

THE UNIVERSITY - CONCEPT AND REALITY

Mr. Chairman, Ladies and Gentlemen,

Traditionally, the Arts and Science Week is a time when The University is "At Home" to the public. We as members of the university also have an opportunity to be exposed to academic pursuits other than our own specialities, and to consider problems and questions covering a broader perspective than we normally encounter in the lecture room. That the organisation is firmly in the hands of the students is one of the most cherished traditions of the week. It virtually guarantees that exciting issues will be discussed and that a sense of personal involvement on the part of the student body in general can be expected.

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This year an additional dimension is present in that the Staff Association has also entered the arena by co-sponsoring a series of four symposia in which we as a university community are holding ourselves up for reflective self-examination. Two of these symposia have already taken place, and during the ambit of the Arts and Science Week proper the remaining two will find their setting. The basic theme "The University: Concept and Reality" is heavily dependent on the material of these symposia.

There is always a sense of foreboding and apprehension when either an individual or an institution undertakes an explicit self-examination, albeit an unofficial one, as in the present case. Such

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an examination implies that we are less than perfect, and that the possibility of change must be faced in order to correct acknowledged short comings. This is always a painful process, like the periodic visits to the dentist that those of us who are still in possession of our own teeth must be prepared to undergo. Two extremes of attitude, both indicative of a certain immaturity, must be guarded against. The first and most obvious is that this process of self-examination and stocktaking is so painful that we put it off indefinitely (or even worse, we cannot even bring ourselves to acknowledge that there is any need for it). The second, and more subtle danger is that we become so obsessed with self-examination that we spend an inordinate time on the process, to the point that we are so paralysed by self-doubt and lack of confidence in what we are doing that we become totally ineffective.

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The balanced attitude, in my view, is to undertake a formal analysis from time to time, and from what the process uncovers we proceed with confidence in whatever new directions are indicated. It takes a certain healthy self-confidence to accept, even welcome, criticism, provided it is constructive and positive. Let us cheerfully admit also that we are a community of well-meaning and committed, though imperfect individuals. A group of imperfect students, academics and administrators are certainly capable of running an effective, though imperfect university. In fact, given the human condition, this is the only type of person and institution available. The sine qua non of a sound institution is that we recognise our imperfections, (and the impossibility of being perfect in any ultimate, final sense), are not content with the present state

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of affairs, and as part of the normal daily routine, we strive to do better. Paradoxically, the essence of doing a good job is to be constantly on the alert, to do better, not in any fanatic Savanarolan sense, but in a perfectly ordinary, matter-of-fact way.

All human beings show a marked reluctance to change from comfortable, old-shoe settled ways. It has always struck me as ironic that amongst the two foremost institutions dedicated in their various ways to making the world a better place, and which are always urging us to change our ways, spiritually and intellectually respectively, one finds the utmost reluctance to put the spotlight squarely on themselves. I am referring of course to the churches and the universities. Normal human inertia is, I submit, an inadequate

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explanation of the phenomenon, so entrenched are the resistances one finds to overdue reappraisal. The explanation is rather to be found in the high proportion of elevated, dedicated idealists that these institutions attract. The hallmark of the idealist is his steadfast devotion to principles and ends. The churchman would have us live up to our full responsibilities as Sons of God; the academic wishes to preserve, propagate and extend the sum total of valid human knowledge. Excellent! One cannot find fault with such lofty ideals. The difficulties arise with what I call "creeping extension of ideals". Usually after a period of spectacular success, (whole continents converted to the True Faith, whole new provinces of knowledge uncovered) the original central fortress of non-negotiable ideals (Commitment to the Gospel, seeking the Truth wherever it may lead us)

is extended with further ramparts, walls and towers, expertly constructed for the circumstances in which they were conceived. The circumstances change, but the fatal mistake, understandable enough in the light of the successes achieved, and nobody likes to quarrel with success, is made of confusing these inessential outworks with the central fortress, to be defended at all costs. The cleric or the academic is then in the tragic situation of defending with all the fury and vigour at his disposal dogmas and theories that are not part of the True Faith, and which have become impedimenta and embarrassments. Modest proposals concerning necessary change (of syllabus or of ethical emphasis as the case may be) are met with the full force of defensive rhetoric with which we are all so familiar. Phrases like "no compromise with principle", "lowering of standards",

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"thin edge of the wedge", "essential material that cannot be diluted" rend the air.

History is replete with examples of what I am discussing. The heliocentric theory of the universe, the Divine Right of Kings, the phlogiston Theory of combustion, were all defended in their time with all that special intensity that is invoked when what is regarded as orthodoxy is attacked. The depressing thing about it all is that so few of these stout and idealistic defenders ever admit that anything less than central dogma is being threatened. Equally depressingly, hardly anybody ever changes his mind about these things: they simply die in due course, and the old heterodoxy becomes the new orthodoxy, to become ossified in its turn again. To come nearer to home, in

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twenty five years time we shall look back in complete incomprehension at the view of those who propagate what passes for orthodox political theory to-day - if we do not do so already.

I can remember quite vividly wondering as a teenager growing up in Johannesburg whether "they" would ever finish building the city. Surely one day the last block of flats or offices would be completed and the glorious city would have reached a stage of perfection. What an absurd idea! No city, except perhaps Pompeii ever got "finished" in that sense. Yet how often are we not, especially those of us of the older generation guilty of just such a folly? We feel that what we teach our undergraduates is "finished". Our image of our subject or of the university is that of a classic Greek temple, and we are as outraged at the young iconoclasts who suggest changes as we

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would be at somebody who would superimpose a block of flats onto the Parthenon. How powerful, and how mischievous such mental images are. How different our attitude would be if our mental image of knowledge were that of a vine - to be cultivated and pruned. The only central dogma to be defended at all costs would then be to keep the vine as a whole alive and productive: no ultimate commitment to any given branch would ever have to be made!

On the other hand even the most vehement proponent of change would have to admit that any system with little or no inertia would be a most uncomfortable thing. Every change or suggestion of change would be instantly acted upon, and we would be blown about like a feather by every wind of doctrine. The other extreme is the unstoppable juggernaut that proceeds irrevocably to its doom because

it is too difficult to stop. Inertia we must have: the problem is to determine how much.

Consider one simple example, where the change of attitude is crucial. The transmission of knowledge implies teaching and learning. In more leisurely days, when what one taught stood the recipient in good stead for this whole working life, rather than being almost completely supplanted in five or at most ten years, the important thing was to drum the knowledge in. The accent was clearly on teaching by dictation, or rote if necessary, as long as the factual knowledge sank in. To-day, when virtually half of what we know has been discovered since 1950, such an attitude is hopeless - worse it is dangerous - because it destroys all motivation in those on

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the receiving end. Now that we are all to a greater or less extent suffering from the disease made famous by Alvin Toffler - Future Shock - the accent most definitely is on learning, or even more radically on learning how to learn. These circumstances place greater burdens on lecturer and student alike. The former must update his material at a rate of at least 20% per annum and the latter must be prepared to ferret out a great deal more material for himself. The accent is on where to find theories and facts and how to marshall them, rather than on the theories and facts themselves. Paradoxically, this very fluidity makes faintly ridiculous the impassioned discussions, so beloved of academics, about details of curricula and syllabuses. In to-day's circumstances, particularly in the more applied subjects it does not really matter a great deal in detail what one discusses in

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lectures (as long as it is not too antediluvian). After all, its all going to be out of date in five years anyway. What does matter is the inculcation of basic method and principle, and the transmission of the concept that in a true professional learning is a lifelong commitment. That is best done by infectious example rather than by pedagogic skill in the imparting of already obsolete facts

I believe that it is a lack of explicit understanding of this point that contributes to the crisis of motivation that infects many of our educational institutions - schools and universities alike. The student senses that what he is being taught is not all that important, and consequently the academic, feeling under threat, reacts negatively to student criticism. Let us admit it candidly - the contemporary

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facts are largely unimportant, or at least have a very short half-life. What is important (and infectious) is a visible commitment to the subject on behalf of teacher (evidenced by active research or at least awareness of the latest trends) and an openness to learning how to learn on the part of the student.

I can remember very vividly a moment of great triumph at Wits. I and my professional colleagues were totally dedicated to the proposition that the single most important facet of applicable mathematics was the imparting of skills in using various mathematical techniques to solve problems. In those situations where mathematics is useful one usually constructs a (more or less) accurate model of that piece of the real world one is studying and then manipulates

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mathematically the model on has constructed, in the hope (to be tested by experiment) that the results bear some resemblance to real life. Now mathematical models come in various styles - deterministic, probabilistic, numeric. One of the finest deterministic models - a very paradigm - is Newtonian mechanics, and consequently we insisted that all our students, from computer scientists to would-be actuaries, learn to manipulate Newton's famous Laws of Motion. Many and heated were the arguments we had, especially with our brighter students, who maintained that they had no interest whatever in Laws of Motion. Why did we not teach them immediately more facts about computer architecture, operating systems, artificial languages and the like. All four "greybeard" professors concerned, of whom I was the senior by at least a dozen years, resisted emphatically this crass

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shortsightedness of the young. Imagine our moment of triumph when our most vehement critic - I am sure he will not mind my mentioning him by name - Mike Levy (he is now busy on a Ph.D. at a Canadian University) one year after he had graduated and was working for a large computer company, insisted on coming back and giving a seminar to our second and third year students on what they needed to know in order to get a good job. Guess what he told them? Exactly what we had been trying to convince him about for four years - with all the newfound zeal of one who thought he had discovered it for himself!

This emphasis on problem - solving rather than fact amassing, while I am convinced that it is right and healthy, has dangers of its own. The university must not fall into the trap of regarding itself

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as general problem solver and redeemer to the nation. With so many pressing problems to be solved it is all too fatally simple to lose one's academic dispassion and calm weighing of the evidence - the chief characteristics for which society values and supports us, and to become partisans of causes in a too direct way. The problems seem so urgent that we often feel compelled to become partisans. This very urgency traps us into believing that the normal academic processes of argument and counter-argument, of sifting and weighing the evidence, are too slow. The consequences can be disastrous, and we can lose our academic credibility so patiently built up over the years. A prime example has been the alacrity with which some academics have cried alarm over environmental problems. In some cases disinterestness and honesty have gone out of the window, and patient scholarship has given

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away to shrill propaganda without the proper support of the painstaking putting together of hard new evidence. I am not referring here to South African environmentalists, who on the whole have been remarkably responsible, but to certain "Club of Rome" sponsored work like "Limits of Growth", which have sometimes been characterized by slipshod and limelight seeking rhetoric.

So many problems of this ilk have been created by a precipitate, careless and overexuberant use of technology, and the great temptation is to believe that the problems so created can be solved by technology alone. Nothing could be further from the truth. It is now a truism of the post-sputnik era that while we can put a man on the moon, we do not seem to be able to solve the more mundane, and surely more

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technically simpler problems of efficient public transportation, housing, food production, quality of life in the urban areas, population control, equable distribution of wealth and the like.

The truth of the matter obviously is that our inability to solve these problems satisfactorily is not solely technical in nature, although they have their technical component. Factors of inertia, greed, maldistribution of political power and the like display a more than commensurate role. The technologists are most definitely not going to solve such problems alone. In summarising the situation we face I cannot do better than by quoting from the last two paragraphs of recent article "The American University To-Day" by Philip Handler in the American Scientist:

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"we will need to know what men and women have made of the world in which they found themselves, what they demand of it, what their perceived aims, needs, and ideals have been and the circumstances under which these may change, what aspirations determine our society's view of reality. This is not the knowledge of logical truth provided by scientific observation or deductive reasoning. It is more like the knowledge we claim of a friend, of his ways of thought, of his character - and is better approached by imaginative powers

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like those of a novelist than of a physicist. Only with such humanistic insight will it be possible to shape the huge decisions yet to be made.

As, collectively, we address such matters, we would be well served to recall a statement by Wellington and Winters in quite another context: 'To look for solutions to these difficult questions is profoundly to misunderstand their natures. The quest is not to solve but to diminish, not to cure but to manage; and it is this hard truth that makes so many frustrated,

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for it takes great courage to surrender a belief in the existence of total solutions without also surrendering the ability to care'."

That, I am sure you will agree, Ladies and Gentlemen, is an appropriate note on which to inaugurate an Arts and Science Week. As you attend the lectures and symposia, visit the exhibits and watch the films on offer I hope that some of the thoughts I have expressed will help to put in perspective what our collective endeavour of Rhodes is, and help you to judge to what extent we are being successful in that endeavour.

It gives me great pleasure to declare the 1976 Arts and Science Week "The University - Concept and Reality" officially open.