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ABSTRACT

The extensive social-scientific interest and continuing relevance of environmental study assure its immediate and long-range importance in the social studies. But the crisis atmosphere surrounding this issue threatens a thoughtful, systematic approach to the subject, and poses the danger of a careless rush to activity. As social studies educators, we have three major obligations: 1) to familiarize teachers with the ecological framework in which environmental issues must be viewed; 2) to alert teachers to the range of opinions on environmental action and stress that this, like other social issues, are controversial and must be so treated; and 3) to prepare teachers to lead effective inquiry into questions of social action. The issue of population growth, for example, can be placed in the ecosystem framework by examining how increases affect food supply, proportion of land available to man in relation to other species, and overall support capability of the system. The range of opinions runs from warnings of imminent disaster to accusations by ethnic groups that birth control serves only to reinforce existing white dominance. Inquiry should proceed on the basis of an analysis of the underlying values and the kinds and sources of data upon which differing conclusions rest. (JLB)

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ENVIRONMENTAL ISSUES
ARE CONTROVERSIAL ISSUES

Mary Allaire Hepburn

In the onrush of dramatic prophecies, academic concern, popular articles and all the new educational materials on environment, social studies teachers are in danger of being carried on a floodtide of mindless involvement.

A serious social-economic issue is upon us, and we cannot help but recognize that this is the stuff of the social studies. But how are we to treat the environmental crisis in the social studies?

The extensive social-scientific interest in environmental study, as well as its relevancy for many years to come, assure its importance in the social studies of the future. The inter-disciplinary nature of the subject suggests its potential as a propellant for future curriculum change in the schools. Our practical immediate concern, however, is with the quality of immediate efforts to deal with environmental problems in the social studies. How shall we assist today's teachers and student teachers to take on "the environmental crisis" in the classroom?

All around us a surge of communications is producing worry and wonder about man and his environment. We are bombarded with forebodings, apologies and warnings about population, pollution and pesticides.

It is this crisis atmosphere which poses the danger of a thoughtless rush to activity. Social studies educators are confronted with the need for immediate, systematic scrutiny of the subject of environment to determine for teachers the most educative treatment.

I propose that as social studies educators we have three major, immediate obligations in regard to environmental studies:

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- 1) to familiarize teachers with the ecosystem model and to sensitize them to the overall ecological framework in which environmental issues must be viewed.
 - 2) to alert teachers to the multiplicity of views concerning environmental action; to make it clear that environmental issues, like other social issues, are controversial and must be treated as such in the classroom.
 - 3) to prepare teachers to lead effective inquiry into the questions of social action in regard to the environment.
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Looking to the first obligation, we face the task of presenting a realistic, useful, overall perceptual framework in which teachers may study and teach about problems of environment. Man plays a part in numerous small ecological systems and in a large overall planetary ecological system. The ecosystem model reveals the complex system of interdependence in which man is involved.

Man is highly dependent on other factors in the system. Plants, animals (including man) and inorganic elements all interact in the system, and when the system is functioning well there is an inter-supporting balance. It is various types of ecological imbalance which produce our environmental problems.

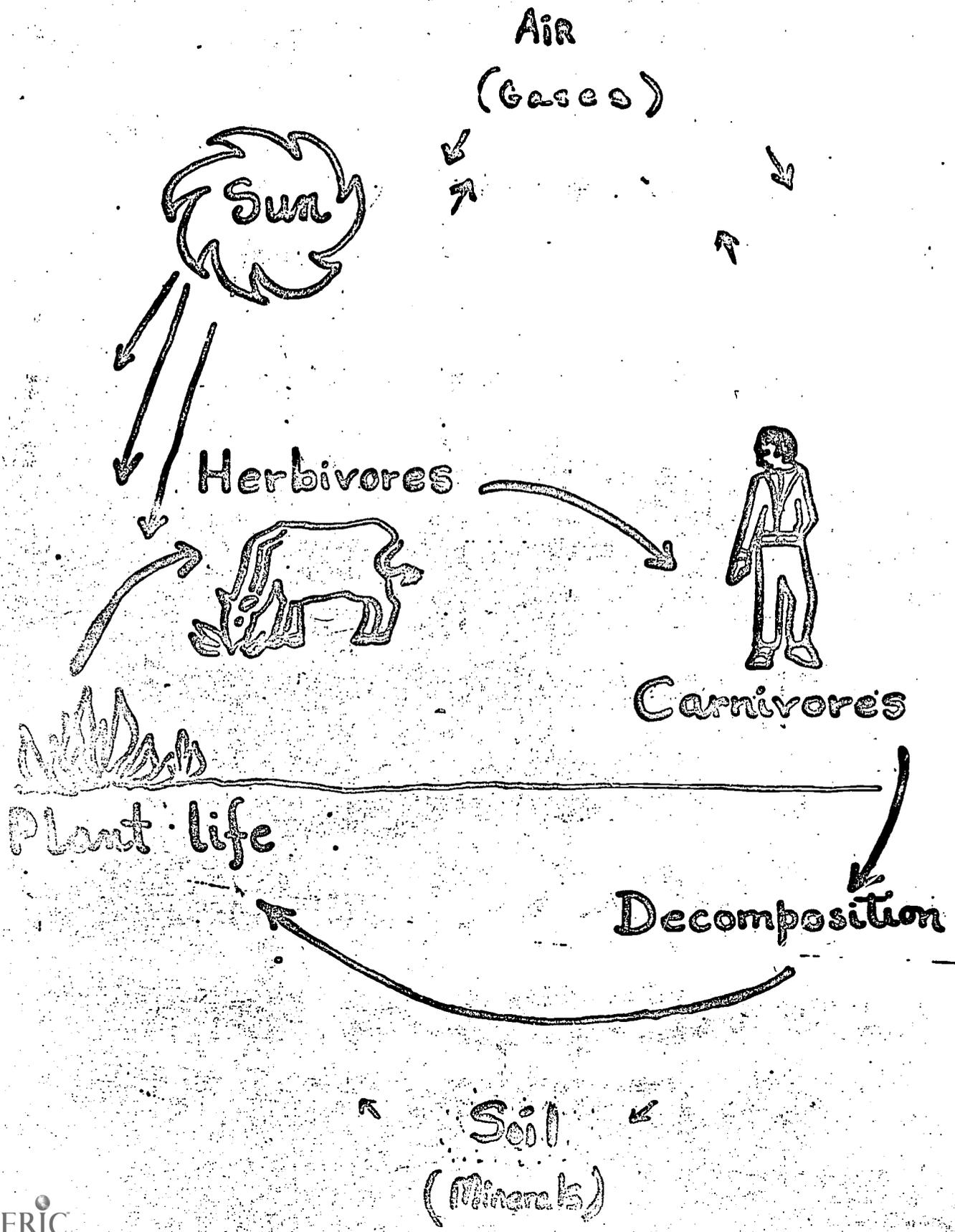
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[Model adapted from
Frank Golley]

This simple model of the chain of interdependence in the eco-system takes into account all life in its area--plant and animal, including man. In the food chain, plants feed the herbivores or plant eaters, which in turn feed the carnivores or animal eaters, whose organic wastes feed small decomposing organisms, which eventually release chemical materials, which again serve as food for green plants.

Air and soil also play a role in the system. The air protects us from the sun's harmful rays and provides the gases utilized by both plants and animals. The minerals in the soil provide nourishment for the plant life and thus provide for the whole chain of life. Because the process

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is circular, and there is a limited quantity of nutrients, the productive materials are used and reused. Hence, recycling is essential. An action or change in the system leads to reactions somewhere else in the system.

An understanding of the ecosystem model, presented in this manner, (or perhaps in some other more detailed diagram) which stressed the interdependence of the functioning parts, is fundamental to viewing problems of the environment. Man-made changes are seen in terms of their consequences throughout the system. Therefore, this framework prepared teachers and students to deal more intelligently with important environmental issues in the social studies.

Turning to the second obligation, teachers must be made aware of the numerous perspectives on environmental issues. It may seem all too obvious that environmental issues are controversial issues. What important social issues are not controversial? However, in the present day crisis-atmosphere, the political community around us has been aroused, and there is a growing fervor for environmental action. Such fervor works subtle pressures on social studies education--pressures for quick inclusion and rapid commitment.

It reminds me of the fervor for citizenship education in the forties and fifties. The crisis temperament of those years provoked mindless immediate measures. In the scurry to promote a committed democratic citizenry, the critical democratic process of probing important social issues was too often neglected. A prescription of democratic ideals was presented like the daily vitamin pill to be swallowed (without chewing) to produce healthy loyalty and nationalism. It had unhealthy side effects, however, resulting

in a buildup of unthinking ethno-centrism and anti-democratic attitudes.

Today the crisis atmosphere generated by a burgeoning concern for environmental quality threatens to hurry us again toward teaching and preaching packaged solutions. It would be unrealistic and uneducative to adopt a quick formula for environmental salvation offered from one particular viewpoint. The view of a single ecologist, industrialist, educator or any one interested group can hardly provide our needs in the social studies. Because environmental issues are controversial issues they bring about emotional responses to major social, economic and political questions. Their study requires broad perspective and material from a whole spectrum of viewpoints.

This brings us ^{to} the third obligation. Analytical inquiry is the honest, stimulating and only thinking approach to the possible alternatives of social action or controversial environmental questions. Proposed solutions, the selection of data and even the statements of problems are rooted in values, and, therefore at variance. There is no overall agreement on just how serious each environmental problem is. And although it is generally agreed that there must be some action, there is little agreement on just what action is appropriate.

Social and political overtones to each definition and each solution spur disagreements among ecologists, industrialists, political leaders, community planners and social scientists. Inquiring into the bases for this variance provides perspectives for the analysis of both facts and values.

Focusing on the disagreements and placing them in the ecological

framework reveals the complexities of interrelationships among men, and between man and his environment.

Thus we find the three obligations are so closely related that they overlap: Environmental issues require unfettered investigation of multiple sources representing multiple viewpoints which are set in the perceptual framework of the ecosystem.

Let us look at one of the great environmental issues confronting us today--the issue of population growth. There are many questions: How serious is the "explosion" of human population? What are the present effects? What consequences are predicted for the future?

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First, we should place this issue in the ecosystem framework. Population increases must be offset by increases in food production and increases in waste disposal and decomposition. At the same time population increases result in greater space allotment to man, and less to other animals and plants. Just what additional numbers of men can the system support? In some regions the small ecosystem is already out of balance: decreased plant and animal productivity for increased numbers of homo sapiens has resulted in starvation. What man made changes can help the system accommodate more people and still maintain a balance? An "over increase" in population will throw the whole

system out of balance. The problem, then, is to attempt to determine just what is an "over increase."

Second, inquiries into a multiplicity of views would turn social studies teachers away from oversimplified summaries and pat solutions (which characterize some of the materials quickly produced for environmental studies). The population issue is a controversial one which calls up dissonant voices. Scientific, economic, political and moral judgments are involved and the questions of population must not be given narrow prescriptive treatment.

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Students may be led to explore the whole range of views from the doomsday prophets who see the worldwide growth of population as a serious and immediate crisis to those ethnic leaders who view control efforts as a conspiracy against the ascendancy of their people. Between these two extremes on the continuum there are numerous shades of positive and negative.

At the crisis end of the continuum students can probe the gloomy prophecies of highly concerned physical and social scientists. For example, biologist Paul Ehrlich, in his book The Population Bomb, warns that immediate preventive action is crucial to our survival; that unchecked population growth will result in a doubling of the world's 3½ billion people in about 35 years; that there is the possibility that immediate action is too late! In plain, direct terms he calculates the results of uncontrolled growth will be drastic. Ehrlich foresees vast overcrowded slums in many areas of the world, excessive

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The Population Issue Viewpoints

Crisis

Conspiracy

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starvation, overwhelming problems in waste disposal, water purification, crime, riots and, quite possibly, war.

At the opposite end of the continuum social studies students can discover the views of those who believe the growth crisis is trumped up, and that promoters of population control are in a conspiracy against a specific minority groups. One source of such views is the Black Muslim newspaper, Muhammad Speaks.² Here the voices of opposition to population control are based on fears that organized moves toward birth control are disguised attempts to reduce the numbers of black people. Black militants contend that the means to power is in numbers; that more black children will eventually mean more black votes. Birth control efforts in the black ghettos are seen as a form of black genocide carried out by the white society to prevent the rise of blacks to political power.

Near the middle of the population continuum social studies students may examine the arguments of those who are neither extremely disturbed that the population problem has reached a crisis stage calling for serious control measures, nor are they extremely opposed to population control measures. The support here is for careful, methodical planning and action. The implication is that we are being led astray by the cries of alarmists of both extremes. A number of educational films offer this center viewpoint. One example, is the film, People By The Billions (McGraw-Hill, 28 min. black and white) which explains how the increases in population have come about, depicts some resulting problems and considers dispassionately some long-run solutions.³

A little toward the crisis side of center students can analyze the

arguments of those who are highly concerned but not nearly so pessimistic as the doomsday prophets. Some economists measure the seriousness of the population growth issue in terms of the prospects for economic development to keep pace with growth. Students might well examine a speech delivered at Notre Dame University last spring by Robert McNamara, President of The World Bank.⁴ He finds that many underdeveloped countries subscribe to a myth--a myth that more people mean more wealth, when in actuality rapid population expansion retards growth in per capita income and contributes to mass poverty. He cautions that rising birth rates could use up all of the new capital available as nations struggle to provide the barest minimum in shelter and food. But McNamara is somewhat optimistic, for he predicts that if enough energy, skill and investment ~~is~~ pumped into the agricultural revolution, food supply can grow at a faster rate than population, at least for a few decades.

Even more optimistic about the power of economic growth to provide for population growth are the perspectives of those who confide great faith in the power of American resources and the American economy to avert any serious food or crowding problems in the U. S. Students may analyze such a view in an article in The New Republic by Ben Wattenburg, demographer and political analyst.⁵ Wattenburg's perspective tends a little toward the conspiracy side of the continuum because he claims that the crisis atmosphere is presently serving as a political smokescreen to divert attention from more serious social and economic problems in our society. He admits that population could be a problem sometime in the distant future, but he concludes that it is not a real or immediate issue now in the U. S.

Teachers who treat the population issue, or any other environmental issue, in terms of a continuum of viewpoints, can reveal the issue's breadth and scope of significance in our society. Between and overlapping the points noted on the population issue continuum, there are various other expressions of viewpoints found in a variety of readings, films, television shows, speeches and even popular songs. Of course, not every relevant piece of material can be included, but teachers can be taught to think in terms of the range of perspectives on the issue both in the selection and the treatment of content.

And treatment or method can hardly be separated from the content itself. Controversial issues with multiple points of view require an inquiry approach. Breadth of perspective calls for depth of questioning and analysis in the effort to reach conclusions and make decisions.

These issues are alive with personal involvement and personal values. This calls for an analysis of the underlying values and the kinds and sources of data upon which differing conclusions rest. We fail our teachers and their students if we allow this content to be separated from the requisite thought processes. Controversial content and inquiry treatment are as interdependent as the parts of the ecosystem.

Thus in the population-issue example just presented, teachers must be prepared to have their students do more than familiarize themselves with the different views. In addition, they must probe the arguments to analyze their validity and their value implications in the effort to find solutions.

To prepare teachers to lead this kind of rich analytical investigation of significant controversial environmental issues, set in the ecosystem framework;

this is the immediate responsibility of social studies educators in the present crisis atmosphere.

- ¹ Paul R. Ehrlich, The Population Bomb. New York, Ballantine Books, 1968, Chapter 1.
- ² Muhammad Speaks (Chicago), August 15, 1969, December 5, 1969, May 22, 1970.
- ³ People By The Billions, produced by the National Film Board of Canada, available from McGraw-Hill, 28 min., black & white.
- ⁴ Robert S. McNamara, "The Excessive Population Growth," speech delivered at Notre Dame University, May 1, 1969.
- ⁵ Ben Wattenberg, "The Nonsense Explosion," The New Republic. April 4, 1970, pp. 19-23.