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ON THE LIMITS OF SOCIAL ECOLOGICAL EXPLANATIONS IN COMPARATIVE RESEARCH

INTRODUCTION

IN COMPARATIVE research as elsewhere the important word is research. The "comparative" part just indicates one way of doing the research. It may be that the complexity of the world and the forever changing conjunctures of history put out of reach anything but incomplete and fragmented webs of understanding. But the goal is with us: to unravel and master the forces shaping us and our societies. We want to build a model of the world which will help mankind become master of its destiny.

One thread in this web is labeled social ecological theory. Every so often our separate small projects run across this one. Sometimes we even make it an anchor for directing our own threads of reasoning. But do we really know it? Do we know its strength or its weak parts?

The central problem of social ecological theory is to understand how a population organizes itself in adapting to a constantly changing yet restricting environment. The "ecological complex" (Duncan 1959) of population, organization, technology and environment are the main variables used in the studies of growth and development of social systems. A social ecological

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population with a common culture. It is clearly a non-actor system. Only rarely will one find coincidence of the boundaries of responsibility for a state and the boundaries of a culture.

The various processes generating what we call development, must in social systems have actors as executing agents. So what is it that generates the development of nation-state? Is it the activities of the individual actors of a culture or the activities of the system of state-actors? Posed this way the answer is obviously that they both affect the development of the nation-state. But until Wallerstein (1974; see also Wallerstein 1979, 1980; Chirot 1977 and Breiger 1981) published his investigation into the dynamic of the world system of states and large scale business enterprises, the implications for sociological theory of the Marxist critique of mainstream theories of development seemed mostly unnoticed or ignored. Since then the problems of multilevel systems with different kinds of actors have cropped up everywhere. In order to contribute to the understanding of the development of different social systems also social ecological theory must expand its scope to include multiple levels, different kinds of actors and systems, as well as specifications of how effects can be traced across levels, across system boundaries and how these effects are related to different types of actors. A beginning might be to recognize that social ecological theory as it stands today applies only to non-actor systems where there is no single actor or coalition of actors with any responsibility for the system as a whole (like states have responsibility for the society within their boundaries). This at least seems to be one possible interpretation of Hawley's (1979) speculations on the utility of an evolution model for the explanation of cumulative change.

In order to attack the problems connected with the duality of state and society (or nation) or at another level the duality of incorporated city and metropolitan region, the population and organization variables need to be refined by distinguishing among a population of human actors, a population of system responsible actors and a population of other incorporated actors (other than system responsible). The organization variable must differentiate between the organization of non-actor systems and

the organization of actor systems. Both for non-actor systems and for actor systems of the various types of populations there will be levels of systems. Each hierarchy of levels can be summarized as follows:

Type of system organization Type of population	Non-actor systems of		
	System responsible actors	Organization actors	Human actors
Level			
Environment	World systems -of states -of cultures -of multi-nationals	Society	Society
Units of analysis	Society	Market	Social network
Agents of internal processes of the unit of analysis	All actors which are legitimate members of the society	All actors which are able to participate	Human actors
Type of system organization Type of population	Non-actor systems of		
	System responsible actors	Organization actors	Human actors
Level			
Environment	World systems -of states -of cultures -of multi-national	World systems -of states -of cultures -of multi-national	Society
Unit of analysis	State	Multi-national organizations	Organization
Agents of internal processes of the unit of analysis	Local system responsible actors and elected representatives from other populations	Member organizations	Human actors

If we from here return to the problem of doing comparative research on urban development, the problem must be restated as having to do with how technology and environment determine the parameters shaping the internal spatial distribution of the member actors of a society and their activities. From an applied point of view the most interesting aspect lies in the possible degrees of freedom the system responsible actors of a society (the state, the cities and municipalities) have for influencing the internal spatial distribution of actors given the externally determined parameters. The appropriate unit for doing applied comparative urban research would then be societies where variations in externally determined parameters might be used as controls in the assessment of the efficiency of various efforts of system responsible actors to influence the characteristics of the urban regions within their societies.

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