

# Center for Studies in Demography and Ecology



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## Some Evolving Thoughts on Leo F. Schnore as a Social Scientist

by

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SOME EVOLVING THOUGHTS ON LEO F. SCHNORE AS A SOCIAL SCIENTIST

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I first encountered Leo on an autumn day in 1966 when, during my second graduate term, I was taking a course from him on Urbanism and Urbanization. Leo had actually missed the first few weeks of the course, and his friend Eric Lampard had ably filled in with a discussion of the long-term history of urbanization.

Leo was a galvanizing figure in my life. Until that point, I did not see much future for myself as a sociologist. I had enjoyed sociology as a discipline at Oberlin College in Ohio, but what bothered me about it was the seeming abstractness of the subject matter. As presented to me by other faculty, there were many interesting concepts and ideas, but I failed to become engrossed in them because I could not determine their validity. At the time, I was contemplating a return to newspaper reporting which I greatly enjoyed because of its investigative quality, although I saw little of the conceptual overview that I appreciated from sociology.

Leo brought it all together. He had a lot of stimulating, clear ideas about what was happening to cities in the United States. And he seemed wedded strongly to the position that ideas were largely accepted on the basis of empirical support. The course was essentially a sampler of Leo's ideas and research. He talked a lot about the nature of urban development in the United States, and he almost always had some interesting tables to discuss in relationship to the ideas, usually written on the chalkboard or handed out in hard copy.

While I have resisted the idea of becoming a disciple of anyone, Leo's ideas and data have been the most important to me in my career. Unfortunately, I got to know him at a time in his life when his personal difficulties were beginning to mount. By the time I received my Ph.D. in 1970, it was clear that Leo was headed in a downward personal spiral from which he was never able to rebound fully. It is certainly fair to describe his life as

tragic because the incredible promise of his early career was never fully realized.

Yet, between the late 1950's and early 1970's, he produced an impressive array of nearly 100 publications that clearly set an agenda for research on urbanization within the human ecology perspective. In one year alone, 1962, he published at least eight papers in refereed journals. Not to be outdone by much, he published at least six papers in 1963.

Leo's theoretical heart was with the human ecology approach. In his early professional years, he wrote stimulating papers that tried to revive the aggregate empirical study of social organization as a central focus of sociology. Most of his practical research focused on urbanization, especially the growth and development of cities in the United States, where he tried to lay out their basic patterns of development. Leo also wrote some about world urbanization, and he had others research interests in the relationship of social variables to urbanization.

Born in 1927, Leo described (1966a, 152) himself in print as "really just a rural-nonfarm boy from North Ridgeville, Ohio," from which he "escaped in 1948." He attended Miami University in Ohio (then a center for innovative population-related research) and attained a Ph.D. in 1955 with Amos Hawley at Michigan. He served on the faculties at Brown, Berkeley, Michigan State, and, for most of his career, at Wisconsin. While hardly an administrative type, Leo was a major supporter of the creation of the Center for Demography and Ecology at the University of Wisconsin in the early 1960's.

Leo had a lively sense of humor, which was mixed with disdain for pomposity. In one paper, he reported (1966a, 155) that the "sociological theory from which I have drawn my greatest inspiration is that of Ben Jonson (c. 1572-1637 A.D.)," described as "a contemporary of Shakespeare, and an actor and dramatist as well as a poet." Leo noted that "Jonson's most notable empirical effort---Every Man in His Humour, first published in 1598---contains the first known principal components analysis of city and countryside and 'rural' and 'urbane' people. I need hardly emphasize the well-known fact that Jonson, employing a varimax rotation and utilizing a CDC 6600, extracted four orthogonal factors."

Leo was himself actively involved in dramatics and music. He especially loved jazz and had a wide-ranging knowledge of the

field. He also played a wide-ranging second base for the faculty softball team. As a bad field no-hit player for the grad students, I noticed that he never shaved when playing second base, presumably a strategy to scare the base runners.

#### WHY THE IMPORTANCE?

What was so important about Leo's work? I think his key virtue was the same one that inspired me in the course on Urbanism and Urbanization, namely, the ability to weave ideas and data together. This is a goal that many in sociology proclaim, but few are actually able to achieve. Our best known sociologists tend to be people who are well known either for their ideas or their data analysis, but rarely for both. Not only was Leo able to meld ideas and data, but his work also had four other important qualities that made it extremely appealing: relating demography to mainline sociological issues, theoretical generality, theoretical parsimony, and empirical comparison.

Most demographic research is high on describing patterns in the data and relatively low in developing general propositions about social organization. However, Leo used demographic data and issues to illuminate the most central of sociological issues. In the process, he gave those of us who identify as demographers a sure footing in the social science fraternity. Some demographically-oriented sociologists such as Kingsley Davis and Amos Hawley had already demonstrated the power of broad conceptualization among demographers, but had not generally engaged in detailed quantitative research to support their arguments. Leo was audacious enough to proclaim sociological saints such as Durkheim to really be demographers, to argue that demographers fundamentally dealt with the most basic sociological issues related to social organization, and to suggest specific hypotheses that might be empirically tested.

In regard to theoretical generality, Leo clearly envisioned his goal as explaining the social and spatial organization of all cities, regardless of time, region, and culture. Leo saw broad social forces at work in the world, largely transcending the actions of individuals, and he was eager to identify them, always on the basis of data. In this respect, he opened up new vistas in the study of cities because other scholars had typically focussed much more on the unique or particular. Other scholars had their particular city or particular aspect of urbanization to study, but Leo was not afraid to analyze large samples of communities. To him, the specific dependent variable, whether it be social class distribution, population growth of

communities, or community form of government, was not especially important. But the overarching explanatory framework was crucial.

In regard to theoretical parsimony, Leo clearly sought explanations that were based on a few causal factors. He steadfastly sought out the two or three key variables which affected cities, whether it be their age, time of observation, or cultural history. While a great fan of historical research, he did not seem especially interested in the prosaic details of specific place and time. In this respect, Leo's work had an extremely catchy or flashy quality because the overall viewpoint was easy to grasp.

In regard to empirical comparison, Leo almost always insisted that the truth lay in the data, but there was also the explicit notion that causal factors could be identified only by an actual comparison of multiple cases. In Leo's day, but even now, so many urban studies were based on one or two cases, but Leo was always a big sample person, determined to maximize the number of observations or sample size for whatever specific question was studied. In the process of analyzing large samples, he stimulated greatly the use of metro areas as a basis for causal analysis. Until his work, communities were used as units of analysis, but they seemed to be more the basis of fundamental description rather than analytic insight.

Some of the flavor of Leo's scholarly view is captured by a statement (1959b, 151) that he and Otis Dudley Duncan made as a "rejoinder" to a comment on their view of human ecology:

*It is our conviction that most current research on social organization, soi-disant, carries the burden of a strong microscopic bias and an almost studied disinterest in the classical problem of understanding society and societies. It manifests, moreover, an intense intellectualistic preoccupation with the intricate for its own sake and a disinclination to work with the kinds of gross and obvious, but accessible, indicators and variables that are within our power to manipulate here and now.*

The contribution of Leo's scholarship was immense, but there were also certain unresolved issues, some which should have been anticipated at the time of his writing and others which seem relevant only from the hindsight of several more decades of society and societies. In the following sections, I provide a

review and critical assessment of Leo's work on three different, but related, topics: the nature of human ecology, the city as a social organism, and the distribution of higher status groups within metropolitan areas. These, I believe, provide an adequate sample but not complete census of Leo's published work.

#### NATURE OF HUMAN ECOLOGY

Duncan and Schnore were the "bad boys" of sociology in the late 1950's with their vigorous written efforts (1959a) to delineate human ecology as a central area of sociology. Indeed, they seemed like a couple of Davids against Goliath in their efforts to propound that sociology would best be served by becoming human ecology, which had a venerable history in the discipline, dating back to Park and Burgess at Chicago.

By the late 1950's, human ecology had suffered an eclipse. Leo's mentor Hawley (1950) had written recently an extraordinarily provocative book on Human Ecology but it was a restrained, theoretical argument for what Human Ecology might be, rather than a frontal attack on the prevailing trends in the discipline of sociology. More aggressive, Schnore and Duncan took on the prevailing trend toward individual-oriented survey research as represented by Columbia University and social psychological perspectives as embodied by the Michigan School. They propounded human ecology as the POET scheme, involving the study of the interrelationships of population, organization, environment, and technology. They were quite explicit in their support of an aggregate-level macrosociology.

The basic argument for the POET scheme was that it hewed most closely to the idea of sociology as a distinctive academic discipline, focusing on the study of the social organization of aggregates. Leo devoted much of his analysis in one paper (1961b) to criticizing the predominant individual-level trends in sociology, which he labeled as "individual psychology", "social psychology", and "psychological sociology". Additional effort was devoted to showing how the four variables of the POET scheme might be conceptualized and measured.

Leo's most interesting effort in this area was a paper (1958) entitled, "Social Morphology and Human Ecology," in which he made two major points about Emile Durkheim, one of sociology's intellectual founding fathers. First, Schnore seemed to be arguing, sociology has mainly ignored the interesting conceptual issues that Durkheim had raised in his doctoral dissertation on the division of labor. Second, Schnore suggested,

even though Durkheim had died before the Chicago School invented human ecology, he was really a human ecologist at heart. As Schnore noted (1961b, 139) in another paper,

*...the central role given to organization—as dependent or independent variable—places ecology clearly within the sphere of activities in which sociologists claim distinctive competence, i.e., the analysis of social organization, If human ecology is "marginal" to sociology, what is central?"*

Leo's work on Durkheim also evidences a great interest in ideas of societal evolution, which he seemed to see as crucial to the human ecology perspective. Throughout his work (both conceptual and empirical), Leo seemed driven to discover whether social groups went through a patterned sequence of sociological changes. In the case of Durkheim what intrigued Leo was the issue of the evolution from a mechanical (largely undifferentiated) to organique (highly differentiated) society.

In the process of elaborating the POET scheme, Leo became academic imperialist by trying to subsume demography within it. This is most clearly evident in his interesting paper (1961a) on "Social Mobility in Demographic Perspective", where he adds population composition and social mobility to the traditional demographic variables of fertility, mortality, and migration. As I read the paper, he argues (1961a, 47) that the study of population composition (such as educational attainment, occupational position, and marital status) are reasonable demographic topics because of the way the field "has actually developed in the course of the past century." Thus, he deftly ties the human ecologist's concern with organization and the division of labor to the demographer's concern with population composition. Having defined population composition as a legitimate topic, Leo then has no trouble arguing that social mobility, or change in position, is also a reasonable topic for the demographer (also perhaps read human ecology) since social mobility involves the study of changes in population composition.

Leo's argument in behalf of tradition for the study of composition as a fundamental aspect of demography may seem superficially weak; yet, we all know that demographers legitimately study population composition, mainly because they use census materials and bureaucratic records that often contain the traditional variables of fertility, mortality, and migration AND the more marginal but certainly legitimate

variables such as educational attainment, occupational role, and marital status.

A more modern update of Leo's ideas might proceed from a position that recognizes the concept of a "population" as the most basic concern of the demographer. Populations can change through births, deaths, and movements in and out of the population. What needs to be pointed out more explicitly than Schnore did is that changes in population composition are really just specific indicators of abstractly defined changes in entrances and exits that we call fertility, mortality, and migration, but could be called other things. Thus, the growth of the college-educated population is really a function of the birth of new college graduates and the migration of college graduates from abroad. This conceptualization of demography is quite evident in the many methodological advances that have been made since Leo's early writings in such areas as cohort and life table analysis, where the study of techniques for the analysis of fertility and mortality has been applied to the study of population composition such as marital status and educational attainment. In effect, our methodology tells us that changes in educational attainment and marital status are simply a product of the same cohort and life table processes as fertility and mortality.

The efforts of Schnore and Duncan to outline the POET scheme have led to much discussion. Some have tried to elaborate the nomenclature of the POET scheme, but this seems to me to be a task with no eventual goal except categorization. A more serious concern is that Schnore and Duncan failed to identify explicitly how the POET variables operated in relationship to each other; in other words, the POET scheme represents only a clever mnemonic device, rather than a theory of causal relationships. In some respects, this is a fair criticism. However, there are few areas of sociology where its practitioners are reasonably held to a standard where they must present overarching causal statements of relationships. For instance, social psychology is considered a very legitimate area, but few would dismiss social psychology because it has failed to work out explicitly the exact relationships between the individual and society.

From a historical standpoint, a more serious concern about the POET scheme may be that it, to some degree, won the war without many of its practitioners knowing or caring about it. Leo wrote his essays at a time when macro-level Marxist and Durkheimian perspectives were at a relatively low point in American sociology, at least at major universities. But, by the late 60's and early 70's, there was a strong upsurge in interest, as



evident by the growth of such areas as comparative/historical sociology and the study of complex organizations. Many studies appeared in which the sociologists were concerned with variables that closely resembled technology, social differentiation and organization, and population size. But many of these macro sociologists had never heard about the POET scheme, did not care about it, and thought that human ecologists only studied the number of people who lived in various census tracts. Many of them also failed to share Leo's concern about the careful, systematic analysis of data. But the fact is that the POET scheme is so widely accepted, at least in practice, that it may fail currently to delineate a very distinctive area of sociology.

My view is that there is a legitimate niche for human ecology in sociology. I very much like Leo's concern with the interrelationships of population, organization, environment, and technology. Yet, I also like Hawley's (1950) more traditional conception of human ecology as focusing on the causes of the social organization of communities, largely spatially defined. The original Schnore conception of the POET scheme is too broadly defined to lead to much intellectual closure in the context of current theory construction and validation in sociology. It seems to me that there are very realistic possibilities for scientific paradigms if we focus on the nature of community organization in units such as neighborhoods, cities, suburbs, and metropolitan areas.

Unfortunately, I do not see this Schnore-Hawley perspective as developing rapidly in number of adherents within the profession of sociology. This reflects a variety of factors, including the types of topics and approaches that are most amenable to funding from such sources as the National Institutes of Health. Yet, the issues and data are there to foster a flourishing intellectual field.

#### THE CITY AS AN ORGANISM

Leo's ideas about human ecology received their empirical test mainly by focusing on the city. As he noted (1966b, 59),

*We are interested in cities around the world, not just in English-speaking countries; and we are interested in cities of many forms, from the earliest urban islands that rose above the seas of agricultural villages, through city-states, through preindustrial and post-industrial cities to the Megalopolis of today. Thus, I think it is well to keep a certain looseness in our conception of the city, for the city is many things—political,*

*economic and social, historical and geographic, physical, and even psychological.*

Leo's Ph.D. dissertation at the University of Michigan focused on metropolitan growth in the United States, and it stimulated numerous studies in which he investigated community organization across U.S. metropolitan areas, encompassing a variety of topics including residential patterns, the functional differentiation of suburbs, journey-to-work patterns, community growth, and the nature of government structure in cities and suburbs. He devoted only minor attention to the study of inter-community variation on the international scene, probably because he was busy filling in the gaps on what we needed to know about the American urban scene and the international data base in the 50's and 60's was often skimpy. Certainly, the international scene deserves the replication and extension of Leo's ideas, a task that would have probably occurred if he had maintained his health.

Leo's empirical studies of American cities were always based on careful analysis of comparative patterns, generally using census or official statistical data. While he thought big in terms of his ideas, he always insisted on very careful analysis of the data, and, he was always quite open to the possibility that his theory might be wrong or needed more development, to be supported by empirical research.

Leo's ideas about cities were heavily drawn from previous theorists, and he did not propound many truly innovative ideas. However, he was quite innovative in his ability to synthesize the arguments of others and to turn them into researchable hypotheses.

Leo's Durkheimian ideas were almost literally applied to the city. One summary article was entitled "The City as a Social Organism." In it, he underscored (1966b, 62) two points about the city as an organism:

*First, the parts, the individual human beings making up the city, can be regarded as replaceable and interchangeable. They are very much like cells and, as in the organism, cells may come and go and the organism itself may survive. One might ask if this is radically different from the fact that the city may live on, while people come and go. Secondly, the city may grow and there are young, middle-aged, and old cities. Cities are founded, or born. There are periods of rapid growth, as in "boom towns." Cities live and die. There are "ghost towns", or dead cities.*

A few paragraphs later, Schnore talked about the internal aspects of cities, a subject that continually fascinated him. As he noted (1966b, 63), "Fast and slow growing cities are different structurally, whether regarded from economic, social, or political points of view. Large and small cities are also dissimilar, organizationally speaking. Size operates as a kind of limit upon complexity of organization. Large cities are at least potentially more heterogeneous and more complex."

Elsewhere (1965b, 106), Leo describes the large contemporary metropolitan area as having "an extremely high degree of interdependence that is reflected in an intricate territorial division of labor."

To perhaps oversimplify a little, Leo liked, at heart, a very simple model of urban structure, in which the growing size of the community leads to a growing differentiation, especially in spatial patterns. Welcome Durkheim to the American city.

Leo's evolutionary Durkheimian model of the city was tempered by his recognition of what he called "residues", or patterns of land use that had been left from previous eras of urban building (Schnore and Evenson 1966). He was well aware (1965b, 216), for instance, that the development of the electric streetcar in the late 1800's had produced certain land use patterns that were altered by the development of the high speed motor vehicle. However, his overarching theme seemed to emphasize a universal evolution of cities regardless of time period, just as he viewed total societies.

While Leo clearly emphasized the differentiation of cities as social organisms in the face of competitive pressures, he also recognized, as the Chicago School sociologists had, that there was another consensual side to urban life. The consensus allowed the city to function, as he pointed out (1966b, 61),

*...quite effectively in the face of its inhabitants' indifference to and ignorance of the system as a whole. The residents of the city carried on their daily rounds and lived out their lives in their own small worlds, largely unaware of the larger unity of the city. At the same time, the city was exhibiting a life of its own.*

Furthermore, he recognized that, in some respects, life in the city may become more homogeneous, as a counterpoint to the possible disintegration from the heterogeneity of social

differentiation. (1966b, 67). The relative homogeneity versus heterogeneity of urban life is still an issue that demands great research attention.

Leo used the organismic analogy to demonstrate a number of interesting empirical facts about the American metropolis. He documented (1957) the fact that suburban rings had started growing faster than their central cities at quite variable dates, and related this to their size, growth, and period of development. He noted (1954) the growing spatial distances of commuting to work, and interpreted these as indicating a growing functional differentiation of homes and workplaces. Focusing on suburban communities outside the central city, he traced (1957) interesting differences in such population characteristics as age, family composition, and social status between those that were primarily residential as opposed to employment oriented. In great detail, he measured (1972) the decentralization of higher status workers in suburbs, arguing that metropolitan areas evolved over time toward a decentralization of higher status workers.

With former Wisconsin sociologist Robert Alford, Leo even tackled the political structure of communities. They suggested (1963) that suburban communities might increasingly evolve toward forms of government such as city manager versus commission. Since the data in their study were cross-sectional, they did not have the opportunity to actually trace changes (and their causes) over time, a topic that would be quite interesting.

Leo was extremely innovative in his empirical use of the age of the city as the first census year in which the central city reached maturity, as defined by a population of 50,000 residents. Age of the metropolitan area often turned out to a good predictor of the dependent variable in question. However, since much of his data was cross-sectional, Leo often had some difficulty in determining why age was important. Leo should have more directly recognized and tested for what we now call age, period, and cohort effects (Glenn 1977), in which the organizational structure of the community may reflect some combination of its age or length of existence, its period or the specific time of observation, and its cohort or the time period at which it achieved some critical characteristic such as large population size. Did what Leo called the age effect simply represent the stage of evolution for the metropolitan area (or what would be called a true age effect) or a cohort effect, such as developing in the electric streetcar era? This is an extremely crucial distinction because the answer supports either the Durkheimian

(growth or aging equals differentiation) perspective or what might be called the "residue" view in which cohorts of cities have distinctive patterns of development.

Leo did have a major practical problem in testing for the importance of age, period, and cohort effects, namely that, by the 60's, the census had not typically provided for a large number of time points the comparable metropolitan observations of specific phenomena such as the location of higher status individuals. This is becoming less of a problem as repeated cross-sectional observations are collected in the last part of the 20<sup>th</sup> Century, permitting us now to come closer to accurate tests of Leo's ideas.

I am convinced (Guest 1977, 1978a; Guest and Nelson 1978) that much of the action in contemporary metropolitan areas represents a period effect in which all metropolitan areas are developing in fairly similar ways, with these patterns constrained by their residues (or what might be called cohort effects). The patterns of change are typically quite similar and the end point, if there is one, will be increasing similarity of structure across communities.

Leo's notion of an evolutionary pattern of spatial and population differentiation, associated with growth in population size, will work only under conditions in which the need for physical proximity constrains strongly the possibility of metropolitan development. In the streetcar era, relative rates of metropolitan growth were important to understanding variations in metropolitan development because growth increased the pressure for certain types of land use (much as Burgess (1925) argued in his famous concentric zone hypothesis). However, all metropolitan areas today are being shaped by the development of high speed transportation that, to some degree, liberates activities from the need for specific locations. And the development of electronic communications is freeing individuals and activities everywhere from the need for extremely close spatial proximity. Indeed, if population size has an effect these days on the differentiation of the metropolis, it may work in the opposite direction than the Durkheimian-Schnore view. Namely, growth may be an opportunity for communities to develop increasingly in a rather formless, or, at most, a multi-nucleated, fashion (Guest 1973; Guest and Cluett 1974).

Some of Leo's writings implicitly assumed that a high degree of functional differentiation characterized much of the metropolis and that this differentiation was increasing over time. This is

especially evident in his work (1957) on suburbs and satellites, where he shows that satellite communities, primarily employing, had lower status and older populations in the 50's and 60's than what he terms suburbs, primarily residential. Leo saw this as a longitudinal trend that would intensify the differentiation of the metropolis.

He based this conclusion on the finding (1965b, 355) that commuting distances for individuals were increasing over time periods, a rather well documented pattern in a number of studies. However, as Leo would probably be forced to agree, what is true at the individual level need not be true at the aggregate. Individual commuting distances may increase but the overall distances between homes and workplaces may actually decrease. My research (Guest 1978b) on the functional differentiation of communities, while limited, shows that, in aggregate, employment and residences were becoming intermixed in the last part of the 20<sup>th</sup> Century. This could happen for a variety of reasons, including the fact that, due to the decline of heavy manufacturing, workplaces may be less noxious than in the past. But we need to know a lot more about this, and about the population characteristics of communities with different types of employment and mixes of employment and residences.

#### LOCATION OF HIGHER STATUS FOLKS

As his active publishing wound down in the late 1960's and 1970's, Leo increasingly focused on the spatial distribution of higher status residents. He had a large grant on the subject from the National Science Foundation, and he produced a short, interesting book (1972) on research in progress. Leo primarily tackled this problem empirically by comparing (1963), across most U.S. metropolitan areas, the status levels of persons who lived in suburban rings with persons who lived in the comparable central city or cities. He also charted (1965b, 300-302) the distribution of high status individuals by specific miles from the center of the metropolis. Toward the end of his active period, he also became interested in the study of individual neighborhoods, to determine their status history and the factors underlying change or lack of change, although much of this work was not published.

Leo's most interesting empirical finding was the cross-sectional variability in the tendency for suburban rings to be higher in status than their central cities. While a number of observers have treated suburban rings as the preserve of the elites, Schnore found (1963) that, in 200 Urbanized Areas in 1960,

this was true in only about half the cases for the percentage of white collar workers, about two-thirds of the cases for high school completion, and about three-quarters of the cases for median family income. Holding constant other independent variables, the expected pattern of high status suburbanization was clearly most evident in the oldest metropolitan areas, and, to a lesser extent, in those doing little annexation of population/territory. Population size of the urbanized area had little influence, once age and annexation were statistically controlled. Schnore argued (1965b, 214) that the older urbanized areas may have evolved from a pattern of high status centralization to suburbanization at some points in their history, but this may have never occurred to the same extent in newer metropolitan areas which lacked the same intense competition for central land uses, given the availability of the automobile and truck.

Leo's initial model, then, seemed to break from many of his other writings in that it emphasized a cohort-type interpretation of the patterns, rather than a universal Durkheimian model. Urbanized areas that had appeared as large places before the automobile had a different history of status evolution than urbanized areas that appeared as large places in the more recent time periods.

By the end of his active writing, Leo had become much more tied conceptually (1972, 18-21) to the scheme of universal evolution, regardless of time period, that runs through much of his work. I am unable, however, to identify the exact causal mechanism in his writings for this interpretation of status redistribution. He also seemed increasingly to identify himself closely with the Burgess hypothesis that argued, in part, for the universal redistribution of higher status neighborhoods toward the periphery as the metropolis grew in size. Indeed, Leo suggested (1965a) that such an evolutionary pattern might also describe Latin America cities, superficially what seemed to be part of a very different culture.

Based on my research, I would have a related but somewhat different position than Leo on status redistribution. Consistent with his initial research on status distribution, I have argued (Guest and Nelson 1978) elsewhere that selective decentralization of higher status workers occurred in the oldest densest metropolitan areas in the 1920 to 1950 period, when the mass diffusion of the automobile permitted flight from the central city for the highest status groups. These groups were fleeing from the congestion and unattractive features of the

center left by the age of the electric streetcar. The automobile, however, did not force this redistribution in the smaller, newer places during this time period.

I also believe that the decentralization of high status groups was relatively universal across most metropolitan areas between 1950 and 1970, regardless of their size and age. By this time period, technological changes in work and residences had made the centers unattractive for almost all metropolitan areas, and the development of the national freeway system "liberated" high status folks from almost all metropolitan centers. In this time period, my evidence supports his position for a universal evolution that he propounded at the end of his major writings, but I do not believe that it was stimulated by the competition for the center that Burgess celebrated and Leo seemed to endorse.

Evidence for the period since 1970 (Hill and Wolman 1977; Schwirian et al. 1990) suggests that the status evolution is continuing in many metropolitan areas, but I do not feel that the studies clearly shed significant light on why this is happening.

Leo's most clever empirical work on status distributions focused on the relative dispersion of different status groups between central cities and suburban rings, rather than the simple dichotomization of groups into high and low status. In this research (1964), Leo took a number of different educational attainment categories, ranked from high to low, and investigated the over-representation of each one in the suburbs versus the central city. The most common pattern, not surprisingly, involved the lowest educational categories being overrepresented and the highest categories being underrepresented in the central cities. However, the next most common pattern involved both the highest and lowest educational categories being overrepresented in the central city. The third most common, but clearly a minority of cases, was the highest educational classes being overrepresented in the central city. Leo suggested that the case of both high and low status persons being overrepresented in the central city might be an intermediate case in the evolution of central cities from relatively high to low status in relationship to their suburban rings.

In an effort to test the universal evolutionary thesis, Schnore and Jones (1969) investigated how Urbanized Areas changed in their patterns of educational distribution between 1950 and 1960. For instance, did the pattern of centralization for both low and



high status groups tend to switch to only low status centralization over time? By his own admission, the results were somewhat inconclusive, although they tended to support his evolutionary view. In my opinion, this is an interesting conceptual-empirical approach that needs to be developed with more recent data. Leo's approach was to describe these distributional patterns by intuitive categorization of each metropolitan area. Modern statistical techniques of scaling and grouping make possible more sophisticated efforts in this direction.

Leo's last major empirical paper (1972), with Hal Winsborough, carried the analysis of status distributions to a much more sophisticated level than previous research. In this analysis, the authors investigated the effects of a number of community characteristics on a number of cross-sectional measures of the suburbanization of higher status groups for Urbanized Areas in 1960. A valuable contribution was the demonstration in the paper that older areas had a decentralization of higher status individuals through such characteristics as a high proportion of unsound housing, high use of public transit, and a small proportion of the population in the central city. Given the cross-sectional data, it was difficult, nevertheless, to draw conclusions about the evolution of status distributions.

An especially interesting finding was the strong importance of manufacturing (as opposed to trade activity) in the central city in leading to relatively low status central cities. Higher status workers were presumably repelled by the unattractive character of much manufacturing activity. The data thus suggested but did not prove that evolution might have occurred at some point in the manufacturing metropolitan areas but not to the same degree in others. Certainly, this work suggests much more attention to the employment structure of metropolitan areas.

In practice, Leo's research on social status distributions represents a nearly ideal picture of the social scientist at work. Hypotheses are formulated and carefully tested with high quality data. The researcher refines and revises his hypotheses as the data reveal patterns. New directions for research are suggested.

Conceptually, I believe that Leo's writings about status distributions need to be updated to recognize more clearly four distinct facts about the contemporary metropolis.

First, in most metropolitan areas, the tendency for social status to increase with distance from the center of the metropolis is moderate at best (Guest 1972). While Leo would probably not disagree with this fact, his writings and studies, especially toward the end of his active period, seem to treat central cities and suburban rings as homogeneous wholes. Much more needs to be known about why high status districts appear in almost all central cities, and why poverty concentrations are frequently located in suburban rings.

Second, patterns of population growth in various parts of the metropolis may complicate the degree to which we can conclude that areal social status changes. On the whole, there has been a net shift of population away from low status to high status neighborhoods in recent decades (Guest 1978a), and relative shifts of social status for central cities in relationship to their suburban rings may reflect movement among areas of the central city and suburban ring, rather than large scale shifts in social status for specific small territories within the central city and suburban ring.

Third, Leo needed to recognize more clearly that abandonment and obsolescence could be a primary driving force of the status distributions of contemporary metropolitan areas (Moore et al. 1983; Crowder and South 1997). Changes in lot size, housing construction, and community facilities have led to the outmoding of many central city neighborhoods. In the early post-World War II period, the sheer degree of abandonment of many neighborhoods could only be visualized vaguely, but the depth of this trend is quite clear to many of us as we head into the 21<sup>st</sup> Century. We also need to have a better empirical sense of why some neighborhoods have become zones of abandonment, while others have not. The abandonment and obsolescence of many central city areas stands in striking contrast to the patterns that were predicted by Burgess as a consequence of the high demand for centrality.

Fourth, Leo needed to deal more directly with the effects of race on the status distributions of central cities and suburbs. The large-scale movement of African Americans to Northern and Midwestern cities in the second half of the 20<sup>th</sup> Century resulted in a dual housing market. Spatial segregation of black and white communities was often very high. While African Americans often had fairly similar status characteristics to the whites they replaced (Taeuber and Taeuber 1965), there can be little doubt that many of the neighborhoods with the most severe economic and social distress have had majority African American populations.

These neighborhoods have been especially located in the central cities. In contrast, nonblack neighborhoods have typically not experienced the absolute despair of some of their African American counterparts. It is clear that racial composition of metropolitan areas will influence the status distributions of central cities, and, in turn, the overall status levels of central city neighborhoods relatively to their suburban counterparts. The evolution of status distributions may be confounded with the evolution of areal racial composition in ways that we still do not understand well.

## CONCLUSION

As I mentioned in the first part of this paper, Leo's initial attraction for me was his ability to blend theoretical ideas about the city with carefully gathered and analyzed empirical evidence. His work will have an enduring importance primarily because he did sociology well, in combining general theory with hard data.

Leo's view of human ecology as a perspective has never led to a well-developed corpus of laws or well-documented theories. But it has inspired many of us to think about the organization of the society in macro or aggregate variations and has suggested some important directions in which sociology as a discipline could move. Individual-level sociology clearly has its value, but the potential of an aggregate level sociology drawn from Leo's intellectual challenges to us is still exciting.

Leo's view of the city is probably too simplistically Durkheimian in its emphasis on size and differentiation, but in his effort to think parsimoniously, Leo challenged many of us to think in parallel ways about the evolution of urban life in the United States. What are the two or three or four major principles that explain how cities are developing today? These remain intriguing questions, and, even if the principles are more complex than Leo would like, the struggle to understand them is likely to prove educationally beneficial in its own right.

Leo's study of the distribution of status groups in metropolitan areas is an outstanding example of the scientist at work. Formulate your hypotheses clearly, gather the best data, test the hypotheses from various perspectives and time periods, reformulate and revise your ideas as the data illuminate the truth. We still do not have answers to all the questions he raised about the spatial distribution of status groups, but his work

has stimulated many others and has raised further questions that deserve research.

I'm still really glad that I signed up for Leo's course in 1966. Many hundreds of other students benefited greatly from study with him. In my classes, I have tried myself to communicate Leo's enthusiasm about human ecology and the city to many hundreds of students for 30 years. Human ecology, as Leo envisioned and practiced it, has never swept the field of sociology. But it continues on, and there are still a number of us who feel excited about the issues and questions it raises.

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