

Human-Environment Interactions: The Sociological Perspectives

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ABSTRACT Writers on ecological environment have concentrated mainly on the political and economic effects of human populations on the natural environment. Most of the write-ups have not looked beyond outer appearances especially, at what lies beneath. This paper looks beyond what lies beneath by using sociological thinking and information to explain the human environment interactions. The paper uses three prominent sociological perspectives – *functionalism*, *conflict*, and *interactionism*, to examine the interactions. Functionalists identify desertification, deforestation, oil spillage, gas flaring and sea erosion as the source of environmental problems. To overcome these problems, man should be sensitive to both the manifest and latent consequences of their actions on the environment. Conflict theorists identify the inequality in the distribution of the world's resources as the source of environmental problems. To overcome these problems, the government and oil companies should take bold steps to arrest deforestation, oil spillage, gas flaring and sea encroachment. Interactionists identify human actions and inactions as the sources of environmental problems. To overcome environmental problems, political actions involving human judgements, decisions, and choices, should be taken.

INTRODUCTION

Writers and scholars have written extensively on the human environment in general and the human environment interaction in particular. For instance, the social, economic, and political factors that result in people having to protect themselves from a polluted environment, and the social, economic, and political consequences of such pollution have attracted the attention of scholars.

Demographers in particular, have measured population growth and have equally considered humans in their environment. The effect of human population on the natural environment has been considered by demographers while sociologists have shown interest in the relationship between size, human organizations, environment and technology (Hughes et al., 1989: 424-425).

Ecologists and agricultural specialists have on their part focused interest in the restoration of land altered by human activity. For instance, restoration ecologists stress the importance of conservation biology, the protection of existing ecosystems through national park and wildlife programmes. Such conservation according to Dobson et al., 1997: 515-522) ensures that species are preserved and can be used to recolonise reclaimed land in restoration projects.

One good example of human factors in environmental problems is the management of fisheries

(Botsford et al., 1997). A major goal of fisheries is sustainability; that is, to limit catches so that fish populations are never damaged or depleted. For instance, over-fishing can result in the loss of jobs for those employed in fisheries and loss of food for a nation's population.

Most of the writers and commentators on human-environment interactions have failed to look beyond outer appearances in order to encounter new levels of social reality. This is what constitutes the core of the sociological perspectives. The sociological perspective invites us to look beyond what we take for granted about our social lives and to examine them in fresh and creative ways (Berger, 1963). There are for instance, many layers of meaning in the human experience; things are not always what they seem. Networks of invisible rules and institutional arrangements guide our behaviour. Many of these understandings are below the usual threshold of our awareness (Collins and Makowsky, 1984).

The objective of this paper therefore is to analyse how sociology uncovers new levels of reality on human-environment interactions. Specifically, the paper uses the three contemporary sociological perspectives: the functionalists, the conflict, and the interactionist perspectives to explain this relationship. A *theoretical perspective* provides a set of assumptions, inter-related concepts, and statements about how

various social phenomena are related to one another. Theoretical perspectives are tools – mental constructs – that allow us to visualize something. The paper also makes some recommendations on how to reduce environmental hazards in Nigeria.

THE FUNCTIONALIST PERSPECTIVE

An accepted premise of the functionalist position is that no human custom, institution, or set of behaviour exists *in vacuo*; there must always be an interplay between, the component elements of a social system (including the environment), and a continuing interdependence between them is created on many different levels (Spencer, 1965: 13).

Structural – functionalism seeks to describe the social system in terms of structures, mechanisms, processes, and functions and to explain why a given structure rather than another contributes to the satisfaction of a given functional requisite at a given time. The functionalist draws mainly upon the ideas of the pioneer sociologists – Auguste Comte, Herbert Spencer, and Emile Durkheim. And one of the features of a system stressed by functionalists is its tendency toward equilibrium, or balance, among its parts and among the forces operating on it.

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The functionalist perspective though has the following drawbacks: has difficulty in dealing with history and processes of change, has the tendency to exaggerate consensus, integration, and stability while disregarding conflict, dissent and instability it is still a useful tool for describing society and identifying its structural part and the functions of these parts. Functionalism for instance, provides a “big picture” of the whole social life, particularly as it finds expressions in patterned, recurrent behaviour and institutions.

The functionalist perspective can be used to analyse various aspects of the human-environment interaction. The functionalists approach the ecological environment by examining the inter-connections between the various parts composing the ecosystem (Faia, 1989: 658-60). Functionalists see the ecosystem as exhibiting a tendency toward equilibrium; in which its

components maintain a delicate balanced relationship with one another. Functionalists stress that our survival depends on our ability to maintain a precarious balance among the living and nonliving component comprising the biosphere (Hughes, 1989: 425).

The reciprocal ties that bind human beings and their physical environment in the Sub-Sahara region of Africa present a good example of the human-environment interaction. This region is facing the danger of the growing desert causing starvation among its people and an increase in the death of cattle.

Much of the “desertification” is not attributable to basic climatic change, but to the overworking of marginal lands for crops, grassing, and firewood. The introduction of western techniques, such, as irrigation, deep plowing, and the use of chemical fertilizers, has compounded the sub-African region’s problems (Tucker et al., 1991: 299-301). The irrigated land became waterlogged, accumulated too much salt, and became useless. The wells dug in the arid region led people and cattle to congregate in the vicinity of the wells, with the herds overgrazing the pastures and trampling the ground with their hoofs.

The most obvious impact of desertification in addition to widespread poverty is the degradation of a large expanse of land. This generally leads to potential for human and animal carrying capacity, and decline in soil fertility. Deserts are known to be environmental extreme on their own; human-induced desertification has the potential to counteract any ameliorating effect of climatic change on most deserts unless appropriate management actions are taken.

The Niger-Delta (oil-producing) Region of Nigeria, presents another good example of the human-environment interaction. The activities of the oil companies- Shell, Chevron-Exxon, British Petroleum among others in this region have caused lots of damages especially pollution. Pollution causes environmental damage and human health problems. On the economic side, pollution control and clean up in this area costs money. And anything involving money is always affected by politics. The interwoven roles played by politics, the economy, human health, and the environment will be fully analysed under the conflict and interactionist perspectives.

Expanding human activities on land and seas lead to a vicious cycle because humans intensify

their exploitation of the land in order to compensate for desertification and pollution. This can cause a lot of damage, thereby resulting in what Merton calls 'dysfunction' on the land. To avoid this damage to the ecosystem, functionalists emphasise that human beings must become more sensitive to both the manifest (those consequences that are intended and recognized by the participant in a system), and latent (those consequences that are neither intended nor recognized by the participants in a system) consequences of their actions on the environment. Such precaution will lead to a state of balance or equilibrium.

THE CONFLICT PERSPECTIVE

Like functionalists, conflict theorists, focus their attention on society as a whole, studying their institutions and structural arrangements. Table 1 presents the major dissimilarities between functionalist and conflict perspectives.

The main source of conflict in human societies is scarcity of the resources people require, according to conflict perspective. Wealth, prestige, and power are always in limited supply, so that gains for one individual or group are often associated with losses for others (Hughes, 1999: 60). *Power*, the ability to control the behaviour of others, even against their will-determines who will gain and who will lose (Laswell, 1936). Conflict theorists are concerned with how it is that some groups acquire power, dominate other groups, and affect their will in human efforts.

The Human-Environment Interactions: The Conflict Perspective

Generally speaking, conflict perspective does not offer a unified point of view on many issues. Issues relating to environmental matters are no exceptions. Some conflict theorists have linked environmental problems to the distribution of the world's resources than to a limited amount of resources available. That is, the main issue is not one of *how much* is available but one of *which* individuals and groups will secure a disproportionate share of what is available. Consequently, the critical decisions that affect the environment are made not in the interests of present and future generations but in the interests of those groups that can impose their

will on others (Hughes, 1999).

From a conflict perspective people are usually separated into two camps on environmental matters. Those who favour economic development and growth even if it results in some measure of environmental damage, and those who see environmental protection over economic goals.

Although conflict theorists also see many of the same circumstances earlier discussed in Africa in general and Nigeria in particular, they however, come to somewhat different conclusions. For instance, *desertification* is not blamed for Africa's problems, but rather the growing *indebtedness pressure* exerted on African governments to promote cash crops for export rather than for food crops for their people. This phenomenon is concisely described in the World Bank Report in the 1980s. The Report explained the situation in five ways: one, from 1980 to 1987, African farmers increased their food output by only 1.3 percent, less than half the rise in population; two, commodity prices fell simultaneously on the world market, and this made it impossible for African nations to repay their debts; three, much of the money provided by Western aid agencies was diverted to highly visible projects such as roads, port facilities, airports, and office buildings, thereby recycling the aid money to Western corporations, to the neglect of the African farmers; four, even when Western nations provided funds for African governments, they have found an outlet for surplus food in need of market which has benefited the United States of America and European farmers; finally, assistance is often rendered to African governments that are friendly toward the donor nations, thus guaranteeing the stability of such 'cooperative' African nations (Farnsworth, 1990).

The Niger-Delta Region of Nigeria also fits into the human-environment interactions. The coastal area of Niger-Delta Region contains diverse and productive habitats in addition to minerals that are important for settlements, development and local subsistence. Coastal resources in particular are vital for many local communities and indigenous people. But what exists in the Niger-Delta Region points to the contrary. In addition to the pollution resulting from gas flaring, degradation of the marine environment has also resulted from a wide range

of activities on land. Human settlements, land use, construction of coastal infrastructure, agriculture, are affecting the marine environment. Shipping also causes marine pollution and sea based activities. In Nigeria, for instance, marine pollution is basically caused by oil producing activities.

The marine environment including the oceans and all the seas and adjacent coastal areas form an integrated whole that is an essential component of the global life-support and a positive asset that presents opportunities for sustainable development (Sumit, 1992: 139). Also in Nigeria, in addition to desertification and the hazards of oil producing activities, soil erosion, deforestation and overgrazing are adversely affecting productivity in the farming; forestry and livestock sectors, thereby slowing overall economic growth in a country that is an agriculturally based economy.

There is also currently the conflict between the federal government of Nigeria and the oil producing states on one hand and the non oil producing states and the federal government on the other hand over the issue of 'resource control', especially as this relates to *on-shore*, and *off-shore* resources.

There was also the conflict between the federal government of Nigeria and the youths of Bayelsa state – one of the leading oil producing states in Nigeria. Specifically, in 1999, immediately the civilian government came to power, some youths of Odi town in Bayelsa, in agitation for improvement of their lives, abducted and later killed some law enforcement agents. In retaliation, the federal government sent a detachment of the army to arrest the situation, but what invariably happened was the destruction of Odi town by the army. So many lives were lost, and property and houses extensively destroyed.

According to conflict theorists, expanding human requirements and economic activities are placing ever increasing pressures on land resources, creating competition and conflicts and resulting in sub-optimal use of both land and land resources, and at times loss of lives and property as reported above. If human requirements are to be met in a sustainable manner, it is essential to resolve these conflicts and move towards more effective and efficient use of land and its natural resources. Integrated physical and land-use planning and management is an eminently practical way to achieve this.

Table 1: Dissimilarities between functionalism and conflict perspectives

<i>Functionalism</i>	<i>Conflict</i>
1. Depicts society in relatively static terms	Emphasises the processes of change that continually transform social life.
2. Stresses the order and stability to be found in society	Focuses upon the interests that divide in society
3. Views consensus as the basis of social unity	Insists that social unity is an illusion resting on coercion
4. Views existing social arrangements as necessary and justified by the requirements of group life.	Sees many of the arrangements as neither necessary nor justified

THE INTERACTIONIST PERSPECTIVE

While the functionalist and conflict perspectives focused on the macro or larger-scale structure of society, the interactionist perspective has traditionally been more concerned with the micro or smaller-scale aspect of social life. Interactionists emphasize that humans are social beings who live group existence. Basically, symbolic interaction focuses upon the ways in which meanings emerge through interaction. Its prime concern is to analyse the meanings of everyday life, in a close observational work and intimate familiarity, and from these develop an understanding of the underlying forms of human interaction.

Symbolic interactionism has four key foci (Marshall, 1996: 524). The first highlights the ways in which human beings are distinctly always concerned to study the ways in which people give meaning to their feelings, their actions, and to the wider social worlds in which their lives exist.

The second highlights process and emergence. For the interactionist, the social world is a dynamic and dialectal web, situations are always encounters with unstable outcomes, and lives and biographies are always in the process of shifting and becoming, never fixed, not upon rigid structures, but upon streams of activity with their adjustments and outcomes.

The third focus highlights that the social world is – interactive. From this point of view there is no such thing as solidarity individual; humans are always connected to 'others'. The most basic unit of interaction analysis is that of the self, which stresses the ways in which people

can come to view themselves as objects, and assume the role of others through a process of the role taking. The final focus is that interactionists look beneath the symbols, processes, and interactions in order to determine the underlying patterns or forms of social life.

From interactionism, we gain an image of human beings as active agents who fashion their behaviour, as opposed to an image of individuals who simply respond passively in a manner prescribed by social rules and institutional arrangements.

The Human-Environment Interaction: The Interactionist perspective

Symbolic interactionists focus their sociological eye upon "people behaviours". The two major points of focus here are: the difference between people's attitudes and their actions, and the difference between expert and public perceptions of risk.

The difference between people's attitudes and their actions. Specifically considered here is the issue of whether people are ready to take action or not. People are generally divided into two groups – those who believe that action should be taken to preserve the environment, that is, environmental protection should take priority over economic growth, and those who believe that economic gains should take precedence over environmental protection.

Public versus Expert Perceptions of Risks. A gap exists between public and expert perceptions of risk. Two examples can be used to explain this difference: oil spillage, gas flaring, and global warming. In Nigeria, reports from Newspapers and general public discussions show that oil spillage and gas flaring are not only hazardous waste, they also release radioactive materials. Up-to-date, the Nigerian government has not found a solution to how the daily flaring of gas that causes air pollution can be converted to economic advantage. This is not only hazardous to human health; it is also an economic waste. Although the federal government had in the past established Federal Environmental Protection Agency (FEPA), the political wranglings, dissolution and re-establishment that had marred the agency does not show that the government and/or the agency realize much about the magnitude of the risks in these problems.

By contrast, if Nigerians in general and Delta Region people of Nigeria in particular, are asked about global warming, and alteration of natural habitats, the general opinion will rank relatively low in public concerns, but the Nigerian scientists, who know much about the destructive nature of global warming will place it among the top risks because their long-term potential consequences are known to be damaging. Also their effects can be so widespread and difficult to reverse.

One is not saying outright that the Nigerian government does not realize the "risk hazards", of oil spillage or gas flaring, but the economic gains more often override ethical considerations. For instance, the Federal Government established the Oil Mineral Producing Area Development Commission (OMPADEC) through Decree Number 23 of December, 1992. The basic objectives of OMPADEC were the physical and human development of the oil producing communities. Nwogu A. (1998) however in her study found that OMPADEC did not achieve the objectives for which it was established. Her findings even show that OMPADEC was another strategy for the government to mismanage or waste funds. Though OMPADEC was a brilliant concept, one of its problems was its misplaced priority of not involving the people of oil producing areas before embarking on any development project. Rather, government embarked on top-down development strategy. Another problem was the inadequacy of development on a sustainable basis and an Environmental Impact Assessment (EIA) before carrying out its physical development projects.

From the symbolic interactionist perspective, one can conclude that environmental issues qualify for the adjective "social" because of two reasons. One, they involve human judgements, decisions, and choices. Two, they entail an exercise of power. For instance, the poor and minorities of the Niger-Delta Region are much more exposed than other Nigerian citizens to the dangers of environmental hazards. But political skirmishes, "settlement syndrome", and division among the Niger-Delta people have prevented all efforts to find solutions to these environmental problems.

RECOMMENDATIONS

To radically reduce the risks of environmental

problems such as desertification, coastal erosion, oil spillage, gas flaring, and deforestation, should involve concrete and at times combined actions from both the government of Nigeria and the international oil companies. For instance, it is known that land resources are used for a variety of purposes, which interact and may compete with one another. It is therefore desirable for government to plan and manage all uses in an integrated manner. Integration should take place at two levels: all environmental, social, and economic factors, and all environmental and resource components should work together. The objective of such integration is two fold. The first is to review and develop policies to support the best possible use of land and the sustainable management of land resources. The second is to create mechanisms to facilitate the active involvement and participation of all concerned, particularly communities and people at the local level in decision making on land use and management.

To combat deforestation, there is the need for securing the multiple roles of forests, and forest lands through adequate planning and appropriate institutional strengthening should be emphasized.

Government should develop and sustain an effective system of forest extension and public education to ensure better awareness, appreciation and management of forests with regard to the multiple roles and values of trees, forests, and forest lands. Government should go beyond the political rhetorics of a head of state or a state governor planting one tree with "fanfare" as a way out of this problem. Government should establish more institutions for forest education and training, as well as forestry industries, for developing an adequate cadre of trained and skilled staff at the professional, technical and vocational levels, with emphasis on youth and women.

Government should also carry out revegetation in appropriate bare lands, degraded farmlands, arid and semi-arid lands and coastal areas for combating desertification and preventing erosion.

To combat the problems of oil spillage, gas flaring and air and water pollution, all oil companies should be required to safeguard the interest not only of their owners, and the stakeholders, but also of their workforce, society

and the environment. Environmental protection should be a crucial ethical aspect of the oil companies. The Niger-Delta Development Commission (NDDC), which replaced OMPADEC, should be well funded and not allowed to die unceremoniously like its predecessor.

CONCLUSION

This paper has shown that writers and scholars on human-environment interactions can use the three major sociological perspectives of functionalism, conflict and interactionism to analyse their work. The paper also offers some recommendations on how to reduce the tension as well as overcome the hazards of environmental pollution in the Niger-Delta Region of Nigeria, in particular, and the arid and forest regions in general.

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