

The Educated Man

An Inaugural Lecture

GIVEN IN THE UNIVERSITY COLLEGE OF
RHODESIA AND NYASALAND

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*An inaugural lecture
given in the University College of
Rhodesia and Nyasaland*

by

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THE EDUCATED MAN

ANIMALS do not organize schools or universities, but neither do they ever know those unpleasant feelings that assail a man when he enters an examination hall. Animals do not write books, but neither do they have to read income-tax forms; they do not work in laboratories, but are blissfully unaware that their future is threatened by the hydrogen bomb; they do not paint pictures, but remain undisturbed by the vagaries of modern sculpture; they do not vote, though in herds they are generally well led; they never take part in philosophic argument, but, except at rare moments, achieve long periods of philosophic calm. Literature, science, art, politics, and philosophy are specifically human activities, and a man can only be called educated when his mind moves with some facility in all five worlds.

A university today, in spite of the fact that it is concerned with universal knowledge, is often thought of as a place of narrowly specialized studies. Yet a person cannot be called educated unless he is endowed with a sense of proportion such as flows from a perception of the wholeness of knowledge. The deep and vigorous study of a particular subject may be one way to acquire this sense of the whole, for if roots go deep enough, then the sap of the tree of life itself rises up into the mind. But, even so, with depth of study must go also a degree of interest in the five main branches of human knowledge: literature, science, art, politics, and philosophy.

In this lecture I want to glance at each of these branches in turn and to ask in what way each contributes to the development of the educated mind.

These are pre-eminently the studies to which a university

hopes to introduce its undergraduates, and it will be a pity if any undergraduate of this University, however specialized or utilitarian his study, left its halls without having had his mind quickened in all five directions.

In a few months' time the first undergraduates in its history will enter this University and jointly with their teachers begin to contribute to the life of the Federation. It may therefore be necessary to utter a word of warning. No country that embarks upon the venture of setting up its own university can ever be the same again. This University in the Federation, through its Royal President, its Charter, its teachers, and its association with the University of London, is the inheritor of the traditions that have accumulated since the first small bands of students gathered together in the medieval universities of Europe. Throughout the long, complicated, and often tragic history of civilization in Europe, one of the three great authorities obeyed by the minds of men was the university. Universities were often, and particularly during periods of crisis, the keepers of the intellectual conscience of mankind. They reminded men, whilst many were still uneducated and some even primitive, that there are certain presuppositions of thought that demand obedience and certain standards of excellence that must never be dethroned. It is for this reason that many who were nurtured in her universities became great leaders of European thought and action. Sidney and Raleigh at Oxford, Bacon and Marlowe at Cambridge were typical of the men of the sixteenth century whose adventurous minds and wide interests produced in that century such a flowering of the spirit and such renewal of life. That was a critical century in English history. The survival of an uneasy association of the three peoples of Wales, England, and Scotland was by no means assured.

The present century is a critical one for Rhodesia, also composed of three territories as yet incompletely welded into a single whole. Rhodesia today, as England three centuries ago, needs leaders who will look beyond party or race to the good of the Federation. The Federation is now committed to as difficult an enterprise as any territory in the world. It has to dissipate natural and deeply rooted fears. It has to ensure firm and civilized government whilst steadily enlarging the region of participation in it. It has to bring together for the common good the work and gifts of peoples of utterly different backgrounds and history. For such an enterprise, balance of mind and width of judgement are needed in exceptional degree, and if a university can give these gifts to some of its sons then it will have helped the country that created it at a critical time.

LITERATURE

It is significant that the first rooms in this University to be occupied were those used by its Library staff. The Library is the centre-piece of the first block of buildings and has been central to much planning. This is as it should be, for, notwithstanding the advances of modern science, books are still the main tools of thought in a modern university. We have remembered Shakespeare's words: 'He that hath never fed of the dainties that are bred in a book, he hath not eaten paper, as it were, he hath not drunk ink; his intellect is not replenished, he is only an animal, only sensible in the duller parts.'

The modern novelist, Graham Greene, wrote of his early years, 'I remember distinctly the suddenness with which a key turned in a lock and I found I could read—not just sentences in a reading book—but a real book—and when I took Miss Bowen's *Viper of Milan* from the

library shelf, the future, for better or worse, had really struck for me. I decided to become a writer.'

We extend our experience by reading what others have to tell us, as we learn to think by trying to make our meaning clear to others by writing. The modern poet, Stephen Spender, might have been speaking of the university undergraduate when he wrote:

And let their tongues run naked into Books
The white and green leaves open
The history theirs, whose language is the Sun.

All students, and not merely the specialist students of language, need to be in contact with books, for the world of language and books is not only one in which men learn to communicate with each other, but also, and this is perhaps more important, it is one in which they learn to bridge the strange gulf between the worlds of matter and spirit. Let me explain how this is so. All symbols take us a few steps away from the purely material world—even visual symbols like the handshake, the curtsey, and the smile do this—but words do so most effectively. For example, when we come down to breakfast in the morning, our words may be at the dull material level of signalling. So we may say 'marmalade' and a piece of matter may be moved from place *A* to place *B*. But as soon as we say 'Marmalade, please' we have advanced a little into the world of spirit, for we are in contact with personalities with the god-like gift to accept or to refuse. It is not many steps from this simple analysis to that most penetrating analysis of the powers of verbal symbolism elaborated by the philosopher Whitehead. He showed that words, literature, and above all poetry, enable man to link together two profound experiences, apparently contradictory, but both of which he

recognizes intuitively as having a profound truth. There is first of all our experience of the immediate vivid material world, presented to us, instant by instant, gay with a thousand tints and sounds, but transitory, passing, and empty of meaning. We all know this experience, but together with this, and recognized as equally true, is our experience of the inextricable relatedness of things, of the haunting interplay of cause and effect, and the long filiations in history of good and evil. In moments of insight we can see, beyond the empty and transitory present, certain inescapable and eternal laws and values written indelibly in the universe and in human nature, and such moments of insight increase as we allow great literature to influence our minds.

Even in a negative way we can see the importance of this truth. It can happen in the modern world that whole societies grow increasingly illiterate, and when this happens their loss of a sense of absolute values can be very dangerous. In this case man's inherent and unquenchable longing for perfection, unassuaged by creative developments in literature, leads him to the invention of material Utopias. The perfect state, he thinks, can be created on this earth although always in the future. Futurism then becomes a philosophy and allows man to sacrifice without a qualm the happiness of individuals now living to the illusory dream of a perfect society to be established in years to come. This was the Nazi dream and it is the Communist dream. Such dreams lead to a terrible awakening.

Great literature, on the other hand, accepts man's intimations of immortality but shows him that the perfect is not something that lies only in the future; it is something that can be seized now by creative effort. In this, literature rises to the religious level, for it suggests that eternal life is a

gift to be granted now and that it begins whenever man strives to express his longing for the Absolute by the transfiguration of the material conditions of life or the development of human relationships based on love. By his grasp of symbols and his powers of rational thought man can develop universal ideas. He can visualize perfection and begin to move towards it. So he can set a critical value on his own condition and strive after his own improvement. This struggle towards perfection develops a quality which the Greeks realized to be essential in all good education. It is what today we should call the quality of rigour and discipline in study. For this the Greeks used the word *arete*, which is best defined by a few lines from one of their own poets:

Arete dwells in cliffs that are hard to climb
 A pure choir surrounds her
 Nor can she be seen by all eyes
 But only to him who knows
 The sweat that stings the heart.

This essential possession of the educated mind, the power to follow difficult and disciplined study, comes only to him who has experienced the feel of 'the sweat that stings the heart', and this comes quite often to those who have chosen to follow the disciplines of language or science.

SCIENCE

Plato put at the entrance to his Academy, 'Let no one uninstructed in mathematics enter here.' In the modern world, which is so greatly influenced by science, the educated man must live largely in blinkers if he is ignorant of mathematics and its imaginative expression in science.

Mathematics is often thought of as a particularly specialist and utilitarian study, of interest only to a very

few rather queer individuals. But it is not in essence a utilitarian study at all. It has been defined, quite accurately, as the study of patterns of ideas by the use of methods believed to be infallible. That may seem a strange definition, but you can see how true this is if you consider the history of the growth of arithmetical knowledge. So long as man was limited to counting on his fingers or on an abacus, trade, commerce, and invention were unable to develop. It was only after the Indians and Arabs had made the brilliant discovery of the usefulness of zero that all the operations of addition, subtraction, division, and so on were simplified by the use of rows and columns in patterned arithmetic. This was the beginning of mathematics, and of science, and it held in it the seeds of great future advances in civilization.

The fact is that the interest in number is a very natural human interest, as can easily be seen in a country like England, where railway stations and roads are at places crowded with children of nine or ten years of age recording with immense concentration the numbers of railway engines and motor-cars. This natural love of mathematics can easily be, and often is, killed in the child because he is not so thoroughly grounded in the fundamentals that he is nearly perfect in skill and so moves with great confidence in the world of mathematical symbols. Failure in mathematics is generally not a failure in capacity but a failure in confidence. Children, at whatever level they can work, need to be taught so that they can get all, or almost all, of their sums habitually right, and if they are not, they grow to dislike mathematics.

It can be seen that man was obviously intended to be a mathematical animal, because having ten fingers he quickly invented the decimal system of notation. From

this it was not a big step to the invention of logarithms, by an Englishman, Napier. Logarithms led on fairly naturally to a study of functions and so on to the differential and integral calculus, and then the whole ambitious flight of modern mathematics and its growth as the handmaid of modern science was possible.

It is true enough that much in modern science is incomprehensible without a knowledge of mathematics, but its broad truths and general trends should be known to all educated men. There are in particular two movements in modern science which should be known because they show that new scientific truth is beginning to thrust deeper roots into a subsoil of thought at present only partly uncovered.

A single example will suffice to show how close the study of physics draws to many other departments of knowledge.

The modern neurologist, in carrying out his researches on the surgery of the brain, has found that in order to make progress he has to study in the unlikely field of the mathematics of rocket-propulsion. This is not so strange as it sounds. A guided missile, fitted with an electronic direction-finder, may be set so as to follow an enemy aircraft. The process of trial-and-error by which it does this is very similar to the way in which the brain acts in controlling, for example, the muscles of the leg of a climber negotiating a difficult rock. So the neurologist gets much help from the engineers of rocket-propulsion.

The second movement in scientific thinking is also profound and revolutionary. Scientific thought for the first fifteen centuries of European life was very much influenced by Greek mathematical thinking, which was deductive in character and of the same type as that we are familiar with in geometry. The process of thought in this kind of reason-

ing is from axioms invented by the mind to the practical operations of nature, and the general result of this, unfortunately, is to discourage experimental science. It is true that the conclusions of deductive science might be tested by experiment, but if these conflicted with the perfection of axiomatic doctrine then experimenters would be branded as dangerous heretics.

At the Renaissance, Galileo appeared and insisted on dropping weights from the leaning tower of Pisa, then Gilbert came with his lodestone to help the intrepid navigators of his century, and Harvey with his unromantic notion of the heart as a pump. These and many others developed inductive science, in which the scientist goes first to nature, collects facts, builds a laboratory and collects more facts, and then examines them all to see if some regularity or network of relationships can be established and described. If it can, then a hypothesis will be developed to explain the facts. No sooner is a hypothesis invented than it stimulates scientists to test it by experiment. If it survives the most rigorous tests it will be expressed in a generalization assumed to have universal validity and then it will be called a scientific Law. Such Laws are most useful, for they enable predictions to be made about the future, and to be able to predict the future is in a large measure to be able to control it. The continuing urge in all this inductive work is towards experiment and more experiment, and the flow of ideas is always from experiment to theory. This kind of scientific thinking has held the field for three centuries, but now there are signs of a new flow in the opposite direction. In the early years of this century great advances were made following the discovery in the laboratory of particles of matter called protons and electrons. Even these were too small actually to

be seen even by the best microscopes. But in a chamber full of moist air they made clear tracks similar to the cloud tracks now made in blue sky by high-flying aeroplanes. From these tracks information could be found about the mass, velocity, and other properties of the particles, and from all of this far-reaching atomic theory developed.

Now, in the later years of this half-century, there has been a spectacular reversal of the use of inductive methods in atomic physics. The particles which have played such a crucial role in the discovery of atomic energy, such as the positron, the neutron, and the meson, have not been discovered by experimental observation at all. Theories of atomic structure led to the writing down of certain mathematical equations and by looking at these it was possible to see that, if they were to make sense, there must exist particles of a nature that could be predicted. One by one, experiments were devised which actually revealed the existence of the particles predicted. Here the flow of ideas, for the first time since the Greek period, is from theory to practice, from the pattern of ideas to the machinery of the laboratory. It is deductive thinking and it indicates that a movement of thought set going at the Renaissance has come full circle and that we are now at the beginning of a quite new phase in scientific thinking. It is this that will make the study of science, for the generation now entering universities, so exciting and so rewarding a study.

ART

To turn from science to the world of art is to turn from a world of cold abstraction, if of brilliant imaginative power, to a world more easily understood because it is concerned with the concrete and often warmed by the influence of human personality.

We can easily distinguish between the significance of a motorist sounding his horn and an artist like Léon Goossens playing a solo on his oboe. The motorist operates in a material world of objects and sounds his horn in order to tell us where certain pieces of matter are likely to be at certain times. We do not listen to Goossens in order to know where he is, or for any other material reason, but because he takes us into a different world from the world of objects, a spiritual world.

This new world, not like science stating, but nevertheless revealing Truth, is a world of ideas, of personality, and of the struggle to express meaning by the transfiguration of matter. It is above all a world of continual creativity. The artist uses this pigment or that, the musician uses this succession of notes or the other, for no other reason than that he so chooses in his creative freedom.

The potter at his wheel begins to make a pot under purely utilitarian impulses, until the feel of the clay and the motion of the wheel release creative impulses so that he begins to give to his clay some form or ornamentation that is expressive of his own joy in creative work. Ever afterwards the joy that he felt can be reborn again in the minds of those who look on his work. This is the common experience of all who create or enjoy works of art. The chairs made by Chippendale are not just signals to a potential sitter; the music of Mozart is not just a therapeutic noise; these body forth truth, and help us to bridge the gulf between the visible and the invisible worlds, tied as we are to the first by our senses and the second by our ideas.

When the artist is absorbed in his work and the cutting edge of his mind is looking into the future, he may be unaware of the passage of time. Art that is creative and not

reproductive is the result of a multitude of small choices, made continually by the artist as his work proceeds. For these reasons, artists need great freedom and much leisure. There is a connexion here between leisure, art, and education. It is not without significance that our word 'school' is derived from the Greek *Schole* which means leisure. In schools and universities the development of work in the creative arts in an atmosphere of freedom and leisure must always be an important part of their educational work.

It may, therefore, be no bad thing that for reasons of poverty this University College cannot at first include in its work any of the formal, examined studies of the creative arts. This situation will force many of us who are very sensible of the great value of this aspect of education to develop in other ways those creative arts which contribute to the enrichment of community life. This is of great intrinsic value and in addition it can be predicted that unless the technical, disciplined, and utilitarian studies of the university are irradiated by the free creative spirit that blows freshly only where interest in the Arts is strong, then they, themselves, will become dull, uncreative, and in the end meaningless.

Artists are not generally politicians and this is probably good both for politics and for art, but nevertheless there is a link between art and politics. Roger Fry, the art critic, maintains that all great art is strongly marked by two very different qualities: the quality of order and the quality of spontaneity. The drawings of children and primitives are strongly marked by the regularity of their patterns. Rhythm in music and proportion in architecture are representative of the same quality in other arts.

Equally, the element of surprise, of the unexpected, of the spontaneous, is an essential element in great art—as

when the regularity of the form in a Bach fugue may be delightfully interrupted by the unexpected reversion of the theme—or the regular mathematical lines of a modern block of flats are broken by the almost humorous decorativeness of a line of balconies.

POLITICS

So also, in politics, good government must reconcile order with spontaneity, social harmony with social change, and tradition with freedom. Everywhere in social life is the need for the preserving savour of salt and the lightness of leaven. Good government is based on the desire to extend simultaneously firm, responsible, ordered government and also to set free the initiative of individuals and of responsibly organized groups.

A basic study, therefore, in the study of politics is that of Law. Law, in a civilized state, is not just a codified set of rules. It is both the expression of those safeguards necessary to preserve social harmony and also of those necessary to preserve fundamental human rights. For this reason the Law itself and the means for its enforcement must rest on beliefs and on a constitution that places it outside the changing political structure of a state. This is the difference between the police and the democratic state. In one, the Law is the creature of politics and in the other it is not. Ultimately, this difference goes very deep, for, in the last resort, that element in democratic laws which exists to protect the rights of the individual rests upon the religious conviction that every man is a son of God and of infinite worth.

The study of Law, Economics, Political Science, Sociology, Anthropology, History, and Education are all part of the university study of politics because, in different ways,

they all explore this creative venture in government to achieve both order and freedom. Such studies, pursued in this University, cannot but have a profound relevance to the problems posed by social advance in the Federation of Rhodesia and Nyasaland.

In the first place, there is here in the Federation a relatively small group of Europeans who, in a short time, judged by the centuries of history, have courageously established over large and intractable areas the network of an orderly and uncorrupt government. The law stands outside of politics; human freedoms are secured and privilege is not bought and sold. But this apparatus of civilized control, fragile even in Europe, here in Africa floats upon and is surrounded by pagan and uncivilized modes of thought that can quickly strike up through the veneer of civilization with demonic force. It is not surprising, therefore, that at times, to many, the only really important thing seems to be to hold and defend the fortress of the civilized life. One recalls the words of the American poet S. V. Benet, speaking of the words and language of civilized government:

I am merely saying—what if these words pass?
 What if they pass and are gone and are no more,

They were bought with the bitter and anonymous blood
 Of farmers, teachers, shoemakers and fools

It took long to buy these words.
 It took a long time to buy them and much pain.

In a university this sense of debt to the past and of dedication to the preservation of the values of civilized life must be deepened and strengthened, and this, indeed, is one of its prime aims.

Yet caught up in this process of civilization are the African peoples of this Federation—uprooted from their own old life, but not fully accepted in the new. Anxious for friendship, insecure and unsettled, they ask, generally inarticulately, for a place and a settled future in the new life which they half reach up to and half react away from, back to their old life. Yet they desire most keenly to find a foothold in a country that needs their loyalty and is in their debt.

Here, then, is a dual insecurity, and a dual task, which will take time, patience, and much devoted service if fears and insecurities are to be dissolved or immediate and long-term problems to be solved. In a university, economists, historians, and educationists, working together, may make their contribution to the solution of problems that can never be easy in Africa but that need not be made more difficult by bitterness or misunderstanding.

PHILOSOPHY

In the modern world we all labour to find roads through the confused tangle of modern life, in the form of clear ideas and convictions concerning the nature of things. Universities, therefore, are bound to interest themselves in the great themes of the day and to assert themselves as one of the great spiritual powers of a nation, raising man up to the height of his times. From this it follows that, in addition to professional training and research, a university must be concerned with the spreading of general enlightenment. Its graduates must go out aware of the essential ideas that move their contemporary world, mature in understanding and with a strong purpose in life.

Philosophy, in this sense of general enlightenment, and not just as one of a number of specialist subjects in an Arts

course, is an essential university study. This means that the student, in addition to all the trouble he must take to increase his knowledge and skill in many directions, must be helped to relate new knowledge to some centre of thought which can give coherence to what would otherwise be confusion. This is not always easy in the age of intellectual confusion in which we live. The educated man has to work hard to find some road of positive conviction through the tangle of modern thought. But by the end of a university course, growing awareness of scientific truth can lead a man to see that a world of value exists outside of the minds that experience it. The overriding orderliness of the physical universe can also point to the existence of some entity interlocking its constituents into a unitary whole. So, in the end, he can come to relate his own humble purposes to a universal purpose: the purpose of a mind which, like ours, is concerned to realize value, but which, unlike ours, is neither limited nor mortal.

At this point, philosophy reaches up to theology, and theology leads on to worship. Theology and worship are both part of the life of the educated man, and this is symbolized here, in the University grounds, by the place set aside for the College Chapel. This lecture has been concerned with the gifts and qualities of the educated man; but it must be admitted, even if reluctantly in these academic surroundings, that he has also a besetting sin, the sin of intellectual pride. It is only in moments of self-understanding during worship that he is helped to shed his pride before the vision of the creative power of God. At such times also he sees that all knowledge, however apparently wide and extensive, only gives to mortal man a few fleeting glimpses, through the dark glass of the temporal, of the brightness of the eternal.



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