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The Full Extent of the Field: A Commentary on the "New Cultural Geography" in Latin America

Franz Boas, when still formally a geographer, said that "geography must either be maintained in its full extent or it must be given up altogether." Perhaps the fact that he gave it up indicated his sincerity. In 1975 we lost another geographer in the death of Carl Sauer. Carl Sauer was certainly successful in his lifelong attempt to maintain geography in its full extent, as a concern for the historical, cultural, economic, and physical contexts of humankind, and as a practice in the world of the geographer as scientist, critic, and teacher.

The papers in this session indicate a continued commitment to the geographical endeavor as defined by Carl Sauer, if it is appropriate to speak of a "new cultural geography," as Denevan suggested, the novelty lies not in any narrower scope. We derive continuing vigor from contacts with new developments in economic history, anthropology, archaeology, biogeography, and physical geography -- our sister disciplines. The novelty lies rather in an increasing sophistication of explanation. These new developments have served to help us refine equilibrium models as well as moving us towards an increasing appreciation for the roles of disturbance and historical change. In the first part of this paper I will discuss in turn: 1) the competence to achieve stability, 2) the resilience, and 3) the historical changes of subsistence cultures. These three topics involve three levels of explanation, three time frames and three process contexts in terms of which cultural patterns become intelligible. I will argue that the three approaches are complementary and that all should form part of a complete cultural geography of aboriginal and peasant societies.

The geographical enterprise is not limited to explanation. Parsons (1977) has described the geographer's activity in the world as exploration, discovery, and communication. Our responsibilities to the arenas of our practical action -- the field, the realm of policy, and the public arena of our students and readers -- will be discussed in the final section.

The Full Extent of the Field: Levels of Explanation

The Competence of Subsistence Producers

During the 1970s it has proven useful to study peasant and aboriginal societies as systems in equilibrium. Ambitious ecological studies of groups or regions have been made by Nietschmann, Ruddle, Kirkby, Bergman, and others. The desire has been to demonstrate the practicality and efficiency of traditional practices. Indeed, as Denevan points out, research on traditional resource management is beginning to have important influences on development policy. A study aimed at this objective was that of the corn farmers of Motupe, Peru, by development specialist John Hatch (1976). Similarly detailed studies of other agricultural systems are badly needed.

Much research has focused on particular problem areas within the general study of resource management. Perhaps the major focus of research on traditional technology has been on agricultural landforms. Parsons, Siemens, Kus, Turner, Denevan, Donkin, Wilken, Mathewson, Patrick, myself, and several others have investigated these conspicuous and lasting devices of sophisticated traditional resource management. Our attention has been directed first towards relic features and more recently, and partly in consequence, towards currently used agricultural landforms. The investigation of relic features has of necessity been organized around morphology. The study of current features, as exemplified by the work of Wilken, has involved the determination of construction tools and techniques, crops, and agronomic functions. These two directions of study need to be linked. We need to begin to interpret the ecological, agronomic, and demographic implications of abandoned features. To this end, it would be desirable to create and test a taxonomic system for agricultural landforms. Such a taxonomic system could be based, for example, on Denevan's (1979) nomenclatural system combined with morphological classification criteria. The differentiae should be significant in terms of environmental processes.

Our interest in raised fields, canals, terraces, furrows, sunken fields, and embankments must not blind us to the other less immediately visible alterations to the earth surface. Soil profile truncation, changes in soil properties, and alteration in vegetation are all as potentially persistent and as significant to agricultural practice as the more spectacular landforms. The potential for the study of cultural alterations of the soil is great. We have pioneering studies in this vein by Barbara Williams and Gene Wilken. Similar opportunities exist for interpreting the manipulation of vegetation by subsistence producers. In the last ten years, Gordon (1969, 69-81) has looked at species arrangements in space,

Kellman has studied *milpa* weeds, and Scott (1978) has produced a monograph on Campa Indian savanna formation.

Further work also needs to be done on traditional tools, following the lead of Donkin and Gade. The plow and the machete have encouraged very different practices than have the *chaquitaclla* and the stone axe.

Much work has been done in placing cultural practices in physical context. Occasionally, references have been made to the Holdridge life zone system or the Seventh Approximation; more frequently, each author has created his or her own framework for ecological zonation. Nietschmann subdivided his Miskito coastal plain into four ecosystems, based on general vegetational characteristics; one ecosystem was further subdivided into biotopes. Kirkby divided the valley of Oaxaca into four physiographic zones. Work in the Andes has developed through altitudinal zonation schemes (Brush, 1977; Gade, 1975), often linked with the concept of verticality. The concern has been to show the competence of communities to effectively utilize a variety of microenvironments through an annual round of exploitation, colonization, or specialization and reciprocity. Geographers should be active in refining -- and addressing the latent environmental determinism of these zonation concepts.

Archaeologists have been much influenced by the idea that a settlement's location is the optimal site for least-effort resource utilization (Vita-Finzi and Higgs, 1970). Such "catchment area analysis" is now beginning to be tested (Flannery, 1976). As Patrick pointed out, we need to be skeptical on this matter.

The initial attempts to relate such cultural practices as ritual to merely nutritional needs have proven to be over-simplified (Clarke, 1977). Nevertheless, once we have gone beyond what Brookfield has called the calorific obsession, it is quite possible to see the general competence of self-subsistence cultures to provide a rich set of social satisfactions for themselves. The ultimate purpose of agriculture in such communities is to produce materials for the reproduction of the entire society and its relationships of family, hospitality, and authority. Food production is community reproduction. Hence the risk of social as well as ecological instability residing in externally-controlled innovations, so well documented for the Miskito by Nietschmann. Hence also the vital role played in intensification by luxury or ceremonial crops. A general study of Andean terracing must also be a study of maize beer and the periodic festival.

"Competence" topics that have been and will continue to be studied include the ability of Maya farmers to reclaim humid forest on karst (Harrison and Turner, 1978), the kinds, antiquity, and permanence of agricultural reclamation techniques in Mesoamerican upland valleys (Kirkby, 1973; Woodbury and Neely, 1972), the antiquity and productivity of reclamation of hydromorphic soils, the significance of alternatives to canal irrigation on the Peruvian coast, and the extent to which the physical characteristics of the *varzea* prevented the development of populous societies in Amazonia (Meggers, 1971; Lathrap, 1970).

Disturbance Regimes and the Resilience of Subsistence

There is ample opportunity for the further study of the competence of subsistence producers to reproduce their internal social relationships and maintain a stable relationship with their environment. It must be admitted that actual equilibria have occurred only at certain time scales, in certain systems, and during certain historical periods. One broadening of the concept of equilibrium has been the introduction of the idea of resilience. Biogeographers are increasingly becoming involved in disturbance ecology; I think there are also considerable opportunities for the study of resilience among subsistence producers. Agriculture is subject to risks of floods, drought, storm, night frost, landslide, earthquake, and pest outbreak. In common with biogeographers, we would like to know the frequency, intensity, and extent of these disasters. We also need to investigate the techniques employed to minimize risk. Kirkby, for example, has effectively used game theory to study the rationality of simultaneous use of different physiographic zones in Oaxaca. Archaeologists often explain change in terms of environmental disaster (Sheets and Grayson, 1979); geographers should be able to judge which disasters actually would be capable of overwhelming the strategies of subsistence producers.

In somewhat more general terms, the need to preserve the means of resilience can be said to produce a "subsistence ethic" in peasant societies (Scott, 1976). Social and economic innovations are subject to acceptance or rejection on the basis of their implications for long term biological or social survival.

Historical Change

The archaeological and historical record indicates continual cultural and agricultural change. In some areas and during some periods, change seems to have been gradual; in others, change has been rapid and dramatic.

Particular attention has been given to population dynamics as one factor that at times has functioned as an independent variable. Turner and Denevan have both worked on historical demography, with special emphasis on the Maya collapse and Columbian exchange. Patrick has just discussed the contrasting implications of in situ population growth and population spread. Demography and intensification theory will clearly be the topics of continuing interest in the 1980s.

Work on the impacts of environmental change on human cultures has been almost entirely the province of anthropologists (Whitten, 1979). This is an area in which geographers should become more involved.

It has become somewhat unfashionable to relate culture change to invention unprompted by appropriate changes in the practical context. Nevertheless, we must not allow ourselves to ignore the aspects of culture and cultural change that cannot be reductively explained. The long tradition of study of cultural origins and dispersals should not be left untended.

As has often been pointed out, linkage to a larger economy can have major effects on intensification even without local population change. In this regard, geographers have re-assessed the notion of "traditional" society. As Nietschmann (1979) observed, "traditional" is an image of ours, not of the society involved. We are today generally interested in various mixtures of subsistence production with different types of commodity production, including part-time wage labor and temporary labor migration (Elwert and Wong, 1980). But even in the past subsistence production was normally embedded with a larger economic context of reciprocity, trade, or tribute. We need to learn more about the various ways the larger polity and economy interact with subsistence producers; we must keep in touch with the economists, sociologists, historians, and anthropologists who are refining and testing these concepts. Different commodities and different modes of commodity production may have quite different effects on nutrition, resilience, demography, distribution, and the environment.

Geographers have related the increasing emphasis on commodity production to environmental degradation and malnutrition. Smith and Nietschmann have expressed concern for the green turtle; Denevan, Parsons, and Sternberg have discussed the demise of the rain forest. Soil erosion has been partly attributed to the market orientation of peasants in Chiapas (Collier, 1975), and to the commercial orientation and mobility of Mennonites in Northern Mexico

(Sawatzky, 1971). Eidt has pointed out that malnutrition plagued colonists in Argentina who could not learn subsistence techniques from the Indians. Were similar ecological or social problems created in the past by the spread or decline of regional economies or states.

The Full Extent of the Field: Arenas of Action

The Local Arena

One of the reasons for becoming a geographer is to partake of the opportunity for field work -- for informal education in culture, agriculture, and nature, led by people who have learned through a lifetime of work and curiosity (Parsons, 1973; 1977). The importance of this local education process has been emphasized by Ruddle and Chesterfield's (1977) fine study of folk education for traditional subsistence skills. The literature on ethnoscience is of particular interest to geographers; we should be able to make substantial contributions on the basis of our own field work.

Our activity in the field is not limited to learning. We also are friends, advisors, teachers, scientists, and scholars with an interest not merely in the processes we observe but also in the sites and communities in which they operate. Long dedication to a place, such as that of Parsons for Antioquia, Kirkby for Oaxaca, or Neitschmann for the Miskito Coast, is a most admirable goal.

The Policy Arena

Many of us find our opinions solicited by agencies or publics with interests in such broad policy issues as development, the environment, or social change. Most of our research is facilitated by local or international institutions, often with policy goals. It is important to continue to realize that our pronouncements and actions in this arena are not strictly speaking those of scientists or teachers. Valuable policy advisors are politic evaluators. The applied geographer is a geographical critic, someone who not only knows the theory of soil erosion or subsistence production but also is able to make reasonable judgments as to their significance in a particular situation.

It seems to me that we will be most effective in policy matters when we are, like all good critics, most independent and least dependent on a particular institution or state with its biases and rigidities. We should encourage and associate with

voluntary associations and ad hoc social networks. I do not think it strange that Joshua Dickinson is both a fine development advisor and a fine poet, for both vocations require a sensitivity to the total human context.

The Public Arena

What we do is not merely of specialist or governmental interest. If so, our classes would be much smaller and our books sell less well. Many geographers are not aware that for some time now there has been a very strong interest in subsistence on the part of essayists and poets, notably Wendell Berry (1972) and Gary Snyder (1977). These people see the stability, resilience, and concern for place and community of subsistence economies as something of quite radical promise for modern civilization, not only agriculturally but also culturally.

Regardless of future promise, the current importance of subsistence production is great. The world is still fed largely by subsistence producers, and if everyone is to have reliable food and a measure of dignity, this will probably continue to be the case. Even in urban society, subsistence production in the broad sense of production for the needs of the household is still important. Whenever we garden, prepare food, decorate or fix our house, or entertain at home, we are engaged in subsistence production, production for use, and thus have something to learn from self-subsistence producers in other places. Much of what is most valuable in culture is tied to subsistence in this broad sense. A large public reads books such as *Caribbean Edge* and Davidson's work on the Bay Islands. Such communication should be our goal. This must be our vocation: to seek to learn from peoples with a rich household economy, and to awaken in others a curiosity about and affection for cultures with a rich subsistence capability.

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