

[ceremony]
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[Dr]
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MIND ON A WALK-ABOUT

This is the time of the year when our fatigued minds and brains tend to go back in time to assess the events of the ending year and our individual and collective roles in them. As we drag our bodies, heavily weighted with the effects of the year's rat race that life in this country has increasingly become, we tend to take stock of our successes and failures and the wisdom of some of the choices and decisions made during the course of the year. For the graduates here today, you have every reason to be proud because your major project for the year was completed successfully.

During the last few weeks, my mind has been engaged in a somewhat pleasurable game which could easily be termed "Mind-on-a-Walk-About". For example, my mind was tickled by a newspaper report of an address in which Professor Mbulelo Mzamane, the Vice Chancellor of the University of Fort Hare suggested that the idea of an African Renaissance is oxy-moronic. Africa, he claims, is the only continent where indigenous scientists, scholars and intellectuals primarily conduct their enterprises in languages that were foreign to them. How can there be a renaissance in Africa, he asks, when Africans have lost their languages as mediator of art, culture, learning and science. An even more troubling question to me is what becomes of a people that lose or surrender language; what else is lost or surrendered with language and what remains in the anchor of being in a

people that surrender their language. Professor Mzamane may disagree with me but I think he is also indirectly asking another question : Are Afrikaners correct to insist on accessing a French-English world through Afrikaans, in much the same way that the

Chinese access it through the Chinese language; the Japanese through the Japanese language; the Russians through Russian; the Saudi Arabians through Arabic; the French through French and the English through English. Should the Zulus and Basothos enter this world through IsiZulu and Sesotho, respectively, or else we stop talking of an African renaissance but just seek our spot in a world that is becoming simpler and yet more complex as it resolves into a unified globe as dictated by economic activity and information and telecommunications technologies ?

Human Immunodeficiency Virus / AIDS

Another question that my mind has been playing around with is where the HI Virus comes from and where it is headed ? Is Nobel Laureate Manfred Eigen correct when he postulates that the incredibly high frequency of mutation in the genome of the HI Virus means that the virus mutated from non-virulence to virulence and will mutate out of its current virulence state in the next 30 - 50 years ? Even if Manfred Eigen were right, humanity can least afford to hide in a morality capsule for the next 50 years to wait for the scourge to pass. On the other hand, should Virodene be the antidote to the morality capsule ? The Virodene saga presents me with a number of intriguing questions. By all accounts, no rigorous scientific research was ever done by the Virodene team before

clinical trials were initiated. Instead, a committee which investigated the episode reported

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that a perfusion technologist who used dimethylformamide as a cryopreservative concluded that it would make a good anti-viral agent simply because it was a bi-polar agent that was absorbed percutaneously and distributed uniformly in the body. A further

reading of eight scientific articles, only one of which referred to or mentioned DMF, and carrying out of some preliminary experiments, led the group to conclude that DMF was an HIV protease inhibitor and proceeded to clinical trials. A judge in the USA Judicial system was immortalised by stating that much as he may not be able to define obscenity, he knew obscenity when he saw it. Similarly, I may not know what voodoo is, but this Virodene logic sounds like voodoo to me. There is no apparent connection between data and information and the conclusions drawn. My voodoo conclusion is partly influenced by the standing ovation with which a Cabinet meeting was reported to have received the news on Virodene as a cure for AIDS. What may be even more intriguing would be if Virodene did turn out to be effective against HIV and AIDS. Who knows what Virodene as a cure for AIDS, discovered in this manner by White people, could prove to be an effective bridge between traditional medicine and Western medicine in the minds of those who discard traditional medicine on the sole basis of the perceived lack of a research process to underpin a finding. Voodoo does work sometimes !

Science and availability of water consumption by humans, animals and plants

As we approach the end of the twentieth century and of the second millennium on the Gregorian calendar, a lot of thought is going into reviewing the role that science and technology have played in human existence. The United Nations Educational, Scientific

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and Cultural Organisation (UNESCO) is planning a World Science Conference in 1999 in this regard. Also, many scientific associations and learned societies are planning major congresses and general assemblies in 1999 and 2000 to ponder the question of how

science, engineering and technology can have an even better interface with society as a mediator of human development. Numerous audit, review and foresight exercises will be undertaken in the next two years as part of the millennium celebrations. One of the greatest sources of fascination to me on this issue of science and society is the question of science and water. Scientific research is beginning to give us answers to some of the most fundamental questions about matter. Institutions like the European Centre for Nuclear Research (CERN) in Geneva, Switzerland and Fermilab in Chicago, USA, have particle accelerators that enable particle physics research into sub-atomic matter. The US Space Agency (NASA) has the Hubble Space Telescope peering deep into space and getting us closer to answers on the question of how the cosmos were born. NASA also astonished the world recently with precision landing a small vehicle called Sojourner on the surface of the planet Mars. Advances in instrument design are giving us access to mind-boggling research on the Mind and the Brain. Genetic engineering has made the inner secrets of DNA and chromosomes as accessible as candy, thus re-defining heredity.

The most astonishing thing about all of this is that coastal countries still experience shortage of water. Science and scientific research remain helpless against the question of harvesting water from the oceans for human, animal and terrestrial plant consumption. Without rain, the collective human intellect just dries up. And when it rains rivers take this precious substance called water and pump it into seas and oceans, converting it from a highly

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usable form into a form of limited use. The pundits the world over are already predicting that the next major war in the world will be over water. How can we enter the cosmos, the brain, the DNA and fail to desalinate sea water on a scale significant enough to eliminate

drought from the world ? Is this a reflection of the same phenomenon that has led the Department of Health to place such high premium on Essential National Health Research (ENHR) to the extent, if we are not careful, of depleting tertiary medical research ? Is this simply a matter of research priority or one of those paradoxes where the most complex problems are easier to solve than the simple ones ?

The National Research Foundation

The Department of Arts, Culture, Science and Technology (DACST) recently tabled a bill in parliament which will create a new National Research Foundation (NRF). It is anticipated that the bill might pass through the National Assembly and the National Council of Provinces (NCOP) by the end of June 1998. The NRF would then be promulgated in the second half of 1998. The Foundation for Research Development

(FRD) has over the last few years openly and strongly advocated for the consolidation of the grant-funding function or agency function as it is commonly called in this country. Some respondents to this open advocacy by the FRD have declared, also rather openly, that such a consolidated grant-funding function would only play into the megalomaniacal tendencies of the FRD. The FRD, it is alleged, simply wants to enlarge its limited empire and impose the ethos of natural science and engineering research on other scientific disciplines. Nothing could be farther from the truth.

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The FRD regards the establishment of the NRF as a major step in the right direction and a step that it is very much in harmony with the vision encapsulated in both the Higher Education and Science and Technology White Papers. The FRD accepts the reality of the proposal in the White Paper on Science and Technology and in the Bill that “as soon as possible after the commencement of the NRF Act” the NRF Board must establish separate divisions for :

Natural Sciences and Engineering

Social Sciences and Humanities

Health Sciences

Agricultural and Environmental Sciences

More importantly, the FRD welcomes the provision in the Bill allowing the Board of the NRF to establish or disestablish organisational divisions for different research fields, after

consultation with the Minister of SCST. Strict delineation of funding research within constraints of disciplinary divisions will frustrate further development of an already accepted paradigm of trans-disciplinarity in research, education and training. Any strictly divisionalised structure would require complex and intricate measures in management to ensure such trans-disciplinarity. Organisation of the NRF around different research fields in such a way that different disciplines can be made to descend on an particular research question is what the FRD believes is most appropriate. Such a research question could be elimination of shortage of water in a form that is readily usable by humans, animals and terrestrial plants. Different scientific disciplines, including religion and even voodoo,

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could then be mobilised to assist in seeking the solution. This does not mean that research within any particular discipline, be it of the fundamental, basic, blue-sky, applied nature, in natural sciences, social sciences, health and medical sciences will not receive priority. I just find it difficult to understand why we are still trying to find a distinction between Natural Sciences and Agricultural Sciences such boundaries are collapsing under the weight of intellectual demand for integrated approach to problem solving.