

THE CAPTURE OF THE SUN

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On the afternoon of Saturday 30 June 1973, a total eclipse of the sun stretched across Africa from the Atlantic Ocean on the west coast to the Indian Ocean on the east coast. In parts of west Africa it lasted for a little over seven minutes, making it the second longest total eclipse in 1433 years. It thus afforded scientists with a rare opportunity of conducting long experiments and observations in connection with not only the heavenly phenomena of the eclipse but also of human and animal life on the ground. Scientists had already calculated in advance the time of the eclipse and the region it would cover. As physical phenomena, eclipses are easily explainable in terms of how they are caused, and every school child gets to know how eclipses of the sun and the moon are caused.

But for many millions of African peoples who saw this eclipse, there were other explanations. According to their traditional framework of thinking, some blamed the scientists for "capturing" the sun; others considered it to have been "captured" by God or another spiritual being, and many feared that it was a bad omen. Even if they would understand that the moon is positioned between the sun and the earth during a solar eclipse, they would still insist that "someone" has captured the sun, since such phenomena do not just happen without mystical, mythological, or spiritual causes. It is not enough for them to ask why or how this and other phenomena in nature and human life happen. They ask also who causes them to happen. In traditional life the who questions and answers are more important and meaningful than the how questions and answers. Yet, with the advance of modern science and technology, more and more emphasis is being laid on the how questions for which science often supplies the answers. The gradual switch from the who questions and answers, to the how or why questions and answers, is opening up for African peoples new and revolutionary perspectives of looking at the world and relating to it.

This simple illustration underlies the profound change which is sweeping across Africa through the invasion of modern science. The change affects all areas of human life. But our immediate concern here is to look at some of the moral implications of science within the African setting. Through the generations, people evolved their own ways of explaining the world of nature and human experiences. Whether wrong or correct in the light of modern knowledge these explanations were satisfactory. They sustained a working view of the world suitable for the life that people found to be meaningful.

Traditional African attitudes and concepts have been formed in the context of people's deep sense of the mystique in nature, an awareness of intimate presence of the departed members of their families, sometimes the ubiquitous presence of spirits and above all the providential presence of God. Nature's mysteries and many human relationships are explained theologically ^{or} mystically, since phenomena do not just happen by chance. Everything is 'caused' by a personal or intelligent agent or through the working of mystical forces. When a person falls sick or suffers an accident, it is because someone else or a mystical power has 'caused' this to happen whatever physical or hygienic circumstances may have prevailed at the time. People treat nature in personal ways; and they relate to it and to one another according to this sense of the presence of spiritual realities and God.

African traditional morality revolves around the concept of "I am because we are, and since we are therefore I am". Traditional ethics and morals are primarily societary, that is, they are related to, and governed by, the relationships that subsist in society. The individual grows into his self awareness and identity only in relation to the existence of other people. These relationships are both vertical and horizontal. Their vertical dimension embraces the children, parents and departed members of the family. This chain of relationships is both biological and moral. A person is under moral obligation to bear children and thus extend his vertical relationship and simultaneously facilitate the coming into existence of those who are otherwise locked up in one's physiology. According to African cosmology, the physical form of human life is the crown of man's existence, whatever it may otherwise bring to him. There is no paradise beyond this life. Therefore each person is under moral obligation to set free those potential human beings who are not yet born, so that they may come into the state of existence which is the height of their being.

Furthermore, when a person has died, it is important that he be remembered, and thus kept in personal state of immortality, by his children. If he has no children to do so, he would be completely cut off from the living, and such a prospect is painful and unpopular. The horizontal relationships mean that a person is related through blood and social kinship, to everyone in his community. For that reason, each individual has hundreds of fathers, mothers, brothers, sisters and other relatives, even if they are not immediately his biological relatives.

In this complex network of relationships, there are duties and rights the fulfilment of which is morally determined. The morals that sustain this interweaving of relationships are morals of conduct rather than

morals of being. This means that they apply to a person's life according to his actions vis-a-vis the rest of society. These moral values include love, kindness, friendship, hospitality, justice, respect for human life, sharing of joy or grief, and so on. They are not abstract values: they are enshrined in practical terms for the welfare of the community in which the individual acts or should act in accordance with the principle that "I am because we are, and since we are therefore I am."

In addition to the explicit moral values, there are taboos which regulate what people ought not to do, and there are social sanctions and ostracisms to punish people for wrong doing. Although taboos describe the negative aspect of relationships in word, action, look and general interaction of people, they are nevertheless an enforcement of morality. They are a normalising influence, and the breaking of them earns the person concerned shame, embarrassment and the fear of being struck by a misfortune. It is assumed that behind the taboos and moral values, there are spiritual, sacred and mystical upholders of morality.

There are symbols and points of reference which integrate all of people's lives. There are also rituals, religious beliefs, social institutions and cultural settings all of which, together with moral values, shape the life of the individual and his community. As far as it went, African traditional life was self-sufficient, within the world view that people held at the time.

But now modern science has come to African communities, bringing with it marvels, wonders and promises. Among other things, it is providing them with new insights into nature and how to exercise greater control over nature for the benefit of man. The scientific answers to the questions about nature are giving intellectual satisfaction in supplementing or even supplanting mythological and mystical explanations that people may have held according to their traditional insights. Science has many other physical or material values which are too obvious to be enumerated here.

While modern science has introduced these benefits to African peoples, it has done so at the cost of shattering their traditional world at many points. Intellectually it is driving out their sense of the mystique in nature; it has invaded their awareness of the spiritual presence, their beliefs, their symbols, and the social points of reference hitherto held to be sacred and fundamental for the good welfare of the individual and society. Traditional, self-contained life is increasingly being broken up by both science and economic, educational, and national factors. The life of more and more people is being shaped by a physical and intellectual environment which is radically different from that which shaped their

previous generations. Urban life draws people together from different rural areas, tribal, cultural and social backgrounds, into a kind of existence in which blood and social kinships lose their meaning, taboos and sanctions exert little or no influence whatsoever upon the masses. The solidarity of existence in which the individual is an integral member of his community and relates to the community, breaks up in the cities and towns. Consequently, the values of the pre-scientific and rural world view, are being abandoned or questioned because man is conceptualizing the world differently, and is relating to it and to one another under different perspectives.

But, in spite of all its material benefits, modern science is neutral to the innermost parts of man which make life meaningful at deeper levels of experience and concern. Science does not know how to love the people who benefit from it; it does not know how to comfort those who are sorrowful and unhappy; it does not know how to cultivate a sense of beauty, goodness, and joy in the world. Science does not tell whether or not people are oppressed and exploited, nor does it explore whether or not injustice is evil. For science, these and related values have no meaning.

In the African context, modern science is a material benefit but a moral deficit. Through its impact upon human understanding and the technological gadgets it has produced, science is creating a new world of nature and human relationships. But this is at the cost of losing the moral and spiritual integrity which had taken shape over a period of many generations. Alone science does not indicate whether doing something is right or wrong, and ^{for it} to undermine the spiritual and moral points of reference by means of which people related ^{to} the world and to one another, is truly to take away "the soul" of African peoples. Even the very nature which is the main object of scientific investigation, deserves to be treated with moral respect. If science rapes nature, it puts the life of man in danger unless moral values are brought to bear upon the methods of science, ^{the} interpretation of scientific findings and the application of scientific knowledge vis-a-vis human life.

Science is comparatively new in Africa where the traditional values have long roots historically, socially and culturally. Although the scene is rapidly changing, these traditional values are still operative to a large extent. There is ^{still} time in the African setting, for modern science to find accommodation within many of the values which are still operative. To bring about new perspectives of understanding the world around us, as modern science does, should not mean sacrificing those values that sustain human relationships and that give man a more personal relationship with

nature around him.

While the fabric of traditional life is breaking up rapidly in all African societies, there is paradoxically a growing renaissance of traditional cultures, values and ideas. The latter could provide the opportunity and the excuse to explore which moral values may be salvaged from the traditional background, and how these can be integrated into modern trends of thinking and living. People are still excited about the wonders of science, and many African countries are stepping up the teaching of science subjects in schools and universities. It would be through the educational facilities and mass media, that an integration of modern science and moral values could best be achieved. Unfortunately this question has not begun to be faced in African countries. Whatever moral values are to be integrated with modern science, they should harmonize with the changing scene both in human understanding and patterns of living. It is not enough to revive only the values that evolved in the pre-scientific views of the world, and in the social units where the individual identity was only possible in reference to the identity of the community. This world view is no longer the norm, and this community solidarity is giving way to urban individualism. We cannot romanticize the past at the expense of being ^{un,} realistic about the present. Therefore new values are demanded by the new era in history, to which modern science has flung all societies of mankind. The change in the values is more in form than in content: we need, as former generations did, the same love, peace, justice, friendship, freedom, and so on, but expressed in new forms, answering to new insights and living conditions. Modern science and moral values are both for the benefit of man: one is for the external good of man, the other for his internal welfare. Only ^{the harmony of} the outer and inner components of man, can be the ultimate criterion of the fulness of human life on earth. Anything less than this wholeness of man, is deceptive and dangerous.

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