

Churchill Speech Coverage—See Insert

THE TECH



CAMBRIDGE, MASS.
TUESDAY, APR. 5, 1949
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THE OFFICIAL NEWSPAPER
OF THE M.I.T. UNDERGRADUATES

... See Inside Pages For Articles
On Panel Discussion of Spiritual,
Intellectual, Material Problems

4000 SEE COLORFUL INAUGURAL

Harold Stassen Asks For Aids To Poor Areas

**Stresses Propaganda
And Leaflet Dropping
Behind "Iron Curtain"**

Appearing as a late substitute for the President of the United States to speak at the final assembly of the Convocation, last Friday evening, Harold E. Stassen presented his program for stemming the further progress of Communism and for raising the standard of living of the world's underdeveloped areas.

The President of the University of Pennsylvania declared that there were three philosophic views in the world today, one characterizing the democracies, one the totalitarian states, and the third the mystical Eastern societies which do not place great emphasis on matters of the flesh.

He called for stepped-up dissemination of propaganda behind



HAROLD E. STASSEN

the iron curtain to Eastern Europe by employing such methods as dropping leaflets from "drifting balloons or from high-flying airplanes." With obvious reference to the recent "Intellectuals' Conference" in New York, the contender for the Republican Presidential nomination in

(Continued on Page 3)

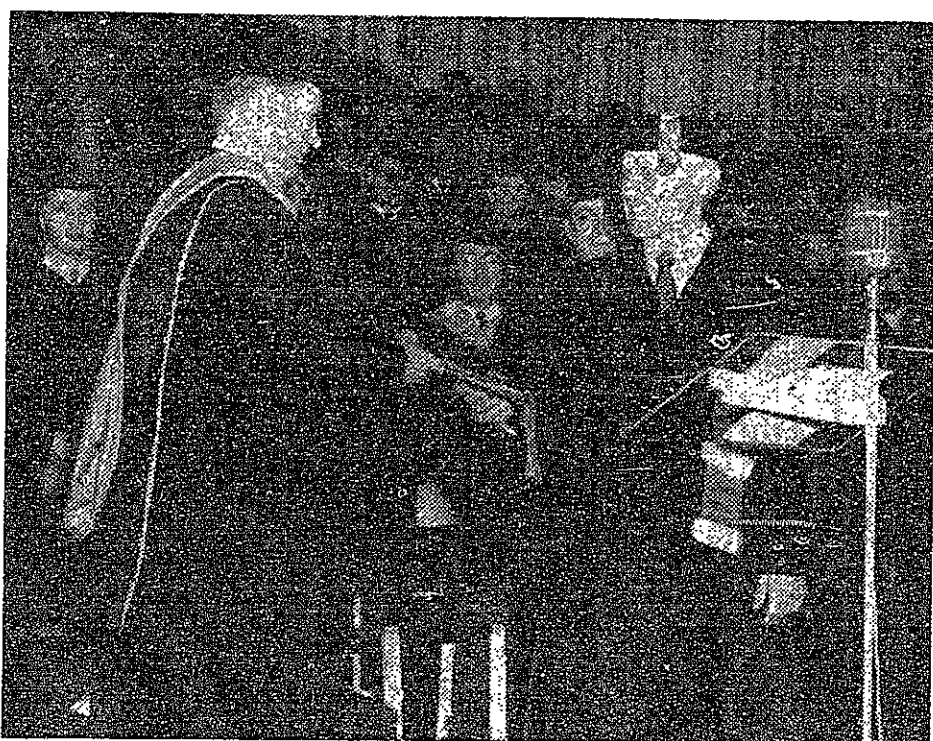
Pictorial Backdrop Posed A Problem

A spectacular backdrop, a 12-by-24 foot photographic enlargement of a 5-by-7 inch aerial photograph of Technology's building, virtually put Winston Churchill on the Institute's campus when he appeared as speaker at the Boston Garden last week.

Production of the panel, the largest of its kind ever made in Boston, exceeded the facilities of any photographic plant in Boston and was made possible only through the resourcefulness of Frank H. Conant, head of Technology's Photographic Service.

The picture, taken by Conant while cruising over the campus in his Aeronca several weeks ago, was developed in 4 by 13 foot sections rolled up in a five foot tank. The six sections were then rushed to Briggs Field and the prints washed in two sections of the shower room while Conant and an assistant waded through the two inches of water to agitate the panels.

THE PRESIDENCY: FROM COMPTON TO KILLIAN



Dr. Karl T. Compton, retiring president of the Institute, presents the symbols of authority to his successor, Dr. James R. Killian, Jr., during the inauguration ceremony in Rockwell Cage Saturday morning, April 2.

Churchill Receives Two Gifts, Thanks Tech In Moving Reply

Winston Churchill made a dramatic exit from the Technology scene and received a rising ovation from the crowd at last Friday's Boston Garden meeting, after being presented with two awards unique in the Institute's history.

Dr. James R. Killian acted for the Corporation in giving Mr. Churchill an appointment as "Honorary Lecturer" at the Institute, after Otto E. Kirchner, '49, in charge of student services at the Convocation, had presented Mr. Churchill with a gold key as a token from the student body.

Churchill's Response

"I am off duty tonight. My task was accomplished as well as it lay in my power last night. Tonight I am to receive and have received kindly tokens that at any rate all friendly relations were not at an end.

"Now on this occasion I have to thank you for two gifts, two presentations, which I value very greatly. The first is that I am an Honorary Lecturer of M.I.T., which means that I can come here whenever I choose and lecture you on any matter which may excite my interest. The second is the presentation to me from the student body from Mr. Kirchner of the golden key. May it always be the means of giving me the feeling and the faith that I have the key to American hearts.

"If that should be so and if I may feel that in our own small island across the ocean we have reached conclusions which are in broad harmony with those of the great republic, we may indeed face the future with confidence and hope.

"For my part, I have the strongest feeling of gratitude for all the manifestations of kindness and friendship which I have received.

Boston Teaparty

"I carry away from this great gathering sentiments which will enable me for the rest of my life to view in a totally different light the Boston Tea Party, of which I heard in my early days.

"Let me express from the bottom of my heart the gratitude of the British people to the valiant, generous people of the United States for all the part that they are playing in the future world. Let me give my assurance to this great audience, one of the finest I have ever addressed, that without their aid, without their guidance and strength, all the struggles of our soldiers and sailors in the war might well be cast away, but the persistency along the lines which they have adopted will carry us, may well carry us, through the dangers which lie ahead and may possibly avert from humanity the fearful curse of another war.

"I thank you all for the kindness which you have shown me. I do not need a microphone to tell you how deep is my regard for my motherland, and I will carry an inspiration from this great gathering back to Britain and I trust, indeed, that we may continue to march shoulder to shoulder along the path of truth, of justice, and of honor.

A Message From Pres. Killian..

One of the striking and fitting aspects of the great academic festival last week was the number of students who took time out of their vacation to attend and to participate. As your new president, I want to thank all of you for your warm and generous greeting and good wishes.

Throughout my career at the Institute I have found stimulation and pleasure in my relationships with students, and I hope that as president I may have more and not less opportunity to know you individually and to work closely with you in our joint undertaking to make M.I.T. a superbly effective educational enterprise. By some standards we are a large institution, but we must never feel that we are too large to be a friendly community, where the group works for the individual and the individual for the group.

As I have observed succeeding generations of students, my conviction has grown that the M.I.T. student body represents as able and fine a group of young people as can be found in any American college. This is the measure of our strength and one of the chief reasons why I feel it to be a privilege and a challenge to be president of the Institute.

Yours cordially, James R. Killian, Jr.

Scholars, Corporation Watch Killian Invested As Institute's President

As a colorful climax to Technology's three day convocation James Rhyne Killian was inaugurated last Saturday as the tenth president of the Institute. With an audience of over 4000, including dignitaries from all over the world, Karl Taylor Compton, retiring President, handed the charter of the Institute to Dr. Killian.

Endowment Fund Committees Set Up Throughout Nation

"Screening operations have just about been completed and solicitations should begin early this summer." Such were the words of Malcolm G. Kispert, Administrative Assistant to the President, in a recent interview with *The Tech* concerning the progress of the Institute's \$20,000,000 fund-raising drive.

Committees have been set up in most of the major cities of the country for screening purposes. In other words, the function of the committees is to determine which alumni and friends of the Institute in that particular area can be expected to contribute to the drive. After determining which individuals in that area will aid the drive, the committee will then proceed with solicitations.

In the December, 1947, meeting of the Corporation, the \$20,000,000 drive was first devised when it was foreseen that a great deal of expansion at the Institute was needed in the coming years. At that time, a survey committee was appointed which had as its chairman, John R. Macomber, retired President of the First Boston Corporation (investments). The purpose of the Committee, according to the Corporation, was "to determine the needs and financial requirements of M.I.T. and to devise and recommend the type of organization to secure the funds for the Institute."

Expecting the fund-raising drive to last approximately two years, the committee is confident that the funds required are well within the capacity to contribute of members of the Corporation, the alumni, friends of the Institute, and industry.

After the robed delegates and the student honor guard had filed in, the meeting was opened in an official manner by Charles George Dandrow, Chief Marshal, and president of the Technology Alumni Association. The vari-colored robes of the academic delegates added a holiday atmosphere to the proceedings, and some of the delegates, including Lord Hailey, wore brilliant crimson robes. The Reverend William Brooks Rise, minister of the Unitarian Society of Wellesley Hills, gave the invocation.

The key speech was given by Dr. Killian who, after accepting the "charter," began his address with an analogy about mountain climbing. "Today as I stand at the base camp of the Institute's presidency, a shining mountain but rugged, I well understand George Meredith's observation that in mountain climbing every step is a debate between what you are and what you might become." He continued, "This bracing challenge of the mountain climber heightens my appreciation for the gracious welcome and the good wishes of this great assembly."

War Preparation

Dr. Killian discussed the necessity of being prepared for war, on the scientific front: "We must continue to educate the imaginative and audacious minds that created the OSRD and mustered the democratic ranks of American scientists into invincible battalions, such as our own Radiation laboratory here in Cambridge. We must be able again to beat an enemy to the draw, as we did in developing the atomic bomb."

Dr. Killian concluded his speech with a hope for the future. "It is my hope that in the years ahead we may also achieve the imaginative administration and the noble environment to give our faculty and students opportunities to contribute their full potential to the prosperity and peace of the world. In the faith that we can attain these ideals, we move confidently into the second half of the century."

The next speaker, Governor Paul A. Dever, extended the official greetings of the Commonwealth of Massachusetts to the new president, and expressed pride in the Institute as an educational institution.

President of Harvard

As befitted such an academic ceremony, the President of Harvard University, Dr. James Bryant Conant, officially offered the greetings of American Universities to the new president and to the Institute. Dr. Conant described the relations between Harvard and Technology, "I hardly need remind this audience that the good neighbor policy was established here in Cambridge

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Many Institute Scientists Are Prominent In Basic Research

As man ponders the social implications of science at mid-century, his store of knowledge continues to be enlarged here at the Institute in both fundamental and applied fields. After their brilliant war record, Technology's laboratories turned to the task of assimilating basic data with a view toward eventual application on a practical level.

Examples of significant contributions cannot form an exhaustive list but give an indication of work being carried on. Peacetime applications of so-called atomic energy are high on the list of major developments. Dr. Robley D. Evans of the Physics Department has conducted fundamental research into the properties and uses of radioactive isotopes in cooperation with several other departments and with nearby hospitals. Treatment of thyroid disease using radioactive iodine is one application of this work.

Atom Explored
Exploration of the nature of the atom itself is continuing along two fronts. Dr. Jerrold R. Zacharias heads the interdepartmental laboratory of Nuclear Science and Engineering which makes use of high-energy machines such as the cyclotron to bombard the atomic nucleus. Employing the Wilson cloud chamber at high altitudes, notably on Mount Evans in Colorado, Dr. Bruno B. Rossi has directed research for which he received the Scientific Award of the Research Corporation.

Another significant example of interdepartmental cooperation is the spectroscopy laboratory where chemical, physical, and biological investigations have been conducted into the structures of many organic and inorganic compounds by study of their infra-red and Raman spectra. Dr. Richard C. Lord, chemist, is in charge of the laboratory, and along with Dean George R. Harrison, physicist, and Dr. John R. Loofbourov, biologist, has written a book entitled Practical Spectroscopy.

Very Low Temperatures
Using liquid hydrogen, Dr. Clark C. Stephenson has succeeded in measuring the specific heat and other properties of phosphorous at temperatures only slightly above absolute zero. Another physical chemist Dr. Walter H. Stockmayer has made important theoretical contributions to the thermodynamics of polymers and the processes by which they are formed.

In the field of organic chemistry, Dr. John C. Sheehan has developed a new method of synthesizing polypeptides, a class of compounds which includes many antibiotics. Two nuclear chemists, Dr. John W. Irvine, Jr., and Dr. Charles D. Coryell have made advanced theo-

retical studies of trace elements and applied this knowledge to such problems as friction.

Biology Studies Cells
The cell, its molecular structure and chemical functions is the chief target of research of the biology department. Dr. Francis O. Schmitt with the electron microscope and Dr. Richard S. Bear with X-rays have made extensive studies of the structures of nerve cells and proteins of the skin such as collagen.

Low temperature spectroscopy and the absorption spectra of micro-sized cells and tissues have also thrown valuable light on cell structure, so that it has been possible to compare the relative structures of normal and abnormal or cancerous growths of cells.

By taking extracts from cells, Dr. William F. Loomis has simulated cell activity in a test tube. Further studies in cell functions have been carried out in connection with enzymes and metabolism by Dr. Bernard S. Gould and Dr. George T. Johnson. The application of their work lies in wound-healing.

Using emission spectra, Dr. Bert L. Valee has determined the role of trace elements in biological systems, a factor which may eventually be considered as important as vitamins.

Radioactive Research
Radioactivity has also played a prominent role in geology and geophysics. Dr. Patrick M. Hurley of the Institute has been active in this field. Dr. Walter L. Whitehead has used radioactive substances to study the formation of petroleum hydrocarbons and only recently succeeded in cracking organic substances in marine mud using artificially high temperature sources such as electric furnaces.

Mathematics Advanced
Dr. Norbert Wiener's cybernetics which correlates the human brain with mathematical calculating machines is the most familiar and significant contribution to mathematics. In his post as liaison between the Mathematics Department and project Whirlwind, Dr. Philip Franklin has advanced this work on high-speed computing machines from the mathematical standpoint.

Dr. Prescott D. Crout has made applied studies into the mathematics of electromagnetic theory and has developed numerical methods for solving integral equations. Two members of the department are at present working abroad. Dr. Norman Levinson on a Guggenheim fellowship at Copenhagen, is concerned with the solution of non-linear differential equations, and Dr. Henry Walkman is a visiting professor at the Chalmers Institute of Technology at Gothenburg, Sweden, in the field of circuit and communication theory.

Is Federal Aid Best Solution?

Dwindling Of Fortunes Dangerous To Schools

Speakers in the Friday afternoon panel discussion, "The State, Industry, and the University," were primarily concerned with answering the questions of how can the private institution survive with the growing cost of education? Is government aid to private institutions the solution? If government aid is the solution, then will government control necessarily follow? If government aid results, then will the formerly private institutions lose their freedom?

Opening the panel was Dr. Lee A. DuBridge, President of the California Institute of Technology and former head of the M.I.T. Radiation Laboratory. Dr. DuBridge was, of course, representing the private institution when he said, "It is very easy to take a gloomy view as to the future adequacy of private sources of financial support. We are all familiar with the facts about private fortunes, falling interest rates on endowments, and rising costs. The question is: Is Federal support the solution?"

State Has Interest
DuBridge went on to say that both the state and private industry have always had an important stake in the accomplishments of our universities. "However," stated DuBridge, "we find that until relatively recent times neither has been a major contributor to the financial support of our universities."

As to Federal support, DuBridge believes that it is both necessary and desirable for the government to provide funds for the support of research in the universities. However, Dr. DuBridge agreed with the other members of the panel in favoring diversity of control.

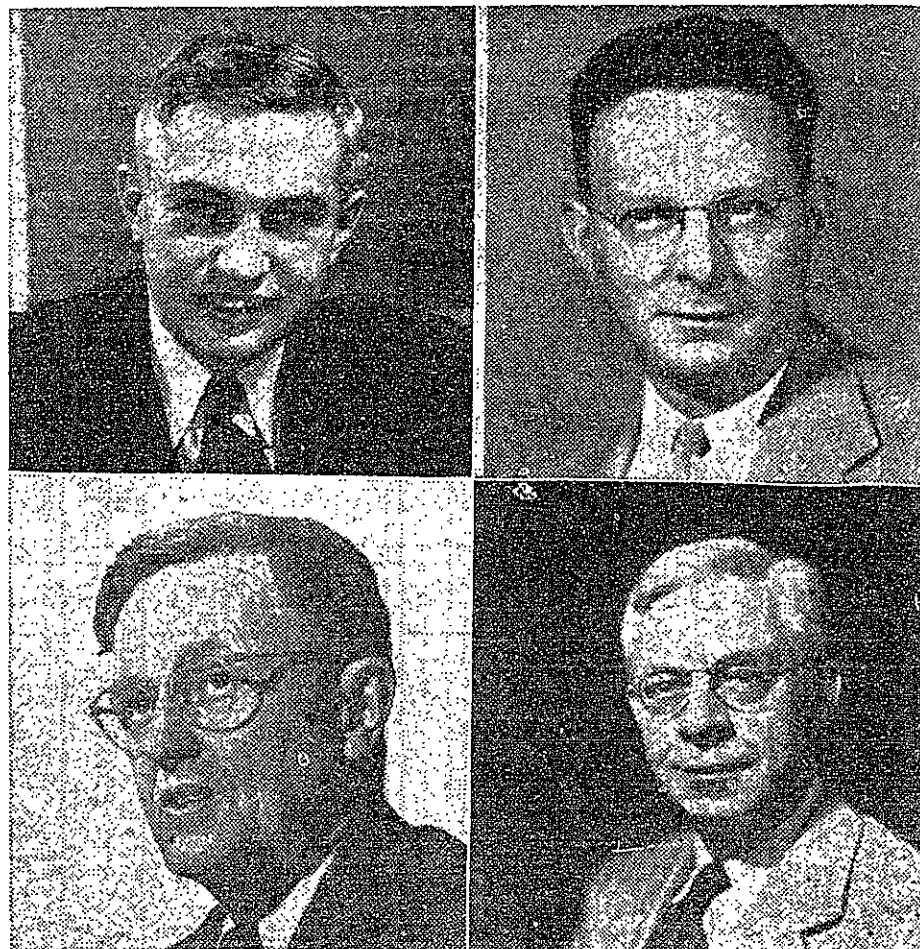
Society Not Static
The next speaker on the panel, Dr. Bryn J. Hovde, President of the New School for Social Research, presented the social scientist's viewpoint on the subject. Pointing out that human society no longer was of a static character, Dr. Hovde stated that "state is being obligated by society with major concern for education, housing, and health."

Continuing, Hovde observed that "the state and the University must at one and the same time serve industry and help it to guide its development in the direction demanded by the social order. Nor can the university claim to be the supreme mentor and judge of the state and industry or of the propriety of social change."

True Education Needed
Next on the program was Dr. Peter H. Odegard, of the Political Science Department of the University of California, who represented the viewpoint of the state-supported institution. According to Dr. Odegard, we must inform the American people about what is meant by education. There is a vast difference between mere training and education. In answering a question from the audience, Dr. Odegard maintained that we had no fear about too many truly educated people overflowing the country no matter how many people went to college. Dr. John Dale Russell, in his own words, was "the only bureaucrat on the panel," since he is the Director of Higher Education of the National Security Agency. Dr. Russell was against having government aid to private institutions unless there was, to some extent, government supervision.

Finally, representing the trustee's viewpoint was Mr. Laird Bell, Chairman of the Board of Trustees of the University of Chicago. Speaking of the relation of industry and the university, Bell stated that "research spreads out into many fields; universities furnish facilities in more diverse fields than any one concern can hope to cover in its own laboratories. Here then is a field in which universities have something to sell which industry can well afford to buy."

STATE, INDUSTRY AND THE UNIVERSITY



Upper left: Dr. Lee Alvin DuBridge, president of the California Institute of Technology since 1946, was Director of the Radiation Laboratory at the Institute from 1940 to 1945. Educated at Cornell College, Iowa, he received his M.A. and Ph.D. from Wisconsin. Honorary Sc. D.'s were awarded him by Wesleyan and Cornell College. In 1926, Dr. DuBridge became a fellow of the National Research Council at Cal Tech. Moving to the University of Rochester in 1928, he was Dean of the Faculty there from 1938-41.

Lower left: Dr. Peter H. Odegard, former president of Reed College, Portland, Oregon, is now chairman of the Department of Political Science at the University of California. Receiving his A.B. and M.A. from the University of Washington and his Ph.D. from Columbia he has taught at Williams, Ohio State, and Amherst. Dr. Odegard was Assistant to the Secretary of the Treasury in 1942-43.

Upper right: John Dale Russell, Director of the Division of Higher Education, U. S. Office of Education, and a former professor of education and dean of students at the University of Chicago, has been in government service since 1946. He received his B.A., M.A., and his Ph.D. from Indiana, and also studied at the University of Kentucky and Chicago. He taught at Indiana, Kentucky, and Chicago, where he was dean from 1939-44. Middle right: Bryn Jacob Hovde,

educator and political scientist, is president of the New School for Social Research in New York. Educated at Luther College, Iowa, he received his M.A. and Ph.D. Dr. Hovde taught at Luther, Allegheny College, and the University of Pittsburgh. Chief of the State Department Division of Cultural Cooperation (1944-45), he was on the UN delegation which established UNESCO.

Lower right: Laird Bell, lawyer and a director of many corporations is chairman of the board of trustees of the University of Chicago and member of the Board of Overseers of Harvard College. A graduate of Harvard in 1904, he is a former president of the Harvard Alumni Club, and holds the degree of doctor of jurisprudence from the University of Chicago. In civic duties, Mr. Bell was president of the board of Education in Winnetka, Illinois, and served in the Military Government in Germany in 1945.

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COOPERATION IS KEY TO PEACE

Compton Sums Up Science At Convocation Opening, Scores Idea Restrictions

From the development of atomic energy can be drawn five lessons, said the Chairman of the Institute Corporation. Dr. Karl T. Compton, who is also Director of Research for the National Military Establishment, spoke at the opening session of the Convocation on the afternoon of Thursday, March 31.

Dr. Compton looked at the state of science from the point of view of a physicist, summing up the development of science from the middle of the last century to the present. Bringing the story of atomic energy to its climax he noted, "We see the sudden merging of the results of many lines of investigation which had previously proceeded almost independently: fifty years of research on radioactivity; twenty years' development of high voltage machines; the equivalence of mass and energy announced by Einstein as early as 1905 as part of his theory of relativity; several decades of study of cosmic rays; fifty years' development of electronics; the whole modern art of chemical separation; the science of radiology whose impetus had come from medical applications of x-rays and the rays from radium; the most modern refinements of metallurgy, of chemical and electrical engineering."

Five Lessons

Four of the five lessons which Dr. Compton drew from the atomic development program dealt with the social atmosphere necessary for scientific advancement. "The first lesson is the cooperative character of scientific progress, depending on the stimulating interplay of ideas and the accumulation of facts and skills contributed by many scientists."

In the second lesson, the speaker hit at much of the secrecy that surrounded the wartime development of the atomic bomb which, as a continuing policy, would stifle much scientific progress. He went on, "It is more than tragic that any nation should seek to restrain the great flow of knowledge across the world or, within national boundaries, should seek to direct its course or make it subservient to the current politics of the state."

Freedom in Research

Finally, he concluded that competent scientists must be given freedom to follow their own individual lines and areas of investigation. "The scientists would have their efforts united by the free flow of information between them."

In the fourth point, the necessity for teamwork, Dr. Compton qualified the control that such teamwork implies by defining a team as "a group of competent and imaginative project leaders whose skills and knowledge supplement each other and are supported by the technical assistance required to carry out their ideas." The team method of working is more efficient in engineering applications of science than in the basic research aspects.

The fifth conclusion was that progress in the theory of one branch of scientific endeavor will provide new tools and concepts in other branches.

Technology and Economy

According to Dr. Compton, an important role of science and technology today is to restore the war-torn economy of the world. He cited the establishment in France and Germany of technical schools during times of economic upset in the eighteenth and nineteenth centuries, and in Great Britain after the first World War.



DR. KARL T. COMPTON

House Cleaning For Convo Guests

Technology has had her face washed, but good. The derrick drivers were more careful where they piled their slabs of granite last week and the grounds around the new Library have been cleaned up. The entire campus has been groomed; hedges have been cut, walks cleaned, and there is a noticeable lack of debris on the Dormitory window sills.

At a glance it looked as though a small circus had come to Briggs field. Canopies have been erected so that the dignitaries would not get wet, should it rain.

Finally, to speed preparations and arrangements, Western Union facilities have been set up on the first floor of Building 7.

Churchill Asks Close Unity Between All Western Powers To Win "War Of Nerves"

Churchill Audience Was Entire World

As a fitting corollary to the Mid-Century Convocation the feature address by the Right Honorable Winston Churchill on "The Twentieth Century, Its Promise and Realization" reached a larger audience via radio and television than any previous speech in history.

Three major radio networks carried the Thursday night talk by the former British Prime Minister from 9:00 p.m. to 10:00 p.m. with only the Columbia Broadcasting System excepted. All television hookups featured the address, which was the first network telecast to originate in Boston. The cost of reversing the coaxial cables from Boston to as far west as St. Louis was a reported \$600,000.

Unlike similar addresses there was no battery of microphones in front of Mr. Churchill. The American Broadcasting Company originated the broadcast for the other networks. Television facilities were also pooled with the National Broadcasting Company providing the camera and technicians for CBS, ABC, and Dumont. Four short-wave stations beamed the Churchill speech abroad, the Boston outlet being WRUL.

Calling for perseverance and unity to "make sure that the cause of Freedom is defended by all the resources of combined forethought and superior science" as "the best hope of averting a third world struggle," Winston S. Churchill spoke to an audience of 13,900 at the Boston Garden and a world-wide radio audience.

"If, however, there is to be a war of nerves let us make sure our nerves are strong and are fortified by the deepest convictions of our hearts. If we persevere steadfastly together, and allow no appeasement of tyranny and wrong-doing in any form, it may not be our nerves or the structure of our civilization which will break, and peace may yet be preserved," continued the wartime Prime Minister of Great Britain.



WINSTON S. CHURCHILL

Mr. Churchill, long-time symbol of resistance to oppression, was introduced by Bernard Baruch at the second general assembly of the Mid-Century Convocation at the Institute. He blamed Russia for the failure of the United Nations to guarantee security to all its members, and attributed the attitude of the Soviet Government to the fear of the Politburo of the friendship of the West. "Thirteen men in the Kremlin," he said, "holding down hundreds of millions of people and aiming at the rule of the world, feel that at all costs they must keep up the barriers."

Asks "Goodwill"

While professing that he desired nothing but "goodwill and fairplay" from Russia, he expressed the fear that but for the atomic bomb in the hands of the United States "Europe would have been communized and London under bombardment some time ago." In reviewing the mistakes of the democracies after the first World War, he remarked, "The failure to strangle Bolshevism at its birth and to bring Russia, then prostrate, by one means or another, into the general democratic system lies heavy upon us today."

He does not believe that war is inevitable, however. Citing the invasion of Europe from Asia by the Mongols, he pointed out that "it seemed that nothing could avert the doom of the famous Continent from which modern civilization and culture have spread throughout the world. But at the critical moment the Great Khan died. The succession was vacant and the Mongol armies and their leaders trooped back on their ponies across the seven thousand miles which separated them from their capital in order to choose a successor. They never returned till now."

Don't Abandon Hope

"We need not abandon hope or patience. Many favorable processes are on foot. Under the impact of Communism all the free nations are being welded together as they never have been before and never could be, but for the harsh external pressure to which they are being subjected. We have no hostility to the Russian people and no desire to deny them their legitimate rights and security. I hope that Russia, after the war, would have access, through unfrozen waters, into every ocean, guaranteed by the World Organization of which she would be a leading member; I hoped that she should have the freest access, which indeed she has at the present time, to raw materials of every kind; and that the Russians everywhere would be received as brothers in the human family. That still remains our aim and ideal."

FRATERNITY LUNCHEONS

The following fraternities will serve luncheons for their Alumni from 12-2 today: Sigma Alpha Epsilon, Phi Beta Epsilon, Sigma Chi. A buffet lunch will be served at 12:30 by Beta Theta Pi.

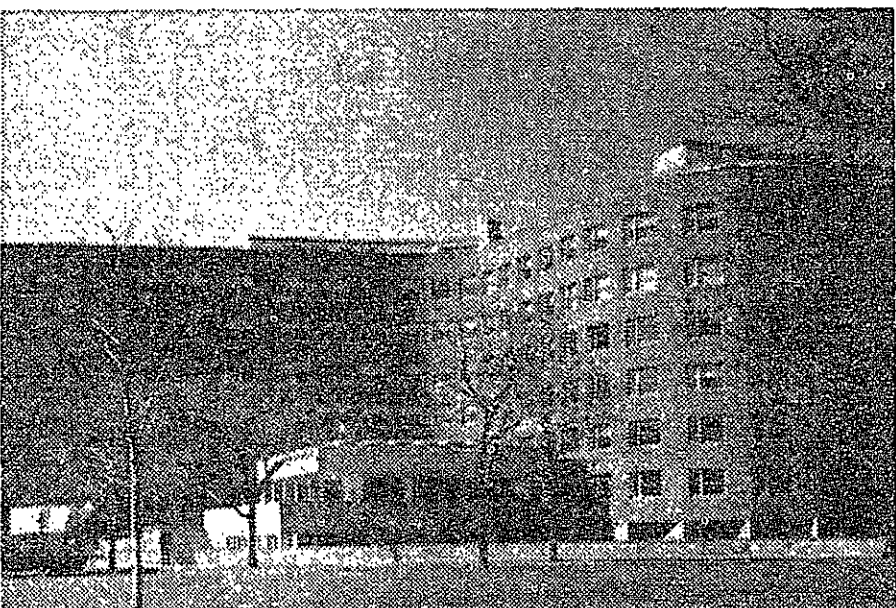
Notice to Academic Delegates:

In case of rain robing will take place in the tent on the west Campus. If the weather is fair, delegates will robe in Building One. All delegates are urged to arrive for robing not later than 10 a.m. Delegates will enter the building through the main entrance at 77 Massachusetts Avenue. The Academic Procession will start to form at 10:25.

Construction Projects Reflect New Program Of Development In and Around Institute Grounds

With four major additions to the Institute campus under construction at the present time, Technology's program of expansion and development is well under way.

It will be open for inspection by the student body for the first time from Monday, April 4, till Wednesday, April 6, from 12 noon to 5:00 p.m.



A view of the nearly completed Senior Dormitory from Memorial Drive, scheduled to be occupied by Technology students this fall. The building housed some of the Institute's guests at the Mid-Century Convocation on the Social Implications of Scientific Progress.

The new Senior House is virtually complete, finished just in time to house some of Technology's Con-

Hayden on Schedule Work on the Charles Hayden Memorial Library is proceeding ac-

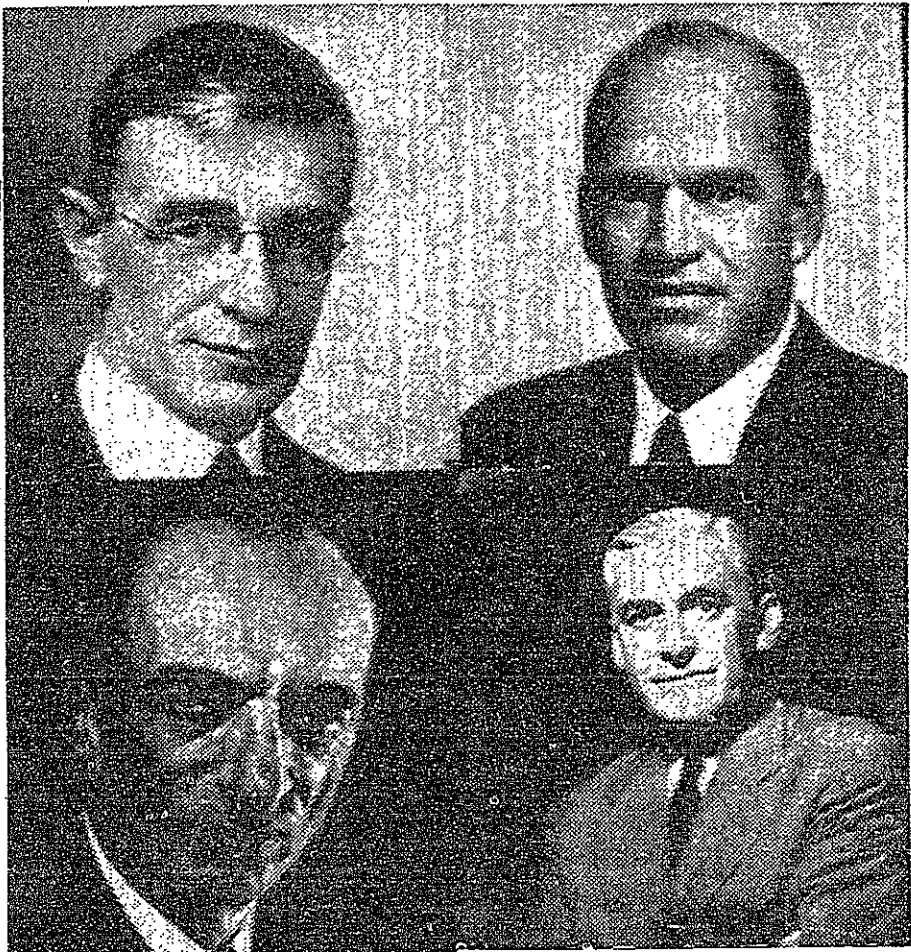
ording to schedule. The north wing, housing administrative offices, is slated for completion by August in order that work may begin on the job of moving in. The remainder of the building will be finished by December or January. Hayden will contain what is now Walker Library, all of Central Library except Vail, and the Economics and Industrial Relations parts of Dewey Library.

Beside the Swimming Pool and beyond the Dormitories is the partially finished 12 MEV Generator. Designed after the old Van de Graaf machine, the new generator will be capable of producing potentials of 12 million electron volts for use by the Laboratory of Nuclear Science and Engineering.

Tech to Have Tow Tank

Youngest of Technology's building projects is the Hydrodynamics Laboratory and Model Ship Towing Tank. The first project under the 20 million dollar Development Program, the lab has been under construction for about two months. When complete, the building will house a towing tank 106 feet long, complete with mechanisms for producing waves of predetermined sizes.

THE PROBLEM OF WORLD PRODUCTION



College, Cambridge University, England. He is editor of "The Pacific World" and a contributor to technical publications.

Lower Left: Sir Henry Tizard, K.C.B., British physicist and aeronautical authority, and president of Magdalen College, Oxford, from 1942 to 1946, is chairman of the British Advisory Council on Scientific Policy, the British Defence Research Policy Committee, and the Committee on Industrial Productivity. His scientific contributions in the field of aeronautics are credited with helping to enable the R.A.F. win the Battle of Britain. Sir Henry was educated at Magdalen College and at the University of Berlin. In addition to other medals he is the holder of the American Medal of Merit.

Upper Right: Frank Wallace Notestein, one of the world's outstanding authorities on population problems, has been director of the Office of Population Research, Woodrow Wilson School of Public and International Affairs, at Princeton University since 1941. He has been a consultant of the Department of Social Affairs for the United Nations since 1946.

Lower Right: Robert Price Russell, chemical engineer and industrialist, is president of the Standard Oil Development Company and is also active in Venezuela in the International Basic Economy Corporation, a firm established to make a contribution to raising world standards of living. Mr. Russell was educated at Clark University and at the Institute where he received his master's degree.

Middle Left: Fairfield Osborn of New York City, internationally known naturalist, is president of the New York Zoological Society, an office which he has held since 1940. His "Our Plundered Planet" attracted widespread attention when published last year. Born at Princeton, N. J., in 1887, Mr. Osborn was educated at Princeton, and Trinity

Problems Of Production, Population Hashed Out By Bush, Osborn, Others

Vannevar Bush, president of the Carnegie Institute and wartime head of the O.S.R.D., posed "The Problem of World Production" at the first of panels on "Men Against Nature." "In its essence," Dr. Bush stated, "it is a result of the upsetting of the nebulous something which we call the balance of nature."

"The available means of subsistence—not food alone, but materials for shelter and for all the other needs of men—are limited; the number who must subsist on them increases geometrically; nothing can beat a geometrical increase; and we are doomed to starve. Freed by the applications of science from the controls of epidemic disease, possibly freed by world government from the controls of war, population will increase exponentially without limit, exhaust the resources of the earth, and leave a few miserable remnants crawling about in barbarism. The answer to the argument in this bald form is that science and its applications also increase exponentially."

Citing examples of how modern technology is rapidly increasing production of food and prolonging human life, Dr. Bush affirmed his belief in the effectiveness of science in solving the problem. "I am prepared to abide by the conviction that, if we hold to the course of increase of knowledge and press vigorously forward upon it, though there may be troubles, problems, and abuses, in the end we shall know that it was worth the risk."

Osborn Is Pessimistic

A more pessimistic attitude was expressed by Fairfield Osborn, president of the New York Zoological Society and author of "Our Plundered Planet." Asking the question, "Can modern technology substitute for the processes of nature?" Osborn went on to say, "It would not be sensible to rest upon the hope that inorganic synthetics as substitutes for food can be created. Certainly this possibility lies a long way in the future."

"In conclusion, scientific activities aimed at supplementing or accelerating the processes of nature are practicable and indeed imperative. Science may even unravel the

final secrets of photosynthesis and the mysteries of chlorophyll, but in these explorations we are apt to fall into the abyss of a fateful delusion and be deceived into believing that modern technology has the power to substitute itself for the functional processes of nature."

"Allow me to recall here that our problem is not one of food alone but is essentially one of maintaining the natural economy of the earth. Plant life including forests, animal life in its myriad forms, productive soils and water sources—each of these is in truth an inter-related part of a unified whole which sustains this economy and causes it to operate productively. In like terms, we are speaking not of the life of an individual but of the preservation of our civilization. Its structure and nature's structure will continue or dissolve together."

Population Expert Speaks

Dr. Frank W. Notestein, director of the Office of Population Research at Princeton University, began by saying, "As a demographer in the company of experts on production, I should like to talk about reproduction." To Dr. Notestein, the problem is that of "achieving the replacement of human populations by means of low birth rates and low death rates, instead of by the present tragically wasteful system in which millions are born who survive only briefly in varying degrees of ill health."

Dr. Notestein went on to outline recent trends in populations growth in various world areas. Among his

conclusions, he stated, "The optimists who see no problems of resources and production also seem to be too little aware that long-range solutions will require higher levels of living for more people."

"An escape from a grossly inefficient form of population replacement depends upon balance and speed in all aspects of change—technological, social, political, and economic. The problem for some decades will be to secure progressively higher levels of living for growing numbers while unleashing indigenous forces of social change. It is not a simple combination: indeed, it will be surprising if events take a smooth and uninterrupted course."

Agricultural Developments

In general agreement with Dr. Bush was Robert P. Russell, vice president of the International Basic Economy Corp. and formerly president of the Standard Oil Development Company. Mr. Russell discussed great advances in recent agricultural technology, citing several specific situations.

"To sum it up, I'm convinced that modern technology can lay the basis for a refutation of the Malthusian doctrine for more generations than any of us need consider. Technological advance alone won't do this, however, and powerful economic, educational and political forces must also be brought to bear, if the potentialities uncovered by technology are to achieve their inherent promise."

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Majority Of Panel Agree That Some Specialization Is Desirable

"Specialization in Twentieth Century Education" was the subject of one of the Friday morning panels of the Mid-Century Convocation. Moderating at the panel was Thomas K. Sherwood, Dean of Engineering, at Technology. In general the panel attempted to answer the question of whether present-day individuals and institutions are over-specialized.

Sidney Hook, Chairman of the Department of Philosophy at New York University, replied that "first we must know with respect to what. If it is with respect to the discovery of new and significant truths about nature and man, I make bold to answer the question set for us with an unqualified negative. We owe the revolutionary developments in almost every field of knowledge during the twentieth century primarily to work done in institutions of higher learning." Mr. Hook defined several other ways that the question might be answered, depending upon the way the question was interpreted, and felt that "it therefore seems to me appropriate to offer in the curriculum of all the professional schools what John Dewey has urged for years, 'continuous education in the social, moral, and scientific contexts within which wisely administered callings and professions must function.'"

Freedom of Inquiry
"Insofar as a university exists to discover and make known the truth, it needs no overarching synthesis, no unified world-outlook, no meta-

physical or theological or political postulate to organize instruction. It needs only the freedom to inquire into anything or everything that professionally qualified scholars feel moved to investigate."

In conclusion, Mr. Hook stated that "All specialized education is inadequate in preparing its devotees to live and think intelligently in our changing culture, and therefore we must provide for proper political education. But let us never confuse this legitimate demand with the 'politicalization' of learning which ultimately makes science, as in the Soviet Union, a matter for the police."

Definite Stand

One member of the panel definitely in favor of specialization was Sir Richard Livingston, President of Corpus Christi College of Oxford University. He began by listing three major ideas in favor of specialization.

"a. It is inevitable in an age which depends on growing knowledge."

"b. Some of the major ends of education can be achieved through it—the general training of the intelligence, the art of arguing logically, and of arranging and expressing thought. These can be acquired in the intensive study of any subject."

"c. It gives an insight into the meaning of knowledge and the way to attain it, not to be achieved in any other way, and is a medicine against superficiality, which is at least as dangerous as narrowness."

Specialization Inevitable

Dr. Philip J. Rulon, Professor of Education at Harvard, felt that specialization is necessary, and in any case inevitable. He concluded his address with the thoughts that "... It is possible that persons who specialize most thoroughly are those who can most safely be trusted to do so without falling short on wisdom and conscience. Such men of wisdom as Bridgman, Bush, Conant, Eddington, Jeans, and Oppenheimer — to mention a few in alphabetical order—provide examples of this possibility."

Matter of Definition

According to Audrey A. Potter, Dean of Engineering of Purdue, general education, liberal education, and specialization are all a matter of definition. "Engineering education is a distinctive type of general education, useful in a wide range of occupations. It is not inconsistent with any other form of general, or liberal, or scientific education."

Dean Potter made a good point in that "much of the students' education comes from activities outside of the classroom. Voluntary participation in student publications, musical organizations, dramatics, debates, literary contests, athletics, the reading of good books, and other student activities are not limited in American higher educational institutions to those pursuing liberal arts or general programs of study."

Analytical Thinking

Mr. Charles Allen Thomas, Executive Vice President of the Monsanto Chemical Company, stressed the various "attitudes found in students of various types of education."

The last speaker of the six-man panel was Frederic Lilege, Asst. Professor of Education at the University of California, who used the development of Germany as a comparison study in effects of specialization. He came to the conclusion that specialization does have some bad effects, and should in some way be compensated for. "Technical or professional specialization when unmitigated and unbalanced, is apt to leave the members of society with little of importance to say to one another."

SCIENCE, MATERIALISM AND THE HUMAN SPIRIT



Upper Left: Dr. Audrey A. Potter, eminent mechanical engineer, is Dean of the Schools of Engineering at Purdue University. His long record of government service includes chairman, National Advisory Committee on Engineering, Science and Management War Training, 1940-1942 and expert consultant, U. S. Bureau of Education.

Middle Left: Dr. Charles A. Thomas, of Monsanto Chemical Company of St. Louis, is one of the key figures in the development of atomic energy. During the war he had charge of the final purification and metallurgy of plutonium. He was one of the five authors of the report on international control of atomic energy, submitted to the Secretary of State.

Lower Left: Dr. Sidney Hook is chairman of the department of philosophy of Washington Square College, New York University. He has been at the forefront of organized effort to preserve and extend

the heritage of freedom in America. Upper Right: Professor Phillip J. Rulon, professor of education in the Harvard Graduate School of Education, has worked particularly in the field of educational psychology. He served as acting dean of the School of Education from 1943 until last spring, when he laid aside administrative duties to devote full time to teaching and research. Middle Right: Sir Richard Livingston, British classical scholar and author, is president of Corpus Christi College, Oxford. He served as assistant master of Eton College, 1917-1918, and became vice chancellor of Queen's University, Belfast, in 1924.

Lower Right: Dr. Frederic Lilege, assistant professor of education at the University of California, captured public attention with his book "The Abuse of Learning," a scholarly and provocative study of the rise and fall of the German University.

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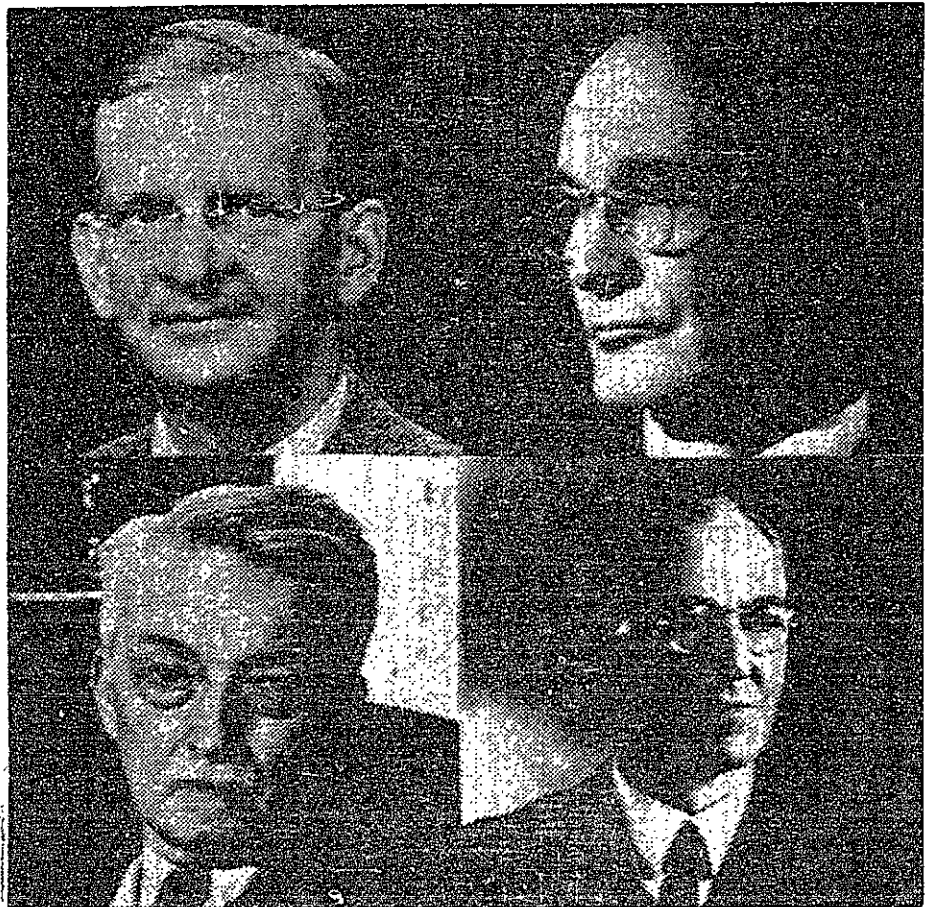
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TWENTIETH CENTURY
EDUCATION



Upper Left: Dr. Julius Seelye Bixler, president of Colby College since 1942, graduated from Amherst in 1916 after which he taught in India and the Near East for two years. He studied theology at Union and Harvard and received a Ph.D. from Yale in 1924. Dr. Bixler has lectured on religion, philosophy, and The Bible at Smith and Harvard from 1933 to 1942. In 1939 he received his degree of Doctor of Divinity at Amherst and holds honorary degrees from Harvard and Union.

Lower Left: Dr. Jacques Maritain, universally recognized as the leading Roman Catholic philosopher of the day, recently relinquished his post as French Ambassador to the Holy See to become visiting professor of philosophy at Princeton. In 1947 he became acting president of the UNESCO Assembly at Mexico City.

Upper Right: Percy W. Bridgman, Hollis Professor of Mathematics and

Natural Philosophy at Harvard University, has devoted more than forty years to the investigation of high pressures and their effect on matter. He was awarded the Nobel Prize in 1946. Professor Bridgman was born in Cambridge, Mass., in 1882 and educated at Harvard where he received his degree of doctor of philosophy in 1908. In 1939 Harvard conferred on him the honorary degree of doctor of science.

Lower Right: Walter Terence Stace, Stuart Professor of Philosophy at Princeton University, came to the United States from England in 1932, following twenty-two years in the British Civil Service in Ceylon. Born in London in 1886 he was educated at Bath College, Fettes College, and Trinity College, Dublin, from which he received the degree of Doctor of Letters. He is the author of several books on morals, philosophy, and aesthetics.

Panel Speakers Answer Question Of 'Is Science Responsible For Crisis'

During Friday morning's discussion of "Science, Materialism, and the Human Spirit," Dr. Walter T. Stace, Professor of Philosophy at Princeton University, raised the point that "the outstanding characteristic of this age is that all its thinking about the world is dominated by the scientific spirit."

According to Dr. Stace, science (as suggested (by its insistence on mechanistic categories) that morals have no foundation. Formerly, morals were considered to have metaphysical foundations, but now, since mechanical explanation seems completely to account for the facts, there seems to be no room left for teleological explanations.

Loss of Faith

Consequently, this suggestion which science has provided has produced a crisis in the human spirit, a loss of moral faith. But all this is based on a mistake. Morals have a perfectly firm and objective foundation in human personality. In the words of Dr. Stace, "love and hate are just as real and objective as oxygen and hydrogen, and they just as truly produce effects in the world. And to know these effects is just as much knowledge although it may never be capable of the precision of mathematics and physics."

Callously Indifferent

Continuing with the discussion of "Science, Materialism, and Human

Nature," Percy W. Bridgman, Professor of Mathematics and Natural Science, at Harvard, upheld Dr. Stace's convictions by saying that "science is regarded as devoid of emotional elements, coldly logical and completely materialistic . . . which sees nothing beyond the world of the senses and is callously indifferent to the higher things of the spirit."

As for freedom in science, Dr. Bridgman stated that there must be no limitations on the methods by which facts are discovered. Maximum efficiency in the output of the scientist demands that he have as much outer freedom as possible.

False Messiah

Dr. Julius J. S. Bixler, President of Colby College, agreed with Dr. Bridgman on the question of finding the ultimate truth through common sense. Bixler believes that "mind cannot face up to and solve the problems of life today. Inevitably science is summoned before the bar of judgment and is labeled the false messiah which has not brought the salvation it promised."

Discussing religion and science, Dr. Bixler states, "It may well be that our religious faith operates partly in a realm where scientific

tests do not apply. But if this is so, we must be clear in our own minds where and why they do not apply, and if we leave them behind, we must know where to pick them up again."

Don't Lose Faith

Dr. Bixler maintains that instead of losing faith in science, we should attempt to recover its religious implications. Instead of either making merry or growing bitter over the futilities of reason, we should try to see more clearly what it requires.

Assuming an attitude different from that of Dr. Stace, the last speaker of the panel, Dr. Jacques Maritain states that "science and technology, considered in their very natures, are by no means responsible for the intellectual crisis of our time."

Greed and Power

"What is responsible for the crisis," according to Dr. Maritain, "is greed and will to power. Thus the human person is threatened today with all-pervading slavery, not through the fault of science, but through that of the enlarged power granted by science and technology (that is, by reason mastering natural phenomena) to human foolishness."

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PROBLEM OF THE UNDERDEVELOPED AREA



Upper left: James M. Barker of Chicago, corporation executive and civil engineer, is chairman of the board of the Allstate Insurance Co. and Allstate Fire Insurance Co., Chicago. Following his graduation from Massachusetts Institute of Technology, he entered business, but returned to teaching for five years, from where he entered the banking business with the First National of Boston. After eight years, he changed to Sears, Roebuck and Co., where he became a Vice President before he served as a member of the Price Adjustment Board during the War.

Center left: Long prominent at international conferences, Sir Ramaswami Mudaliar, Prime Minister of Mysore since 1946, is president of the United Nations Economic and Social Council. After attending Christian College and Law College, Madras, he entered the Madras legislature and also served as Mayor. He was delegate to the Nine Powers Conference in

Brussels in 1937; member of the Economic Committee of the League of Nations and, representative in the Imperial War Cabinet during the War.

Lower left: Dr. Pierre Ryckmans, Belgian statesman and former Governor General of the Belgian Congo, has been the representative of his country in the United Nations General Assembly since 1946 and is now serving on the Trusteeship Council. After receiving a doctorate of laws from the University of Louvain, he entered Law, fought in World War I, entered the Colonial Civil Service in Belgian Congo, but went back to teaching Colonial Law at the Universities of Louvain and Antwerp, before becoming Colonial Governor.

Upper right: William Malcolm, Lord Hailey, Baron of Shahpur in the Punjab and Newport Pagnell in Buckinghamshire, is chairman of the British Colonial Research Committee. He was appointed Privy Counsellor in the 1949 New Year's Honors List. Educated at Oxford University, he entered the Indian Civil Service in 1895, was made Governor of the Punjab, then Governor of the United Provinces. For this, his Colonial research work in Africa and Asia, as well as many other outstanding works, he has received doctorates from Oxford, Cambridge, and Bristol.

Lower right: Nelson A. Rockefeller, President of the International Basic Economy Corporation and of the International Association for Economic and Social Development.

Ideas on Colonialism, Self-rule, Clash At Discussion Of Underdeveloped Areas

Speaking with passion and forthrightness, Sir Ramaswami Mudaliar, president of the United Nations Economic and Social Council, pleaded for equal opportunities for all men and women in so-called backward areas of the world. His remarks were in sharp contrast with those of traditional colonialism and realism expressed by other speakers at the panel discussion of "Men against Men, the Problem of the Under-developed Area" Friday afternoon in Rockwell Cage.

Preceding Sir Ramaswami's attack on imperialism, Pierre Ryckmans, Belgian representative on the Trusteeship Council, declared that stable colonial government may be in some cases preferable to self-rule, and William Malcolm, Lord Hailey, chairman of the British Colonial Research Committee, expressed faith in "the State" to develop latent resources. Nelson A. Rockefeller, President of the International Basic Economy Corporation, cited his experiences with underdeveloped areas in Brazil and Richard M. Bissell, Jr., Assistant Deputy Administrator of the ECA, attacked the problem from the economist's point of view. James M. Barker, chairman of the board of the Allstate Insurance Company, summed up the arguments of the speakers.

Colonies Difficult Task

In defining his position, Lord Hailey spoke from his experiences in the Punjab and Newport-Bagnell to draw three conclusions regarding administration of colonial areas. The first was the necessity of sufficient technological knowledge for economic-planning, the second, recognition of the human factor in a scheme of development, and the third, the necessity of maintaining a clear view of the method to be applied in employing outside capital and skill.

After reviewing progress in the Belgian Congo, of which he was formerly governor-general, Ryckmans submitted that the immense task remaining in this area is no indication of failure and that evolution of advanced standards of living requires much time and capital. As for the means of ruling such areas, he contended, "Political sta-

tus, as such, has nothing to do with economic advancement. Stable and efficient government has; but stable and efficient government is not synonymous with self-government."

"Human Problem"

At this point, Mudaliar made his dramatic appeal. "The problem is a human problem," he declared, presenting, as he called it, the case of the people of India where he has been Prime Minister of Mysore since 1946. He questioned the source of money for the World Wars if none is available for colonial development, pointing out that India herself contributed large sums in both struggles.

"Supplant Colonies"

As a remedy to the problem, Sir Ramaswami offered an organized effort by the UN or some other group of nations to supplant the colonial system and bridge the gap between the vanguard and rear guard of civilization. In conclusion, he praised the United States and President Truman's "bold new program."

The spiritual and humanistic approach to the problem of underdeveloped areas was also emphasized by Rockefeller. He cited the United States' "good neighbor policy" as an indication of our growing concern for the welfare of people in such countries and mentioned several examples of capital investment in Brazil profitable to both investor and native. He deplored exploitation.

"Must Import"

From the point of view of Bissell, ECA facts and figures man, three points must be emphasized in tackling the problem of a given area. Agriculture must be emphasized and expensive heavy industry kept at a minimum. As a consequence, the United States must become an importer of basic goods rather than primarily an exporter. Finally, financing must be accomplished by international investment as opposed to local capital.

Professor Norman J. Padelford, Professor of International Relations at the Institute, was moderator of the panel.

Inauguration
(Continued from Page 1)

long before it was thought of in Washington."

The next speaker was Sir Richard Livingstone, President of Corpus Christi College, Oxford, speaking for foreign universities, and in the spirit of the occasion offered hope and congratulations to Technology. John Thomas Toohy, the president of the Senior Class, gave the greetings of the students to the new president. Mr. Toohy stressed the part played by Dr. Killian in encouraging student activities. Dr. Killian was the editor of *The Tech* when he was a student, and since has taken an active interest in this and many other student extracurricular activities.

Alumni Represented

Greetings were advanced from the Alumni by Mr. David Allan Shepard, the president of the Class of 1926, of which Dr. Killian was a member. Mr. Shepard also stressed the part played by Dr. Killian in student government, and in *The Tech*, when he was studying at the Institute.

The concluding address was given by Dean George Russell Harrison, Dean of Science at Technology. Dean Harrison discussed the intimate connection already established between Dr. Killian and his faculty, and stressed the fact that no internal changes would be necessary in this "change."

Stassen
(Continued from Page 1)

1948 declared, "The remedy is not infringement upon the right of assembly to hear this party line, whether it be in New York or Newark, within free countries.

We have not reached the ideal outlined in our philosophy, Stassen stated, and it were well that the present Congress pass anti-poll tax and anti-lynch measures if we are to take steps to approach that ideal. In attacking what he called the breakfast-in-bed economy of the welfare state, he said, "Our unending effort should be to ease those overwhelming burdens which are beyond the capacity of individual man to bear, but we must leave the major normal provision for man's own livelihood and future up to him, himself."

CAMERA CAVORTING AT THE CONVOCATION



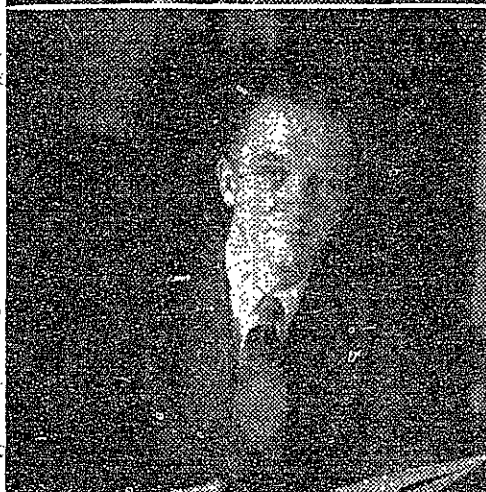
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war, is now labor advisor to the Economic Cooperation Administration.

Upper left: Erwin D. Canham, editor of the Christian Science Monitor and president of the American Society of Newspaper Editors, is regarded as an authority in analyzing and interpreting world affairs. A former Rhodes scholar, with degrees from Bates College, including an honorary Doctor of Letters, and Oxford University, he was stationed in Geneva during the years when it was the political center of the world and was chief of the Monitor's Washington Bureau during most of the thirties.

Middle left: United States Senator Ralph E. Flanders of Vermont, prominent in engineering and the machine tool industry, has had wide experience in public affairs, notably during the war. From 1942 to 1944 he was a member of the Economic Stabilization Board and from 1943 was chairman of the machine tools committee of the Combined Production and Resources Board. In 1946, the year he became a senator, he was chosen president of the American Research and Development Corporation.

Lower left: Dr. Merle A. Tuve, research physicist, is director of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington. In scientific circles his war work was marked by his direction of the development of the "proximity fuse," a period during which, from 1940 to 1945, he was chairman of Section T of the Office of Scientific Research and Development, and from 1942 to 1946 director of the Applied Physics Laboratory at Johns Hopkins (Navy).

Upper right: Carlos Contreras of Mexico City, architect and city planner, and creator of the master plan for Mexico City in 1938, has worked principally in the fields of planning and housing. He is now a member of the American Institute of Planners, National Association of Planning Officials, and a member of the Executive Committee of the International Federation for Housing and Town Planning. He is a graduate of the School of Architecture at Columbia University and for seven years has been a member of the faculty of that school.

Lower right: Clinton S. Golden, labor official, one-time vice president of the United Steelworkers of America, vice chairman of the War Production Board and of the War Manpower Commission during the

Afternoon Spiritual Panel Debate Individual-Institution Conflict

Five individualists discussed the "Role of the Individual in a World of Institutions" in Huntington Hall on the afternoon of Friday, April 1. This was the second meeting of the panel on spiritual questions at Technology's Mid-Century Convocation.

Represented at the conference were an editor, an architect, a labor expert, a senator, and a scientist. Each speaker discussed the relationship of the individual to the institutions with which he (the speaker) was most familiar.

Erwin D. Canham, Editor of the Christian Science Monitor, felt that today's institutions were serving the individual well. "They are far from perfect," he said. "They must constantly feel the healthy thrust of his criticism. They are subject to great and steady improvement, but on the qualitative test they pass." He illustrated the present need for large institutions by citing the example of the automobile industry, which he did not feel could be broken down into small units, and said, "I do not know . . . how this great Institute of Technology can be split into the size of half a century ago."

Speaking from the point of view of a politician, Senator Ralph E. Flanders (Rep.—Vt.) outlined the

growth of institutions until they reached their present size. He characterized our society as being "totally integrated"; that is, every individual is dependent on a host of other individuals as well as groups of individuals which are institutions.

Senator Flanders then outlined the difficulty of explaining economic facts to the common voter. It is hard for the individual to realize the necessity for the reinvestment of profits in new and better tools if the standard of living is to be raised. He warned against the drying up of new capital markets by excessive taxation on high incomes.

Altruistic Approach

"It is necessary to subordinate the personal interest of each man or group of men to the interests of all men and of all progress," said Carlos Contreras, architect and city planner from Mexico City.

He next turned to city planning to expound his philosophy of service by the individual to society. Of his own experience, he said, "Over the week-ends during three years with my fellow colleague, Tarditi, we planned and rebuilt a rural village with a school, a home for the teachers, shops, baths, playgrounds, with local labor, with only five thou-

sand dollars, and charged no architectural fees. And so I can say to you, as a happy individual in a world of institutions, to you the young men of M.I.T. and of the world, to those who want to do things, to those who are willing to do something for others, to give of themselves freely for they shall receive a hundred to one of what they give."

Merle A. Tuve, who is Director of the Department of Terrestrial Magnetism of the Carnegie Institution, stressed the importance of communication between the individual and the organization to which he belongs. He defended the efficiency of the democratic processes, as opposed to autocratic ones, by explaining that the key to efficiency and effectiveness in a free system is two-way criticism, and by citing the fact that investigating teams in Germany in 1945 found that under the dictatorship countless errors were perpetuated.

His second major point was that our methods for selecting young men for advancement distorted reality by placing an undue emphasis on those who were proficient in rational area of the mind as opposed to aesthetic areas.

The fifth speaker was Clinton S. Golden, labor advisor to the Economic Cooperation Administration. Mr. Golden spoke of the workingman's positions in the large, impersonal industries and his need for unions if he is not to be submerged.



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