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THE NEXT FIFTY YEARS[1]

By President ROBERT M. HUTCHINS

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THE task which Mr. Harper and his associates set themselves fifty years ago was that of organizing a university. To them a university was, like the German university of that time, an institution dominated by the spirit of inquiry. The characteristic activity of its professors was research.

The task involved selecting men qualified for research, giving them facilities for it, assembling students who could take part in it, and erecting that protection of academic freedom about it which, in the bad old imperial days, guaranteed the independence of the teaching and investigations of the German professor.

[1] An address delivered at the Fiftieth Anniversary Convocation of the University of Chicago on September 29.

The University of Chicago was a university the day it opened. We are now so used to universities that we are apt to think that this achievement, though doubtless unusual, was not very remarkable. We are apt to think that all it required was money and that anybody could have done it if he had had the money that was available to the organizers of the University of Chicago.

But the money was not available. Mr. Rockefeller's original pledge was for $600,000, and it was conditional on the raising of $400,000 more. We later became so used to great gifts for universities that we now suppose that all the participants, including Mr. Rockefeller, must have expected him to give the enormous sum of $35,000,000 which he did give by 1910. But

in 1891 all the funds of Harvard amounted to not much more than seven millions. All the university had fifty years ago was a contingent pledge of $600,000. The courage of Mr. Harper and his colleagues must be measured by what they had.

Within the memory of living men there was no such thing as a university in this country. Graduate instruction had begun at Yale in the seventies. Harvard was getting under way. But neither was a university, as Chicago understood it, in 1891. Clark, which was having difficulties which Mr. Harper did nothing to alleviate, and Johns Hopkins, which had started fifteen years before, were the only American universities in the Chicago sense. Mr. Harper had originality as well as courage.

The founders succeeded in what they set out to do. They won the battle they fought, and we are the beneficiaries of their victory. We take universities as a matter of course. Even the taxpayers are now willing to support institutions which Mr. Harper would have recognized as great universities. The American university is established.

To the question, "When you get your organization, what are you going to do with it?", the founders of the University of Chicago replied, "We are going to conduct research with it." To say that this answer is unsatisfactory is not to depreciate the accomplishment of those who gave it. It was satisfactory then. American education had begun to suffer from premature senescence. It was rejuvenated by the spirit of inquiry. That spirit, too, has produced the brilliant achievements of American scholarship, which alone justify the toil and treasure that have been lavished upon the American universities, the popular devotion they have commanded, and the faith of the founders of the University of Chicago.

The time of the founders was one of conscious or unconscious agreement upon the ultimate foundations of society and the ultimate purposes of the individual. Though men differed sharply, they differed not so much about their destination as about the methods of arriving at it. They would have been shocked to hear from any responsible person that morality was a matter of opinion, the state an end in itself or God the product of wishful thinking. They did not need to heed the warning of Socrates that the unexamined life was no life for man, because the examination had been conducted long before, and its results were imbedded in the tradition which guided the daily action of men. The American university did not need to reformulate the ideals which should animate mankind, and still less to suggest that ideals were important. All that was needed, men thought, was more knowledge to enable them to reach the goals which they more or less clearly had before them. The University of Chicago was founded to provide that knowledge. It was to supply the means to improve a civilization the main lines of which were laid down and the aims of which were taken for granted by those who enjoyed its blessings.

In those areas in which the last half century has brought no change in the fixity and clarity of beliefs the American university has surpassed the highest hopes of its founders. People still want material goods; and through the natural sciences we can now produce a range and luxuriance of such goods that would embarrass a Roman emperor. People still want health; and through the American university we may sometime achieve a longevity comparable to that of the heroes who flourished before the Flood. Wherever we know what we want, wherever we want it badly enough, the knowledge acquired by research can help us get it.

But no matter how we may struggle to deceive ourselves, we vaguely feel that bodily goods and external goods are not the ends of life. They are means to other goods beyond them. Now we no longer join in conscious or unconscious agreement on the nature and existence of the other goods beyond. The last half century has substituted confusion and bewilderment for the simple faith in which Mr. Harper, Mr. Rockefeller and their collaborators embarked upon their enterprise at Chicago. That civilization which we thought so well established seems on the verge of dissolution. The religious belief which led the Baptists to found this university does not sustain its constituency to-day. Instead of feeling that we were born with a common inheritance of ideas about the purpose of the state and the destiny of man, we listen to competing affirmations of contradictory positions on these issues without being able either to accept or deny them in a manner satisfactory to ourselves. Confronted by the great question of peace or war, we can not make up our minds what we want to defend, why or how. Though the death rate is declining, we do not know what to do with our lives.

Since we are confused about ends, we do not know how to employ means. Though our means of improving the material conditions of existence exceed those of any previous generation, we could not use them, in the great depression, to save our fellow-citizens from starvation and despair. The means of improving the material conditions of existence are now diverted to the extermination of mankind on a grander scale than ever before.

Gibbon, in his celebrated chapter summarizing the reasons for the fall of the Western Empire, relieves the fears of Europe by saying that there will never be another barbarian conqueror. His reason is simple. War now requires the knowledge of a large number of arts and sciences. Hence to excel in war the barbarian must cease to be barbarous. Since man first

discovered how to master the forces of nature all history has been tending toward this goal. Gibbon's final remark is, "We may therefore acquiesce in the pleasing conclusion that every age of the world has increased and still increases the real wealth, the happiness, the knowledge and perhaps the virtue of the human race."

The conclusion is pleasing; the premise is false. Professor Nef's researches show that the rate of increase of real wealth is rapidly declining. Though knowledge has grown from more to more, happiness and virtue have not. And we see that a barbarian conqueror equipped with knowledge is more barbarous, as well as more dangerous, than any of his unlettered predecessors.

The centrifugal forces released through the dissolution of ultimate beliefs have split the universities into a thousand fragments. When men begin to doubt whether there is such a thing as truth or whether it can ever be discovered, the search for truth must lose that precision which it had in the minds of the founders of the University of Chicago. If we doubt whether man is rational, we can not lightly put our trust in the exercise of reason. And if the traditional notion of freedom, when dragged up out of our subconscious, looks less impressive than we had always supposed it would; if we think on the one hand that freedom is doing as one likes, and on the other that man is a mere automaton, free inquiry ceases to be that infallible guide to terrestrial salvation which Mr. Harper thought it was. After fifty years we must confess that the beacons established to illuminate the pathway of our people give a light that is flickering and dim. The universities, instead of leading us through the chaos of the modern world, mirror its confusion.

If we are to do for our own day what the founders of the University of Chicago did for theirs, we shall have to continue what they did, and we shall have to do something more. We shall have to recapture, revitalize and reformulate for our time the truths which gave purpose and significance to their work. We are in the midst of a great moral, intellectual and spiritual crisis. To pass it successfully or to rebuild the world after it is over we shall have to get clear about those ends and ideals which are the first principles of human life and of organized society. Our people should be able to look to the universities for the moral courage, the intellectual clarity and the spiritual elevation needed to guide them and uphold them in this critical hour. The universities must continue to pioneer on the new frontiers of research. But to-day research is not enough either to hold the university together or to give direction to bewildered humanity. We must now seek not knowledge alone, but wisdom.

This is what the University Grants Committee of England meant when it said: "Here arises the responsibility of the universities. They are the inheritors of the Greek tradition of candid and intrepid thinking about the fundamental issues involved in the life of the individual and of the community, and of the Greek principle that the unexamined life is no life for man."

Candid and intrepid thinking about fundamental issues—in the crisis of our time this is the central obligation of the universities. This is the standard by which they must be judged. This is the aim which will give unity, intelligibility and meaning to their work. This is the road to wisdom. Upon that road the American university will regain its own soul and bring hope and comfort to a distracted world.

HYPOTHESIS AS TO THE ORIGIN OF COSMIC RAYS AND THE EXPERIMENTAL TESTING OF IT IN INDIA AND ELSEWHERE[1]

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THE hypothesis here adopted as to the mode of origin of the cosmic rays makes possible the prediction of five definite vertically incoming cosmic-ray bands. As the observer moves north from the magnetic equator each of these five bands should begin to reach the earth at a particular latitude and continue reaching it at all more northerly latitudes. Between each latitude of first entrance of a band of particular energy and the latitude of first entrance of the band of next lower energy there should be found a plateau of constant vertically incoming cosmic-ray energy. Four such plateaus should be experimentally observable.

The hypothesis rendering possible these predictions rests upon five major discoveries made by the workers in the Norman Bridge Laboratory of Physics at the California Institute at Pasadena. These discoveries are (1) that more than 60 per cent. of all incoming cosmic-ray energy is of the nature of incoming

[1] From a symposium celebrating the Fiftieth Anniversary of the University of Chicago, the American Association for the Advancement of Science collaborating.