

### Regional systems

I think we shall come to study regional systems. We shall study such systems not, as we now tend to do, from the viewpoint of some one small local community looking outward, but from the viewpoint of an observer who looks down upon the whole larger regional system.

Redfield (1956:28)

Few anthropologists have hastened to implement Redfield's suggestion; the empirical data necessary for such a perspective are unreliable, inaccessible, or entirely lacking in most parts of the world, and a single fieldworker cannot possibly collect them himself, using only the methodology of participant observation. Indeed, both Leach (1954:311-12) and Skinner (personal communication) confess that they would never have undertaken their exemplary regional formulations but for the loss of their detailed field data, which consequently necessitated a more generalized view of social organization.

The study of regional systems is concerned with analysis of the processes by which institutions and organizations integrate individual communities into larger social units. It is clear that many important aspects of social organization transcend the boundaries of the small community, and that it is rarely useful to consider communities as if they were isolated, closed, unchanging, and autonomous socio-cultural units. Higher levels of social and cultural organization have always been recognized in the abstract (eg, a culture or society is of course composed of <sup>nested hierarchies of</sup> local populations), but anthropology itself possesses few developed concepts for the differentiation and integration of the implied intermediate levels. Marketing systems, hierarchies of political control, and ethnic and linguistic subgroupings clearly exemplify such meso-social organizational forms (and clearly possess

spatial referents), and are beginning to receive anthropologists' attentions as such, but much of the work of analysis must be done with concepts and research methods borrowed from other disciplines.\*

The concept of the region as an organizational level of human settlement and activity has been most fully developed in geography, a discipline which has been concerned with spatial organization and process and with explanation of the areal distribution of phenomena. For geographers, regions are significant partitions of space which subdivide larger spatial units according to uniformly-applied formal or functional criteria (see above, page 1); functionally-defined regions (such as that discussed in this proposal) represent levels of integration within a hierarchy which theoretically culminates in a single all-inclusive spatial entity --a nation, a continent, or perhaps the whole world. At lower levels, functional regions are seen as transactionally-defined (and, implicitly, interacting) components of such larger landscapes.

This approach may be readily applied to the spatial configuration of human settlements, territorial systems, and activities; human groups and communities of any scale can be seen as landscape entities which occupy space, exploit resources, and interact with one another in patterned ways. The regularities (and, of course, gross irregularities)

\* A closely related development has been observed among workers on the fringes of economics:

The concept of the functional economic area seems to emerge at a weak point near the intersection of several specialized fields --geography, regional economics, agricultural economics, labor economics, urban economics, macroeconomics, demography and perhaps other specialties. It is basically an ecological concept.

of human activities form physical patterns\* and, over time, may be read as "a palimpsest of landscapes, dead, atrophied, and flourishing" (Bradford 1957:viii).

The development of quantitative techniques for the study of landscape patterns and areal distributions is a rapidly growing part of geography; patterns may be studied directly by means of network analysis on systems of nodes (Haggett and Chorley 1969, Kansky 1963) and in relation to various theoretical landscapes developed in location theory (Abler et al 1971, Haggett 1965). Other approaches involve the abstraction of a landscape as an xy area on which individual spatially-distributed variables may be plotted as an orthogonal z-dimension, and the result presented as an isarithmic surface (Haggett 1965:214; cf Monkhouse and Wilkinson 1971:39-43). Time-series analysis of such surfaces can be done for single variables, and relationships among areal distributions of two or more variables may also be studied (Neft 1966:4). Any continuous spatial distribution can be generalized as a potential surface; in this case, a z-value

...indicates the geographical distribution of proximity... where the space potential of a commodity is highest, there is the point which has the greatest proximity of accessibility to the commodity.

Warntz (1959:36)

The development of gravity and potential models is discussed by Olsson (1965), and further detail is given below in the methodological

appendix.

Barry and Marble state that "the fundamental properties of pattern include absolute location (position), relative location (geometry), and scale" (1968:7).

The geographers' concept of region seems capable of filling the intermediate-level gap in anthropologists' models of social organization. Geographers have generally been primarily concerned with systems of regions (eg, partitioning a national economy into its regional components --cf Berry and Hankins 1963, Berry 1966), and relatively few methodologically significant descriptive studies of regional units have been published (Broek 1932 and Marshall 1969 are important exceptions). Most empirical research using central-place theory has concentrated upon relations between nodes (eg, systems of central places), and the structure and operation of node-hinterland relationships has received relatively less attention (Chisholm 1962 is a principal exception; it should also be remembered that Christaller specifically defined centrality as "the relative importance of a place in regard to the region surrounding it" --Thomas et al 1962:117); regional units have been identified, but their operation has been considered primarily in terms of characteristics of their central places, with the tacit assumption (following the model of rural spatial organization proposed by von Thünen) that land- and resource-use patterns within the nodal hinterland are a function of cost-distance from the central place. Further, the tendency has been to treat central place systems as if their configuration, once established, was permanent and static, ignoring the notion that it is the flow of commodities (goods, services, information, people) through the network of central places that structures and maintains internodal relations (cf Richardson 1969:227-8; Skinner 1964-5).

The integration of communities into larger units must be seen as a continuing process. It is useful (at least as a preliminary device) to consider communities as performing functions --eg, growing food, producing and socializing subsequent generations, extracting resources. Rarely are individual communities entirely self-sufficient, and often they are highly specialized, and therefore highly dependent upon other communities. This interdependence is structured in both time and space, and may be studied in terms of recurrent patterns of interactive events. Thus, one might study interconnected systems of marketplaces as temporal phenomena (Good 1970, Hill 1966, Skinner 1964-5) and as spatial matrices for socio-cultural activities (Mintz 1959, Skinner 1964-5). In either case, it is the flow of commodities through a system of places that constitutes empirical data.