In conclusion, let me add with hearty sincerity that a native Houstonian and peripatetic Texan—who has lived half his life inside this state and half without, but rarely lets a year go by without returning home—finds much more to be proud of than to criticize, although he may reserve the latter as one of his birthrights in this frank, outspoken land. The self-confidence, energy, and creative enterprise of frontiersmen and empire-builders seem

ADDRESS BY DR. WECTER

to linger here, more than in other states. One thinks of springtime and youth as still the season and the mood of Texas. But one also has the hunch that Texas is now a better place in which to live than it was fifty or seventy-five years ago, not only enhanced in material comforts, but wiser, more tolerant and humane, and with a sense of deeper civic responsibility. Advancement in educational and cultural matters—like most phenomena in Texas—tends to be big, often spectacular. Upon national and international frontiers the leadership of Texans in war and peace, against the backlog of an alert and intelligent citizenry, is always cause for appreciative pride.

Among such people, whatever their diversities of geography and interest, a common tradition, sturdy and self-reliant, survives. Within the constellation of the Union, I venture to think, the Lone Star will long keep its particular luster.

* * *

MR. BROWN—When I was attending Rice, the students were still reading Kipling. Four of his lines come back to my mind:

God gave all men all earth to love,
But, since our hearts are small,
Ordained for each one spot should prove
Belovèd over all . . .

The next speaker graduated in the first class of the school in the “belovèd spot.” He is now serving his second term as President of the Association of Rice Alumni, which alone shows his interest and ability in working with the affairs of the Rice alumni—Carl Milham Knapp.

ON BEHALF OF THE ALUMNI*

M^{R.} Chairman, Distinguished Guests, Ladies and Gentlemen: It has become my privilege to perform a very pleasant duty here tonight. It is my good fortune to represent a large and greatly interested group, as Mr. Brown has told you, the alumni of the Rice Institute. Alumni are indeed interested in the affairs of Rice, and are, more and more, taking an active part in promoting the welfare of Rice. And of course they should. Rice alumni are those who have received the benefits of the educational facilities of Rice. A distinguished Houston woman recently said that along with the enjoyment of such benefits there go certain obligations to support the institution, in order that it may ever be of greater service. Alumni are recognizing their obligations and acting accordingly.

We have, during the past few months, made occasion to meet the guest of honor and his family and to become acquainted with them. We like them. They wear well. We like their interest in intercollegiate athletics. We are particularly pleased with Dr. Houston's entire program for the Rice Institute.

For instance, we find that he intends to continue and in fact to increase the high standards for admission to, and graduation from, Rice. We like that. We have worked hard for the degrees awarded us by Rice. We like to

*Address by Mr. Carl Milham Knapp, President of the Association of Rice Alumni.

GREETINGS FROM THE ALUMNI

know that others must work equally hard for theirs. Of course the degree in itself is of little importance, but the fact that Rice makes awards only to those who have worked diligently and successfully in letters, science, and art, is all-important. We are pleased that the standards of Rice remain high.

During recent years, the requirements of the nation's armed forces have prevented the expansion of our faculty. Now we find steps being taken to improve and increase the staff of the Rice Institute. We hear, in fact, that there will be sufficient individuals added to the faculty to result in a ratio of one teacher for every ten students. And we know that these new faculty members are being chosen with the same extreme care as has always been done in the past.

We like to see the new buildings. It has been many years since there has been such construction activity on the campus. The new classroom building is well along. Construction will soon begin on the Fondren Library. The plans for the new engineering building are complete. You will find it surprisingly large, larger than the present engineering building. Of these things, of course, alumni strongly approve.

And we hear that Rice will place increased emphasis on science and research. We remember that our armed forces won the Second World War with the aid of science. And we know that controlled atomic fission has resulted from research. We feel that continued scientific advancement will be a great force for peace. And so we approve.

DINNER

In fact, Dr. Houston, we wholeheartedly approve your entire program and we hope that you and your Board will call upon us, individually and collectively, when we may be of service. It becomes my privilege to pledge to you the wholehearted and enthusiastic coöperation of the alumni of the Rice Institute.

* * *

MR. BROWN—His name is written in the skylines of this county from the San Jacinto Monument to the roof garden of this hotel. Confidential adviser to top authorities of this nation through two wars, himself a statesman who has rendered the stability of his country inestimable service, he could watch as well as pray, a happy warrior all the way. It is a good omen for Dr. Houston that this adopted son and great Texan should welcome him here tonight for all of Texas—Jesse Holman Jones.

ON BEHALF OF THE PEOPLE OF TEXAS*

MR. Chairman, Mr. President, Distinguished Guests, Ladies and Gentlemen: We are meeting this evening, Dr. Houston, to conclude the ceremonies of the day formally welcoming you and your family to Texas, and to the Rice Institute. You have come to assume an important role with us and we do most heartily welcome you, formally and informally. Your coming marks another milestone in the life of the Rice Institute.

Turning the pages back, we find that soon after the Battle of San Jacinto, which won the independence of Texas, April 21, 1836, William Marsh Rice, in his early twenties, came to Houston to cast his fortune with the fortunes of the new Republic of Texas. He must have had much the spirit of adventure that prompted courageous men from many states to come this way—the spirit that has made Texas great. He laid the foundation of his fortune here and contributed materially to the early development of Texas. It has been said of Mr. Rice that once he acquired property in these parts it was never sold. Our generation can easily see the wisdom of his judgment.

In 1891, at the age of seventy-five—incidentally, fifty-six years ago—Mr. Rice associated with himself a brother and a few friends and incorporated the William M. Rice Institute for the advancement of letters, science, and art. In transferring property to the Institute, he is

*Address by the Hon. Jesse Holman Jones.

DINNER

quoted as having said, in effect: "Texas received me when I was penniless, without friends or even acquaintances, and now in the evening of my life I recognize my obligation to her and her children. I wish to leave to struggling boys and girls the fortune that I have been able to accumulate."

Mr. Rice was a frugal man, and, I think, a little Scotch. He issued his own note for two hundred thousand dollars, bearing interest at two and one-half per cent, and gave it to the Institute. That was the beginning of the endowment.

From time to time he conveyed property to the Institute, but on his passing in 1900 there were not enough funds to start building immediately, and furthermore there was litigation over the estate which lasted several years. Even after the litigation was successfully concluded, it was necessary for the trustees to conserve the endowment and income until sufficient funds could be accumulated for procedure. All of this delay caused considerable impatience on the part of some of our people because of the apparent slowness of the trustees to get started, but time has vindicated their judgment. We could not have had the fine plant and beautiful campus of Rice that we now have if the trustees had started building immediately. They very properly took their time.

In 1908 they had the good fortune to secure Dr. Edgar Odell Lovett, a young professor of Princeton, as President of the Institute. Their judgment in his selection has been well demonstrated, as has also their further action

GREETINGS FROM TEXAS

in giving the new President ample time to conceive, to plan, and to bring into being this institution, which is a credit not only to its founder, but to Dr. Lovett, the original trustees, and to the educational world. It is well known that Rice, under the direction of Dr. Lovett, has held scholarship above all else. There has been no compromise of these ideals in his thirty-five years of immaculate directorship.

As one who has observed this man from his beginning here, thirty-nine years ago, I can say that I have never known a kindlier man, or a stricter disciplinarian of his own life and conduct, than Edgar Odell Lovett. Dr. Lovett, you planned well this great institution, and you administered well, in holding its standards so high that its certificate of scholarship is recognized throughout the world. While we are welcoming your successor and are happy with you that you are relieved of the responsibilities which you carried several years past your retirement, nevertheless we are expecting you to remain with us in the watch-tower for many more years. Some of us here, too few I am sorry to say, were present with the then Board of Trustees thirty-five years ago to celebrate the opening of Rice. On that occasion, educators from far and wide gathered in Houston, much as these distinguished men and women have gathered here today; and let me say to you visitors that our breasts swell with pride that you, who represent the best in education, have come to honor Dr. Houston and Rice.

Today we have a new Board of Trustees, one an alum-

DINNER

nus of Rice; all have grown up in our midst, as Rice has grown—men of character and of high ideals. Under your leadership, Dr. Houston, and with the support of these fine young men, which you will assuredly have, we look with confidence to a greater Rice.

You have come to a state that has been favored with many natural advantages and resources. You have come to a people of pride and ambition. You have come to a community where people work together and do not fail in whatever they undertake. You have come to us with a distinguished record of achievement in science and in education. You have made a mark in the educational world which has singled you out as the leader we need for the oncoming generations of youth who will attend the Rice Institute. Not only have you won fame as an educator of unusual ability, but you have demonstrated the practical value of science in the complex world in which we live. Your contributions to the war effort have won national acclaim. In your position at the Rice Institute you are more than a college president. You are an important leader in all the best and most worth-while aspects of life in Texas. We welcome you most cordially in this capacity. We also welcome you, Dr. Houston—you and your family—as our friends and neighbors.

Ladies and Gentlemen, Dr. Houston.

THE UNIVERSITY OF BRITISH COLUMBIA
TO
THE RICE INSTITUTE

GREETING:

THE UNIVERSITY OF BRITISH COLUMBIA expresses its cordial goodwill and congratulations to the RICE INSTITUTE on the occasion of the inauguration of
WILLIAM VERMILLION HOUSTON
as its president.

APPRECIATING the honour of being invited to share in this ceremony, the University of British Columbia has named
ALAN DUFFIL HUNTER, B.A.
as its delegate and has charged him to bear its greetings.

GIVEN at Vancouver on the twenty-fourth day of March in the year of Our Lord nineteen hundred and forty-seven.



Edw. A. Hunter
Chancellor

Norman A. McKelvey
President

INFORMAL RESPONSE OF THE PRESIDENT

I HAD resolved that if I had an opportunity to say a word to you tonight that word should be, first and most deeply, about Houston, Texas.

The kindness of the individual citizens of this community toward newcomers, and toward each other, is a constant source of wonder and appreciation to any one who is a comparative stranger in your midst. Mrs. Houston, Anne, and I could never express to you our thanks and appreciation for your friendliness in your clubs, in your churches, in your individual homes. If this is the habitual hospitality of the South, not nearly enough has been said in praise of its warmth and sincerity.

The attitude of the individual Houstonian toward his cultural and civic tasks is also amazing. He takes a post on Symphony or Museum boards, or Social Service committees, as an opportunity rather than a burden. And the generosity of the individual in putting back into the public good, the private gain the country has vouchsafed him, has in this community assuredly reached a peak.

I am certain that every thoughtful citizen of Houston was gladdened beyond measure at the wonderful bequest from Mr. and Mrs. Cullen this past fortnight. It spurs the imagination to realize what that great force for good may mean in health and education. It is a cause of rejoicing to us all.

DINNER

Of the trustees of the Rice Institute, I should like to say a word of public appreciation, also. One cannot estimate the value of the time, the skill, and the devotion these seven men put into the Institute life—not once a year, but every month, and every week.

A university is like an oak tree to some extent. It is of slow growth, and it is apt to take, in its infancy at least, pretty much the whole attention of the gardener who nurtures it successfully. You have had one man's full lifetime of single-minded purpose in the nurturing of the Rice Institute. Dr. Lovett has seen that the faculty he has chosen and guided has contained men of the highest calibre.

Like an oak's, also, the roots of a good college must go deep into its indigenous earth. We have felt increasingly during this pleasant year how much of life-giving strength the Rice Institute does draw from this community. As you all know, the thanks of the Rice faculty and students and Board go out again and again to the Fondrens for inaugurating our Library, to the Abercrombies for making possible our engineering laboratory, and to the Wiesses for the contingent income which is so timely and so fine. Rice has always been a community institution in the past, and we look to you, all, for your continued heartening coöperation in the future. The Rice Institute has had the privilege of educating some of you; many of your sons and daughters; and we look forward to having your grandsons and daughters in the years ahead.

RESPONSE OF THE PRESIDENT

A glimpse of what the engineering department alone, in a school of quality, can bring to its community is stupendous. To visualize it in terms of smooth, moisture-resistant roads; absolute drainage and flood control; refrigeration of houses as simply performed as in your kitchen iceboxes; viaducts that can bring you the purest water supply in the country for your vastly increasing population; discoveries of new techniques in chemical and atomic engineering which promise to play so large a part in our economy of the future, gives some slight measure of the rewards. These things are the payoff, in terms of material gains, from the support of engineering research. But there are deeper gains of the spirit in the associations of a good college, too.

I am reminded this evening of William James' summation in his Founders' Day Address of 1906 at the Leland Stanford University.

"What makes the essential quality of a university?" asked Mr. James.

"It is the quality of its men that makes the quality of a university. You may have your buildings, you may create your committees and boards, you may spend money till no one can approach you; yet you will add nothing but one more trivial specimen to the common herd of colleges, unless you send into all this some breath of life, by inoculating it with a few men, at least, who are real geniuses. We are only beginning in this country to see that the alpha and omega in a university is the tone of it, and that this tone is set by human personalities ex-

DINNER

clusively. The world, in fact, is only beginning to see that the wealth of a nation consists more than in anything else in the number of superior men that it harbors.

“In the practical realm, it has always recognized this, and known that no price is too high to pay for a great statesman or great captain of industry. But it is equally so in the philosophic and scientific sphere. How can we measure the cash-value to France of a Pasteur, to England of a Kelvin? Geniuses are ferments; and when they come together as they have done in certain lands at certain times, the whole population seems to share in the higher energy which they awaken.”

This has been true, I believe, in the interrelation of the Rice Institute and this community. Our only hope is that it may be deepened and intensified, in the days ahead.

I think we may say of the Rice Institute as Mr. James did of Leland Stanford, “She only needs a boldness like that shown by her founders to become the seat of a glowing intellectual life. Let her claim her place; let her espouse her destiny.”

OFFICIAL REPRESENTATIVES
OF ACADEMIC INSTITUTIONS AND
LEARNED SOCIETIES



OFFICIAL REPRESENTATIVES
OF ACADEMIC INSTITUTIONS AND
LEARNED SOCIETIES

- 1636 *Harvard University*
Alan Dugald McKillop, A.B., A.M., Ph.D.
- 1662 *The Royal Society of London*
Sir Robert Robinson, M.A., D.Sc., LL.D., F.R.I.C.,
P.R.S.
Harold Albert Wilson, M.A., M.Sc., D.Sc., F.R.S.
- 1676 *Universidad de San Carlos de Guatemala*
Joseph S. Werlin, B.A., M.A., Ph.D.
- 1701 *Yale University*
Dixon Wecter, M.A., Ph.D., Litt.D.
- 1740 *The University of Pennsylvania*
William Ward Watkin, B.S. in Arch.
- 1743 *The American Philosophical Society*
Harold Albert Wilson, M.A., M.Sc., D.Sc., F.R.S.
- 1746 *Princeton University*
Julian Parks Boyd, A.B., A.M., Litt.D.
- 1749 *Washington and Lee University*
Melvin Earl Kurth, B.A., LL.B.
- 1754 *Columbia University*
Victor Kuhn La Mer, Ph.D.
- 1754 *The Royal Society of Arts*
Alfred Charles Bossom, F.R.I.B.A., M.P.
- 1764 *Brown University*
Kenneth Livingston Burdon, Ph.B., M.S., Ph.D.
- 1766 *Rutgers University*
Kenneth Mildrum Eden, B.S.

OFFICIAL REPRESENTATIVES OF

- 1769 *Dartmouth College*
Dwight James Edson, B.A.
- 1773 *Dickinson College*
B. Frank Porter
- 1776 *Hampden-Sydney College*
Mason A. Botkin, B.S.
- 1776 *The United Chapters of Phi Beta Kappa*
Floyd Seyward Lear, A.B., A.M., Ph.D.
- 1780 *The American Academy of Arts and Sciences*
Karl Taylor Compton, D.Sc., D.Eng., Ph.D., LL.D.,
D.App.Sci.
- 1787 *The University of Pittsburgh*
John Nill Troxell, P.E.
- 1789 *The University of North Carolina*
Raemond Wilson Craig, A.B., M.A.
- 1791 *The University of Vermont*
Laurence Golden Cowles, B.S., A.M.
- 1793 *Williams College*
Hamilton Hyde Kellogg, D.D., S.T.D.
- 1795 *Union College*
Floyd Edward Ulrich, B.S. in E.E., M.S. in E.E.,
A.M., Ph.D.
- 1800 *The Library of Congress*
Duncan Black MacDonald Emrich, Ph.D., D. en Letras
- 1800 *Middlebury College*
Donald F. Weekes, Ph.D.
- 1802 *The United States Military Academy*
Rudolph Charles Kuldell, B.S., Brigadier General,
O.R.C.
- 1804 *Ohio University*
Jay V. Castle, B.A.
- 1807 *The University of Maryland*
J. Lawrence Plumley, B.A., B.D.

INSTITUTIONS AND SOCIETIES

- 1809 *Miami University*
Horace N. Shofstall, B.A., M.A.
- 1812 *The Academy of Natural Sciences of Philadelphia*
Asa Crawford Chandler, A.B., M.S., Ph.D.
- 1812 *Hamilton College*
Joseph Selwyn Ibbotson, A.B., B.S.
- 1817 *The University of Michigan*
Robert Haig Martin, LL.B.
Russell Sheldon Wolfe, M.D.
- 1818 *St. Louis University*
President Patrick J. Holloran, S.J., A.M., Ph.D.,
Mag.Agg.
- 1819 *The Cambridge Philosophical Society*
Harold Albert Wilson, M.A., D.Sc., F.R.S.
- 1819 *Centre College of Kentucky*
President Walter A. Groves, M.A., Ph.D., D.D.
Joseph Turner Browder, B.A.
- 1819 *Colgate University*
James Andrew Brooks, Jr., B.S.
- 1819 *Maryville College*
Virginia Ross Donnahoe, B.A.
- 1819 *The University of Virginia*
Joseph Chappel Hutcheson, LL.B.
- 1820 *Indiana University*
Phil Harter Hidy, Ph.D.
- 1820 *The Royal Astronomical Society*
Otto Struve, Ph.D., Sc.D.
- 1821 *Amherst College*
Frederic B. Asche, A.B.
- 1821 *George Washington University*
Evan Weisiger Burris, LL.B.
- 1822 *Hobart College*
Gerald F. Coursey, A.B.

OFFICIAL REPRESENTATIVES OF

- 1824 *Kenyon College*
Robert Edward Lee Boyd, II, A.B.
- 1824 *Rensselaer Polytechnic Institute*
H. Banks Jones, Jr., C.E.
- 1826 *Lafayette College*
Edward Prince Renouf, M.E.
- 1827 *The University of Toronto*
Vincent J. Guinan, B.A., M.A.
- 1829 *Illinois College*
Winfred O. Milligan, A.B., M.A., Ph.D., D.Sc.
- 1830 *Randolph-Macon College*
John Richard Spann, A.B., M.A., B.D., D.D.
- 1831 *The University of Alabama*
Thomas Griffin Synnott, B.S., M.D.
- 1831 *Denison University*
Claude H. Smith, B.S.
- 1831 *New York University*
Henry L. Pritchett, B.A., M.A., Ph.D.
- 1831 *Wesleyan University*
Andrew Louis, Ph.B., Ph.D.
- 1832 *Gettysburg College*
Wilbur Renfrew McElroy, A.B., M.S., Ph.D.
Helen Benedict McElroy, A.B.
- 1832 *Wabash College*
Merle Benefiel Stokes, A.B., M.D.
- 1833 *Haverford College*
Walter W. Whitson, A.B., M.A.
- 1833 *Oberlin College*
Helen M. Douthitt, A.B., M.A.
- 1834 *The Tulane University of Louisiana*
James Marshall Robert, B.E.
Adele DeLeon Conselyea, B.A. in Ed.

INSTITUTIONS AND SOCIETIES

- 1834 *Wake Forest College*
 Kyle M. Yates, A.B., A.M., Th.M., Th.D., Ph.D.,
 D.D., LL.D.
- 1835 *Marietta College*
 Fred G. Jackson, B.A., M.S.
- 1836 *Davidson College*
 Charles Leonidas King, D.D., LL.D.
- 1836 *Emory University*
 James Osgood Bickley, B.S.
- 1837 *DePauw University*
 Everett F. Stratton, A.B., A.M., Sc.D.
- 1837 *Knox College*
 Wirt A. Paddock, B.S.
- 1837 *The University of Louisville*
 Clinton Simon Quin, LL.B., D.D.
- 1837 *Mount Holyoke College*
 Anne Hall Wheeler, A.B.
- 1839 *Boston University*
 Francis Edward Jepson, S.B.
- 1839 *The University of Missouri*
 Harry Viner, B.A.
- 1839 *Virginia Military Institute*
 Stewart Wise Anderson, M.S., E.E.
- 1840 *Southwestern University*
 President J. N. R. Score, A.B., B.D., Th.D., D.D.,
 LL.D.
 Claude Carr Cody, Jr., A.B., A.M., M.D., Sc.D.
- 1841 *Fordham University*
 Vincent deP. Hurley, B.S.
- 1842 *The Citadel*
 Richard Lee Etter, B.S., B.A., M.A., M.D.
- 1842 *Mary Baldwin College*
 Jane Mattox Turner, A.B.

OFFICIAL REPRESENTATIVES OF

- 1842 *The University of Notre Dame*
George W. Strake
- 1842 *Ohio Wesleyan University*
Clarence Elder Sharits, B.A.
- 1842 *Willamette University*
Frances Lemery Miller, B.A., M.S.
- 1843 *College of the Holy Cross*
Francis J. Donoghue, A.B., M.B.A.
- 1845 *Baldwin Wallace College*
Ruth Hertzler Stillinger, B.A.
- 1845 *Baylor University*
President Pat Morris Neff, B.A., M.A., LL.B., LL.D.,
Lit.D.
- 1845 *Mary Hardin-Baylor College*
President Gordon Grady Singleton, Ph.D.
- 1845 *The United States Naval Academy*
Jacob Elliott Cooper, B.S., Captain, U.S.N.
- 1845 *Wittenberg College*
Jean Green, B.S.
- 1846 *Beloit College*
George A. Loescher, B.A., M.A.
- 1846 *Bucknell University*
Charles Vernon Dunham, B.S., M.A.
- 1846 *The University of Buffalo*
Gould H. Cloud, B.A., M.S., Ph.D.
- 1846 *Carroll College*
Lorne Campbell, D.D.S.
Matie Howard Campbell, Mus.B.
- 1846 *MacMurray College for Women*
Dorothy Trone Howe, A.B.
- 1846 *Mount Union College*
Allen M. Springer, B.A.
- 1846 *Smithsonian Institution*
Matthew W. Stirling, B.A., M.A., D.Sc.

INSTITUTIONS AND SOCIETIES

- 1847 *Earlham College*
Irvin T. Shultz, A.B., M.A., Ph.D.
- 1847 *State University of Iowa*
Samuel Rhodes Dunlap, B.A., M.A., B.Litt., D.Phil.
- 1847 *College of the City of New York*
David Ballin Klein, A.B., M.A., Ph.D.
- 1847 *Otterbein College*
Robert Copeland, A.B., B.D.
- 1847 *Rockford College*
Myra King Whitson, B.A.
- 1848 *The American Association for the Advancement of Science*
Chauncey D. Leake, Litt.B., M.S., Ph.D.
- 1848 *The University of Mississippi*
Lee Harnie Johnson, Jr., B.A., M.A., M.S., Sc.D.
- 1848 *Muhlenberg College*
John H. Bennetch, A.B., Th.B., Th.D.
- 1848 *Southwestern at Memphis*
George M. Brandau, B.A., M.D.
- 1848 *The University of Wisconsin*
Robert E. Moroney, B.A.
- 1850 *Illinois Wesleyan University*
Hugh F. Montgomery, LL.B.
- 1850 *The University of Rochester*
Floyd Seyward Lear, A.B., A.M., Ph.D.
- 1850 *The University of Utah*
Alexander Golden Oblad, Ph.D.
- 1851 *Milwaukee-Downer College*
Janet Stoltz Harrison, B.A.
- 1851 *The University of Minnesota*
William A. Gorman, B.A., Ph.D.
- 1851 *Northwestern University*
Alvis Eugene Greer, M.D., F.A.C.P., F.C.C.P.
- 1851 *Ripon College*
Herman H. Brien, B.A.

OFFICIAL REPRESENTATIVES OF

- 1852 *The American Society of Civil Engineers*
Frank Hastings Newnam, Jr., B.S. in C.E.
- 1852 *St. Mary's University of San Antonio*
President Walter F. Golata, A.B., M.A., LL.D.
- 1852 *Tufts College*
Hubert Evelyn Bray, A.B., A.M., Ph.D.
- 1853 *Cornell College*
Sherman S. Shaffer, B.A., M.A., Ph.D.
- 1853 *Monmouth College*
Grace D. Huey, A.B., A.M.
- 1853 *Washington University*
Arthur Llewelyn Hughes, D.Sc.
- 1853 *Western College for Women*
Dorothy Williamson Jackson, B.A.
- 1855 *Berea College*
Lige Tatone, B.A.
- 1855 *Pennsylvania State College*
Edward M. Armsby, B.S.
- 1856 *Birmingham-Southern College*
Marguerite Johnston Barnes, A.B.
- 1857 *The University of the South*
Alexander Sessums Cleveland, B.A.
- 1858 *Baker University*
Everett R. Filley, A.B.
- 1859 *Whitman College*
Haylett O'Neill, A.B., B.S.
- 1860 *Augustana College*
James Martin Anderson, A.B., B.D.
- 1860 *Wheaton College*
William Boyd Hunt, A.B., Th.D.
- 1861 *Massachusetts Institute of Technology*
President Karl Taylor Compton, Ph.D., D.Sc., LL.D.,
D.Eng., D.App.Sci.
Joseph A. Tennant, B.A., S.B.

INSTITUTIONS AND SOCIETIES

- 1861 *Vassar College*
Hally Ballinger Bryan, B.A.
- 1861 *The University of Washington*
Stanley Harold Gill, B.S., Ch.E.
- 1863 *Kansas State College*
Ray Leonel Smith, B.S., M.A., LL.B., M.P.L.
- 1863 *Massachusetts State College*
Ralph Ellis Gunn, B.S., M.L.A.
- 1863 *The National Academy of Sciences*
Roger John Williams, Ph.D., Sc.D.
- 1864 *Bates College*
Nicholas Andronis, A.B., M.D.
- 1864 *The University of Denver*
Floyd L. Karsten, A.B., LL.B.
Maxine Mohrbacher Karsten, A.B.
- 1864 *Swarthmore College*
Robert Eikel, B.A., LL.B., B.C.L.
- 1865 *The University of Kansas*
Warren S. Bellows, B.S. in Engr.
- 1865 *The University of Kentucky*
Lafayette Brown Herring, A.B.
- 1865 *Lehigh University*
John Russell Wait, M.E.
- 1865 *The University of Maine*
Henry A. Petersen, A.B., M.D.
- 1865 *Worcester Polytechnic Institute*
Donald F. Sears, B.S.
- 1866 *Carleton College*
M. U. S. Kjorlaug, B.A., LL.B.
- 1866 *College of Wooster*
Theodore McConnell Frank, B.S., M.D.
- 1867 *The University of Illinois*
Bruce Patterson, B.S. in Bus. Adm.

OFFICIAL REPRESENTATIVES OF

- 1867 *West Virginia University*
Haymond Willis
- 1868 *The University of California*
Dixon Wecter, Ph.D., Litt.D.
- 1868 *Cornell University*
Radoslav Andrea Tsanoff, B.A., Ph.D.
- 1868 *Iowa State College*
Rowland Rodney Manatt, B.S. in C.E.
- 1868 *Oregon State College*
Charles A. McCollum, B.S. Engin.
- 1868 *Wells College*
Amylu Harman Allen, B.A., M.S. in Social Adm.
- 1869 *The American Philological Association*
William James Battle, Ph.D., D.C.L., LL.D.
- 1869 *The University of Nebraska*
Arthur Preston Allison, A.B.
- 1869 *Purdue University*
Louis Arthur Stevenson, B.S., C.E.
- 1869 *Trinity University*
President Monroe G. Everett, B.A., B.S., D.D.
Thomas B. Slick, B.A.
- 1869 *Wilson College*
Frances Fendley Dicks, M.A.
- 1870 *Ohio State University*
Victor August Greulach, A.B., M.S., Ph.D.
- 1870 *Stevens Institute of Technology*
Edward Joseph Hudson, M.E.
- 1870 *Syracuse University*
Lynn David Hepinstall, B.S.
- 1870 *Wellesley College*
Mildred Carrington Hutcheson, B.A.
- 1871 *The American Institute of Mining and Metallurgical Engineers*
Wilber Judson, S.B.

INSTITUTIONS AND SOCIETIES

- 1871 *Smith College*
Grace Vale Asche, B.A.
- 1872 *The University of Arkansas*
Marvin Hurley, B.A., M.A.
- 1872 *Vanderbilt University*
Chancellor Harvie Branscomb, B.A., M.A., Ph.D.,
Litt.D.
- 1873 *Drury College*
Ralph Rheudolph Kenyon, A.B., LL.B.
- 1873 *Texas Christian University*
President McGruder Ellis Sadler, Ph.D., D.D.
- 1874 *The University of Adelaide*
David Hugh Le Messurier, B.Sc., M.B., Ch.B.
- 1874 *Colorado College*
Gordon McLeod Mace, Jr., A.A., B.A.
- 1874 *The University of Nevada*
Frank C. Gignoux, B.S.
- 1874 *Rose Polytechnic Institute*
Leo Ross Wyeth, B.S.
- 1874 *St. Olaf College*
John C. Gunberg, B.A.
- 1875 *George Peabody College for Teachers*
Vernoy Callease Burk, B.S., M.A.
- 1876 *Agricultural and Mechanical College of Texas*
President Gibb Gilchrist, C.E., D.Sc., LL.D.
Frank Cleveland Bolton, B.S., M.S., LL.D.
James G. Potter, B.S., M.S., Ph.D.
- 1876 *The American Chemical Society*
William McDaniel Potts, B.S., M.S., Ph.D.
- 1876 *The American Library Association*
Joseph Selwyn Ibbotson, A.B., B.S.
- 1876 *The University of Colorado*
N. Catherine Brown, B.A., M.A., Ph.D.

OFFICIAL REPRESENTATIVES OF

- 1876 *Iowa State Teachers College*
David Wilbur Knepper, B.A., M.A., Ph.D.
- 1876 *The Johns Hopkins University*
James Brian Eby, A.B., Ph.D.
- 1878 *Creighton University*
George L. Schmidt, LL.B.
- 1879 *The Archaeological Institute of America*
William James Battle, Ph.D., D.C.L., LL.D.
Harry Joshua Leon, Ph.D.
- 1879 *Sam Houston State Teachers College*
President Harmon Lowman, B.A., M.A., Ph.D.
James G. Gee, B.S., Ph.D.
Charles Oran Stewart, B.A., M.A., Ph.D.
- 1879 *The University of Southern California*
Morris Glesby, B.S.
- 1880 *The American Society of Mechanical Engineers*
James Marshall Robert, B.E.
Willis Raymond Woolrich, B.S. in E.E., M.E.
- 1881 *Drake University*
Albert T. Fitts, B.S.
- 1881 *Incarnate Word College*
J. P. Donaghey, Ph.D.
- 1881 *Wayne University*
Homer C. Baker, Jr., B.S. in M.E.
- 1882 *The American Association of University Women*
Lillian K. Holloway, A.B.
- 1883 *The American Society of Naturalists*
Theophilus Shickel Painter, A.B., M.A., Ph.D., D.Sc.,
LL.D.
- 1883 *The Modern Language Association of America*
Dixon Wecter, M.A., Ph.D., Litt.D.
- 1883 *The University of North Dakota*
Paul Allen Wheeler, B.A., B.S., M.D.

INSTITUTIONS AND SOCIETIES

- 1883 *The University of Texas*
President Theophilus Shickel Painter, A.B., Ph.D.,
D.Sc., LL.D.
- 1884 *The American Historical Association*
Hardin Craig, Jr., A.B., A.M., Ph.D.
- 1884 *The American Institute of Electrical Engineers*
Ronald Fackler Danner, B.S. in E.E.
- 1884 *Mississippi State College for Women*
President Burney Lynch Parkinson, B.S., A.M., Ph.D.
- 1885 *The American Economic Association*
Wendell Chaffee Gordon, B.A., M.A., Ph.D.
- 1885 *Georgia School of Technology*
President Blake Ragsdale Van Leer, Sc.D., D.Eng.
- 1885 *Macalester College*
Solomon D. David, B.A., B.S., M.D.
- 1885 *Stanford University*
H. Gardiner Symonds, A.B., M.B.A.
- 1885 *The Tau Beta Pi Association*
Leo Vernon Uhrig, B.S. in C.E.
Thomas Percy Wier, Jr., B.S. in Ch.E., M.A., Ph.D.
- 1886 *The University of Chattanooga*
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- 1886 *The Society of the Sigma Xi*
Elmer Julius Lund, Ph.D., Sc.D.
- 1886 *The University of Wyoming*
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- 1887 *Clark University*
Linus Ward Kline, S.B., Ph.D.
- 1887 *Occidental College*
Francis H. Henshaw, A.B., M.S.
- 1887 *Pomona College*
Wendell B. Steward, B.A., M.A., Ph.D.
- 1888 *The American Mathematical Society*
Hyman Joseph Ettlinger, A.B., A.M., Ph.D.

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- 1892 *Illinois Institute of Technology*
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- 1893 *Hood College*
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- 1893 *Montana State University*
Alice Frances Wright, B.A., M.A.

INSTITUTIONS AND SOCIETIES

- 1893 *Randolph-Macon Woman's College*
Josephine Coombs Kirby, A.B.
- 1894 *The American Academy in Rome*
James Chillman, Jr., B.S. in Arch., M.S. in Arch.,
F.A.A.R.
- 1894 *The University of Tulsa*
President Clarence Isaiah Pontius, LL.D.
- 1895 *The Southern Association of Colleges and Secondary Schools*
Louis Herman Hubbard, B.A., M.A., Ph.D., LL.D.
- 1899 *The American Astronomical Society*
John Matthias Kuehne, B.S., M.A., Ph.D.
- 1899 *Simmons College*
Marie Henderson Johnson, B.S.
- 1900 *The American Philosophical Association*
Radoslav Andrea Tsanoff, B.A., Ph.D.
- 1900 *The Association of American Universities*
Albert Perley Brogan, A.B., A.M., Ph.D.
- 1901 *Sweet Briar College*
Nevil Crute Holmes, A.B.
- 1901 *Texas State College for Women*
President Louis Herman Hubbard, B.A., M.A., Ph.D.,
LL.D.
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- 1901 *Whittier College*
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- 1902 *Southwest Texas State Teachers College*
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- 1903 *The American Society of Zoologists*
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- 1904 *The Bibliographical Society of America*
Fannie Elizabeth Ratchford, B.A., M.A.
- 1904 *The University of Leeds*
Harold Albert Wilson, M.A., M.Sc., D.Sc., F.R.S.

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- 1915 *The American Association of University Professors*
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- 1915 *The Association of American Colleges*
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- 1915 *The University of British Columbia*
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- 1916 *The Mathematical Association of America*
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- 1916 *The Optical Society of America*
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- 1917 *Stephen F. Austin State College*
President Paul L. Boynton, A.B., M.A., Ph.D.
- 1918 *The American Council on Education*
William E. Moreland, M.A., LL.D.

INSTITUTIONS AND SOCIETIES

- 1919 *The Huntington Library*
Dixon Wecter, Ph.D., Litt.D.
- 1920 *Sul Ross State Teachers College*
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- 1923 *Texas Technological College*
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- 1924 *The History of Science Society*
E. William Bertner, M.D., F.A.C.S.
Frederick Chesley Elliott, Ph.G., D.D.S., F.A.C.D.
- 1925 *The Mediaeval Academy of America*
Floyd Seyward Lear, A.B., A.M., Ph.D.
- 1925 *Texas College of Arts and Industries*
President Edward Newlon Jones, B.S., Ph.D., LL.D.
Frank Chesley Smith
- 1926 *Scripps College*
President Frederick Hard, A.B., A.M., Ph.D., D.C.L.
- 1931 *The American Institute of Physics*
Victor Kuhn La Mer, Ph.D.
- 1934 *The University of Houston*
President Edison Ellsworth Oberholtzer, Ph.B., M.A.,
Ph.D., LL.D.
Walter W. Kemmerer, B.A., Ph.D.
- 1941 *Sociedad Matematica Mexicana*
Dr. Nabor Carrillo
- The Rice Institute Student Body*
Phillip Bernard Costa, President of the Student Association
Anne Katherine Bray, Vice-President of the Student Association
- The Association of Rice Alumni*
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