

A Paradigm Shift in Environmental Conservation and Management: A Behavioural Approach

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Abstract

As population, pollution and resource depletion pressures continue to threaten Kenya's ability to sustain human life, it has become increasingly important for everybody to participate in environmental conservation. Psychology too can be used contribute significantly by influencing change of destructive behaviours to those that are environmentally friendly. This paper advocated inclusion of a behavioural approach in the environmental conservation campaign. It underscores the use of psychological principles in influencing people's behaviour positively. It outlined and discussed behavioural and attitudinal strategies that could achieve this and recommends the incorporation of environmental issues in the school curriculum, the opening of environmental learning and demonstration centers accessible by all people, and continued research for a plausible solution.

Introduction

In recent years, environmental psychologists have become actively involved in the study of psychological reactions to different aspects of the physical environment, with more attention on the destructive nature of human behaviour. 'New Environmental Psychology' has evolved in response to increasing concern over deteriorating global environment, focusing on the three broad categories of assaults namely overpopulation, resource depletion, and pollution (Lahey, 1988). There is no doubt that most environmental problems have a basis in human behaviour. This means that psychologists have a task of finding ways to change the environmentally destructive behaviour of people that have contributed to global warming, food and water shortages, ozone depletion, acid rain and overpopulation.

Due to the high population growth rates in the developing countries, environmental implications such as high demand for timber, charcoal, and firewood have resulted. Many people live in abject poverty and most show little concern for conservation of the environment because their own survival is in jeopardy. As a result they are forced into behaviours that are harmful to the environment. In Kenya, for example, rapid population growth has had adverse effects on the environment including encroachment of marginal lands, over-consumption of wood fuel resources as well as generation of waste products (Ongwae, 2004: 27). Environmentalists warn that if the current rate of environmental degradation and particularly deforestation continues, Kenya will soon be unable to grow money makers like tea, coffee and pyrethrum. Cereal production too will decline, and famine may result on a scale larger than the current.

According to the National Environment Management Authority (NEMA), land degradation has reduced agricultural productivity, the carrying capacity of grazing lands, water quantity and quality as well as wood fuel output. About 35% of the country is vulnerable to degradation and desertification. Eight of Kenya's lakes are being degraded by a combination of siltation, reduced inflow and pollution. The report by NEMA further reveals that deforestation that has occurred in Mt. Kenya, Mau, Aberdare, Mt. Elgon and Kaptagat forests has negatively affected watersheds. Kenya's forest cover currently stands at 1.7% of the country, which measures approximately 587,000 square kilometers. The area under forest cover in Kenya has

rapidly diminished from 165,000 hectares in 1988 to 80,000 hectares in 2003. Between 1990 and 2000 alone the annual loss of forest cover was 93,000 hectares. A total of 67,184 hectares was excised in 2001 (Muganda, 2004: 2-3).

The other major threat to the environment comes from pollution of the earth's air, land, and water. A report by NEMA reveals that only 32 of the country's local authorities have sewage collection and disposal infrastructure. Nairobi generates over 2,000 tones of waste a day. Of this, 68% comes from homes, 14%, 8%, 2%, 1%, and 7% is from industrial, roads, hospitals, market and other sources respectively. Most of the garbage remains uncollected as some of it finds its way into the city's official dumpsite. Some is indiscriminately disposed by private contractors and a small portion by the Nairobi City Council (Abuga, 2005: 1). Poor management of these wastes poses grave environmental dangers with resultant problems including infections such as diarrhea, typhoid, and intestinal worms among others.

Paradigm shift

It is in the area of human behaviour and attitude change that psychologists have a critical contribution to make in the effect to conserve the environment. Our vision is to employ psychological principles in influencing people's behaviour positively towards the environment. Part of the mission is to develop strategies that are effective in promoting environmentally conscious behaviour. This paper represents a combination of behavioural and attitude change strategies that promote behavioural change.

Strategies for Intervention

Many of the attempted solutions to environmental problems in Kenya have largely been technological. Relatively little has been done to change people's behaviour, which is somewhat surprising, since advances in technology are of little use if people don't change or continue to be wasteful and destructive. To counter environmental challenges and misconceptions, the solution lies in the arena of human behaviour, attitude change and psychological principles to influence people's behaviour positively towards the environment. This represents a combination of behavioural and attitude change strategies that promote behaviour change. Strategies used can be either antecedent (aim to prevent or include behaviour) or consequent (giving pleasant or unpleasant consequences for behaviour in order to induce or reduce recurrence). The latter is behavioural approach while the former is by use of educational programmes in the environmental conservation campaigns.

A Behavioural Approach

The behavioural approach focuses on changing specific behaviours by using the principles of learning. Behaviour modification has gained popularity because of its effectiveness in remediating learning or behavioural problems, eliminating undesirable behaviours and establishing desirable behaviour. Behaviourists such as B.F Skinner (1953) and Bandura (1969) emphasized the scientific study of behaviour and its environmental determinants. For example, people do well in school because of the rewards they experience, and people work hard at their jobs because of the money they receive for their effort. People have been encouraged to pick up litter where reinforcement is used, frequently coupled with prompts. An example is the "litter lottery" whereby invisibly marked items are scattered amongst the litter and prizes are given to those who pick them up and deposit them in the appropriate place (Bacon-Prue, 1980: 165-170).

Contemporary behaviourists argue that human nature is neither good nor bad, but merely the product of one's environment. This means it is not human nature but defective environments that are responsible for the destructive behaviours of people. Thus, filthy environments are responsible for people's destructive behaviour. Darley (1982), therefore, contends that the disappearance of natural environment and the crowding of humans have contributed to high levels of destructive behaviours. Similarly, environmental studies have proved that the immediate environment, building and housing facilities and the structure of cities have a profound effect on human behaviour (Sommer, 1974). It is therefore important that the environment be made better.

Skinner urges people to use a system of positive reinforcement to encourage the types of behaviour that are desired. A study by Geller (1982) showed that the use of verbal prompts or cues to remind people about environmentally desirable behaviours were very effective. He noted that notices about littering framed in polite language and giving specific instructions about what to do were effective. Polite signs in proximity to litter bins were also found to be effective. The more bins there were, and the more colourful they were, the greater was the effect. Burgess et al (1971: 71-75) found that giving out litter bags in a cinema led to a 30% increase in correctly placed litter, while the rate of litter pick up increased to 95% if a free cinema ticket was offered in return for a full bag. Skinner noted that says that people must be rewarded whenever they demonstrate the desired response and thus begin to associate the accomplishment of learning with the pleasurable feeling of the reward. Awards in form of certificates, medals trophies, should be put in place in Kenya so that thousands of outstanding projects are publicly recognized for their efforts. This would encourage others to come out and participate. A case in point was the recognition of Professor Wangari Mathaai for her forest conservation efforts by the international community, that has seen many more people come out to plant trees. Skinner also thought that punishment given in return for an undesirable behaviour weakens the behaviour. This can be seen in the use of fines for littering and making litters pick up rubbish dropped by others. On the whole, positive reinforcement works better, is more cost effective, and more socially acceptable than punishment strategies (Geller, 1982).

There is need for proper leadership at community, institutional, and national level in the war against environmental degradation. Leaders should be at the center of development and should exhibit behaviours that make others have confidence in them and accept their guidance. A good example is Professor Wangari Mathaai who works with people in the field planting trees with them, thus sustaining the momentum of environmental conservation campaign.

The key to effective environmental conservation is an input by affected communities. An example is the World Wildlife Fund (WWF) conservation project in Southern Africa where a bee-keeping farm located within a national park enables local farmers to collect honey and sell it to local markets hence providing them with a source of income. In return, the community tends the bees and reports on suspicious activities carried out by poachers engaged in the illicit trade in ivory or rhino horn (Ogodo, 2003: 4). Projects like these are of benefit both to the local communities and to the surrounding wildlife. The result is highly efficient and effective conservation project. Kenya can employ a similar joint management policy by enlisting community participation in natural resource conservation.

People are likely to adopt behaviours of models that are environmentally conscious. The effectiveness of modeling depends on the characteristics of the model (such as power, uniqueness) and the presence of cognitive processes such as symbolic codes and imagery to enhance retention of the modeled behaviour. Crusaders of environmental conservation in Kenya should be political leaders since they have influence on the minds of people at

constituency level. Mass media, T.V. should be used since they have a strong influence on the minds of people.

Attitude Change

Attitude change is another effective method of promoting environmentally conscious behaviour. Jones (1997) found out that persuasion was most effective when the source was credible, reliable and dependable. Such people who have integrity and are factual should also present environmental information. Political, administrative and religious leaders, teachers, and social workers, who should be innovative, optimistic, practical and environmentally conscious, could serve well in educating the public and spreading the desired change. People are also more likely to be persuaded by sources that are similar to them in ways that are relevant to the object of the message (Fieldman, 1984). Women groups can therefore be very effective in disseminating environmental conservation information to fellow women in their various groups. Similarly youth groups can be used as forums through which youths can educate one another on matters concerning environmental conservation activities.

The way the message is framed can also affect persuasion. An excellent and inherently important example has been provided by psychologists Meyerowitz and Chalken (1987). Telling people how much energy or money they were wasting is more effective than telling them how much they could save, when trying to encourage them to insulate their homes. This is attributed to a greater sensitivity to the prospect of losing something than the prospect of gaining something of the same value. This shows that messages framed in terms of potential loss tend to be more effective. The general public should therefore be informed of the potential loss if they do not conserve the environment.

Another effective technique for influencing people's attitude and behaviour is the use of electronic and mass advertisement. These advertisements inform and educate the public on skills useful in environmental conservation and management through appealing to thoughts and cognitive components of their attitudes. The rationale behind this appeal is that the people's feelings about the environment will change their thoughts and behaviour towards it. We can also direct our efforts to modify behaviour by focusing on the behaviour component. When people's actions are at variance with their attitudes, they may change their attitudes to reduce the inconsistency. Many people for instance have positive attitudes towards the environment, but few are actively involved in recycling or energy conservation, and few would intervene if they observed someone littering. Festinger (1957) explains an individual's motivation to reduce the discomfort (dissonance) caused by two cognitions (attitudes or beliefs) that are inconsistent or in conflict. This dissonance is unpleasant and the individual experiencing it is motivated to reduce it.

People who have negative attitude towards the environment can be influenced to change it by being exposed to ideas that are incompatible with their attitude. They can also be induced to behave in a manner contrary to their initial behaviour such as involving them in environment conservation campaign. Such people are assigned leadership positions, or roles that are incompatible with their undesirable attitudes. In order to reduce this dissonance, they are forced to shift their original attitude so that it becomes more consistent with the behaviour that has been induced. Thus they are compelled to become eco-centric i.e. focus on the needs of ecology, believe in environmental preservation and conduct themselves in a manner friendly to the environment.

Social pressure approach where individuals are encouraged to make a public commitment to change, or social norms are changed, group pressure brings about more compliance with desired behaviours. This can be seen in anti-smoking and littering campaigns. Without individual commitment, people tend to show diffusion of responsibility and act selfishly

(Latane and Darle, 1968: 215-221). Finally, educational programmes are frequently antecedent strategies, since they aim to prevent the problem behaviour occurring in the first place. Campaigns in the form of advertisements, school-based programmes and leafleting are employed in the hope of reaching a large number of people with minimum outlay, and that by providing information, their attitudes and hence their behaviours will change.

Conclusion

The contribution of behavioural approaches to environmental issues with the aim of changing people's destructive behaviours towards the environment is significant in the history of the discipline of Psychology. To achieve this noble goal, this paper recommends the following:

- a. Kenya should have a sound environmental management approach to achieve sustainable use and development of her land and other natural resources for example the farmers can be encouraged to plant trees on at least 10% of their land acreage.
- b. All stakeholders (individuals, schools, clubs, NGOs, residential communities, youth and women groups etc) in the country should be encouraged to participate in environmental conservation.
- c. Leaders in all spheres of development should be models of environmental conservation campaigns because of the desirable emotions they elicit in people. Kenya can use the Nobel Prize winner Professor Wangare Mathaai to inspire the public to become pro environment,
- d. Environmental studies be integrated into the school curriculum, and
- e. Environmental learning and demonstration centres accessible to all people should be established.

These notwithstanding, the war on environmental degradation is not over, and more investigations in the area will be a welcome gesture.

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