

ENVIRONMENTAL STUDIES: THE FIFTH TRADITION OF GEOGRAPHY¹

by

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INTRODUCTION

Environment, pollution and technology are the three major areas of concern of the Philippines today. In June 1964, the National Water and Air Pollution Commission was created by the Congress of the Philippines. Today this agency is known as the National Pollution Control Commission. (1) Our deep concern on environmental quality was shown by our sponsoring the International Conference on the Survival of Humankind: The Philippine Experiment last September 6-10, 1976. Today we have the Ministry of Human Settlement, the Technology Resource Center, and the National Environmental Protection Center, all geared toward the study of environmental degradation and maintenance of environmental quality.

What relation has environment to geography?

WHAT IS GEOGRAPHY?

Geography comes from a Greek word meaning, literally, description of the earth. But geography today goes beyond the study of the earth. It is now concerned with man's relationship and analysis with his surrounding as well as with description.

"Geography attempts to picture *man's habitat* at a specific time through the study and arrangement of natural, physical and human settlement over the earth. The effect of the past in the creation of the present is recognized; the effect of the present on the future is implied. (2)

The natural, physical and cultural (human) elements of the man's habitat as per Kendal, et al. are:

I. Physical (Natural) Element

1. Atmosphere — climate and weather — the short term and long term behavior of the atmosphere.
2. Hydrosphere — water features such as oceans, seas, lakes, ponds, streams, sheet flow, soil water and underground water.

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3. Lithosphere — landform, major and minor including rocks and minerals.
4. Biosphere — natural vegetation, natural wild animal life.

II. Cultural (Human) Element

5. Homosphere —

- (1) Population — number, densities, pattern and distribution.
- (2) Cultural Inheritance — man's acquired capabilities, habits, institutions, especially those that relate to his uses of physical elements and habitat.
- (3) Major Occupations—agriculture, manufacturing, mining, trade, hunting, and fishing, etc.
- (4) Major Works and Accomplishments

On the basis of these elements, "Geography" is a science as wide as the world and as general and broad as anybody of knowledge can be. In the words of the University of Colorado Professor, Geography has the claim to be the Queen of the Sciences.

As the science of geography progressed, it has established prestige throughout the world within the umbrella of the International Geographical Union. This Union will celebrate its 108th years of existence on September 1980 in Tokyo, Japan where it will meet for the 24th IGU Congress.

Within the methodology of Geography, Dr. William D. Pattison in 1964 identified the four traditions of geography, namely:

1. Earth Science Tradition — geography within the concept of the planet earth in the solar system.
2. Spatial Tradition — geography within the concept of space and reality.
3. Area-Studies Tradition — geography within the concept of studies of regions.
4. Man-Land Tradition — geography within the concept of man and his relationship to land and soil and other physical and cultural elements.

Earth Science Tradition:

Within the concept of the planet earth in the solar system, physical geography in elementary and high schools were usually taught before 1935. After this year geography as a distinct subject was not taught anymore. In the words of Dr. Bonifacio Sibayan, a linguist, and I quote: "One of the horrible mistakes of the Department of Education was when it abolished the teaching of geography and relegated it with Social Science subjects," unquote.

However, today Earth Science is taught in colleges and universities especially in the University of the Philippines at Diliman, Quezon City and at the Philippine Women's University, Manila.

First year students in College of Arts and Sciences taking Earth Science subject learned a number fundamentals especially in the relationship of temperature and substance. For example, the professor said that at high temperature the substance expand and at low temperature the substance contract. When the student is asked to give an example, the clever one said, "Sir during the warm season the days are longer and during the cool season the days are shorter." Of course this phenomenon has something to do with summer and winter seasons and the distance of the earth from the sun during these times.

Spatial Tradition:

This is an aspect of geographic studies that concern distance, location, space and their inter-relationship to each other. In the spatial interaction, let us take a river for example. The Pasig River is natural linkage between Manila Bay and Laguna de Bay. Putting a flat boat on this river is taking advantage of hydrologic inter-relation and at the same time giving it a new and different meaning as a transportation link. When part of the river is dredged and deepened or regulated by a dam, the hydrologic characteristics of the river is altered in order to increase its value as a means of transportation. (4) The study of spatial inter-action is concerned with movements between areas or the effects of objects or processes in one area upon those in another. Subject like relationship between place of work of people and where they live is a very interesting subject for study here in Metro Manila.

Area Studies Tradition:

In this concept of area studies tradition, geographical studies of region in various scales are made. In the Philippines we can divide the country into Ilocos Region, Cagayan Valley Region, Mountain Provinces Region, Central Luzon Region, Southwestern Volcanic Region, Southeastern Volcanic Region, Bicol Region, Visayas Region and Eastern and Western Mindanao.

An American Geographer, Dr. William L. Thomas has made a good study of the Ilocos Region comprising of La Union, Ilocos Sur, Abra and Ilocos Norte. (5) The Economic Geography class of UP made a good study of CABALAG region comprising the provinces of Cavite, Batangas, and Laguna. There are now a number of geographers who specialized in Regional Geography, like regions of Southeast Asia, Mediterranean in Middle East and others.

Man-Land Tradition:

This tradition of geography covers a broad area where man has dealt with widely. Area of geographical studies such as Economic Geography, Agricultural Geography, Conservation of Natural Resources, Political Geography and Human Geography and many others associated with Social Science studies have been made by many prominent geographers.

An example of this study came out in February 1952, when Dr. Josue de Castro of the Institute de Nutricao, Universidad de Brasil, Rio de Janeiro, published his book on the *Geography of Hunger*. (6) A brilliant exposition of Human Geography, the author has attained his purpose — the study of the phenomenon of hunger in its Universal Manifestation. "The term *Hunger* in the past, means lack of food to satisfy appetite and the number of deaths from hunger limited to the emaciated people who died from sheer starvation as in famine. The author, however, uses it in the modern sense as lack of any of the *forty as so food constituents* needed to maintain health. The lack of any of these causes premature death, though not necessarily from emaciation due to lack of any kind of food that can be eaten. Lack of any kind of food as occurs in famine, has always been a major cause of death. Even in recent times, more people have died from famine than have been killed in war. But these numbers are small when compared with the number whose diet is inadequate to maintain and who consequently suffer to some degree from nutritional diseases. If hunger is used in this sense then according to the past pre-war estimates two-thirds of the population of the world are hungry. A recent American Committee put the number as high as eighty-five percent."

AWAKENING OF ENVIRONMENTAL CONCERN

One of the classical exposition on the subject of environment was written by Ellen Churchill Semple in 1911 in her book on the *Influence of Geographical Environment*. (7) The theater of her study was the Mediterranean Area where dramatic changes for hundred of years came about due to the degradation of the environmental quality of the whole Mediterranean region. From King Solomon time to various Empires, this theater of dramatic changes was fertile ground from Miss Semple brilliant exposition.

In 1928, Van Hise wrote another classical book on *Conservation of Natural Resources*, (8) an American documentary of environmental degradation due to the clearing of virgin forest from the East at Plymouth to the Middle West at Iowa. This book warned the people of United States of the deforestation that created the imbalance of nature to the degradation of environmental quality. It was during this

time that the Name of the Game was Conservation which means the wise utilization of natural and earth resources.

In 1936, came Stuart Chase Book — *Rich Land, Poor Land*, (9) that described the vanishing resources of the West, changing the landscape and consequently deteriorating the environmental quality.

In 1938, Russel Lord's book — *Behold Our Land*, called the attention of the American people of the wanton destruction of forest, the soil and water resources. This destruction lead to the imbalance of nature thus of the environmental quality. (10)

In 1948, ten years later, two great pastoral books came out. The first was William Vogt's — *Road to Survival*, that desribed conservation measures to effect maximum yield production. (11) The second book was Fairfield Osborns, *Our Plundered Planet*, that was dedicated to all who cares about tomorrow. (12)

Tomorrow might be next year, or year after next year, or the year 2000, when the Philippines will have 84 to 90 million people on the piece of land of 30 million hectares. Some of us may not be here on the morrow but our grandchildren dear to us will still be here to experience the environment with standing room only, and not knowing where to get the next meal.

Things were quite for a while until 1962, when Rachel Carson, a brilliant writer published her book — *Silent Spring*. (13) Everybody including the vested interest group took the book for granted. But the conservationist, geographer, ecologist, biologist, botanist, climatologist, hydrologist, and environmentalist who came from no where agitated to save the planet earth for the future due to environmental degradation.

In 1970, the book — *The Environmental Crisis*, edited by Harold W. Helfrich, Jr. came off the press. "The sixth decade of the twentieth century finds mankind confronted by an unyielding paradox. Many people have concluded that because we are at the pinnacle of technological achievements, with an amazing list of accomplishments to our credit, our scientific ability to control and shape the human environment is without limit. Yet, even as our technical ability grows, there is a steady and seemingly inexorable deterioration of our environment. The rising crescendo of discord created by unplanned and unforeseen technological by-products is beginning to penetrate the ears of even the most optimistic. Man's footprints are on the moon, but on earth hardly a stream remains free of pollution, pall's of smog shroud our cities, pesticides telescope thru deadly effects through worldwide food chains, beauty falls before the omnivorous advance of urban sprawl, and unrest and violence dominate our decaying cities and our illustrious universities. (14)

In June 1972, the Stockholm Conference under the auspices of the United Nations, agreed to have world program on ENVIRONMENT.

The environmental crisis wake up the people to reality. Everybody talked of environment, environmental pollution, environmental quality, environmental planning, environmental approach and in one of these days, you will hear environmental squatting.

In August 1972, just two months after the Stockholm Conference, the International Geographical Congress in its 22nd Congress in Montreal, Canada further discussed environment within the context of the Commission of Man and His Environment. For three days of the seven day Congress, I was recipient in the discussion in the programming of the Commission of Man and Environment. (15)

ENVIRONMENTAL STUDIES: THE FIFTH TRADITION OF GEOGRAPHY

In 1971, Dr. Peter P. Mason and Dr. Michael W. Kuhn of the University of California at Sta. Barbara, presented the fifth tradition of geography with a question mark. (16) This presentation was made after Dr. William D. Pattison's Four Tradition of Geography in 1964. (3)

The five traditions of geography today are as follows:

1. Earth Science Tradition — the concept of the planet earth in the solar system.
2. Spatial Tradition — the concept of space and reality.
3. Area-Studies Tradition — concept of regional studies.
4. Man-Land Tradition — concept of man and his relationship to land and soil and other physical and cultural elements.
5. Environmental Tradition — concept of geography within the context of the four traditions.

According to Mason and Kuhn, "The concept of environment is so vague and open to interpretation that a major stumbling block to the development of environmental education is the general diversity in views as to definition. Definition varies from discipline to discipline and within discipline. Just what is "environment" may never be resolved among the various fields of study. This road block should not be allowed to interfere with or deter interdisciplinary communications regarding environmental studies. Many disciplines, indeed most disciplines, have some stake in environment."

In addition, "environment studies is goal oriented. As such it is an information system which seeks to synthesize the products on particular problem. Environmental studies are consumers of the fruits of academic research; academic disciplines on the other hand have no such goals, hence no intellectual constraints and are producer of basic research. The products of environmental studies programs are generalists."

"Environmental studies is well-suited to undergraduate education in the liberal arts tradition which is intended to broaden the intellectual horizons of the individual. In the case of environmental studies, the focus is on the habitat of man and man's interaction with his environment. Study is intended to increase awareness and sensitivity. Environmental studies is at least as good a preparation for coping with contemporary physical and social environment as the traditional undergraduate majors. In the same sense, environmental studies would seem to be an excellent preparation for employment in a broad spectrum of profession."

In Environmental Tradition, the best thing that happened in the Philippines was the workshop on Education and Training needs for the Philippine Environmental Program in May 27-31, 1974, under the joint sponsorship of the National Science Development Board (NSDB) and the National Academy of Science (NAS) of USA.

The four basic recommendations of the workshop were:

1. To strengthen existing education and training for environmental professionals and technicians, emphasizing interdisciplinary approaches to environmental planning and problem solving.
2. Begin environmental training program which are not now offered in the Philippines but for which there is a need.
3. To develop new kinds of environmental training programs which stress conditions and needs in the Philippines and maximize benefit/cost ratios of the trainings.
4. To develop greater awareness on the part of the public, especially businessman, and industrialist, of the physical, social and economic consequences of environmental damage.

The proceedings and recommendations of the workshop have been submitted to the Office of the President, the National Economic and Development Authority and other appropriate agencies of the Philippine government for their consideration. These proceedings have been made available to the educational institutions, local government and industrial sectors.

At one time in 1976, Commissioner Lesaca and I were speakers at the ECHO Seminar/Workshop of the Cavite City teachers on Environmental Education. We distributed a number of copies of these proceedings. I believe there are still some copies at the NPCC office.

SUMMARY AND RECOMMENDATIONS

If we must be knowledgeable in environment, the Ministry of Education and Culture must bring back geography education in elementary, intermediate and high school levels. And if possible, increase the geography courses in colleges and universities. In no time the people will understand the importance of environmental education, thus help maintain our environmental quality.

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