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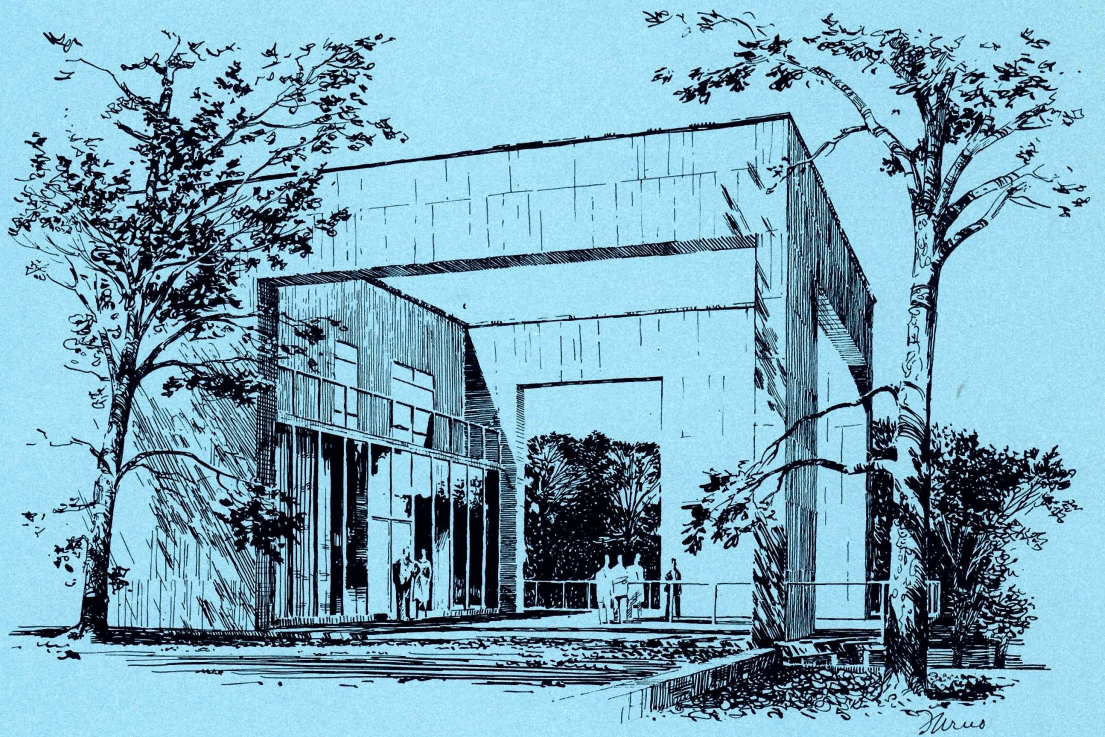
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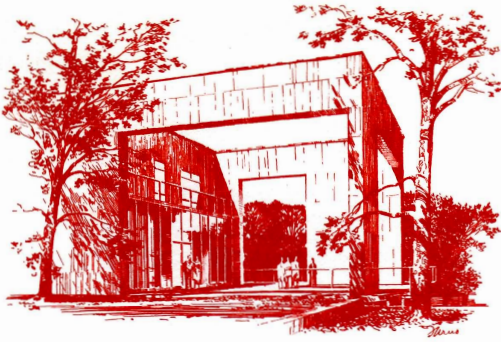
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Completion of the landscaping around the new buildings at the Institute has created an island of soft and verdant beauty in the midst of Manhattan's steel and concrete. Our cover sketch by Vincent Furno shows the north end of Abby Aldrich Rockefeller Hall which was designed by architect Wallace Harrison. Through the glass façade at the left guests in the dining room have an impressive view of the massive towers of New York Hospital framed in the rectangles of the spacious open pavilion.

INSTITUTE HOLDS FIRST ACADEMIC CONVOCATION

NINE CENTURIES after the founding of the oldest university in the western world and a little more than a half-century after its own founding, The Rockefeller Institute celebrated its new status as a graduate university of science. This it did by conferring its first honorary degrees on the leaders of the most ancient universities of the west: Bologna, Oxford, Cambridge, San Marcos of Lima, Mexico, and Harvard. While honoring those institutions from whom science and scholarship have derived so much, the Institute also honored Mr. John D. Rockefeller, Jr., son of its founder.

The conferring of degrees was the central event in that first Academic Convocation, held on May 21 and 22—two brilliant days that were fitting prelude to the conferring of earned degrees of Doctor of Philosophy at the first Commencement, a month later, on June 18.

The Convocation opened on Thursday afternoon, May 21, with addresses by President Bronk; Douglas Maitland Knight, President of Lawrence College; Lord Adrian, Vice-Chancellor of the University of Cambridge; and Henry Allen Moe, Secretary-General of the John Simon Guggenheim Memorial Foundation and President of the American Philosophical Society.

Dr. Bronk's opening remarks placed the Institute's role as a graduate university in the context of academic tradition:

"Since the beginning of the University of Bologna, nine centuries ago, many universities of many kinds have been created in many places, but all have been created to satisfy the same deep desire of men to learn and teach. Because universities satisfy that desire, which is unique to

humankind, universities have been among the most enduring of human institutions. Their vitality has been attested by their ability to sustain their basic purpose within changing patterns of structure and of action. Various and changing circumstances have evoked universities of various characteristics.

"Since the beginning of The Rockefeller Institute, only half a century ago, it has provided rich opportunities for men to learn. It has been a community of scholars who were privileged to explore the frontiers of natural knowledge. Our predecessors

have left us a heritage of traditions of intellectual excellence and adventure. They laid strong foundations for a house of learning.

"Five years ago we determined to build further on those foundations, so that we might welcome our young successors to this community of scholars and gladly teach and guide them as they prepare for scholarly careers. Today I do not speak of buildings as creations of glass and stone, of modern art or natural beauty. I speak now of building an environment and an academy."
(continued on page two)

A NOTE ABOUT THIS ISSUE

The Institute's first Academic Convocation and its first Commencement were landmarks of such significance in its history and to graduate education generally that we are devoting this issue of the *Quarterly* to them.

The Convocation opened with a luncheon for the faculty and guests on Thursday, May 21, followed by addresses in Caspary Auditorium. A reception on the lawn of the North Campus preceded a banquet that evening in the library and dining room of Welch Hall for 500 in honor of the recipients of the first honorary degrees. A concert in Caspary Auditorium followed, after which there was dancing under the full moon on the pavilion of Abby Aldrich Rockefeller Hall.

On Friday, May 22, the Institute conferred the honorary degree of Doctor of Laws on the Rector of the oldest university

in the western world, the University of Bologna; on the Vice-Chancellors of the two oldest universities in our mother country, Oxford and Cambridge; on the Rector of the oldest university in the western hemisphere, the University of San Marcos in Lima; on the Rector of the oldest university in North America, the University of Mexico; on the President of Harvard University, oldest university in the United States; and, finally, on Mr. John D. Rockefeller, Jr.

Dedication of the new buildings and a garden party concluded the events.

Commencement followed a month later, on June 18, when the degree of Doctor of Philosophy was conferred on five Graduate Fellows, and the Institute's honorary degrees of Doctor of Science were conferred upon Peyton Rous, Member Emeritus, and on Herbert Gasser, Director Emeritus.

democratic structure in which the youth may learn from the elder, and the elder have the intellectual stimulus of the younger.

"As we have extended the scope of The Rockefeller Institute and assumed the new responsibilities of a school of graduate studies, we have thought deeply of our obligations to satisfy the traditional standards of institutions of higher learning. I have personally felt that sense of responsibility keenly, for my life and the lives of my forebears have been lived in academic places which we prized highly.

FUNCTIONS OF THE UNIVERSITY

"The two most essential functions which a true university has to perform and which all universities have more or less discharged amidst the widest possible variety of system and method of organization," Dr. Bronk said, quoting Rashdall's *The Universities of Europe in the Middle Ages* (Oxford University Press, 1936), "are to make possible the life of study, whether for a few years or during a whole career, and to bring together during that period face to face in living intercourse, teacher and teacher, teacher and student, student and student."

He pointed out that those functions, described by Rashdall, "are familiar enough, but in times of turmoil, when the tranquil, contemplative life is harassed and eroded by the busy demands of the moment, they need to be restated, again and again. There are too many all about us," he said, "who value academic institutions most, or only, for the training that they give as preparation for the performance of specific tasks; they value research only as discovery of useful knowledge. Too few, I fear, perceive research as a happy, exciting adventure that gives vitality to our culture." Here he quoted the Institute's founder, Mr. John D. Rockefeller, who took a longer view, saying often to those who studied at the Institute: "Don't be in a hurry to produce anything practical. If you don't, the next fellow will. You, here, explore and dream."

The wisdom and at the same time the difficulty of limiting the size and scope of a graduate university were then touched upon by Dr. Bronk, who said: "Specialization seems necessarily to follow increase of knowledge. New specialties and special-

ists breed new university departments, and so the scope of universities seems necessarily to grow. But some graduate schools could become superlatively good by restricting the scope of their endeavor to immediately related fields.

"That was said to me by Abraham Flexner as I began my professorial career in 1925. That year he also wrote in *The Atlantic Monthly*: 'The range of certain universities could be greatly reduced. Moreover, modern science and scholarship being what they are, universities could be very irregular affairs. No single science can be completely represented anywhere; still less all sciences. And institutions most concerned with science would almost inevitably be less adequately developed on the humanistic side. Nor does it greatly matter, the very incompleteness of single institutions will force all real universities in the higher sense to view themselves as parts of one great organic field.'"

A 'UNIVERSITY' DEFINED

Rashdall, too, holds that universal interests are not necessarily the hallmark of the university. "The true explanation of [the word]," he says, "at once supplies us with a clue to the nature and historical origin of the institution itself. However imposing and stimulating may be the conception of an institution for the teaching, or for the cultivation of universal knowledge, however imperative the necessity of such an institution [may seem at times to be], it is one which can gain little support from the facts of history. A glance into any collection of medieval documents reveals the fact that the word 'university' means merely a number, a plurality, an aggregate of persons."

In the presence of Lord Adrian, Master of Trinity College, Dr. Bronk quoted a passage from another Master of Trinity College, George Trevelyan, who said of Sir Rickman Godlee: "He was an outstanding example of a type that has always specially attracted me: the specialist who has a wide outlook, broad knowledge and warm enthusiasms outside his own subject as well as in it; and more particularly a man whose mind has been trained in the splendid discipline of a science, but whose heart and eyes take also delight in the triumphs of art, in the history of man, and the beau-

ties of nature. Such a man is about the best thing that our modern civilization can produce."

Such are the kind of men that Dr. Bronk would have here, and that he would have the students be. "We hope," he said, "that here we may relate science to all other forms of creative endeavor; we may interpret science as a great Odyssey of the human spirit. We will not hesitate to draw upon all the resources of the learned world."

"I hope that here we can make an environment in which men and women may pursue knowledge, not as a grim undertaking, nor only for the achievement of immediate, practical ends, but as a happy, joyous quest of knowledge which will enrich all their lives and the lives of all those about them."

After commenting on the need for differing institutions of higher learning with various characteristics, Dr. Bronk paid especial tribute to the undergraduate colleges of liberal arts from which so many of the Institute's graduate students come. And so he closed by calling on Douglas Maitland Knight, President of Lawrence College in Appleton, Wisconsin, who addressed the Convocation as spokesman for the liberal arts college. He saw the relationship between the college and the graduate school as an essential, organic one, and he said, "Since the live interchange between the scholarly life and the whole life of society takes place nowhere else so effectively as it does in the undergraduate years, it may not be totally arrogant to say that the future of the Rockefeller Institute rests partially in the power of a hundred liberal arts colleges not only to provide graduate fellows but to maintain the climate of learning in this country—even for and in those who themselves will never be learned men or women."

THE EDUCATED MAN

The aim of it all, of course, is the educated man. "Whatever the means it uses to guarantee the continuum of knowledge," said Dr. Knight, "a course of study has its meaning only if it assumes life in the individual; it is the single person who is the true unit of education... The great curse of size and mass in education is that they blind us to the end, and lead us instead to talk endlessly about the process. The *process of education* is no substitute for the educated man; in a sense the great-

est responsibility of liberal education is to keep its process simple enough so that the event of true education can still take place."

The aim of this process Dr. Knight described in various ways, but most vividly and generally in terms of the bringing together in a single individual certain complex qualities which he termed "related opposites." Three of these pairs of opposites he cited as: "first, knowledge and immediate experience; second, tolerance and commitment; third, individuality and community. In each case, one half of the equation—knowledge, or tolerance, or individuality—is commonly regarded by our society as somehow less significant than the other half—immediate experience, or commitment, or communal life. It is the insistent claim of the best education, however, that we cannot participate in the immediacies, the commitments, the communities of our world until we understand them; but it is our equal claim, of course, that we fail just as badly if we give our allegiance only to a passion for abstract knowledge, only to a tolerant but therefore detached appraisal of human convictions, only to the existence of the individual and not to his relationships. The educated life

expresses itself above all in a victory over these polar attitudes... It is the power and the duty of the best education to show that these 'related opposites' are essential to one another if the life of the mind is to flourish, and equally if the life of the community is to be possible."

Dr. Knight then went on to consider one of the most important of all of the paradoxes of related opposites: the right regard for ignorance, confessed and accepted, as the prelude—perhaps the necessary condition—of knowledge.

RIGHT REGARD FOR IGNORANCE

We were reminded of Grote's introduction to his *History of Greece*: "A confessed and confused ignorance," Grote said, "is a better state of mind than the fancy, without the reality, of knowledge." Dr. Knight called fear of the "creative darkness" of ignorance one of the most tragic aspects of our "public culture." "We are conscious enough of the other kinds of darkness," he said, "those that lurk always at the edge of foreign policy, stare out of a mental hospital, or up from the sidewalks of an Asian slum. The darkness of unknowing, however, makes inner demands on us which

we prefer to ignore or to escape; our pride will not accept the dark humility of ignorance, and we forget that it is only prelude to knowledge. We are willing as a society to repeat the most trivial newsprint version of reality rather than puncture with a question our own pretenses at understanding."

Such were some of the aims and challenges of education and, in particular, undergraduate education, put before the Convocation by Dr. Knight. But he considered the problems of education at the Institute to be no different, essentially. "The setting is different," he said, "the measurable task is more complex in certain ways; but its twin bases are the creative intellect and the living community. You have more to expect of yourselves here than the advancement of knowledge, more than the interaction of the great scientific disciplines. When you added the first graduate fellow to your community of scholars, you assumed two new responsibilities: first, for the continuing life of the mind as something shared equally by scholar and pupil; and second, for a public image of academic achievement as inseparable from

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Ceremony of Conferring Honorary Degrees Dr. Rous delivering his citation of Baron Adrian of Cambridge. Seated from left to right are: *Front row*, Dr. G. Gherardo Forni, Baron Adrian, Dr. Nabor Carrillo, Mr. David Rockefeller, President Bronk, The Reverend McCracken, Dr. Nathan Pusey, Dr. León Barandiarán, Dr. T. S. R. Boase; *Back row*, Dr. Whitaker, Dean Brink, Dr. Corner, Professor Shope, Professor Mirsky, Professor Weiss; Professor Dubos, Professor Horsfall, Jr.

the worthy ends of society at large. You are an instrument of public policy as well as private research: you embody a way of living as well as a way of knowing."

SCIENCE IN UNIVERSITIES

Baron Adrian of Cambridge, Master of Trinity College and Vice-Chancellor of Cambridge University, was the third speaker during the Thursday afternoon of the Convocation. His subject was "The Place of Science in Universities Past and Present," and he took us at once more than 300 years into the past to Gresham College, founded in the City of London at the beginning of the seventeenth century. It was a college for advanced studies and had close ties with Oxford, but so uneasy were the troubled times prior to the Restoration that there is no evidence that the lectures at Gresham College were ever regarded as an organized course of instruction for students.

After 1660, however, Gresham College had full advantage of its position. "The King," said Lord Adrian, "and many of the Court were interested in the new learning. Some of them had occupied their time with experiments when they were in exile, and some of the Oxford philosophers had come to London and were anxious to continue their meetings, and Gresham College was the obvious place for them." Thus began the Royal Society for Improving Natural Knowledge. "The story of Gresham College," said Lord Adrian, "is largely the story of its connection with the Royal Society and with the Fellows of the Society who worked there. It is a story full of personal details about men who were remarkable for much more than their interest in science. It is copiously illustrated by portraits, letters and diaries and it is about men as talented and as different as Boyle, Pepys, Newton, Hooke, Wren and King Charles II. It seems a pity to leave such distinguished company, but we have come here 300 years later to see the start of a new college in a new age.

"The Rockefeller Institute is not so large and impersonal that we cannot think of it and its staff in the same intimate terms, but the great flood of scientific endeavour is now too vast to allow us to think of the individuals who inhabit it. There are still the giants whose heads stand out

above the surface, but for the rest personal details and controversies and habits of life are not our affair. We have to survey the operations of an immense army and to do what we can to see that the troops are properly trained and led in the right direction."

The training of scientists in adequate numbers to meet today's demands, Lord Adrian thought, is likely to be free at least from too great emphasis on technological aims. "They have been and will be trained in universities by academic scientists who are aware of the need to study the foundations as well as to put up the temporary and showy buildings," said Lord Adrian.

"I think, however," he went on to say, "that there is a danger that comes from the great expansion of scientific effort at the university level, though it may not be as urgent in the United States as in countries where it is less well supported by private endowment. The danger I have in mind is that the centralised authority of the state will come to play a greater and greater role in directing the nature of university training and that it is likely to canalise the direction of advance in science; to interfere to some extent with the processes by which we arrive at some entirely new outlook on outstanding problems.

STIMULATING CONTACTS

"Our universities collect the ablest students: these teach one another unofficially and they are, or should be, taught more officially by senior members of the university who are themselves engaged in research or have at least a close acquaintance with the research of their colleagues. In an atmosphere of intellectual ferment, when investigations may be going on next door in a wide range of science, the student has to make his own choice, and it is at this stage in his scientific career (if he is to have one) that the seeds may be sown which will germinate later in new ideas and in these days there is so much ground to cover that only the most self-reliant student can do without the stimulus of varied and active research departments close at hand and of the contacts with the men who are at work in them."

Yet, the very nature of much of modern research, its size, and costly accoutrements, press for organization outside the univer-

sity of specialized research institutes. The result has been that there is now a tendency to weaken the research activities of universities by removing some of the most fruitful fields of investigation to special institutes with little or no duty to teach.

Lord Adrian acknowledged that in many fields, e.g., history, law, economics, the research institute has become a popular organization and that in science such bodies are playing a valuable part in this and other countries. "Yet," he said, "I feel sure we ought to resist too much paring down of our responsibilities for advancing knowledge within the framework of university courses. The most fruitful research team will suffer in the long run if it has no direct contact with the student body and, quite apart from the claims of scientific research, the student's general education will suffer if it can never come near the growing points of knowledge... The important point is that universities should be able to maintain active research departments in the kind of science which deals with general principles and offers no immediate profit to society. It is important because such research will give life to the teaching and even more because special research institutes must work on special problems. An enlightened government or an enlightened director of a research institute may encourage work on fundamental long range problems and may sometimes provide a refuge for the occasional genius who cannot teach and wants to be left alone. But universities do not need to be specially enlightened to encourage unprofitable research. We are prepared to applaud our colleagues who spend their talents on the lesser authors of antiquity and so academic scientists need not excuse themselves if they prefer to neglect the fashionable lines of advance. There is always a need for the kind of scientific research which is dictated by pure curiosity, for a fresh outlook will come more readily when there is no obvious target to fix its direction.

THE BEST OF BOTH WORLDS

"The famous Institute we are in today," said Lord Adrian, "has had many years as a research establishment of just the sort I have been attacking. Its success outside the university framework shows how little one can generalize and how much we should miss if we were tied to a single pattern. It

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has made great advances in medical science when it was not a university, when it was like Gresham College, with famous scientists to improve natural knowledge but without full-time students to carry on the torch. Now there are students and courses and degrees, the younger generation to be allowed to see the advance going on and trained to take part in it.

"In our crowded universities we might be pardoned for envying such ideal conditions, such handsome buildings, generous benefactors and enterprising direction, but we cannot feel anything but pride at the thought that our family has been enlarged by such a precocious well-connected infant. The founders of our line, the doctors of Salerno, the lawyers of Bologna and the theologians of Paris, if they were here now, might compare themselves now to the old woman who lived in a shoe and had so many children that she did not know what to do, but they would all agree that this particular child cannot fail to be a credit to the family. It is a university to lead the way into the unexpected territories of science. The Rockefeller Institute, from now on, will make the best of both worlds, the world of research and of advanced teaching. We can all be glad that it has taken this step which will assure that its future will not be less productive than its past."

FUNCTION OF THE SCHOLAR

The final speaker of the day was Dr. Henry Allen Moe, who addressed the Convocation on "The Role of the Scholar in Society." Dr. Moe observed that the sailing orders implied in the subject that Dr. Bronk had asked him to consider would take him into uncharted seas and shoal waters. Yet, he added, these seas have had a reconnaissance. "Ralph Waldo Emerson, who made it," said Dr. Moe, "declared that a scholar's first duty in society is not to quit his belief that a popgun is a popgun, although the ancient and honorable of the earth affirm it to be the crack of doom.

"It is all there," he said. "All that anyone needs to know about the function of the scholar in society in these days, or in any days; you go where your evidence takes you; and there you make your stand—even though the ancient and honorable of the earth are sure you should be standing somewhere else."

But Dr. Moe, citing the upsetting of the

finality of Newtonian mechanics by relativity, proposed a Moeian recension to the Emersonian declaration: "Neither shall the scholar quit his belief that the crack of doom is the crack of doom, although the ancient and honorable of the earth affirm it to be a popgun."

POPGUN OR CRACK OF DOOM?

Cracks of doom that had been labelled popguns were Dr. Moe's chief interest. Darwin's *On the Origin of Species* published just a century ago was the first he cited. Attacked by the *Quarterly Review* and the *Spectator*, derided by Sir John Herschel as "the law of higgeldy-piggeldy," time has shown that whatever the final judgment, it was definitely not a popgun.

Dante, whom Dr. Moe regards as in some ways the greatest mind of all time... "first followed nature and was persecuted by his critics as long as he lived," as Oliver Goldsmith put it. Yet he dreamed a dream of a plan of government which, five centuries later, became embodied in the constitution of the Italian state which still has no stronger bond of union than a common worship of the exiled and imprisoned poet's indignant and impassioned verse.

Still another example, cited by Dr. Moe, was Edward FitzGerald's translation of *The Rubáiyát of Omar Khayyám*. Just a century ago it appeared in an edition of 250 copies, but not one was sold at the published price of a shilling. "Omar's contemporaries," said Dr. Moe, "honored him for his mathematical and astronomical computations; but for his verses, they denounced him as a free thinker. The *Rubáiyát*, in essence, is a plea for tolerance: in it, everything is tolerated except intolerance. This point of view was offensive to orthodox Moslems. As was said in *The Book of Learned Men*, an Arabic biographical work of the thirteenth century: 'The inner meanings (of Omar's verses) are as stinging serpents to the Musselman law: hence, the men of his day hated him...'

"Being disapproved in contemporary eleventh century Islam, the verses lay in obscurity on through the ages... And the resistances which the eleventh century Omar's verses met in Islam were no different in kind than the resistances which the FitzGerald translation met in nineteenth century Christendom. "In the pre-Darwinian Western World," said Dr. Moe, "when all things were known or could be

known by revelation—especially about human affairs—words such as these by Omar had no takers:

There was the Door to which I found no Key:

There was a Veil through which I might not see...

"But Omar had seen clearly that the great questions always stand—all the great questions of literature and history and philosophy and science—stand outside the limits of finality. It is a lesson we have not learned to this day."

Dr. Moe's final example he took from the mathematician Hermann Weyl, who reminds us that as late as 1923 the protagonists of relativity theory and tensor calculus "were accused by some of the ancient and honorable of the earth of having laid waste a rich cultural domain, that rich cultural domain being the algebraic theory of invariants. This time what was called a popgun almost literally became the crack of doom."

THE SCHOLAR'S DECISION

In closing, Dr. Moe paused to wonder "what might have happened in Islam as well as in Christendom, in the Middle East as well as in the West, if the freedom-giving intellection behind Omar Khayyám's *Rubáiyát* had become as well understood as Charles Darwin's intellection *On the Origin of Species*.

"But let me not engage in speculative futility on this occasion," he said. "Rather, let me hope with Omar, for each one of us, that:

Of my base metal may be filed a Key,
That shall unlock the Door he [the
Dervish] howls without.

"'A Hair, perhaps, divides the False and True', wrote Omar in the eleventh century. A hair, perhaps, divides the popgun from the crack of doom, the crack of doom from the popgun. The function of the scholar in any society is to make that division for himself and then to stand on the side of the divide that represents Truth for him."

With this declaration of the role of the scholar in ours or any other society, Dr. Henry Allen Moe ended his address and closed an afternoon that provided rich material on the nature and role of graduate education in science, a highly appropriate introduction to the events to follow.

UNIVERSITY GREETINGS

on the occasion

of the First Academic Convocation and Dedication of New Buildings

New York, May 21-22, 1959

THE CHANCELLOR, MASTERS, AND SCHOLARS
OF THE UNIVERSITY OF OXFORD SEND GREETINGS TO
THE ROCKEFELLER INSTITUTE



It is with the greatest pleasure that we hear, learned gentlemen, that you have obtained the right of conferring degrees and have decided to make a beginning by summoning the foremost men of the most ancient Universities of Europe and America to receive your honors. The youngest of the Universities has now trained its first pupils, but already for fifty years your seat of learning has shown itself most worthy, in view of the reputation of its founder, by healing the sick and at the same time investigating the causes of health, and finally by advancing the good of the human race. At the beginning of this century your country seemed perhaps to be scarcely equal to some other peoples, at any rate in these arts; we believe that it is chiefly through John Rockefeller that the situation is now very different. Nor should we fail to mention that Christian A. Herter, the grandfather of the distinguished gentleman who on his recent appointment has undertaken the most serious task of preserving peace, was among the first directors of your association.

We think that many things should be admired in your institution: the sick pay no fee; your Fellows give their whole attention to the business assigned to them; your guests assemble from many other peoples to share in your work; and you arrange that whatever is discovered shall be published frequently in books and widely distributed. We are glad to appoint our Vice-Chancellor to bring you our congratulations, to take part in your festivities, and to receive an honor of distinction from you, and now that you have started on your course with happy omens, all our prayers are that you, gentlemen of the Institute, may always advance with prosperous fortune. Farewell.

*Given at Oxford, England
on the fifteenth day of May, 1959*

THE UNIVERSITY OF CAMBRIDGE
SENDS GREETINGS
TO THE ROCKEFELLER INSTITUTE



We, as Cambridge men, remember especially the name of John Rockefeller with grateful hearts, because in large part we owe the new library, built for us twenty-five years ago, to the trustees of the funds which he bequeathed for the use of mankind and for the embellishment of life. Now we rejoice to learn that your Institute, which originated from the same founder and for long has been famous for its studies in the field of medicine, has recently been converted into a University, and soon will admit its young men for the first time to the degree of Doctor of Philosophy. Indeed for fifty years you have even sent across to us many of your professors of that science in order to share their plans with us. Moreover, we remember with what enthusiasm we recently admitted your President, Detlev Wulf Bronk, to the honorary degree of Doctor of Science, and so it is especially pleasing to us that we now have Baron Adrian, who is closely united to him by study and friendship, as our Vice-Chancellor, since it is his good fortune to receive a similar honor from you on such a happy day.

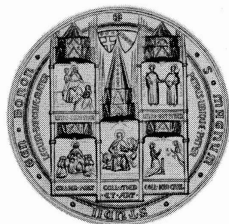
Medicine, indeed, is almost the only subject about whose value and usefulness there is no argument, and nothing must be regarded as more important than that worthy young men should succeed the famous masters of that science.

For this reason we join all peoples in congratulating you, not only on the increase in your functions but also on the new buildings which we have heard you will dedicate on the same day.

Farewell, and when your ceremonies have been happily completed, keep the glory of your University unimpaired for many centuries.

*Given at Cambridge, England
on the second day of May, 1959.*

THE UNIVERSITY OF BOLOGNA
TO THE ROCKEFELLER INSTITUTE



Different times have produced different Universities. For the ones which were first established on this side of the Atlantic almost a thousand years ago, and as many years after the birth of Christ, did not indeed prepare to embrace all branches of learning, but undertook to study and investigate thoroughly what seemed most important and especially necessary in view of the conditions of the times and the state of human affairs. Thus it happened that Bologna wisely built up a new form of civil law for mankind on the very firm foundations of Roman jurisprudence, while at Paris the mysteries of God's divinity were studied by the keenest intellects, in so far as that could be done. Then when more and more studies were added to this, as the beauty or the utility of the arts compelled, in a short time the Schools of Bologna and Paris truly became Universities devoted to studies instead of Universities consisting of masters and scholars. Almost all the Universities in Italy and other parts of Europe, and all of them in both the America's and other lands, both the old and the new ones, were adapted to this pattern and the name of a University gained such force in all the languages of mankind that it represented all branches of learning and art.

But though the wisdom of mortal men was perhaps confined within the same boundaries in which the wild Nature of the forest had placed it, Science, in contrast to this, grew so much by learning new fields and arts, that it went forth into the vast spaces and could no longer be kept within the narrow circle of the old system. The result was that people followed certain streams and no longer saw the springs from which everything arose. Therefore a new kind of University had to be devised (since Universities are the citadels and workshops of a better culture), or rather the old kind had to be renewed. For as our ancestors had placed a knowledge of Law and of God as a point, as it were, in the middle of the circle of the disciplines, so in our times an understanding of life, which indeed concerns the preservation of the health of the sick and the revelation of the hidden strength and resources of nature, brought together into one Institute the most learned men, who were summoned from every quarter of the earth under the leadership of John D. Rockefeller and Frederick T. Gates; and this was first called "The Rockefeller Institute for Medical Research". It follows that, since this Institute has been established, we can rightly and justly state that a third type of a University, after that of Bologna and Paris, has arisen in New York.

Therefore, as the oldest Universities, we see the true and genuine image of our own origins in the ample beginnings of The Rockefeller Institute, and the University of Bologna, which was once established, not by the power of the state but by the free will of private persons, especially sees this. It also rejoices greatly and congratulates the University of The Rockefeller Institute in a fraternal spirit because it is now conferring academic degrees for the first time, after five years have gone by since this power was granted. And it expresses the greatest possible gratitude because the honorary degree conferred upon the Rector of Bologna has had such excellent auspices. For I have both arranged for this to be written for me and shall also be present myself at your celebrations, and in my own words and in those of the whole University of Bologna I shall offer my prayers for the good fortune of The Rockefeller Institute.

Given at Bologna, Italy [Giuseppe Gherardo Forni]
on the twelfth day
of May, 1959

PRESIDENT AND FELLOWS OF HARVARD COLLEGE
TO THE TRUSTEES, PRESIDENT, AND FACULTY
OF THE ROCKEFELLER INSTITUTE



Greeting: On the occasion of the Academic Convocation for Conferring the First Degrees of The Rockefeller Institute and the Dedication of New Buildings, to be held on Thursday, May twenty-first, and Friday, May twenty-second, nineteen hundred and fifty-nine, the President and Fellows of Harvard College have charged Nathan Marsh Pusey, Ph.D., LL.D., L.H.D., President of Harvard University, to convey to The Rockefeller Institute the felicitations of Harvard University on this important milestone in service to the cause of education.

Given at Cambridge, Massachusetts
on the thirteenth day of May, 1959

A NOTE ON THE TRANSLATIONS *The documents of greeting, except for that from Harvard University, were written in Latin. We are indebted to John F. C. Richards, Associate Professor of Greek and Latin at Columbia University, for the translations into English reproduced here.*

CONCERT SPANS FOUR CENTURIES OF MUSIC

AN OUTSTANDING FEATURE of the events during the Convocation was a concert in Caspary Auditorium held on Thursday evening, May 21. The music covered a span of four centuries from a work by Frescobaldi, contemporaneous with the founding of the universities at Lima and Mexico City, to experimental compositions employing sounds achievable only by laboratory manipulation of the tape recorder.

The program opened with "The Unanswered Question," by the late American composer, Charles Ives. His own program notes indicate a mystical interpretation, but on such an occasion the unanswered question also suggested the perennial questions put by scientists to the universe. The Frescobaldi was a selection from his "Fiori Musicali." Henry Cowell's "Persian Set" brought a Near Eastern flavor to the program. Cowell is an American, but he has tried to widen the horizons of Western music with music of other cultures. A Japanese chemist, Shukichi Mitsukuri, was the composer of music to "Ten Haiku by Basho." The *haiku* is a verse form of three lines of five, seven, and five syllables each, made popular by the seventeenth century Japanese poet Basho. Mitsukuri's brief sketches on such themes as "Waking from sleep," "My heat-twisted shadow," and "Inhaler of chrysanthemum," were altogether charming.

After the intermission more experimental works were presented. The first was *Ritmo Jondo* by the conductor of the ensemble, Mr. Carlos Surinach. Mr. Surinach, a Spanish-born composer and conductor, has recently become an American citizen. *Ritmo Jondo* was first performed as a dance work by José Limon and his company in 1955 in New York. Hand-clapping in the flamenco tradition is used effectively in the composition. Alan Hovhaness, son of a Boston chemist, composed the next work, "October Mountain," for a percussion ensemble. The Manhattan School Percussion Ensemble under the direction of Paul Price performed Mr. Hovhaness' work as well as a prelude for percussion instruments by Malloy Miller, a young American composer on the faculty of Boston University.

"Music for Tape Recorder," composed

by Vladimir Ussachevsky, Russian-born member of the Faculty of Columbia University, was performed by the Ampex tape recorders in the projection booth, where Mr. Surinach wittily directed the applause. In recording laboratories both here and abroad, particularly in Italy, great interest has been aroused in the technical possibilities of the sounds that can be produced by manipulation of tape recordings. Mr. Ussachevsky, together with Otto Luening at Columbia, has produced a work full of extensive blending of timbres, transposition of pitches, and careful control of dynamic properties while using traditional instrumental techniques of thematic development. The final composition was "Homage" to the Spanish poet Garcia Lorca by the late Silvestre Revueltas of Mexico.

Much of the burden of arranging this remarkable evening of entertainment was borne by Mr. Oliver Daniels, Director of Contemporary Music Programs for Broadcast Music, Incorporated with the help of Mr. Richard Dana, associate of Mr. David Rockefeller and a connoisseur of contemporary music. After the Concert, the guests of the Convocation danced in Abby Aldrich Rockefeller Hall and on the veranda, under the full moon.

KAJ U. LINDERSTRØM-LANG

Director of the Department of Chemistry of the Carlsberg Laboratory in Copenhagen and Visiting Professor at The Rockefeller Institute, died on May 25, 1959. Born in 1896 and trained originally as a chemical engineer, Linderstrøm-Lang went on, in the Carlsberg Laboratory under Sørensen, to the studies of the physical chemistry of proteins for which he has been honored throughout the world. In addition to membership in the Royal Danish Academy of Sciences and Letters, he was a member of the Royal Swedish Academy of Sciences, the Academy of Sciences of the USSR, the Royal Society of London, the Finnish Scientific Society, and the National Academy of Sciences, among many other honorary scientific societies.

GRADUATE FELLOWS GIVE SUMMER COURSE

"AS ONE OF the students chosen... to attend the summer course at the Rockefeller Institute, I enjoyed an educational experience I will never forget..." So began a letter from one of the twenty-seven high school students chosen by their schools to attend a course in biological science organized and taught by a group of the Institute's graduate students this summer.

"Our instructors were all working for their doctorates, and their lectures were invariably stimulating... With their help I was able to analyze my own method of attacking a problem and find out where I was strongest and where I needed improvement," the student continued in his letter to the principal of his high school. "I now feel that I am more than adequately prepared to meet challenging situations, not only in science, but in all areas of learning... I cannot thank you and the school enough for giving me this opportunity."

The graduate student instructors had the task not only of teaching the course, but of planning and organizing it as well, which gave them experience unusual for graduate instructors. The program they presented ranged from biophysical and biochemical processes at the level of the cell to development, adaptation, and organization of the higher animals. In field trips students observed organisms in their particular ecological niche, and in laboratory study they observed the physiological characteristics that enabled them to exist in their environment satisfactorily.

The courses were taught by Robert DeVoe, Timothy Loeb, Bruce Voeller, John Cebra, David Eaker, Johns Hopkins and William Talbot. Richard Cellarius assisted them in organizing the program.

A grant from the Carnegie Corporation which made the summer program possible will provide funds for another year. Word about the success of the first year's program has spread widely, for already a request has been received from a student in Colorado who wishes to come next summer at his own expense. Unfortunately it is not feasible to organize the selection of students for such a program nationally, and next year's class will be selected, as this year's group was, by the principals of the high schools in the New York area.

FIVE GRADUATE FELLOWS RECEIVE DEGREES AT FIRST COMMENCEMENT

FOUR YEARS AFTER becoming a graduate university of science and more than half a century after its founding as a research institution, The Rockefeller Institute, on June 18, awarded the degree of Doctor of Philosophy to five students in its first graduating class. On the same occasion the Institute's first honorary Doctor of Science degrees were conferred upon Dr. Herbert Gasser, Director Emeritus of the Institute, and Dr. Peyton Rous, Member Emeritus.

One of the many advantages that The Rockefeller Institute enjoys because of its small size and intimate character is that it is feasible on occasions such as this to pay special attention to individuals. Speaking to this point in his introductory remarks, President Bronk said: "For those who are to be the leaders and catalysts in the world of creative learning, the quiet intimacy of scholars is required and the close personal association between teacher and student. We will devote our resources, time, and effort to the furtherance of excellence, not numbers. As I have said before, in the words of Ellery Sedgewick, 'we will seek to influence the many by inoculating the influential few.'" In this spirit each of the graduating fellows was presented individually by his faculty adviser who described briefly the character and significance of the program of study and research for which the recipient was being awarded the degree of Doctor of Philosophy.

William F. Arndt, Jr., was presented by Associate Professor Howard Schneider, who described his work on the allergic reaction known as the Schwartzman phenomenon in mice which had been supposed not to be subject to it. Dr. Arndt has joined the Department of Bacteriology at Georgetown University Medical School in Washington, D.C., where he will be research associate in the Department of Bacteriology and a candidate for the M.D. degree.

Suydam Osterhout was presented for his degree by Associate Professor Igor Tamm. Dr. Osterhout's thesis research, described by Dr. Tamm, concerned the interaction of the herpes simplex virus with human amnion cells in tissue culture. Dr. Oster-

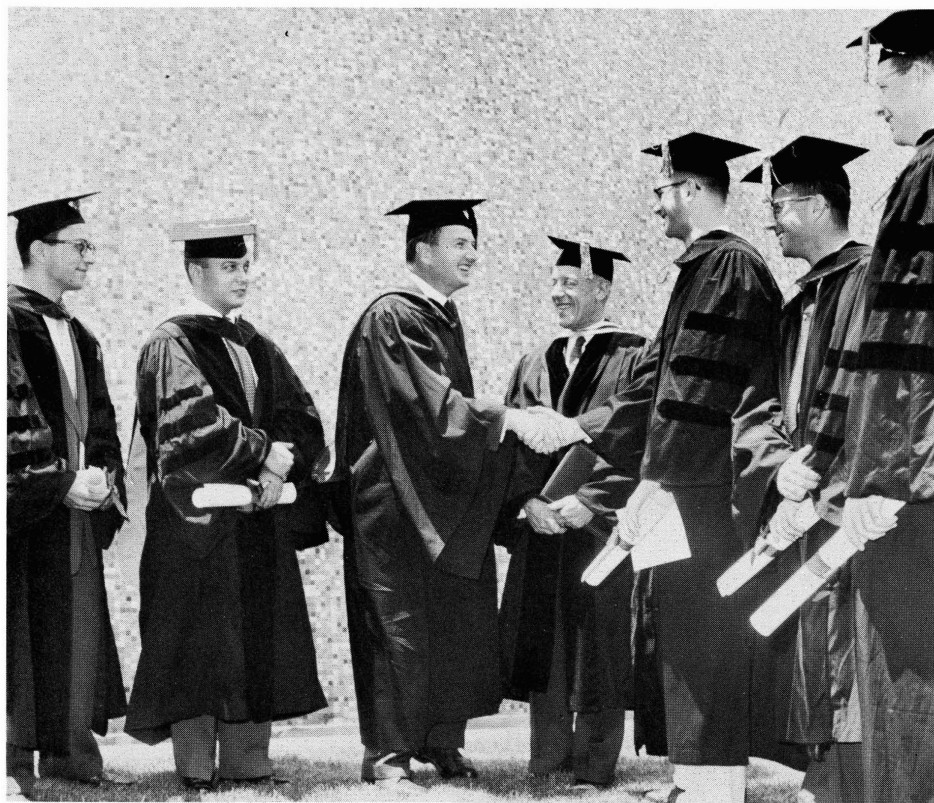
hout has joined the Department of Medicine of Duke University Medical School where he took his M.D. degree. He will be an Associate in the Department of Medicine and an instructor in the Department of Bacteriology.

Lee D. Peachey was presented by Professor Keith Porter. Dr. Peachey, whose work has been in cytology, has proposed a morphological basis for impulse conduction

spective." Dr. Simon has joined the staff of the Department of Medicine of Stanford University School of Medicine as Assistant Professor of Medicine and Microbiology.

Howard Rasmussen, who was presented by Professor Lyman Craig, isolated the parathyroid hormone B during his graduate research, and he based his thesis on the isolation and study of the properties of this hormone. Dr. Rasmussen, who received the M.D. degree from the Harvard Medical School, will remain at the Institute as Assistant Professor.

Following the presentation of the de-



The five Graduates receiving congratulations of Chairman David Rockefeller and President Bronk outside Caspary Auditorium. Left to right are: William F. Arndt, Jr., Suydam Osterhout, Mr. Rockefeller, President Bronk, Lee D. Peachey, Harold J. Simon, and Howard Rasmussen.

in muscle cells. He was awarded the Leitz Fellowship for the academic year 1958-1959, and he plans to remain at the Institute as a Research Associate in Dr. Porter's laboratory.

Harold J. Simon was presented by Professor René Dubos. His graduate work at the Institute has concerned the biochemical, genetic, ecological and anthropological aspects of latency and host-parasite relationships, culminating in a thesis titled: "The Germ Theory in Contemporary Per-

degrees of Doctor of Philosophy, President Bronk, in a brief but moving ceremony, conferred honorary degrees of Doctor of Science upon Dr. Peyton Rous, Member Emeritus of the Institute, and Dr. Herbert S. Gasser, who is Director Emeritus.

After the Commencement exercises the Trustees were hosts at a reception on the lawn of the North Campus and a luncheon in Abby Aldrich Rockefeller Hall for the Academic party, the senior administrative staff of the Institute and guests.

NEW BUILDINGS ARE DEDICATED AND CORNERSTONES ARE UNVEILED

THE DEDICATION of new buildings, which took place on May 22nd during the first Academic Convocation, signified completion of nearly five years of work of fundamental importance for the Institute's new role as a graduate university. A community of scholars, deprived of facilities in which they can gather for scientific meetings and associate informally, is hard-pressed to achieve any kind of true community spirit. Moreover, a graduate school in such a circumstance, whose students reside at scattered locations throughout a great metropolis and its suburbs, would suffer immeasurably from the difficulty of providing its students personal contact with scientists of a wide range of interests. Fortunately the Institute need no longer suffer these disadvantages of its urban location.

The thirteen acres of its campus, wisely provided by the founder over fifty years ago, and the new buildings made possible by gifts from Mr. John D. Rockefeller, Jr., and the estate of Alfred H. Caspary, as well as Mr. David Rockefeller's gifts for landscaping the campus, have provided all

that a university could desire of pleasant and beautiful environment, suitable to scholarly associations.

The dedication ceremonies began with Dr. Bronk's address on natural beauty and science. He was followed by Mr. Wallace K. Harrison, distinguished architect responsible for the design of all the new buildings, who spoke briefly of Abby Aldrich Rockefeller. "She was," he said, "one of the finest women of our time: the mother of six children, the right hand of a man who has done much to preserve our free society and our fading liberty. She was a person who stood up in every fight for freedom, particularly the freedom of the arts. She was a gregarious woman, a warm and gay person who found delight in all that life offered. She stayed in the background, but was actively involved in her own personal projects: housing for workers, aid to Negro schools and, above all, to American artists."

Recalling that Abby Aldrich Rockefeller had been one of the founders of The Museum of Modern Art, Mr. Harrison said that she spent her life supporting Amer-

ican art, from the primitives to the abstract expressionists. It is largely because of her support that we have in America a school of painting of our own, some examples of which are hung in Abby Aldrich Rockefeller Hall and described elsewhere in this issue.

"I emphasize the arts, to which Mrs. Rockefeller devoted her life," Mr. Harrison said, "because I believe that every scientist must be a creative artist. He must create an image in order to find reality. It was Leonardo, an artist, who gave science the artist's sense of the significance of nature's detail; and in this day of confusion it is well for the scientist to remember that the fine arts have had an influence on scientific endeavors since the first cave man painted his description of nature on the walls of his cave.

"This home for scientists, dedicated to a woman who gave her life to her home, the young, and the arts will always be an example of how the arts may aid the sciences by providing an atmosphere for easier and more effective communication of ideas between friends and fellow students.

"Given by the devoted husband of Abby Rockefeller, we hope as the years go by it will take on a patina of memories, not only of how much one gained as a student while

The New Buildings Surround the Old Upper left: curved entry to President's House. Left to right along lower edge of campus: the Pavilion, Abby Aldrich Rockefeller Hall, Caspary Hall and dome-like Auditorium, the Graduate Students Residence, and South Laboratory.



there, but also of how time passed so delightfully and interestingly, and of how even the smell of the place can bring back pleasant memories of the days at the Rockefeller Institute.

"One of its students with this memory may, some day, steer his fellow men into calmer channels where the world may find a little peace. If such could happen, the greatest wish of the gentle lady to whom this building is dedicated will be fulfilled."

In thanking Mr. Harrison for his moving address, Dr. Bronk paid tribute to Mr. Harrison himself, saying that it had been a truly wonderful experience to have worked with him during the past five years. "I have known many architects and worked with many," he said, "but I have never known one before with whom I could feel so true a partner."

Dr. Bronk went on to speak of Alfred H. Caspary whose estate provided funds for the construction of Caspary Hall with its magnificent auditorium, seminar rooms, and administrative offices, as well as the Graduate Students Residence, and the President's House. Regretting that it had not been his privilege to know Mr. Caspary, Dr. Bronk added that nonetheless he had come to know something about him from Mr. George Murnane, Trustee of the Institute, whom Mr. Caspary made sole executor of his entire estate which he left to be used for the furtherance of good undertakings. In memorializing the name of Alfred H. Caspary, Dr. Bronk observed that we are following the way recommended by Pliny the Younger, who wrote: "It is a noble employment to save from oblivion the name of one who deserves to be remembered."

NATURAL BEAUTY IN THE CITY

Dr. Bronk next introduced Mr. David Rockefeller, but before doing so he spoke of the beauty that Abby Aldrich Rockefeller had created at her summer home in Maine. Ely Cathedral, he said, and Mrs. Rockefeller's lovely garden on a mountaintop above Seal Harbor, Maine, are the two physical objects which have moved him most. "Perhaps because I am a native of New York, I have a deep affection for this city. I know people decry living in my native town, but as I look to the future, it seems to me there is no other future but the future of an urban civilization. We must learn to build within the city, the

metropolis, a way of life that will enrich our efforts and our living. And so I have felt that we could create within the city here upon our campus a thing of beauty. The beauty which we have around us has been made possible by the son of Abby Aldrich Rockefeller. And so I want to express my personal gratitude to David Rockefeller, who has given so generously, so that we could have the lovely gardens, the grass, the trees, the setting for the buildings in which we are."

A ROCKET WELL-LAUNCHED

In response, Mr. Rockefeller spoke as follows: "Thank you, Dr. Bronk, and thank you, Wally Harrison, for those wonderful remarks about my Mother. I know that she would not only be very touched by what has been said, but I know that she would be equally delighted by the buildings that Mr. Harrison, one of her favorite friends, has built here, and the gardens that Mr. Kiley has provided.

"As I have thought over the history of the Institute and its relation to the events of the day, it has seemed to me that there is a rather interesting analogy between that history and a very successful space rocket. We have here a 'space rocket' which was, in the case of the Institute, started some fifty-eight years ago, designed by a very brilliant group of men: Dr. Flexner, Dr. Welch, Mr. Gates, and others—extraordinarily well-designed and launched with great brilliance.

"I must say that the world didn't respond at the time of its launching in the same way, perhaps, that it responded to Sputnik some years later, but I think this one has lasted longer, and I think that its impact has possibly been considerably greater.

"Like a space rocket, the forces of gravity and the forces of friction played upon it, and like a rocket there is need for a new impulse. It seems to me that that new impulse has been designed and touched off by Dr. Bronk and others of you here today who have seen new sources of energy and power for the Institute in the form of students to bring new vitality and life in the form of an enriched campus life, in the form of bringing professors and lecturers from all over the world to bring added stimulation.

"That new second stage of the rocket has been launched, and we are celebrat-

ing its successful launching here today. Whether there will be a need for a third and fourth stage in the Institute rocket I don't know, but I feel sure that there are within the Institute the resourcefulness, the imagination, the drive, the energy to produce third and fourth stages if they are needed.

"I for one am very happy and proud to have been connected, in the beginnings at least, with the second stage, and it seems to me that everything we have seen in the last couple of days has dramatized the brilliance and the importance of this on-going institution—which to me is one of the really significant and important institutions in the world today."

Dr. Bronk next introduced Mr. Dan Kiley, landscape architect of Burlington, Vermont, whose visions have become the realities of today's campus. (See "Leaf and Stone" in the *Quarterly*, Vol. 1, No. 3, September, 1957). Mr. Kiley came out for beauty, and the way of the designer with it.

ENVIRONMENT OF SCHOLARS

"Beauty is evanescent," he said. "It is fleeting. It will not be commandeered. It flees from compulsion. Yet it is everywhere to be discovered: in the buds and the twigs, in our hearts, in buildings of stone and steel as they greet the bud and flower.

"Why do we seek beauty? It seems that through it we are helped to see the relationship that we might have to the universe. It is the ultimate idea of the universe.

"Ordinary life has all the elements of it to be discovered. Beauty is not gained by a series of forced ideas or forms. It must be sought tenderly, with love, with understanding, and with humility. You can't 'know all the answers' and get beauty. It will light out. Most important, a designer does not do it alone, or out of relation with life.

"It has been here at the Rockefeller Institute that the designer has had the most glorious opportunity. I knew it would be so when I first met Dr. Bronk. As a matter of fact, when we were first talking about his visions and hopes, I felt as if I were dancing up and down and patting him on the back, so excited I was about how he was outlining the problem to me.

"A designer is always going out on a limb. He must do so in order to progress.

(continued on page twelve)

He must trust in nature, rely on her. Dr. Bronk has always been there to lend his support when the limb was in danger. Both he and David Rockefeller have given the greatest support and encouragement, never dictation. It has delighted me also to see how Dr. Bronk, who is so busy, still was

difference between the kind of design it is possible to do now and the things of the past is the idea of *continuity*.

"And in designing the landscape, and trying to knit everything together—the old buildings and the new buildings and the landscape—it's been this type of approach,



The New Buildings View from the pavilion looking south, past the veranda and dining room of Abby Aldrich Rockefeller Hall on the North Campus of the Rockefeller Institute.

willing to give the time (and think it important enough to take the time) to make sure the thing was being done just the right way, to the highest point possible. That was a very beautiful experience.

"I was going to describe the landscape out there, but I think this is a difficult thing to make sound well; seeing what we try to do is the important thing. I would just like to say one thing which I feel is important in landscape design: that it is not an addition to the building, but it is a working with the things that are there, with the buildings and the space and the grounds, and trying to develop in this particular situation the most significant related thing that you can—that relates outwardly to nature or the universe; and this isn't done, necessarily, by an obvious, say, little design idea, but I think it's done by a thing that we think about as *continuity*.

"I think the biggest thing that shows the

to try to do it in such a spatial way that there's no ending.

"In closing, I would like to hope that all the people of the Rockefeller Institute, Dr. Bronk, the faculty, and the students, will, in the words of Baron Keyserling, 'continue to saunter through the spaces of this lovely world.'

The last speaker in the dedication ceremony was Mr. Barklie McKee Henry, member of the Board of Trustees and Chairman of its Building and Grounds Committee.

"It is very seldom in one's life," Mr. Henry said, "or in the life experience of any of us, that we have an opportunity to be in on the beginning of a great idea. This statement has no platonic overtones; it simply refers to the fact that some five years ago the Board of Trustees appointed a mixed committee of scientists and laymen who were instructed by Mr. John D. Rockefeller, Jr., to make a study of the

needs of the Institute of the future. We have no time to go into that long history which took many hours of conference and thought, but I simply want to refer to the fact that this was indeed, at some point, the moment of conception of what seems to us like a great new idea, and it has since become what we hope will be a great reality.

"The experience of the last two days makes us believe that this may be so. One cannot in a short space of time discuss the causation of these events, but one can at least point out in a purely arbitrary way a few prime movers. I should like in the few moments I have to talk about three of the many prime movers in this enterprise.

IDEA BECOMES REALITY

"You have already heard from our architect and our landscape designer, and no one can fail—as soon as one thinks of this place—to think of them and to think of the realities they have created from the ideas that were described to them.

"However, the three prime movers I have in mind are, first, the President, Dr. Bronk, who was Chairman of that Trustee Committee during those long hours of thought where a great many people besides the Committee took part in the discussions. There was no conception in any of our minds—nor, I am certainly sure, in his—that the end of the road would see him President of the new institution. But by the end of the deliberations that idea was very much in our minds, and nobody working with Dr. Bronk in this long enterprise could possibly feel anything but the greatest possible pride in the association.

"The second person I wish to speak of is one of the Trustees. This Trustee was at the very beginning of the enterprise by far the youngest of the Trustees. It became apparent very quickly that he was not only younger, but singularly full in the quality of courage, singularly equipped with creative imagination, and above all (what should be interesting to everyone in this room), of a coordinative, sympathetic understanding of the affairs of the intellectual life. It sounds like a very simple statement, but I think you ladies and gentlemen will agree that this is not always the case and that we are singularly fortunate in the choice of the person we felt to be our chief leader in this enterprise. This man has a quality that I can only describe

in terms of philanthropy—a quality of personal devotion to this particular cause, which is a quality above all other qualities which elevates an enterprise, lifts an enterprise above the level that it first sets out to reach. This has been our happy experience, and, therefore, I don't think any of my fellow Trustees would think I were exaggerating if I said that the youngest of our Trustees, Mr. David Rockefeller, was also the wisest.

"Now, the third prime mover to whom I should like to refer is a man named Mr. Bernard Lupinek. You people who live here will know all about Mr. Lupinek. (Editor's Note: and *Quarterly* readers learned about him from our article on maintenance and construction, Vol. 1, No. 4, December, 1957.) Mr. Lupinek is the person on the professional staff who has had the terrible responsibility of functioning like a one-man construction firm for three solid years of work. He is a man of passionate temperament, great ability. I have heard construction people say if they could rob us of him they would pay him a huge salary to run a construction firm. It is his whole life's work. Last weekend he suffered a mild heart attack, but I am told by the doctors that he is doing all right, that it wasn't too serious and that he will come through. You can imagine the feeling that must be going on in Mr. Lupinek's mind and spirit right now—the proudest day of his life, and he cannot be here. We can only hope that his heart and our hearts will carry him through the next few days."

STAFF MEMBERS PRAISED

Dr. Bronk echoed Mr. Henry's praise of Mr. Lupinek saying, "He has never failed me. He has been a wonderful, loyal worker, with just one interest in his heart, and that has been the Institute to which he has given his whole life. And so, when this weekend we found that he could not be here, we were saddened because of what we felt would be too much denial for him. But what really bothered him was the thought that he had, as he put it, 'let us down.' I could assure him that the last days of an undertaking are not its important days. They are but the culmination of hours and days and weeks and years of preparation, and he had prepared so well that all was as he wished it to be."

Dr. Bronk also paid a moving tribute to the many individuals on the Institute staff

and among the many contractors, whose work as a team together had made possible the final realization of the new beauty (both interior and exterior) that graces the Institute's campus.

Having opened his remarks by reading from an essay by George Trevelyan, Dr. Bronk again quoted Trevelyan on the importance of taking special care to develop and to cherish natural beauty.

"In the old days," Trevelyan wrote, "natural beauty needed no conservation. Man was camped in the midst of it and could not get outside it, still less destroy it. Indeed, until the end of the eighteenth century the works of man only added to the beauty of nature. But science and machinery have now armed him with weapons that will be his own making or undoing, as he chooses to use them; at present it is destroying natural beauty apace in the ordinary course of business and economy. Therefore, unless he now will be at pains to make rules for the preservation of natural beauty, unless he con-

that science benefits from being carried on in a lovely setting. I see no conflict between science and natural beauty. Rather, the former makes possible the latter; the latter enriches the former, and so we hope that here in this lovely setting there will be grand undertakings enriched by the beauty which surrounds them."

Following the dedication addresses, Dr. Bronk invited the audience in Caspary Auditorium to join him and Mr. Rockefeller outside where they unveiled the cornerstones of Alfred H. Caspary Hall and Abby Aldrich Rockefeller Hall. After this formal gesture of dedicating the five new buildings, President Bronk and Mr. Rockefeller led the guests at the dedication ceremonies on a tour of inspection. This included not only the new buildings themselves and the grounds around them, but new construction in the old buildings as well. Dr. Bronk pointed out that in the past years reconstruction in existing buildings had added more than 40,000 square feet of new laboratory space, and he drew

The New Buildings Fountains in the gardens near the Auditorium of Caspary Hall.



sciously protects it at the partial expense of some of his other greedy activities, he will cut off his own spiritual supplies, and leave his descendants a helpless prey forever to the base materialism of mean and vulgar sights."

Dr. Bronk added: "I have always felt that science should be recognized for the beauty of its spiritual undertaking. I believe

attention to the completely new first floor of Founders Hall which now provides a handsome central reception area for the Institute.

Finally, guests at the ceremonies joined President and Mrs. Bronk in a garden party at the President's House. Thus drew to a close two memorable days in the history of the Rockefeller Institute.

CONTEMPORARY AMERICAN PAINTINGS REFLECT NEW FRONTIERS OF ART

ONE OF THE striking features of Abby Aldrich Rockefeller Hall is the remarkable display of contemporary American paintings to be seen there. Abby Aldrich Rockefeller was a founder of the Museum of Modern Art, and that there exists an internationally recognized school of American painting is due in large measure to her encouragement and support. How appropriate, then, in a building dedicated to her memory, to have the things she loved. And how appropriate, too, that in a hall devoted to informal associations among those engaged in exploring the borders of knowledge there should be paintings by those exploring new frontiers of aesthetic and emotional experience.

The paintings were selected by Mr. Alfred Barr, Director of the Museum of Modern Art, and his assistant, Miss Dorothy Miller, in consultation with Mr. David Rockefeller and President Bronk. Not all the final selections have been made, but as they are, the paintings are purchased by the Institute.

All are postwar works by Americans of the perplexing school known as abstract expressionists, most of whom are living in New York.

We must acknowledge that such paintings pose for the layman a question—they appear to represent nothing we encounter in our ordinary experience; shall we, therefore, reject them as nonsense, or shall we seek a deeper significance? Certainly each must answer this for himself, but here we want to suggest that it may be wise and rewarding to give serious attention to them.

Perhaps our first mistake is to ask of abstract expressionism "What is it supposed to be?" Our question may indicate that we expect a painting to be a report about something else rather than a thing in itself. Yet most of us would readily acknowledge that technical illustration, medical art, fashion illustration, and other essentially reportorial art lie relatively low in the scale of artistic creation, though they may at times display superb craftsmanship. The artist's subjective view in these "reports about things" is less an asset than a liability. Much higher in the scale of art are the more or less representational

masterpieces of Rembrandt and the Zen brush painters of the thirteenth century in China, to cite extreme examples. But in them there is an unmistakable, if undefinable, element of commentary, of artistic invention, of a kind of abstraction out of commonplace experience. Subjective experience begins to predominate over objective, external fact, and reference to the external aspect of things begins to diminish in importance.

This development can be seen from perusal of the catalog of the retrospective exhibition of prize-winning paintings from Carnegie Internationals since 1896. There we see an unbroken succession leading from today's strange and disturbingly formless works to the acknowledged masterpieces of the past—from the abstract expressionists to Degas, Sargent, Pissarro, Renoir, Rodin, Bellows, *et al.* This at least suggests that our children may admire the revolutionaries of today as we admire the revolutionaries of the past.

The French impressionists became more interested in their experience of light and color than in the form and content of that which was lighted and colored. Others, the cubists, for example, became fascinated with the lines and planes they thought they discerned underlying the form of things. Still others, reversing the subjective and the objective totally, expressed their inner fantasies in paintings full of "real" objects, but in the dreamlike, illogical juxtapositions of the surrealists.

THE FATAL QUESTION

Why not, then, finally achieve a style which dispenses altogether with reference to the objective external world, either as subject for artistic commentary or as vocabulary for expressing inner experience? Why not paint for the sake of painting? If this is the point of view of the abstract expressionists, perhaps we can see how fatal is our conventional question: "What is that supposed to be?"

We hear, for example, various half-humorous and half-desperate "explanations" of the great black and white painting by Franz Kline on the east wall of the dining room: "a dying sawhorse," say the

wags; "a figure four lying down," say others; "Chinese calligraphy," say those who are puzzled but serious; "evidence of his preoccupation as a child with coal-mining shafts," say the psychologically oriented who see a kind of giant Rorschach in this painting by a man from Wilkes-Barre, Pennsylvania. But why not let it stand as a painting by Franz Kline, a simple statement of fact—the fact that it is itself, not a reference to anything else?

UNTITLED PAINTINGS

This may help us to understand why these painters are so reluctant to put names on their works. Many are only numbered; others have only accidental, irrelevant, meaningless names; often, it is said, the names are attached by, or at least for, art dealers who do not like to cope with numbers. Our painting by Franz Kline is named "Lucerne."

Strangely enough, the scientist who is puzzled by the unfamiliar appearance of modern painting may be suffering the indirect consequences of the achievement of science. This was suggested by Gordon Bailey Washburn in his introduction to the 1958 Pittsburgh International Exhibition of Contemporary Painting and Sculpture. Mr. Washburn, Director of the Fine Arts Department of the Carnegie Institute, wrote: "...the scientist... now knows that, in a final analysis, he will always stand between himself and 'nature,' between himself and his measurements, making it necessary for him to measure the relationship instead of a particular phenomenon itself." He quotes Heisenberg as writing: "The atomic physicist has had to come to terms with the fact that his science is only a link in the endless chain of discussions of man with nature, but that it cannot simply talk of nature *as such*. Natural science always presupposes man..." Washburn observes that "few stimulations have been greater to artistic creation in its entire history than this conclusion that man himself is also 'nature' and that subject and object are inextricably interlocked. Newly realizing the truth of this, artists have discarded the old, conventional idea of an objective reality, and have found to their amazement and delight, that a vast new world of creative expression awaits them."

The influence of the scientific worldview at times becomes almost explicit. A recent exhibition of twentieth century

American art at the Metropolitan Museum included a painting by Mark Tobey, called "World Dust," reminiscent of current ideas of cosmogony, and a composition in shades of blacks by James Ernst, titled "Almost Silence"—a visual allusion, perhaps, to the aural experience of an anechoic chamber. A magnificent silver sculpture of a lovely three-dimensional curve by Jose de Rivera was significantly titled "Homage to the World of Minkowski."

A different approach to these paintings—perhaps one of more interest to scientists—is to suppose somewhat platonically that abstract painting is an attempt to derive the great aesthetic generalizations out of our experience and present them pure. Scientists often speak of the beauty of a sweeping conceptual generalization abstracted out of the chaos of concrete phenomena. Not all of experience is either significant or beautiful; the scientist, however, chooses to direct his attention to the significant. Perhaps in a similar way we select our beauty from the welter of experience by some vaguely sensed intuition of the presence of form, color, symmetry and harmony. Perhaps, then, the artist's role has been to make more explicit this vague intuition in us all, and the boldest have painted the intuition bare!

GLIMPSES OF STRUCTURE

Hedda Sterne's "Roads—Number 9, 1957," the painting over the piano at the end of the lounge, is most often well-received at first glance by visitors in the lounge, and for good reason. The man who asks "What is that supposed to be?" almost feels solid bottom under his feet as he looks at the painting's flowing, cloudy, geometric curves and abstract perspective. Almost solid bottom, but not quite, for one man sees a bridge, another a multi-level super-highway, and another a forest. None is wholly wrong, for though the name refers to roads, the painting contains intimations of the structure and symmetry that we sense in forest, bridge, and super-highway. Hedda Sterne was born in Rumania in 1916, but has lived in New York for many years with her husband, the well-known cartoonist, Saul Steinberg. She has studied at the Kunsthistorisches Museum in Vienna, the University of Bucharest, and Paris.

Structure becomes explicit in the one piece of sculpture included in the Insti-

tute's collection, a mobile by Philadelphia-born Alexander Calder. Here structure is predominant (and balance imperative), for mobiles are delicately poised construction that are free to move about multiple axes of suspension. Calder, not surprisingly, was originally an engineer, graduated from Stevens Institute in 1919. Soon art became his chief interest and in 1932 he devised his first mobile—a free-moving composition of harmoniously poised structural elements. Our Calder mobile, composed of shapes of black, orange, and white, hangs against the dark fabric walls of the dining room of Abby Aldrich Rockefeller Hall.

Another of the painters represented in our collection, Joan Mitchell, paints in abstractions bearing just-recognizable traces of their origins. Her "City Landscape," which hangs on the south wall of the dining room, is probably not arbitrarily named. Elements of a city landscape, fractured, fragmented, interchanged like a scrambled mosaic, are there. Another of

of them." Perhaps in "City Landscape," she remembers her native Chicago, where she was born in 1926, but it may be New York, where she now lives. Her studies have been at Smith College, The Art Institute in Chicago, and Paris.

More decisively removed from representation than even Miss Mitchell's "landscapes" are the works of James Brooks. Born in St. Louis in 1906, he, too, lives in New York. After studying at Southern Methodist University and the Art Students League in New York, he taught at Columbia University and is now teaching at Pratt Institute. Brooks's large round composition in gray-greens, terra cotta and blues which hangs over the fireplace in the faculty lounge is a masterpiece of balanced form and color stirred together in what seems an almost accidental potpourri of paint and geometry. Yet only the naive and undiscerning would remark, "My ten-year-old daughter could have done that!" The craftsman and skilled critic see at once the sophistication of its apparently random



The New Buildings Abby Aldrich Rockefeller Hall. Painting by James Brooks.

her paintings, named "Hemlock," was seen reproduced in *Time* magazine last year (*Time*, April 21, 1958, p. 71). The essence of hemlock is in the painting. Without the name no one would be likely to discern it; yet, knowing the name, one sees it at once. Miss Mitchell says she is often inspired by "remembered landscapes that I carry with me and my own feelings

treatment. Dominating the lounge, where it is seen almost daily, Brooks's painting grows in its appeal; more, rather than less, is seen in it with time.

"Pink Mississippi—1954" is the enigmatic name of a mélange of pinks and reds by Jack Tworkov, a Polish-born New Yorker also on the faculty of Pratt Insti-

(continued on page sixteen)

tute. It is displayed over the sofa at the north end of Abby Aldrich Rockefeller Hall. Its companion, hung over the fireplace opposite, by William Scharf, is called, simply, "Painting, 1957." Much comment has been aroused by a trickle of white paint on the otherwise smooth and carefully done surface of this painting. We do not know whether accident or design placed it there, but there can be no doubt that the artist chose to let it remain. It is an arresting inclusion.

The late Bradley Walker Tomlin's "No. 6," which hangs just outside the dining room, is a study in calligraphic forms and rectangles of various shades of blues, reminiscent of his early career in the thirties as a cubist painter. This theme he has repeated in a dozen or more paintings with variations. We are reminded of Picasso's blue period, when all was seen in the same melancholy light. But Tomlin's vision is essentially inner, Picasso's, superficially at least, outer.

The painting by Conrad Marca-Relli that hangs in the library of Abby Aldrich Rockefeller Hall is untitled, nor in the tradition of the most pure does it carry even a number. It is simply a rather pleasant composition in warm tones of oil and collage by a Boston-born young artist who studied in Rome and who, like Brooks, has been Visiting Art Critic at Yale University.

Most of the paintings mentioned here have been purchased for the Institute's collection. Others have come and gone, or have moved about. A seascape by Karl Knaths, for example, first hung in the Cohn Library where its colors were uncongenial; next it occupied an office, where its size was overpowering; at last it has found a perfect location in the recreation room of Abby Aldrich Rockefeller Hall. A painting by Robert Motherwell, titled "Je t'aime," remained only briefly with us. It was described by *Time* (December 2, 1957) as "loud, messy, vigorous and oblique." The artist had scrawled its title in huge letters of grey mud across a background of black and orange bars. In its place today is a painting in black oil on canvas strongly reminiscent of the technique of the late Jackson Pollack, but perhaps more revealing in its calligraphic character of the oriental origin of its creator, Walasse Ting. Still others have also

been purchased, though they are not on display. They grace the modern interiors of the residential suites and the President's House.

It would be tempting to try here to indicate the place of our paintings in the school of abstract expressionists, and to discuss the place of the school in contemporary art and art history. This ambitious undertaking is beyond our resources, physical as well as intellectual. We must remark, however, that the abstract expressionists have aroused enormous interest, in this country certainly, but especially abroad. A travelling exhibition last summer showed Europe "The New American Painting" under sponsorship of the Inter-

national Council at the Museum of Modern Art. Brooks, Tomlin, and Kline were among the artists represented. The result was to heighten an already great interest. Laurence Gowing, in the May 24, 1958 issue of *New Statesman*, called the European reaction "infatuation" (reviewing *New Art in America*, edited by John I. Baur and available in the Institute Library). He said: "The idea of American painting has worked an extraordinary liberation, a liberation from ideas about painting, which has a particular force for the self-conscious painter in Europe." Something important in art is stirring. What the judgment of the future will be, we cannot say, but we may take pleasure in the opportunity to observe it first-hand and to draw our own conclusions about it.

MANY NATIONAL AND INTERNATIONAL VISITORS ENJOY NEW FACILITIES

EVERY ISSUE of the *Quarterly* has reported activities that have been made possible, or made more pleasant and effective by the existence of the new buildings. But many such events go by unreported and the great number even of those we mention is apt to be forgotten. We thought it would be interesting, therefore, in an issue devoted in large measure to the new buildings, to sum up the busy season our new facilities have had.

During the past year eighteen thousand meals have been served in the dining room of Abby Aldrich Rockefeller Hall, and its residential suites accommodated nearly three hundred guests, including over sixty scientists from eighteen countries abroad and over one hundred fifty guests from some fifty universities and scientific institutions in this country. The total number of "room-nights" of occupancy was over sixteen hundred.

The auditorium and conference rooms of Caspary Hall saw heavy use, not only by our own faculty and students, but more often than once a week by outside scientific groups. Among those groups who were guests of the Institute in this way during the past six months were four committees of the National Academy of Sciences, the Panel on Science and Foreign Affairs of the President's Science Advisory Commit-

tee, the New York City Medical and Health Research Council, and several committees from the National Institutes of Health. In addition to our own use of Caspary Auditorium twice a week for faculty lectures, for several concerts and films, the Sigma Xi, and the International Symposium on Molecular Biology, held there last Fall, it was the scene of many significant special events including meetings of the American Cancer Society, the International Flight Safety Foundation, the National Committee on Maternal Health, and the Society of European Chemists, as well as the Atoms for Peace Award, five television symposia, and the Conference on Basic Research, sponsored by the National Academy of Sciences, the American Association for the Advancement of Science, and the Sloan Foundation.

The President's House, also a center for visitors to the Institute, has been host to nearly eight hundred guests at one of the many receptions or dinners given there. Few weeks went by without house guests, among whom were Professor K. S. Krishnan of India, Professor and Mrs. W. A. Englehardt of the Soviet Union, Visiting Professor and Mrs. Ragnar Granit of Sweden, Baron and Lady Adrian of Cambridge, Dr. T. S. R. Boase of Oxford and Dr. Nabor Carrillo of Mexico.

FACULTY ACTIVITIES

Academic Honors

DETLEV W. BRONK
LL.D., The Hahnemann Medical College.
LL.D., The Jefferson Medical College.
SC.D., New School for Social Research.

WALTHER F. GOEBEL
D.SC., Middlebury College.

FRITZ A. LIPMANN
L.H.D., Brandeis University.

Lectures, Conferences and Symposia

ARMIN C. BRAUN
Lecture, New York Academy of Sciences.
Lecture, Torrey Botanical Club, New York Botanical Garden.

DETLEV W. BRONK
Address, 25th Anniversary, New School for Social Research.
Inaugural Lecture, Kenyon College.
Symposium on the Structure of Science, The Wistar Institute.

LYMAN C. CRAIG
Speaker, Gordon Conference on Proteins.

ARPAD I. CSAPO
Lecture, New York University.

RENÉ J. DUBOS
Schick Memorial Lecture, Mount Sinai Hospital.
Convener of Symposium on Interplay Between Infectious Agents
and Phagocytic Cells of Metchnikoff Revisited, Society of
American Bacteriologists.
Address, Baltimore Psychoanalytic Institute.

WALTHER F. GOEBEL
Participant, Macy Foundation Meeting on Polysaccharides in
Biology.

SAM GRANICK
Chairman, Symposium on Porphyrin Biosynthesis and Por-
phyrins in Cancer, American Chemical Society, Boston.
Participant, Symposium on Biological Function and Structures,
American Chemical Society, Boston.

ROBERT J. HILL
Participant, Gordon Conference on Proteins.

FRANK L. HORSFALL, JR.
Amberson Lecture, Annual Meeting, National Tuberculosis As-
sociation and American Trudeau Society, Chicago.

ROLLIN D. HOTCHKISS
Fuller Albright Lecture, Peripatetic Club, Twenty-third Annual
Meeting, New York.

TE PIAO KING
Participant, Gordon Conference on Proteins.

WILLIAM KONIGSBERG
Participant, Gordon Conference on Proteins.

DANIEL E. KOSHLAND, JR.
Participant, Oak Ridge National Laboratory Symposium on En-
zyme Reaction Mechanisms, Gatlinburg.

Lectureship series on Enzyme Action and Muscular Contraction,
University of California.

HENRY G. KUNKEL
Ciba Symposium, Paris.

FRITZ A. LIPMANN
Participant, Oak Ridge National Laboratory Symposium on En-
zyme Reaction Mechanisms, Gatlinburg.
Chairman, Symposium on Mechanisms of Protein Synthesis,
American Chemical Society Meetings, Boston.
Chairman, Symposium on Protein Synthesis, Federation Meet-
ings, Atlantic City.
Coover Lecture, Iowa State College, Ames.

KARL MARAMOROSCH
Lecture, Cornell University Chapter of the Society of the Sigma
Xi, Geneva, New York.
Conference, Florida Cancer Training Program, Gainesville.

DAVID C. MAUZERALL
Participant, Symposium on Porphyrin Biosynthesis and Por-
phyrins in Cancer, American Chemical Society, Boston.
Chairman, Session on Porphyrin Metabolism, Federation Meet-
ings, Atlantic City.

DAN H. MOORE
Participant, Seventh Conference on Microcirculatory Physi-
ology and Pathology, National Institutes of Health.
Lecture, American Hungarian Medical Association.

JOHN B. NELSON
Participant, Meeting on Gnotobiotic and Specific Pathogen-
Free Animals, NAS-NRC, Institute of Laboratory Animal
Resources, Lobund Institute.

GEORGE E. PALADE
Participant, Symposium of the Anatomical Society of Great
Britain and Ireland, London.
Participant, Symposium of the Linnean Society, London.
Participant, Symposium on the Origin of Life, Albert Einstein
Medical School, New York.
Lecture, University Board of Studies in Pathology, London.
Lecture, Medical School, Cambridge.
Lecture, Medical School, Oxford.
Lecture, University of Wisconsin, Madison.

S. WILLIAM PELLETIER
Participant, International Symposium on the Chemistry and
Biochemistry of the Solanum Alkaloids, Deutsche Aka-
demie der Landwirtschaftswissenschaften zu Berlin.

GERTRUDE E. PERLMANN
Participant, Oak Ridge National Laboratory Symposium on En-
zyme Reaction Mechanisms, Gatlinburg.
Lecture, Brandeis University.

KEITH R. PORTER
Participant, Symposium on the Biochemical Cytology of Liver,
Histochemical Society, Atlantic City.
Participant, Fiftieth Annual Meeting, American Association for
Cancer Research, Atlantic City.
Participant, *La Carcinogenesi Epatica Sperimentale Studiata
con il Microscopio Elettronico*, First Symposium Annuale
della Società di Cancerologia, Pisa.

HOWARD A. SCHNEIDER
Lecture, the New York Periodontal Society.

FACULTY ACTIVITIES

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PHILIP SIEKEVITZ

Participant, Symposium on Cytochemistry of Enzymes and Antigens, Carlsberg Laboratory, Copenhagen.

WILLIAM H. STEIN

Participant, Gordon Conference on Proteins and Nucleic Acids.

PAUL A. WEISS

Cleveland Foundation Lecture, Western Reserve University.
Lecture series, Universities of Belgrade, Zagreb and Sarajevo, Council of Academies and the Atomic Energy Commission of Yugoslavia.

Lecture, Istituto Superiore di Sanita, Rome.

Lecture, Zoological Station, Naples.

Lecture, Physiological Institute of the Sorbonne, Paris.

Other Appointments and Distinctions

EDWARD H. AHRENS, JR.

Advisory Council, *Journal of Lipid Research*.

Chairman, Metabolism Study Section, U. S. Public Health Service.

MERRILL W. CHASE

Program Chairman, Society of American Bacteriologists.

MAURICE S. FOX

Lalor Foundation Award.

JULES HIRSCH

Associate Editor, *Journal of Lipid Research*.

FRANK L. HORSFALL, JR.

John F. Lewis Prize Award, the American Philosophical Society.

RAFAEL LORENTE DE NÓ

Karl Spencer Lashley Award in Neurobiology, American Philosophical Society.

EUGENE L. OPIE

Jessie Stevenson Kovalenko Medal, National Academy of Sciences, for "Outstanding contributions to medical science and for a life of exemplary devotion to medical education and inquiry into the origins of disease."

NORMAN R. STOLL

Chairman, Editorial Committee, International Code of Zoological Nomenclature, London.

WILLIAM TRAGER

Associate Member, Commission on Enteric Infections, Armed Forces Epidemiological Board.

PAUL A. WEISS

Chairman, U. S. National Committee on the International Union of Biological Sciences.

Society Elections

EDWARD H. AHRENS, JR.

Member, Association of American Physicians.

JOHN B. BLAKE

Secretary-Treasurer, American Association for the History of Medicine.

JULES HIRSCH

Member, American Society for Clinical Investigation.

FRITZ A. LIPMANN

President-Elect, American Society of Biological Chemists, Inc.
Member, American Philosophical Society.

DAN H. MOORE

American Association for Cancer Research.

MONTROSE J. MOSES

Council, the Histochemical Society.

RICHARD E. SHOPE

Fellow, American Academy of Arts and Sciences.

WILLIAM H. STEIN

Chairman, Editorial Committee, American Society of Biological Chemists.

HENRY N. WOOD

Member, Harvey Society.

NORTON D. ZINDER

Member, Harvey Society.

INSTITUTE MENTION

New Appointments to the Faculty

DR. MENY BERGEL, Director, Laboratorio de Investigaciones Leprológicas, Rosario, Argentina, has been appointed a Guest Investigator, effective June 15, 1959, and will work with Dr. Dubos.

DR. OLGA O. BLUMENFELD, who works in Dr. Perlmann's laboratory, has been appointed a Research Associate.

DR. LAURENCE S. BRADHAM, an Instructor in the Department of Pharmacology, Vanderbilt University, has been appointed a Research Associate to work in Dr. Woolley's laboratory.

DR. PURNELL W. CHOPPIN, who works in Dr. Horsfall's laboratory, has been appointed a Research Associate and Assistant Physician to the Hospital.

DR. D. EUGENE COPELAND, Professor and Chairman of the Zoology Department, Tulane University, has been appointed a Guest Investigator in Dr. Porter's laboratory, effective July 1, 1959.

DR. NOEL DE TERRA, a U. S. Public Health Service post-doctoral fellow from the University of California, was appointed a Guest Investigator on April 15, 1959; she will work in association with Dr. Tatum.

DR. RENATA DIRINGER, from the Department of Biochemistry at the University of Toronto, has been appointed a Research Associate, to work with Dr. Perlmann.

DR. STUART D. ELLIOTT, formerly Assistant Director of Research in the Department of Animal Pathology, Cambridge University, was appointed a Guest Investigator in Dr. Lancefield's laboratory, effective July 1, 1959.

DR. JOHN W. ENSINCK, formerly a Graduate Fellow in the Institute, 1958-1959, has been appointed a Guest Investigator and Assistant Physician to the Hospital, effective July 1, 1959.

DR. JOSEPH F. HEREMANS, who was an Assistant at the St. Pierre Hospital, Louvain, has been made a Guest Investigator, and will work with Dr. Henry Kunkel and his associates, beginning July 1, 1959.

DR. GEORGE J. JACKSON, who has been associated with the Department of Microbiology at the University of Chicago, has been made a Guest Investigator, to work with Dr. Stoll, effective July 1, 1959.

DR. BERNARD JEANRENAUD, who has been in the Baker Clinic Research Laboratory of New England Deaconess Hospital, Boston, has been appointed a Guest Investigator and Assistant Physician to the Hospital. He will work in Dr. Dole's laboratory, beginning July 1, 1959.

GEORGE L. KAUER, JR., M. D., has been appointed a Consultant to the Institute, effective July 1, 1959.

DR. GEORGE B. MACKANESS, Member of the Council of the Australian National University at Canberra, and Reader in Experimental Pathology, John Curtin School of Medical Research, has been named a Guest Investigator; he will be with Dr. Dubos in his laboratory, beginning June 1, 1959.

DR. FRITZ MILLER, Associate Professor at the Pathologisch-Anatomisches Institut der Universität, Innsbruck, has been made a Guest Investigator, and will work with Dr. Dan Moore and Dr. Walther Stoeckenius, starting July 1, 1959.

DR. JANE H. MORSE, a Polio Research Foundation Fellow in the Bronx Veterans Hospital, has been appointed a Guest Investigator in Dr. Kunkel's laboratory, and an Assistant Physician to the Hospital, effective July 1, 1959.

DR. DANIEL NATHANS, who has been a Resident Physician at the Presbyterian Hospital, New York City, was appointed a Guest Investigator in Dr. Lipmann's laboratory, starting July 1, 1959.

DR. JOHN R. PAPPENHEIMER, of the Department of Physiology, Harvard Medical School, has been appointed a Visiting Professor of the Institute.

DR. LEE D. PEACHEY, a recent Graduate of the Institute's first class, has been appointed a Research Associate and will work with Dr. Porter in his laboratory.

DR. HOWARD RASMUSSEN, a Graduate of the Institute's first class, has been appointed an Assistant Professor and will have his own laboratory here.

DR. JOHN H. ROCKEY, who has been in the Department of Pathology, The New York Hospital, has been made a Research Associate and Assistant Physician to the Hospital; he will work with Dr. Henry Kunkel.

DR. JOHN K. ROSE, formerly a member of the 1957-1958 class of Institute Graduate Fellows, has been appointed a Guest Investigator and Assistant Physician to the Hospital, to work with Dr. McCarty in his laboratory, starting July 1, 1959.

DR. ERNESTO SCOFFONE, who has been Assistant Professor at the Istituto di Chimica Organica dell'Università di Padova, has been appointed a Guest Investigator; he has been working with Drs. Moore and Stein in their laboratory since May 8, 1959.

DR. LOUIS E. SILTZBACH, Associate Clinical Professor of Medicine, Columbia University College of Physicians and Surgeons, has been appointed a Guest Investigator and Visiting Associate Physician to the Hospital, to work with Dr. James Hirsch and Dr. Dubos on July 1, 1959.

DR. GEORGE R. STARK, who received his Doctorate from the Department of Chemistry, Columbia University, in June, has been named a Research Associate; he will work with Drs. Moore and Stein in their laboratory.

DR. NOBORU TAKAHASHI, of the First Department of Pathology, Tokyo Medical and Dental University, has been appointed a Guest Investigator and Fellow of the Institute, as of July 1, 1959; he will work with Dr. Dan H. Moore.

DR. JAMES F. WILSON, Professor of Microbiology and Physiology, Hartnell College, has been made a Research Associate in Dr. Tatum's laboratory.

Faculty Promotions

DR. ARMIN C. BRAUN, formerly an Associate Professor in Plant Pathology, has been made a Member and Professor.

DR. ZANVIL A. COHN, a Research Associate in Dr. Dubos's laboratory, has been appointed an Assistant Professor.

DR. ROBERT E. FRANZL, a Research Associate in Dr. McMaster's laboratory, has been made an Assistant Professor.

DR. SEYMOUR J. KLEBANOFF, formerly a Research Associate in Dr. Archibald's laboratory, has been appointed an Assistant Professor.

DR. JOHANNA M. LEE, a Research Associate in Dr. Schneider's laboratory, has been made an Assistant Professor.

DR. DAVID C. MAUZERALL, a Research Associate in Dr. Sam Granick's laboratory, was appointed an Assistant Professor.

DR. PHILIP SIEKEVITZ, formerly an Assistant Professor in the laboratory of Drs. Porter and Palade, has been made an Associate Professor.

DR. WALTHER STOECKENIUS, who has been a Research Associate in Dr. Porter's laboratory, has been made an Assistant Professor.

Newly Appointed Graduate Fellows

ALAN R. ADOLPH, Stanford University and Massachusetts Institute of Technology.

THOMAS P. BENNETT, Florida State University.

PAUL R. BURGESS, Reed College and Oxford University.

ARTHUR H. BURR, JR., Hamilton College.

STEPHEN COOPER, Union College.

MARC ESTRIN, Queens College.

ALAN FINKELSTEIN, Washington and Jefferson College, and Yale University School of Medicine.

JAMES W. FRISTROM, Reed College.

PETER J. GOMATOS, Massachusetts Institute of Technology and The Johns Hopkins School of Medicine.

GUIDO GUIDOTTI, Millikin University and Washington University School of Medicine.

BRUCE S. MC EWEN, Oberlin College.

W. CAREY PARKER, Princeton University and Oxford University.

JAMES H. SCHWARTZ, Columbia University and New York University College of Medicine.

CAROLYN WALCH, Swarthmore College and The Johns Hopkins University.

CECIL C. YIP, McMaster University.

INSTITUTE MENTION

(continued from page nineteen)

Faculty Terminations

- DR. CARLO BRUNI, who worked in Dr. Porter's and Dr. Palade's laboratory as a Guest Investigator, left on May 15, 1959, and is now at The Johns Hopkins University.
- DR. LUIZ F. M. COSTA, formerly a Guest Investigator in Dr. Csapo's laboratory, left the Institute on April 30, 1959, to return to the University of Bahia where he is Associate Professor in Physiology.
- DR. PETER ELSBACH, a Research Associate in Dr. Dole's laboratory, left the Institute on July 1, 1959, to be an Instructor at New York University-Bellevue Medical Center.
- DR. E. MYLES GLENN, a Guest Investigator who worked in Dr. Csapo's laboratory, left on April 30, 1959, to return to the Upjohn Company where he is a Research Investigator in the Department of Endocrinology.
- DR. ERHARD GROSS, who was a Guest Investigator in Dr. Craig's laboratory, left on May 15, 1959, to return to the National Institutes of Health where he is a Visiting Scientist.
- DR. HERMANN J. HAAS, a Research Associate in Dr. Weiss's laboratory, left on July 1, 1959, and is now in the Department of Zoology, University of Minnesota, in Minneapolis.
- DR. SYLVIA FITTON JACKSON, formerly an Assistant Professor in Dr. Weiss's laboratory, resigned July 1, 1959, and has returned to the Medical Research Council, Strangeways Research Laboratory, Cambridge University.
- DR. ELEANOR R. LAPPANO, who was a Research Associate in Dr. Weiss's laboratory, left the Institute on June 30, 1959, and is now in the Department of Pathology, Downstate Medical Center, Brooklyn.
- DR. ALEXANDER G. MATOLTSY, who was an Assistant Professor in Dr. Weiss's laboratory, resigned May 19, 1959, and is now Head of the Department of Research Dermatology, Jackson Memorial Hospital in Miami.
- DR. ALISON A. NEWTON, a Research Associate in Dr. Horsfall's laboratory, left June 30, 1959, to return to the Department of Pathology, Cambridge University.
- DR. LORRIN A. RIGGS, a Guest Investigator who worked in Dr. Hartline's laboratory, left June 30, 1959, to return to Brown University as Professor of Psychology there.
- DR. TOSHIO SAKAI, who worked in Dr. Csapo's laboratory as a Guest Investigator, returned to the Department of Physiology, School of Medicine, in Tokyo, May 31, 1959.
- DR. IRA SINGER, a former Research Associate in Dr. Trager's laboratory, resigned on June 30, 1959, and is now an Associate Professor in Bacteriology at the School of Medicine, Georgetown University.
- DR. FABIO SPARATORE, who worked in Dr. Sam Granick's laboratory as a Research Associate, left the Institute in May 1959, to be at the Istituto di Chimica Farmaceutica, Genoa.

- DR. ROBERT S. STONE, a Guest Investigator in Dr. Dan Moore's laboratory, left on June 30, 1959, to be with the Atomic Bomb Casualty Commission in Hiroshima.
- DR. HARRIS H. TALLAN, who was an Assistant Professor in Dr. Moore's and Dr. Stein's laboratory, left the Institute on June 30, 1959, and is now a Biochemist in the Geigy Research Laboratory, Ardsley.
- DR. FREDERICK D. VIDAL, formerly an Assistant Professor in Dr. Lorente's laboratory, resigned as of April 15, 1959.

Visiting Professors in Residence

- DR. RAGNAR GRANIT, Professor of Neurophysiology, Karolinska Institute, and Director of the Nobel Institute for Neurophysiology, April 6-13, 1959.
- DR. LUDWIG EDELSTEIN, Professor of Humanistic Studies, The Johns Hopkins University, May 10-15, 1959.
- DR. H. GOBIND KHORANA, Head, Organic Chemistry Section, British Columbia Research Council, University of British Columbia, June 24-26, 1959.

Guest Speakers

- EMIL L. SMITH, Professor and Acting Chairman, Department of Biological Chemistry and Research Professor of Medicine, University of Utah College of Medicine, Salt Lake City, April 7, 1959.
- F. LYNEN, Professor of Biochemistry, Max-Planck-Institut für Zellchemie, Munich, and University of Munich, April 21, 1959.
- CLAUDE E. SHANNON, Donner Professor of Science, Massachusetts Institute of Technology, April 28, 1959.

Guest Seminar in Medicine

- D. F. STEWART, Officer-in-charge, McMaster Animal Health Laboratory, Commonwealth Scientific and Industrial Research Organization, Sydney, April 22, 1959.

New Grants and Contracts

- From the National Foundation in support of Dr. Igor Tamm's efforts to elucidate certain aspects of biosynthetic processes, etc. \$85,550
- From the American Cancer Society for the work being done by Dr. Weiss on experimental analyses of cellular interactions in growth and differentiation \$10,235
- From the Carnegie Corporation of New York for summer courses in biology for high school students \$35,000
- From the National Science Foundation for Dr. Gertrude Perlmann's studies on protein structure \$1,900
- From the New York Society of Electron Microscopists to assist in compiling an International Bibliography of Electron Microscopy \$3,000

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Inquiries, comments and suggestions should be addressed to Mr. Charles I. Campbell, Editor,

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