RELATIONS OF ECOLOGICAL AND SOCIOLOGICAL CHARACTERISTICS OF URBAN SUB-AREAS OF A MIDDLE-SIZED CITY

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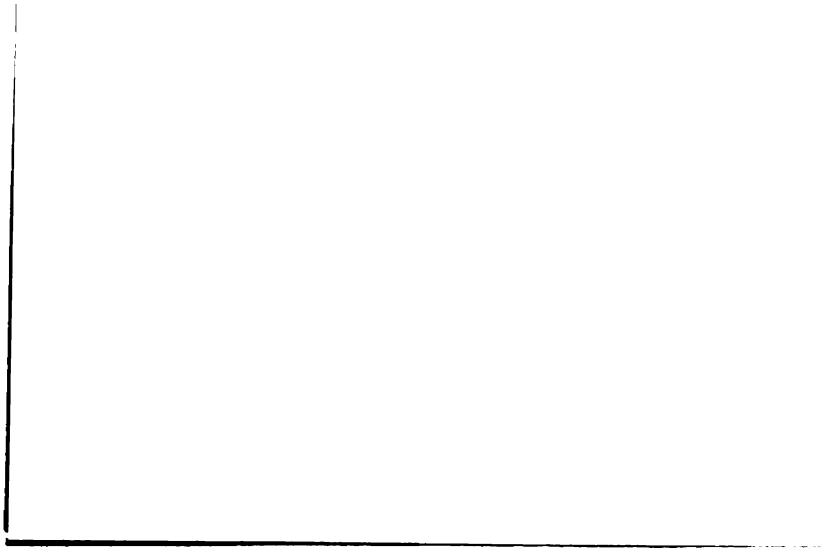

RELATIONS OF ECOLOGICAL AND SOCIOLOGICAL CHARACTERISTICS OF URBAN SUB-AREAS OF A MIDDLE-SIZED CITY

By

James Daniel Cowhig

AN ABSTRACT

Submitted to the School of Graduate Studies of Michigan
State College of Agriculture and Applied Science
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THESIS

ABSTRACT

A continuing problem in urban sociology has been that of the refinement of the analysis of the phenomena of urban life. This dissertation was concerned with the problem of the delineation of sub-areas within the city on the basis of criteria which were primarily sociological. This delineation permitted the comparison and analysis of intra-urban areas.

Interviews of an areal sample of 573 residents of the city of Lansing, Michigan were utilized as a basis for a delineation of intra-urban areas. These areas were delineated on the basis of the degree of inter-personal contact within the local area. Three general types of areas were delineated: Those characterized by a high, middle, and low degree of inter-personal contact -- or degree of 'intimacy.' These areas were then analyzed on the basis of ecological and urban sociological theory, and the information available from formal agencies.

In general, it was found that social areas characterized by a high degree of intimacy were also characterized by a high average land value and a high proportion of owner-occupied dwelling units. A more intensive analysis revealed certain exceptions to this general relationship, and thus those areas presented problems for additional research. It was also found that the relationship between the location of the dwelling unit and the land value of the dwelling unit was contrary to that hypothesized by the Burgess Zonal Hypothesis, i.e., there

was an inverse relationship between land value of the dwelling unit and distance from the functional center of the city. The social psychological definition of high-status areas was found to be compatible in all cases with the economic definition of high-status areas.

An analysis of the local area revealed that although the local area -- or neighborhood -- served as a shopping center for the population of the area, social activities were carried on with little regard to the local area. Formal organizational membership was found to be less important within the local area than outside of the local area, and in all cases, members of formal organizations had a higher socio-economic status than non-members. The presence of friends within the local area was not significantly related to the degree of local intimacy, but the fact that three friends could be named, did differentiate high social areas from low social areas. Informal associations within the local area were found to be relatively unimportant for residents of all of the types of social intimacy areas.

These findings suggest that the usual picture of the urban dweller which is painted by the urban sociologist is in need of some modification. Comparability and applicability of the findings of this study may be evaluated by comparing the functional description of Lansing offered in this study with a functional description of other cities.

It was also suggested that human ecology and sociology would continue to develop in divergent directions.

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To attempt to acknowledge the aid of all the persons who have contributed in one way or another to this dissertation would be a pleasant, but unfortunately impossible, task.

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To the Lansing City Plan Commission and the East Lansing City council, thanks are due for the financial assistance which made possible the research upon which this study was based.

An important influence on the development of this study was that of 'a friend of Prufrock's,' and this influence is hereby fully acknowledged.

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CHAPTER I

INTRODUCTION

Few topics in American sociology have received as much attention as the 'community study.' Shils[1] maintains that,

> 'Urban sociology,' which included the study of practically every process of social life occurring within the urban territory and 'community study' with its comprehensive, relatively unfocused description of the 'entire community' in all of the interconnections of its parts were the two leading (sometimes identical, and almost always parallel) lines of development of research and theoretical speculation. It is largely within the framework of the hypotheses and subject matter connected with these studies, or as offshoots of them, that some of the major subsequent developments have occurred.

Despite the tremendous amount of sociological research which has been done in the field of urban sociology, the sociologist has frequently treated the phenomenon of urban life in broad and general terms. He has for example, pointed out the diversity and heterogeneity which are taken to be characteristic of urban life, and at the same time has implicitly assumed that this very diversity produces similar results. Much urban research has been unguided by any coherent consistent theory, and in this respect at least, is distressingly similar to a good deal of other sociological research. The results may be 'interesting' or 'insightful' but as far as their direct contribution to a systematic theory of human behavior and social organization there is no value in them.[2] 'Urban' has often been used as a category into which are placed events which are

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1. E. A. Shils. The Present State of American Sociology. The Free Press, Glencoe, Illinois. 1948. p. 7

2. Ibid., p. 11

~~placed events which~~ may be quite dissimilar. It is here maintained that one of the requirements for any discipline which aspires to be 'scientific' is a classification which permits the analysis of a class of phenomena in such a way so as to abstract and relate whatever similarities and differences the phenomena may exhibit. This means specifically for the urban sociologist, that the category 'urban' must be sociologically significant. It is not sufficient for sociological analysis to base such a classification upon criteria which do not permit adequate description of the sociological aspects of city life. The classification must be one which permits analysis of the phenomena in a more refined fashion than that of classifying them as 'urban,' and which permits analysis of differences within an urban area. Sociologists have long recognized the existence of the problem concerning the classification of the city into smaller areas which would facilitate sociological research and analysis. The sociologist has also recognized that political and administrative areas are not always sociologically significant; neither are those areas defined solely on the basis of demographic characteristics; nor those based solely upon ecological factors.

It is precisely this problem of the sociological delineation of intra-urban areas with which the Department of Sociology and Anthropology at Michigan State College has been concerned for the past two years. During this period, a research program has been under way with the express purpose of constructing sub-areas for a census tract plan which takes into account sociological as well as demographic and ecological factors. The present dissertation has grown out of this research, in the course of which a number of problems have been selected for more intensive analysis. The analysis is based upon selected theoretical and

empirical propositions drawn from human ecology and urban sociology which are related to intra-urban area research.[3]

Chapter II is devoted to a discussion of the specific ecological and sociological theory which will guide the analysis of data gathered to test certain of these theories. This theoretical discussion has two purposes. First, and more important for the immediate purposes of this study, is the selection of certain specific hypotheses, relating to intra-urban areas, which can be tested in this study. On a more general level, the discussion is concerned with the relationship of ecological and sociological theory, particularly in regard to the future development of the two disciplines. The discussion of ecological theory is concerned with an exposition of a particular school of human ecology, perhaps best represented at present by the work of Amos Hawley. The general orientation of this theory and some of the more significant assumptions of the theory are examined. The orientation of this school of human ecology limits -- as any theory must limit -- the problems which can be considered. Obviously, not <u>all</u> of the 'activities of organisms' are the province of the human ecologist. The propositions of human ecology with which this study is concerned are those pertaining to the location of residential units and the relationship between the inhabitants of residential areas and other

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3. The research was partially financed by grants from the Lansing City Plan Commission and the East Lansing City Council. Members of the research Committee include: J.A. Beegle, J. Cowhig, J.R. DeLora, W.H. Form, (Chairman), C.P. Loomis, J. Smith, G.P. Stone, D.G. Steinicke, and J.F. Thaden of the Department of Sociology and Anthropology of Michigan State College; and G. Belknap of the Department of Political Science and Public Administration of Michigan State College. D.L. Gibson of the Department of Sociology and Anthropology of Michigan State College contributed many helpful comments and criticisms.

functional units of the community. There are many questions which arise in this exposition which can only be stated and not answered. One section of the theoretical discussion is concerned with these questions, and major emphasis is placed on an attempt to show some of the consequences of this theory for the development of human ecology, and particularly for the relationship between ecology and sociology.

Since analysis of the data in terms of urban sociological theory presents a number of difficulties, the second part of Chapter II contains a disscussion of urban sociological thoery. Urban sociological research, largely under the influence of the 'Chicago school' has been greatly concerned with the investigation of unusual or 'deviant' or 'aberrant' forms of behavior, which may be most apparent in the city. One consequence of this approach has been the lack of consideration given to factors which tend to 'organize' the community, and the concentration upon factors which are taken to be signs of 'disorganization.' It has been relatively recently that sociologists have treated the city as a community where large numbers of people do manage to exist.

For the purposes of an investigation into the activities of groups of people who are not obviously 'disorganized' -- that is, into the community' in a larger sense -- urban sociological theory leaves much to be desired. There is it is true, agreement on certain general characteristics of cities, e.g., large groups of people are functionally interdependent; many functions are dispersed to specialized institutions; the population is socially heterogeneous. Studies of voluntary associational membership, religious participation, and economic activities have been made, but in no sense does any adequate sociological theory of urbanism exist. Therefore, the sociological theory discussed is that which seems to embody

the dominant view of urban sociologists at present. A suggested theory of urbanism, that of Louis Wirth, is presented and briefly discussed. Previous urban sociological research is examined for the purpose of gaining information relevant for this investigation, i.e., information concerning the relationship between residence in a specific intra-urban area and the behavior of the residents of these areas. Both social and economic activities are considered, insofar as they are related to residence in a particular locality.

Some of the methodological problems faced in attempting a study of this kind are discussed and the specific methods utilized in this study are presented. A fundamental difficulty has already been suggested, i.e., the inadequacy of present intra-urban classifications for sociological research. Data on the city which was the subject of this study were limited to block statistics on housing within the city. These data were gathered and compiled by political units (wards) which bear little or no resemblance to any of the sociological areas of the city. Thus the relatively meager information available had to be supplemented by information which could not be obtained from any formal agency or source. In other words, information concerning sociological criteria had to be obtained by the initial research in order to devise a suitable classification of intra-urban areas. The research upon which this study is based attempted to secure information on sociological criteria through the use of a rather intensive interview of an areal sample of the city. In this way, it was possible to supplement demographic and ecological data with data on the sociological characteristics of thepopulation. A major assumption of this study is that the social organization of an area must be considered, as well as demographic and ecological factors. To state this assumption in a negative

fashion: If no significant sociolcgical differences exist in the behavior of groups of people in different areas of the city, then it makes no difference (to the sociologist) what the intra-urban classification happens to be.

This study is concerned with the analysis of intra-urban areas delineated on the basis of data which are primarily sociological. For example: The available data make possible the mapping of the spatial distribution of a large number of and wide range of activities and characteristics of the population. From these data, it is possible to discover what, if any, activities or characteristics serve to differentiate areas within the city, i.e., in what ways do areas delineated on the basis of sociological criteria differ in respect to the performance of various social and economic activities? It is possible to compare economic areas of the city with the social areas of the city; data relating to the subjective definition of the 'neighborhood' may be compared with the 'neighborhood' as defined by the performance of economic functions. One of the main functions of this study is to point out areas of the city which differ from surrounding areas, and which require further investigation to provide explanations for this difference. Thus, some light may be shed on the question of whether the concept of 'neighborhood,' in the traditional sociological sense has any validity for urban areas.

The general applicability of the findings of this study cannot, of course, be determined without additional research; but in order to enable a comparison of Lansing with other urban areas, one chapter is devoted to a demographic and functional description of Lansing. This description indicates the factors which are suggsted by the ecologist and the sociologist as being important for the analysis of the city, e.g., size, population

composition, and functional basis. Trends in population growth and distribution for the Lansing Standard Metropolitan Area as well as for Lansing from 1900 to 1950 are discussed. The occupational and industrial composition of both areas is examined in order to determine the present occupational and industrial structure, and also to point out the way in which changes in this structure have taken place over the past twenty years. This description not only permits the specification of certain conditions which may be related to the social characteristics of the population of Lansing, but also makes possible a comparison of Lansing with other cities of a similar type. Clearly, the more complete the description of Lansing, the greater the possibility of determining the applicability of the findings of this study for other cities. For example: The fact that Lansing is of relatively small area minimizes the importance of time-cost distance for those persons residing in the central city, and may affect the general applicability of the conclusions concerning the relationship between accessibility and residential location.

The result of the analysis of intra-urban areas of Lansing is presented in two substantive chapters. One chapter deals with the development and present structure of residential areas in Lansing. The economic status of residential areas is described, and the relationship between economic and social areas is explored. The economic characteristics associated with the types of social areas are also examined. A specific proposition of urban sociology, dealing with the theoretical location of residential areas of various economic levels is examined as to its applicability in the case of Lansing. The last section of the chapter presents evidence relating to the compatibility of a definition of residential areas based on economic criteria, and the social psychological definition of high-status areas by the residents of the city.

Chapter VII contains an analysis of the use of several types of facilities and the performance of various kinds of social activities, in an attempt to indicate the relative importance of the local area for the performance of these activities. Data in regard to formal organizational membership and the frequency of the utilization of local facilities are analyzed in order to determine what, if any, differences obtain between these variables and the social and economic characteristics of the social areas of Lansing.

The final chapter summarizes the findings of the study, and points out topics for further research.

Several points should be kept in mind in considering the study. (1) This study is concerned with the analysis of specific types of intra-urban areas, delineated on the basis of sociological criteria. An important assumption of the research design was that certain areas of the city were characterized by residents who differed significantly in behavior. This, then, is not a study of the population of Lansing, but a comparative analysis of the social and economic behavior of residents in areas of the city which have been distinguished from other areas of the city on the basis of personal contact within the local area. (2) This study was, in a sense, a pilot study. Therefore, the analysis is based on data which are, for the most part, by no means complete. In fact, one of the principle results of the study may be to point out certain problems for analysis in the contemplated continuing research in the Lansing Area.

In the following chapter, the ecological and sociological theory which guided the analysis is discussed. The first section of the chapter deals with a specific school of ecological theory; the latter section deals with what is considered to be the dominant urban sociological approach.

CHAPTER II

ECOLOGICAL AND SOCIOLOGICAL THEORY

Any analysis implies the acceptance of some criteria by which certain eventsare considered to be relevant and certain other events are ignored. In this chapter, the two approaches utilized in the analysis of intra-urban areas are discussed. Neither approach is particularly coherent nor systematic, and in the sense in which the term 'theory' is often used in sociology, little more than a beginning of theory exists in either discipline.[4]

An immediate consequence of this condition is that the range, generality, and precision of the statements which may be made concerning a specific problem are rather limited. 'Wrong' questions may be asked, imprecise methods used, and the basis for the interpretation of results may not be sound.

The first section is concerned with the exposition of the approach of one school of human ecology. This approach provides part of the theoretical framework for this dissertation. The discussion is an attempt to make

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4. This assertion is documented in the following sections. These remarks are not intended to disparage theory nor discourage research -- quite the contrary. But it is felt that it would be naive to imply that sociological research is guided by a theory which is either very adequate or very sophisticated. See: Hobbs, A. H. The Claims of Sociology. The Stackpole Company, Harrisburg, Pa., 1952, and his Social Problems and Scientism, 1953, for a rather extreme view of the condition of sociology. Shils (op. cit.) is more favorably disposed, but is still quite critical. Milla Alihan's Social Ecology (Columbia University Press, New York, 1938) is a critical analysis of one ecological school.

explicit the assumptions of this theory, its general orientation, and some specific propositions of the theory which can be tested in this research.

Human Ecological Theory

When one attempts to define precisely the field of human ecology and to show the relevance of human ecology for urban sociology, one is faced with a bewildering array of contrary and sometimes contradictory views which are held by those who call themselves 'human ecologists.' As Quinn pointed out in the first review of literature in the field,

> The field of human ecology has been variously defined, and no clear-cut outline of topics to be included within it has been unanimously accepted. According to certain authors, the current literature on human ecology would include anthropology, biology, demography, economics, geography, and psychology.[5]

It is necessary to select from the various views of human ecologists one view which would seem to offer promise in the analysis of intra-urban areas. The viewpoint which has been selected for this study is that which is perhaps best represented at present in the work of Amos Hawley, and which is referred to, for lack of a better term, as the 'Hawley school.' Alternative viewpoints will be considered only for purposes of comparison, since a comprehensive analysis of all the alternative positions would be far beyond the scope of this dissertation. The discussion of this specific school of ecological thought entails an exposition of the general orientation of the school, and the selection of certain specific propositions in regard to the structure and composition of intra-urban areas, which can be tested in this study.

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5. James A. Quinn. "Topical Summary of Current Literature on Human Ecology," American Journal of Sociology. XLVI:2. p. 191

It seems quite plausible that Hawley's view of science, which is one that admits of no fundamental distinction between 'natural' and 'social' science, has been one of the major reasons for his emphasis upon the utility of general ecological theory. This basic distinction is evident when Hawley's view is compared with that of Firey. Firey, influenced by Weber, Parsons, and Sorokin would seem to hold a contrary conception of the nature of science -- a conception which is in the neo-Kantian tradition -- and one which would also seem to negate Hawley's conception of a unity of science. This negation leads Firey to insist upon variables which are either taken as constants by Hawley, or for his purposes, ignored.

Now it is quite clear that while basic philosophical differences may affect the development of theory, basic philosophical agreement does not guarantee theoretical agreement. In fact, it might be argued that disagreement within a particular discipline will be most evident among those who are in basic agreement on philosophical grounds; and that a disagreement which stems from fundamental orientations which are incompatible cannot be resolved in the same fashion as the former. Thus, it would seem to be important to point out differences of this latter kind, which are more fundamental than differences in terminology or in specific methods or techniques.

It should be made clear that the concern here is not with the merits of any particular philosophy of science, but with the theoretical consequences of a specific philosophical orientation. In other words, the assumptions (often implicit) upon which a given theory is based, do make a difference in the development of the theory. These assumptions would seem to set certain broad limits within which future development takes place. In this specific case, the importance of the general view of

science held by Hawley will become clear as his conception of human ecology is discussed. The discussion begins with a 're-examination and reappraisal' of ecology.[6]

Hawley acknowledges an indebtedness to R.D. McKenzie for many of his ideas, but the statement of these ideas and their elaboration is his.

Hawley feels that this re-examination is necessary, for, ". .after twenty years, it (human ecology) remains a somewhat crude and ambiguous conception."[7] He maintains that much of the research following the early formulations of McKenzie, Park, and Burgess failed to explore the full implications of ecology as applied to humans:

> . . .responsibility for the existing chaos in human ecology, it seems to me, rests upon certain aberrant intellectual tendencies which have dominated most of the work that has been done. The more significant of these may be described as: (1) the failure to maintain a close working relationship between human ecology and general or bioecology; (2) an undue preoccupation with the concept of competition; and (3) the persistence in definitions of the subject of a misplaced emphasis on 'spatial relations."[8]

This first criticism is closely related to the point which was made above, i.e., it reflects Hawlye's conception of, or philosophy of, science. It is an important criticism, for in his opinion: "Probably most of the difficulties which beset human ecology may be traced to the isolation of the subject from the mainstream of ecological thought."[9] The central importance of this position in regard to the relationship between general

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6. Amos H. Hawley. "Ecology and Human Ecology." Social Forces 22:4. pp. 398 - 405.

7. Ibid., p. 398

8. Ibid., p. 399

9. Ibid., p. 399

ecology and human ecology can be seen in Hawley's writing, for example: ". . .very few persons who regard themselves as human ecologists indicate an awareness that they are logically committed to follow out in the study of man the implications of ecology."[10] Further, Hawley criticizes two specific treatments of this relationship. Park and Hollingshead are criticized for borrowing terminology while ignoring any striving for theoretical unity. Gettys is criticized for attempting to develop human ecology independently of general ecology. Hawley believes that, ". . the majority of human ecologists. . .have proceeded without benefit from the theoretical position they believe themselves to have adopted."[11]

The second criticism illustrates a different type of disagreement. That is, the use of the concept of competition may well have arisen from "The desire on the part of human ecologists to achieve a thorough-going natural science treatment of human behavior. . ."[12] Here is found disagreement, not on fundamental philosophical grounds, but on the basis of a position which is based upon similar philosophical assumptions, but which is in Hawley's opinion, an erroneous conception. For him, "What is important, if true, is that individuals do affect one another through affecting the available supply of required materials. This is all that need concern the ecologist."[13] For Hawley, questions as to whether or not competition is conscious or unconscious are irrelevant. He further

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10. Ibid., p. 399 11. Ibid., p. 399 12. Ibid., p. 400
13. Ibid., p. 400

points out that the lack of an adequate taxonomy makes it difficult to ascertain when competition is taking place, and therefore that, "The utility of competition as an explanatory tool will remain in doubt until a fuller knowledge of functional or social types is developed."[14] He also points out the fact that combination and cooperation have been ignored, and that as a result the concept of cooperation has been treated as a monistic explanatory device. "Certainly competition is not the pivotal conception of ecology; in fact it is possible to describe the subject without even an allusion to competition."[15]

The misplaced emphasis upon spatial relations he believes to be another result of the divorcement of human ecology from general ecology, and he maintains that, ". . .one of the techniques employed in ecological research--mapping -- has been mistaken for the discipline itself."[16] As far as he is concerned, mapping is at best geography, and often it is geography which exhibits "inferior cartographic skill." He stresses the fact, "That space and time are merely convenient abstractions by which to measure activities and relationships."[17] He points out that every science must deal with the spatial and temporal aspects of its own subject matter. For Hawley, 'the problem's the thing,' and considerations of a spatial and temporal nature are incidental to the investigation of the problem.

The above then, are some of the reasons for the confusion existent in ecological thought, according to Hawley. It is now necessary to discuss Hawley's conception of human ecology.

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14. Ibid., p. 401 15. Ibid., p. 401 16. Ibid., p. 402
17. Ibid., p. 402

First of all, a discipline must have a problem, and the problem must be one which is not already preempted by other disciplines. Secondly, the discipline must be, ". . .coherent within itself and consistent with the point of view it pretends to represent. There is no basis, in other words, for calling a study human ecology if it is not ecological."[18] Once again, it is clear that his conception of ecology is one which seems to follow from his conception of science.

Hawley's concern with general ecology leads him to discuss the rudiments of this discipline:

> . . .ecology is concerned with the elemental problem of how growing, multiplying beings maintain themselves in a constantly changing but ever restricted environment. It is based on the fundamental assumption that life is a continuous struggle for adjustment of the organism to environment. However, the manifest inter-relatedness of living forms, which leads students to speak of the 'web of life,' suggests that adjustment, far from being the action of independent organisms, is a mutual or collective phenomenon. Drawing together the relevant facts, it seems that the inevitable crowding of living forms upon limited resources produces a complex action and reaction of organism with environment and organism with organism in the course of which individuals become related to one another in ways conducive to a more effective utilization of the habitat. As the division of labor which thus develops approaches equilibrium, such that the number of organisms engaged in each of the several activities is sufficient to provide all the needs that are represented, the aggregate of associated individuals assumes the aspect of a compact viable entity, a superorganism, in fact. The (biotic) community, as such a functionally or symbiotically integrated population may properly be called, is in effect a collective response to the habitat, it constitutes the adjustment, in the fullest sense of the term, of organism to environment.
>
> The subject of ecological inquiry then is the community, the form and development of which are studied with particular reference to limiting and supporting factors of the environment. Ecology, in other words, is a study of the morphology of collective life in both its static and its dynamic aspects. It attempts to determine the nature of community structure in general, the types of communities that appear in different habitats, and the specific sequence of change in community development.[19]

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18. Ibid., p. 402 19. Ibid., p. 403

The data of ecology are the activities of organisms. It is in this connection that Hawley makes a point that has direct relevance for this study, "Taxonomic characteristics are relevant only so far as they serve as indexes of behavior traits."[20] In addition, ecology views life as an aggregate rather than as an individual phenomenon. "The individual enters into ecological theory as a postulate and into ecological investigation as a unit of measurement. . ."[21] One of Hawley's more important conclusions: "Thus, despite the great difference between the behavior of men and that of lower forms of life -- a difference which appears to be one of degree rather than of kind -- the approach described as general ecology may be applied to the study of man without radical alteration."[22] The significant thing to note in this regard, is that the correctness of the position may be of only secondary importance for theoretical development; of more immediate importance is the fact that this position commits Hawley to a specific delimitation of the discipline, and definition of the elements to be considered. For example, "The external and descriptive approach of ecology is ill-suited to the direct study of the psychological counterpart of symbiosis, although it may serve as a fruitful source of hypotheses concerning that aspect of the community."[23] Hawley concludes:

> The distinctive feature of the study (human ecology) lies in the conception of the adjustment of man to habitat as a process of community development. Whereas this may be an implicit assumption in most social science disciplines, it is for human ecology the principle working hypothesis.[24]

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20. Ibid., p. 403 21. Ibid., p. 403 22. Ibid., p. 404
23. Ibid., p. 404 24. Ibid., p. 405

To summarize Hawley's view: The subject of ecological study is the community; its data are the activities of organisms viewed as an aggregate, and hence the problems of ecology are population problems; there is no difference in kind between ecological communities; the ecologist is concerned with the formation of communities, the way in which this formation is affected by the size, composition, and rate of growth or decline of the population; the significance of migration, and the factors which make for change in the structure of the community. Ecology is concerned with the functions and relationships of 'habits' and not with the way in which these habits are acquired.

In another article,[25] Hawley deals with the relationship between ecology and urban areal research. He points out that interest in the city and its problems was one of the major sources of the application of an ecological point of view to areal research. The environment of the city differs from that of other regions. The one exception -- the one common denominator -- in the environment of the city and the open country is area, but, "It is area without content, area reduced to the abstraction of space."[26] Space has two aspects. It presents opportunity to carry on activity, and it also demands time and energy to pass through space. Hawley terms these aspects as complementary, i.e., resistance and site. "The essential virtue of site is accessibility."[27] Accessibility is related both to distance and the means of overcoming distance and to the type of relationship involved, i.e., frequency of the relationship.[28] For Hawley, "The city, or preferrably the urban community is an aggregate of interdependent units disposed about

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25. Amos H. Hawley. "The Approach of Human Ecology to Urban Areal Research." The Scientific Monthly. LXXIII:1 (July, 1951) pp. 48-49

26. Ibid., p. 48 27. Ibid., p. 48 28. Ibid.

a localized area in such a way that the accessibility of one to another bears a direct relationship to the frequency of exchanges between them."[28] An important hypothesis states that there is an expression of social structure in spatial patternings, "In other words, space constitutes a dimension on which social structure can be measured."[29] (It can be seen that this hypothesis is evident in the writings of Park and McKenzie). In order to test this hypothesis, it is necessary to have a, ". . .rather full knowledge of social structure; at least the essential units and their interrelations should be so clearly identified as to be readily observable."[30]

It has been seen that the 'community' is the subject of ecological inquiry as Hawley conceives of it. Since this term has various and sundry meanings, it might be well to examine just what the concept of community entails for Hawley's approach to ecology.

"The community may be defined as comprising that area the resident population of which is interrelated and integrated with reference to its daily requirements whether contacts be direct or indirect."[31] Community life takes place along two axes -- the symbiotic and commensalistic, and the community is a symbiotic-commensalistic phenomenon.[32] Symbiotic relationships give rise to corporate groups while commensalistic relationships give rise to categoric groups. Thus, a corporate group is composed of units of dissimilar functions; ". . .(it) is internally differentiated and symbiotically integrated; it constitutes an organ of the larger communal organism."[33] An assocation of functionally homogeneous

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29. Ibid., p. 49 30. Ibid., p. 49

31. Amos H. Hawley. Human Ecology: A Theory of Community Structure. Ronald Press. New York. 1950. p. 257

32. Ibid., p. 209 33. Ibid., p. 210

individuals is a categoric group. For the purposes of this study, major emphasis is placed on the examination of these categoric groups as they exist within a city.[34]

"The role of the city, its raison d'etre, is to function as a service center."[35] The predominant basis of categorization in the community is occupational. Into these occupational divisions, ". . .are classed all individuals who habitually perform the same or very similar functions. Any other terms used to designate or identify existing categories either pertain to convenient reference points for the ascription of function, e.g., age, sex, race, or are indexes of functions regularly discharged, e.g., wealth, place of residence, etc."[36] In any community, "the number of occupational differences in a communal aggregate determines in a general way the number of categoric units that may appear."[37] It should be noted here that the term 'occupation' is used in a broad sense to mean "any sustenance producing activity." This means that occupation is not restricted to 'respectable' activities, but includes illicit or criminal activities; nor is the term restricted to wage-commanding activities.

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34. Some discussion of this terminology may be helpful. Hawley points out that these two types of groups are not mutually exclusive, "Corporate groups combine portions of different categoric groups; for example, in the family different sex and age categories are represented and the business enterprise includes representatives of many different occupational categories. On the other hand, categoric groups cut through the corporate groups embracing all individuals who exercise similar demands on and make similar contributions to the community. . . every individual may be thought of as standing at one or more intersections of the symbiotic and commensalistic axes. Every role he occupies in a corporate group qualifies him for membership in an appropriate categoric unit." Ibid., p. 210

35. Ibid., p. 216 36. Ibid., p. 217 37. Ibid., p. 217

At this point a significant and important aspect of the ecologist's view is apparent:

> Although categoric units based on occupation are the most stable and significant units of that type in the community structure, the phenomenon of groupings with reference to common interest (i.e., common function or requirement) occurs in almost limitless variety. Cliques, clubs, 'societies,' neighborhood associations, and the like, are all representative of the categoric reaction.[38]

In a footnote to this paragraph, Hawley remarks:

> An important question concerning such groupings is: To what extent are they units of the community? The test, no doubt, is the degree to which they affect the functioning of the community as a whole. This may be difficult to determine. What is at issue here, of course, is the matter of relevance, clearly one of the most crucial problems in social science. It hinges, in this case, upon the clarity and demonstrability of the definition of communal unit. That, in turn, requires a great deal more exploratory research than community structure has received to date.[39]

It seems as though Hawley is not sure just what the function of many categoric units is, or indeed, whether or not they have a function for the maintenance of the community as a whole. In other words, it may be that many of these units may be safely ignored by the ecologist. This suggests a difference in emphasis between the ecological and sociological approaches, a difference which is discussed in another section of this chapter.

One of the concerns of this dissertation is with the distribution of residential units within the city. Hawley accounts for the distribution of functions and units on the basis of the operation of, "certain fundamental life conditions. (1) the interdependence among men, (2) the dependence of activities or functions upon various characteristics of land, and the friction of space."[40] Furthermore, "The territorial

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38. Ibid., p. 218 39. Ibid., p. 218 40. Ibid., p. 236

pattern of collective life is largely a result of the friction of space as manifested in time-cost distance."[41] The interests of this study are restricted to areas of residential location, and not those of the location of industry. In regard to this topic, Hawley says:

> "Familial units are distributed with references to land values, the locations of other types of units, and the time and cost of transportation to centers of activity. The influence of the three factors are combined in a single measure, namely, rental value for residential use. . .Thus while land values, in the main, grade downward with distance from concentrations of associational units, rental values for residential buildings grade upward. That is, rental values for residential property tend to vary inversely with land values. . .Rent operating through income is a most important factor in the distribution and segregation of familial units. Those with comparable incomes seek similar locations and consequently cluster together in one or two selected areas within the community. . . .Families of the same income class tend to have like needs. . The attraction of similar family units for one another in residential site selection has its basis, to a large extent, in the uniformity of their location requirements.[42]

In commenting upon Firey's criticism of this position, Hawley says, "Firey's reasoning confuses motive with an external limiting factor. Regardless of the motive for the occupancy of a site, that occupancy involves certain costs which must be paid. If the family can pay the costs, then it may exercise any conceivable motive."[43]

Here Hawley suggests a number of relationships between residence and familial characteristics which can be explored in this study. For example, it would be expected that similar types of families would be found in similar areas as the result of certain location requirements. This is one general hypothesis which can be examined in this study.

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41. Ibid., p. 237
42. Ibid., pp. 280-282
43. Ibid., p. 286

It has been seen that Hawley emphasizes the importance for human ecology to follow in the mainstream of general ecology, and it has been pointed out that this position implies a certain philosophy of science. Now perhaps some of the more specific and immediate implications of this view can be more closely examined.

Fifteen years ago, Clements and Shelford said, ". . .bio-ecology is considered to be ecology in the widestsense, but with the recognition the the inclusion of human ecology will be delayed until the feeling for synthesis and experiment becomes more general."[44]

In a more recent work, a group of animal ecologistsremark, "We have purposely avoided emphasis on human sociology, but we hope that in time a maturing ecology will be properly fused with that field."[45] Dice[46] is in agreement with these authors in viewing the human community as a province of ecology, but he too points out the necessity for future research and synthesis.

If the above examples are any indication of the prevailing trend in ecological thought, it can be seen that the 'general' ecologists would agree with Hawley; but it is instructive to note that these writers

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44. Frederic E. Clements and Victor E. Shelford. Bio-Ecology. John Wiley and Sons, Inc. 1939. p. 2

45. W.C. Allee, Orlando Park, A.E. Emerson, Thomas Park, and Kark Schmidt. Principles of Animal Ecology. W.B. Saunders Company, Philadelphia, 1949. p. 2

46. Lee R. Dice. Natural Communities. University of Michigan Press. Ann Arbor, 1952. p. 15

continue to delay the analysis of the human community until general ecological theory becomes more highly developed. It might also be mentioned that there seems to have been a parallel development of ecology and sociology. The following comments of a group of ecologists would seem to apply to the development of sociology as well as to the development of ecology:

> In 1900 the basic ecological emphasis was relatively simple. Most biologists were aware of the fact than an organism lived in an exploitable environment, and now and then this environment-organism nexus was subjected to analysis. However, the analysis was concerned with that problem as an individual instance. There was not much interest in generalization or theory. . .The early workers, through intelligent and enthusiastic labor, unearthed many significant data, and it would be stupid to under-estimate their contributions. As the years wore on, a need arose for the integration of facts and concepts. This had a salubrious effect on the development of ecology. It sharpened the awareness of workers to the existence of new and unsolved problems. It brought younger investigators into the field. It demanded the adoption of new techniques developed by other sciences and technologies. It increased the outlets for discussion, publication, review, criticism, and intellectual intercourse generally. . .
>
> An interest in animal aggregations grew up along with and slightly later than community studies. This interest dates far back into ecological history as a descriptive phase, but it did not attain more precise treatment until the last two decades. We have shown already how this trend is currently merging into a general sociology.
>
> Our review of ecological history also uncovers an urge toward quantification. At the turn of the century research was essentially descriptive and qualitative, with certain notable exceptions particularly prevalent among the marine biologists. . .
>
> We attribute in part the rise of interest in natural and experimental populations during the third decade to this quantification.[47]

These authors also point out the difficulties of employing an objective terminology -- a difficulty which the sociologist can well understand.

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47. W. C. Allee, et. al. op. cit. pp. 67-68

The purpose of the foregoing is simply to point out the fact that at present, the acceptance of general ecological theory does not supply a theoretical framework which is particularly sophisticated or advanced. Perhaps the sociologist, human ecologist, and 'bio-ecologist' face similar difficulties. Within the field of animal ecology for example, divergent positions are quite common. Dice rejects the idea of 'supra-organism' in reference to the community, and prefers the term, 'epi-organism.'[48]

The definitions of 'community' offered by the animal ecologist place emphasis upon the inter-relations of species. Dice says,

> An ecologic community is an assemblage of ecologically related organisms composed of 2 or more species. Such a community may be of any ecologic rank and may include any number of associated individuals. An assemblage of individuals all of the same species is not a community, but is a society.[49]

Allee holds that,

> . . .the major community may be defined as a natural assemblage of organisms which together with its habitat has reached a survival value such that it is relatively independent of adjacent assemblages of equal rank; to this extent, given radiant energy, it is self-sustaining. . .It (the community) is composed of a variable number of species populations, which occupy continuous or discontinuous portions of the physico-biological environment, the habitat niches.[50]

Hawley defines the community: ". . .from a spatial standpoint, the community may be defined as comprising that area the resident population of which is inter-related and integrated with reference to its daily requirements whether contacts be direct or indirect."[51]

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48. Lee R. Dice. op. cit., p. 484

49. Ibid., p. 15

50. W. C. Allee, et. al. op. cit., pp. 436-437

51. Amos H. Hawley. Human Ecology. op. cit., pp. 257-258

Perhaps enough has been said to indicate some of the consequences of this approach to human ecology for the urban sociologist. The emphasis placed upon routine daily activities in Hawley's definition of the community, seems to mean that those activities which are not routine nor related to the sustenance activities of the community are not the concern of the ecologist. This is one of the self-imposed limitations of the ecologist. It has been pointed out that this emphasis may make it difficult to determine whether or not specific groupings are part of the community -- a fact which Hawley recognizes.

This definition of the field also means that much of what sociologists have treated as 'ecology' or as being 'ecological' is, for Hawley not ecology nor ecological at all. That is, the spatial distribution of various social events, characteristics, or activities may be geography -- but it is not ecology. An obvious result of this view of Hawley's is that the city -- as a political or administrative area -- is not the subject of study for the ecologist. If present trends in this development of human ecology continue, it is suggested that studies of larger communities, e.g., Bogue's study of the metropolitan community[52] will become the representative study of the ecologist.

Quite clearly, then, what is suggested is that a logical result of Hawley's position will be a divorcement of ecology from sociology. Emphasis upon the structure and development of the community necessarily implies that those events which are not part of this structure and development are not the concern of the ecologist. The contribution of ecology to sociology becomes, it would seem, a general rather than a

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52. Donald J. Bogue. The Structure of the Metropolitan Community: A Study of Dominance and Sub-Dominance. Ann Arbor, Michigan. 1949

specific one, i.e., the description of the structure of the urban community, and partially at least, of the city. It seems that the concept of time-cost distance is of minimum utility in a study such as this. Furthermore, since the city is, for the ecologist, primarily a service area, major emphasis is placed on the location and operation of service units, and less interest is shown in the location of residential areas, and still less in the sub-areas within the city.

One of Hawley's students has made a statement which illustrates another important concern of the ecologist:

> The functional or occupational niche is basic (if not determinant) in the spatial-temporal distribution of man. In other words, the space which a man will occupy and the time at which he will occupy it will, in general, be based upon his occupational or functional niche.[53]

There are several things to be noted about this statement. One is economic. Occupation is a major -- and quite often, the only -- source of income for a man. This income enables him to pay the costs of living at a particular location. It does not determine where he must live, but it sets limits to the amount he can pay for rent, and thus narrows the possible location to one within a given economic range. Secondly, where he works is influenced by his occupation, and he must live close enough to his place (or places) of work to pay the costs of transportation. The type of function performed influences his relationships with other units of the community, upon which he is dependent.

It would seem that, for the ecologist, residence is determined by location requirements, ability to pay rent, and the function performed by the unit concerned. It should be made quite clear at this point that

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53. Gladys Engel-Frisch. "Some Neglected Temporal Aspects of Human Ecology." Social Forces. 22 (October, 1943) p. 43

these factors imply nothing more about the areas of residence, i.e., there is nothing implied concerning the extra-sustenance relationships which arise or which may arise; furthermore, this aspect of community life seems to be quite consciously ignored.

It is suggested that Hawley's position here is closer to that of the economist than it is to the interests of the urban sociologist. For example, Ratcliff says, "In summary, one might say that the structure of the city is determined through the dollar evaluation of the importance of convenience."[54] It seems as though this statement is quite similar to Hawley's emphasis upon the importance of accessibility, and in an urban site, the measurement of this importance in pecuniary terms, that is, the ability to pay rent. 'Convenience,' in the sense in which Ratcliff uses it, includes other location requirements as well as accessibility.

Since the interest of this study lies primarily in the location of residences rather than in the location of other units, Hawley's position in regard to this matter must be explored.

It would be expected that family units would be found to be in a disadvantageous position in competing with other functional units for land. In fact, Hawley suggests that, ". . .while land values, in the main, grade downward with distance from concentrations of associational units, rental values for residential building grade upward."[55] Earlier it was mentioned that rent is a most important factor in the distribution and segregation of family units. A statement by Hawley on the

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54. Richard U. Ratcliff. Urban Land Economics. McGraw-Hill Book Co., Inc. New York, 1949. p. 375

55. Amos H. Hawley. Human Ecology. op. cit., p. 281

topic of residential areas may serve to indicate the types of relationships which are examined in this study:

> . . .the presence on a site of a given type of familial unit is a localizing factor for others of that type. A number of similar units can create by their congregation various amenities that are not inherent in location. If together in sufficient number they can attract special services to their area, can engage in their own peculiar forms of collective behavior and can when necessary offer relatively effective opposition to undesirable encroachments from without. The attraction of similar units for one another on this basis is apparent in the foreign-immigrant settlements found in many communities, particularly in the inner sectors of the central cities. The same principle doubtless applies in some degree in most areas of homgeneous settlement. But, such an attraction can operate only in a zone where rents do not exceed the purchasing power of the familial units involved.[56]

He points out also that the limiting factor of rent decreases with increase in income -- which of course, means increased ability to pay costs of occupancy.

The location of homogeneous rental areas, and the amenities which they create by their congregation, is one of the topics with which this study is concerned. It is suggested that this topic is one in which the sociologist is interested, and, if Hawley is understood correctly, in which the ecologist is least interested -- if interested at all.

If Hawley is correct when he says, "The community pattern, then may be described as a constellation of centers set upon a patchwork of small internally homogeneous areas,"[57] then it would be expected that areas within the community -- and presumably the city -- of this type would be found. The social aspect of this homogeneity of land and rental values

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56. Ibid., p. 282

57. Ibid., p. 287

is one of the major concerns of this study. The data which are available enable the examination of intra-urban areas in regard to homgeneity of land values and homogeneity in regard to social characteristics. In this examination, there are several specific hpyothese which may be tested. These hypotheses are quoted below:

1. Location tolerance varies inversely with specialization of the unit.

2. The less transportable the product (function) of a unit, the greater is the tendency to seek a location at the point of maximum accessiblity.

3. The territorial distribution of participants in the function of any unit varies with the time and/or cost of transportation.

4. The more intense is a unit's use of land the greater is its ability to occupy a location of maximum accessibility.

5. Units of a given functional type tend to cluster in space.

6. The distancesseparating functional units tend to vary inversely with the frequency of exchanges between them.

7. The tendency to seek a location of maximum accessibility is reduced by the extent to which location requirements other than that of maximum accessibility are involved in the function of the unit.

These hypotheses are selected from a series of assumptions, corrollaries, and hypotheses which were utilized in a course taught by Hawley on the subject of The Urban Community. They were made available to the writer through the courtesy of Dr. Hawley, and they should in no sense be taken to be final or definitive.

It should be kept in mind that the primary concern of Hawley is not with the location of residential units. The above hypotheses were selected because they seemed to be most applicable in this specific case. Perhaps it would be wise to elaborate some of the implications of these hypotheses, particularly as they related to residential location.

1. Hawley points out that the family unit is a relatively unspecialized unit, and would thus have a higher degree of location tolerance than many other more specialized units, e.g., retail stores, factories, etc.

2. The 'transportability' of the residential unit's function refers, it would seem, to the transport of the worker to his place or places of work. Under most circumstances, this transport is rather easily accomplished. If this is correct, then the tendency to seek a location of maximum accessibility would be generally reduced. The ability to pay costs of transport would depend upon the economic resources of the specific unit involved.

3. Time-cost distance as has been earlier suggested, may operate to a less important degree in the city than it would if the community were to be considered. The presence of cheap public transportation and automobile ownership would affect this cost.

4. Since residential land use is not an intensive use of land, the ability to occupy a location of maximum accessibility would be considerably reduced.

5. The assumptions upon which this hypothesis is based are:

   a. Units of a given functional type tend to have similar location requirements.

   b. Sites with given location requirements are clustered in space.

6. This hypothesis should locate the relative location of those units which are most often used by residents.

7. It seems that this hypothesis is an important qualification for the analysis of residential location, particularly since the ecologist does not see to be concerned with many of these 'other factors.

In this necessarily brief exposition of Hawley's theory, some of the problems and questions which arise in the attempt to utilize the theory can only be suggested.

It is difficult to ascertain just how important it is for Hawley that human ecology develop along the lines of general ecological theory. It has been said that this view presupposes a certain philosophy of science; but Hawley does not make this philosophy of science explicit, and thus it is impossible to determine the extent to which he would accept all of the implications involved in this position. This remark could be made about most theories in the social sciences. Hawley, at least attempts to limit the discipline, and perhaps this limitation, i.e., the specification of those events with which he is not concerned is the most apparent consequence of his emphasis upon general ecology.

When the attempt is made to apply the concept of community to the study of a political and administrative area -- which is not a community -- violence is done to the theory. In the present case this is unavoidable, but this short-coming should be recognized.

This limitations which are self-imposed by the ecologist mean that, in Hawley's view, much of what sociologists have termed 'ecology' is not ecology. To this extent ecology is of limited use to the sociologist. This should be obvious, and to say that a discipline is limited is not intended as a criticism. In Hawley's view, ecology supplies information as to the structure of social groups. It is possible to see if ecological theory does lead to accurate description of the location and structure of residential areas, by testing the above hypotheses in the course of this study.

Although any extended critical analysis here is impossible, some difficulties -- or at least some questions — in regard to Hawley's position are suggested. One question arises when Hawley's definition of the community is compared with that offered by plant and animal ecologists. These writers stress the importance of the inter-relations of species; a topic which Hawley treats only indirectly. This comment would be particularly relevant if the unity of science which Hawley accepts were to be based upon a unity of language.

The role of space (or more precisely, the concept of space) remains unclear, at least to this writer. In spite of Hawley's insistence on the dependence of this variable, it would seem to be an exceptionally important dependent variable.

It is suggested that one of the more important consequences of Hawley's view of ecology is the divorce -- or at least the separate maintenance -- of ecology and sociology. In Hawley's terms, it might be suggested that what had been a commensalistic relationship would better be a symbiotic relationship, in which the two disciplines perform functions which are inter-related, but which are different.

Urban Sociology

A comprehensive review of urban-sociological literature is not only beyond the scope of this study, but is not required for the purposes of the study. Urban sociological literature is examined with the following question in mind:

> What is the general position of the sociologist in regard to phenomenon of urban life? That is, what are the characteristics which distinguish urban life from life in other environments? What are the statements which seem to typify current sociological thought on this matter?

On this basis, some general propositions which should characterize any city, and which should therefore apply in the case of a specific city, are selected for examination.

Throughout this examination the theoretical generalizations which relate social activities to residence in an intra-urban area are of major concern.

In one of the best known analyses of urban life, Louis Wirth sets forth those characteristics which distinguish urban life from life in other types of environment.[58] This essay is examined rather closely, since it constitutes an attempt to set forth a theory of urbanism and offers some trenchant criticisms of urban sociological thought.

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58. Louis Wirth. "Urbanism as a Way of Life." The American Journal of Sociology, Vol. 44 (July, 1943). The page numbers given here refer to those of the article as it is reprinted in: Paul K. Hatt and Albert J. Reiss. Reader in Urban Sociology. The Free Press. Glencoe, Illinois. 1951. pp. 32-49.

Wirth seems to be in essential agreement with Shils' position in regard to the status of urban sociological theory. For example: ". . .we do not as yet have a comprehensive body of compendent hypotheses which may be derived from a set of postulates implicitly contained in a sociological definition of the city, and from our general sociological knowledge which may be substantiated through empirical research." p. 37

Wirth points out that the importance of the city cannot be measured solely by the number of people who live in the city, but that the influence of the city as an economic, political, and cultural center must be considered.[59] As a minimal definition of the city, Wirth suggests that, "For sociological purposes a city may be defined as a relatively large, dense, and permanent settlement of socially heterogeneous individuals."[60]

The problem of the sociologist of the city, ". . .is to discover the forms of social action and organization that typically emerge in relatively permanent compact settlements of large numbers of heterogeneous individuals.[61]

Wirth says, "There are a number of sociological propositions concerning the relationship between (a) numbers of population, (b) density of settlement, (c) heterogeneity of inhabitants and group life which can be formulated on the basis of observation and research."[62]

The presence of large numbers of people in a given area increases the likelihood for variation. He suggests that, "The greater the number of individuals participating in a process of interaction, the greater is the potential differentiation between them."[63] When this individual variation is found together with racial, ethnic, cultural, social, and economic heterogeneity, spatial segregation takes place. Under these conditions, competition and formal control mechanisms take the place of the bonds of solidarity that hold a folk society together.[64] Insofar as 'mutual acquaintship between inhabitants' is necessary for a

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59. This view is certainly compatible with that of the ecologist, who considers the city as a dominant element in the community.

60. Ibid., p. 36 61. Ibid., p. 37 62. Ibid., p. 38

63. Ibid., p. 39 64. Ibid., p. 39

'neighborhood' to exist, these conditions minimize the possibility. The urbanite, although having many more acquaintances than the rural person, has an intensive knowledge of a very small proportion of these acquaintances. As for urban contacts:

> Characteristically, urbanites meet one another in highly segmental roles. . .The contacts of the city may indeed be face-to-face, but they are nevertheless impersonal, superficial, transitory, and segmental. . .Whereas, therefore, the individual gains, on the one hand, a certain degree of emancipation or freedom from the personal and emotional controls of intimate groups, he loses, on the other hand, the spontaneous self-expression, the morale, and the sense of participation that comes with living in an integrated society. This constitutes essentially the state of anomie or the social void to which Durkheim alludes in attempting to account for the various forms of social disorganization in technological society.[65]

Following Durkheim, Wirth says that an increase in density, ". . . tends to produce differentiation and specialization, since only in this way can the area support increased numbers. Density thus reinforces the effect of numbers in diversifying men and their activities and in increasing the complexity of the social structure."[66]

Diversity and density produce homogeneity insofar as segregation can be viewed as establishing homogeneity. "The city consequently tends to resemble a mosaic of social worlds in which the transition from one to the other is abrupt."[67] These conditions also make necessary formal controls.

Heterogeneity implies different interests, and in the urban environment these interests are represented best by different groups, none of which demand the full 'personality' of the individual: "Rather the groups with which the person typically is affiliated are tangential to each other or intersect in highly variable fashion."[68] As a partial result of social

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65. Ibid., p. 40 66. Ibid., p. 41 67. Ibid., p. 42
68. Ibid., p. 42

mobility, the task of maintaining these groups is difficult:

> This applies strikingly to the local areas within the city into which persons become segregated more by virtue of differences in race, language, income, and social status, than through choice or positive attraction to people like themselves.[69]

In his discussion of the relation between a theory of urbanism and sociological research, Wirth says,

> Urbanism as a characteristic mode of life may be approached empirically from three inter-related perspectives: (1) as a physical structure comprised of a population base, a technology, and an ecological order; (2) as a system of social organization involving a characteristic social structure, a series of social institutions, and a typical pattern of social relationships; and (3) a set of attitudes and ideas, and a constellation of personalities engaging in typical forms of collective behavior and subject to characteristic mechanisms of social control.[70]

Although the concern here is not with a critical evaluation of the position which Wirth represents, a few comments of a critical nature may be in order, together with an effort to show the relevance of some of the propositions he suggests for this research.

Whether the propositions which Wirth suggests can be derived from the three variables which he employs has been questioned by Stone.[71] Regardless of the logical consistency of his presentation, his general view seems to be typical and representative of the view of urban life which American sociologists have held.

It should be pointed out also, that the ecologist would approach the study of the city from the first perspective which Wirth indicates. The second perspective delimits the area within which this research falls

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69. Ibid., p. 43 70. Ibid., p. 44

71. Gregory P. Stone. Unpublished monograph. Michigan State College. 1953. p. 69

with the important modification that the interests in this study are in the sub-areas within the city, and not with the city as a whole. The ecologist would not be interested in the 'choice' made by individuals who are segregated -- a factor to which Wirth attaches considerable importance.

Janek takes a different approach from that of Wirth, and suggests that the city exhibits those, ". . .complexes of Western Civilization which may be regarded as mainstays of the total pattern."[72] He lists some 16 of these complexes, ranging from the factory system and the use of steam, internal-combustion engines, and electricity, to sports and athletics. In summary he says:

> The habitual acceptance of and dependence on modern technology, a habituation which may be termed gadget behavior. . .it is this dependence on and the increasing habituation to our modern technology and the delegation of primary group satisfaction to the impersonalized institutions and controls that set us apart from other cultures.
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> The great heterogeneity of peoples and interests is only a concomitant of the above condition, as are also. . .the ever increasing mobility and transience coupled with anonymous and impersonal behavior and the rapid changes of interest and the variety of nervous stimulation.[73]

In spite of this rather fundamental difference in approach, both Janek and Wirth arrive at conclusions which are quite similar, although Janek's definition of the city is a more restricted one than is Wirth's.

In a recent analysis of the conditions which affect 'normative integration' in an urban area, the following conditions are stressed:

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72. Oscar W. Janek. "What Is the Total Pattern of Our Western Civilization." American Anthropologist. 48:3. p. 399

73. Ibid., p. 403

Large masses of men are functionally interdependent. They face common problems as a consequence of the Industrial Revolution and especially as a result of transportation and communication developments. Their lives are bound up together, regardless of their individual wishes.

They tend to live in or organize their lives with reference to communities with large and densely settled populations.

The population is heterogeneous. This is partly due to the diversity of functions and experience required by a complex division of labor. It is also partly due to the recent development of interdependence and communication between distinctive areas.

Large numbers of functions of the family in the folk community are dispersed among specialized institutions. . .The place of work tends to be separated from the home.

The overwhelming majority of the people who are interdependent do not know each other or see each other.

Even most of those who know each other or are in face-to-face contact do not have common membership in primary groups. Such membership has been the basis for the social organization under which most men have lived in the past. Necessarily, in the urban community interdependence far transcends the limits of the small groups which meet problems in terms of common experience in the folk community.

The fact of dense settlement and interdependence of a large population necessitates a high degree of specialization in the population.

The net result of all these conditions is that a large heterogeneous population of widely dispersed persons faces many new problems for which common solutions do not exist in the culture.[74]

In a study by Miner, it is maintained that, "The city provides a social milieu in which economic success may be achieved with less regard for activities which are not primarily economic in nature. . . the market rewards secular and impersonal behavior."[75] Miner also

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74. Ronald Freedman, Amos Hawley, Werner Landecker, Horace Miner. Principles of Sociology. Henry Holt and Company. New York, 1952. p. 492

75. Horace Miner. The Primitive City of Timbuctoo. Princeton University Press. 1953. p. 274

emphasizes the fact that the heterogeneity characteristic of the city may stem from different cultural origins and also from an extensive division of labor.

Despite some important and rather fundamental differences in approach, urban sociologists are in essential agreement on those distinctive characteristics of urbanism. The following is a summary of the statements about urbanism with which most urban sociologists would agree.[76]

Large numbers of people inhabit densely settled areas. The people and their interests are heterogeneous. This heterogeneity is due to (1) different social, ethnic, and cultural backgrounds and (2) to increasing specialization and division of labor. The functional interdependence of these people exists without any necessary personal acquaintanceship. Formal controls are substituted for informal controls, and secondary relationships replace primary relationships. New institutions are developed to perform functions which had been performed by the family. The intimacy which had been the basis of social life is replaced by impersonality and anonymity.

It is apparent from the foregoing, that this theory of urbanism is a very general theory, indeed. The very characteristics of urban life which these writers stress make it exceptionally difficult to speak of the city in any but the most general terms, e.g., 'heterogeneity' as an urban characteristic is hardly more than a very general descriptive

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76. The question as to whether urbanism is to be considered as a result of the three variables with which Wirth deals, or as a phenomenon peculiar to a modern high-energy society, while of theoretical importance, is not of concern here. In either case, the conditions and characteristics of urbanism upon which the writers agree, should apply to the study of a modern U.S. city.

term. The investigator is faced with the problem of determining the degree to which these characteristics are present in any specific city. The realization that the influence of the city extends far beyond the political limits of the city suggests that the classification 'urban' indicates relatively little about those groups of people so classified. It is clear that the concept 'urban' is, in Blumer's words, a "sensitizing" rather than a "definitive" concept.[77]

There are, however, certain generalizations which can be made on the basis of this suggested theory of urbanism. The following list of such generalizations contains those which can be examined in this study. These generalizations are based on the literature which has been discussed above, and are thus limited to the topics considered by the writers discussed.

1. With an increase in density, specialization, and heterogeneity, the area of residence decreases in importance, and social and economic activities are carried out with little reference to place of residence.

2. Membership in voluntary organizations is high in an urban area.

3. Membership in voluntary organizations is not related to residence, but to other factors, e.g., occupation, which have no necessary locality basis.

4. The degree of heterogeneity of an area within an urban area will affect the social organization of that area.

5. The greater the diversity of an area, the less the degree to which social and economic relationships are confined to the area.

6. Areas which are homogeneous should least exhibit the characteristics of urbanism.

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77. Herbert Blumer. "What Is Wrong with Social Theory." American Sociological Review. 19:3. pp. 1-13

7. Home ownership is directly related to low social mobility, and also to the presence of and stability of voluntary organizations.

8. Choice of residence is directly related to income.

9. Those areas inhabited by those people who have the greatest 'ability' to reside there, will have a higher degree of social and economic activity carried on within the area.

The above generalizations are illustrative of those which may be tested in this research. As other sociological research is examined, other generalizations about urbanism are suggested for testing in this study.

In the following chapter, recent research devoted to the establishment and analysis of social areas within a city is discussed. On the basis of the theories discussed in this chapter and the information gained from the review of other research on the topic of intra-urban areas, the specific hypotheses utilized in this study are presented.

CHAPTER III

RESEARCH PROBLEMS DERIVED FROM ECOLOGICAL AND SOCIOLOGICAL THEORY AND INTRA-URBAN ANALYSES

Thus far, two theoretical approaches used in this study have been discussed, and the general orientation of one school of human ecology and a dominant urban sociological view have been examined. In this chapter, the relevance of these points of view for testing some empirical generalizations is discussed. In addition, a brief review of some of the recent analyses of intra-urban areas is undertaken. Certain generalizations, selected from this review, are presented for testing in this research.

Intra-Urban Area Research

In the past 15 years, and particularly since the end of World War II, the investigation of urban areas has been considerably broadened in scope. This broadened interest is well illustrated by a symposium, held in 1951, in which biologists, geographers, sociologists, and an economist took part. In a discussion of the points of view presented, Quinn makes the following comment:

> The papers summarized here and the informal discussions of the symposium together disclosed considerable agreement among the various disciplines as related to the study of urban areas. In fact, points of agreement far outweighed points of difference. . . In general, it is interesting to note that differences in emphasis

and in point of view seem more characteristic of individual participants than of academic disciplines.[78]

One of the statements upon which the participants did agree has relevance for this research. "Urban areas of varying size and inclusiveness may be studied -- for example, the city as a whole, sub-areas within the city, the city hinterland, region."[79]

The work of Shevky and Williams is the first report on a contemplated series of studies designed to make available comparative knowledge of the city.[80] The authors state that, "This study is chiefly concerned with the description and measurement of social differentiation associated with urban phenomenon of Los Angeles."[81] An effort was made to construct types of social areas on the bases of social rank, urbanization, and segregation. 'Social rank' is an index composed of three variables: level of occupation, level of schooling, and rent as a measure of income.[82]

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78. "Symposium on Viewpoints, Problems, and Methods of Research in Urban Areas." The Scientific Monthly. July, 1951. Vol. 73. pp. 37-50

79. Ibid., p. 50

80. Eshref Shevky and Marilyn Williams. The Social Areas of Los Angeles. University of California Press. Berkeley. 1949

81. Ibid., p. 33

82. Ibid., p. 68. The 'level of occupation' is measured by the number of craftsmen, operatives, and laborers per 1,000 employed. The higher the ratio, the lower the occupational level of the area. 'Level of Schooling' is measured by the number of persons who had completed grade school or less per 1,000 persons 25 years old and over. Rent per capita was used as the measure of income. The measurement of fertility used is the number of children under five per 1,000 women 15-44. The number of women in the labor force per 1,000 women 14 years old and over constitutes the second index of urbanization, and the percentage of occupied dwelling units which are single family detached is the third variable. The five most highly segregated groups are Mexicans, Orientals, Negroes, Russians, and Italians. In discussing the association of these indexes, the authors point out that, "The trend at each level of urbanization is toward a higher occupation level with higher social rank. . .

'Urbanization', ". . .is an average of the percentile scores of three variables: fertility, women in the labor force, and single family dwelling units."[83] 'Segregation' for each social area in the percentage of the population represented by the five most isolated groups.

It is important to note that Shevky and Williams were able to use census data which were not available for this study. Therefore the delineation of intra-urban social areas in this study had to be made without the data upon which these authors based their various types of areas. It should also be noted that the only social characteristics with which they were concerned were those which could be derived from census data.

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82. (con't) The trend at each level of urbanization is toward a higher level of schooling with increasing social rank. The general trend at the low and high levels of social rank is toward a lower level of schooling with increasing social rank. The general trend at the low and high levels of social rank is toward a lower level of schooling with increasing urbanization, but, within the middle range of social rank, the trend is toward high level of schooling with increasing urbanization." (pp. 68-69) In regard to fertility, women in the labor force, and single family dwelling units, "The highest fertility is in area I, with low social rank and low urbanization, while the lowest ratio is in area IX with high social rank and high urbanization. Fertility decreases with increasing social rank and with increasing urbanization. The percentage of women in paid employment increases with urbanization and social rank. (p. 69) Further, ". . .the association of segregation with the low level of social rank is emphasized. At each level of urbanization the index at the low level of social rank is highest." (pp. 69-70) On the basis of these variables, nine basic social areas or population types were identified.

83. Ibid., p. 70

In a 'very critical review' of this book[84] and in a rejoinder[85] to comments on the review by Greenwood[86] and Schmid[87], Ericksen points out the limitations of these data and suggests that, "Life in Los Angeles, of all places, no longer revolves around the place of residence. No longer is it helpful to know where you sleep, but where you work, play, worship, and what not." The validity of this objection can be examined in this study, since data are available on these activities.

The San Francisco Bay Area has also been the subject of investigation from a somewhat different point of view. In a comparative analysis of Tryon's approach and that of Shevky and Williams, Bell summarizes Tryon's approach:

> The theoretical orientation underlying the work of Tryon is social psychological in character. . .Tryon is interested in broadening the psychologist's study of an individual's response to a situation by studying that part of the equation not usually studied by the psychologist -- the presenting situation. Underlying this view of the large urban aggregate are two fundamental postulates (1) The individual has a variety of basic needs which must be satisfied if he is to survive (these are the fundamental tissue needs for water, food, gratifying sex stimulations, places to rest and sleep, means of protecting the body tissues, as well as higher order needs, many of which are culturally created). (2) These basic needs can be satisfied best when the individual joins forces with some group rather than operating as an individual.[88]

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84. E. Gordon Ericksen. American Sociological Review. 14:6. p. 699

85. E. Gordon Ericksen. American Sociological Review. 15:2 pp. 296-97.

86. Ernest Greenwood. American Sociological Review. 15:1 pp. 108-09

87. Calvin Schmid. Ibid., pp. 109-110

88. Wendell Bell. "A Comparative Study in the Methodology of Urban Analysis." Unpublished PhD. Thesis. University of California at Los Angeles. 1952. pp. 17-18

In the determination of these 'sub-cultures' Tryon utilized physiographic characteristics, land use, demographic characteristics, socio-economic indices, and evidence of social disorganization. Some 33 variables were utilized and measures of variability, dispersion, and skewness were computed for each[89]

Bell found that the results yielded by each method of analysis were substantially in agreement. Bell does not discuss the substantive findings of Tryon's attempt to discover the psychological aspects of symbiosis (as Hawley might term the study), but it should be noted once again that census tract data were available to Tryon which were not available for this study. However, the relationship between residence in a specific area and various types of social and economic behavior can be investigated.

In an intensive study of a Rochester (New York) residential area, Foley raised the question, ". . .as to how extensively a single residential district serves its inhabitants as a 'local community.' "[90] His problem was one which, ". . .has been a continuing problem in the social and psychological sciences: the relation between behavior, ecologically viewed, and attitudes and identifications, social psychologically viewed."[91] The author claims no answer to the problem, but two hypotheses are confirmed. (1) ". . .city residents typically fall considerably short of being thoroughgoing 'urbanites.' " and (2) ". . .city residents, as individuals and as family units, show marked

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89. Ibid., pp. 33-34

90. Donald L. Foley. Neighbors or Urbanites? The Study of a Rochester Residential District. Department of Sociology, The University of Rochester. (Mimeographed) 1952. p. 7

91. Ibid., p. 57

variability in their positions along a local to metropolitan dimension."[92] The last of Foley's concluding comments is of particular interest for this study:

> As a final comment, let it be emphasized that for the large urban community we know very little -- at least in the form of systematically conducted and reported empirical research -- about the ways by which urban residents are linked to the city's social structure.[93]

It should be clear by now that this 'linkage' of the residents of an urban area to the structure of the city is one of the problemswith which this study is concerned.

It is significant to note that this general problem is viewed as being important, not only by American sociologists, but also by their French colleagues. In an impressive study of Paris, the investigators were concerned with the notion of le cadre spatial and more generally with the notion of espace social.[94] This interest resulted in a study of the relations between physical structure of an area and the various social and cultural aspects of the area.

> Les rapports entre les structures spatiales, les conditions de vie et les représentations collectives posent un deuxième probleme qui a plus particulièrement préoccupé les représentants de la morphologies social dans l'École Sociologique française: celle des rapports entre le cadre spatial qui apparaît sur les documents photographiques ou graphique et les diver especes sociaux-culturels correspondat aux représentations des groupes.[95]

The researchers were convinced that there was a close relation between ecological structure of an area and the social and cultural composition of the area. (It might be pointed out here that this is an

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92. Ibid., p. 59

93. Ibid., p. 62

94. P.-H. Chombart De Lauwe, S. Antoine, J. Bertin, L. Couvreur, J. Gauthier: Paris et L'agglomeration Parisienne. Tome Premier. L'espace Social dans Une Grande Cite. Presses Universitaires de France 1952. p. 241

95. Ibid., p. 243

interest with which Hawley would be only minimally concerned, i.e., he would be concerned primarily with the demographic and occupation characteristics of the population, but not with the attitudes of the population) This relationship seems to be a reciprocal one, e.g., "De représentations de classes influent ici sur des distributions."[96]

On the basis of an admittedly limited analysis of the types of social and cultural relations, certain findings appear to be significant. The number of relations of the bourgeois family is greater than those of the working class. The greater leisure time of the bourgeois, their access to more efficient means of transportation, greater income, and the greater importance of tradition, are suggested as some of the reasons for this state of affairs.[97]

The relations among the working class tend to be much more localized than those among the bourgeois, as well as much less dispersed. For the bourgeois, the quartier in which they live has little importance for daily life, while for the working class, the contrary is true. A greater affectivity is attributed to the relations of the working class.[98]

Unfortunately, "La nature des relations ne peut pas être analysee dans cette etude. . ."[99] Nonetheless one generalization is made with considerable force and assurance: Most of the relations of daily life take place within an extremely small area, and outside of this area, impressions of the rest of the city are vague and impersonal.

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96. Ibid., p. 241
97. Ibid., p. 104
98. Ibid., p. 104-5
99. Ibid., p. 106

In the analysis of specific generalizations, reference is made to previous research on the specific topic concerned, but at present the interest is only in the way in which the studies cited affect the generalizations made on the basis of a general theory of urbanism.

The study of Paris is informative, both for its findings and for it orientation. The authors point out the importance and significance of historical factors, of social class membership, and of social psychological factors. For the bourgeois -- as contrasted with the working class -- the area of residence is of less importance; the actual number of relations is greater. The working class relations tend to be localized in areas characterized by the dominance of the working class, while for the bourgeois greater dispersion is found. As to the nature of these relations, those of the working class, ". . .ont une plus grande importance affective en milieu ouvrier, et, en milieu bourgeois, sont plus generalment des relations au sens etroit, parfois des relations d'affaires."[100]

On the basis of these findings homogeneity of an area would seem to have consequences which would differ depending upon the socio-economic composition of the area. Thus, the 'ability' to select one's residence from a wide range of possible sites, the ability to bear transportation costs, and a different life-style affect the nature, localization, and dispersion of activities.

These data on the function of the local area call for some discussion of the concept of 'neighborhood' as it has been used by sociologists.

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100. Ibid., p. 106

McKenzie discusses locality groupings in residential areas. He points out that mobility of modern life facilitates disorganization of traditional group and institutional structures. In Columbus, Ohio, change of residence was much more frequent among the lower economic classes than among the well-to-do. "But dependence upon local institutions is considerably greater in the poorer neighborhoods than in the better residential sections on account of inability to use secondary means of communication."[101] The neighborhood which McKenzie studied was chiefly a working-class neighborhood, but heterogeneous in regard to families and economic level, although its average economic level was low. It should be noted here that the cause of the dependence of the less mobile inhabitants upon the neighborhood is, "The comparative absence of secondary means of communication, such as telephones and automobiles. . ."[102] a state of affairs which does not exist at present.

It is interesting to note that McKenzie anticipated the formulations of urban sociologists when he pointed out the influence of modern means of transportation and communication on the significance of spatial proximity as a group bond. For example:

> Neighborhood sentiment is most easily engendered when the physical basis of life affords a unitary character sufficient to differentiate the neighborhood from the larger community. Neighborhood sentiment thrives best where there is a homogeneity and a stability of population accompanied by a high percentage of home ownership. . . .the difficulty of maintaining local interest in local projects varies directly with the extent of the territory covered and the number of families included.[103]

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101. R. D. McKenzie. The Neighborhood: A Study of Local Life in the City of Columbus, Ohio. University of Chicago Press. 1923 This quotation is from the aricle which appeared prior to the publication of the book: American Journal of Sociology. 27:3 p. 145

102. Ibid., p. 362

McClenahan suggests that the neighborhood as a primary group has largely disappeared, and she prefers the term 'nigh-dweller' rather than neighbor.[103] The physical, economic, and social changes which the area she studied had undergone indicated that residence signifies, "lodgement rather than settlement." She suggests that the communality to be found is functional and not spatial.[104]

Caroline Ware offers a summary of her findings together with some comments on the concept of neighborhood:

> It has long been the presumption that living near-by makes people into 'neighbors' — that it either molds them to common pattern or brings them together and gives them, in spite of personal differences a common point of view as a member of the same 'neighborhood.' The 'neighborhood' has, in fact, been very dear to the heart of the sociologist as being, with the family, the primary face-to face group which is "fundamental in forming the social nature and ideals of the individual."[1] It has held an important place in the American culture pattern largely because of the assumption of American democracy that community of interest is identical with common residence, and that interest groups and social classes do not exist.
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> . . .The evidence of this community indicates that where such forms of urbanism as can here be seen are at their height, the neighborhood very largely ceases to be a basis for social intercourse and a formative influence on the lives of the residents. Only selectively did neighbors in Greenwich Village know each other, identify themselves with the neighborhood and engage in common activity, either formally or informally. The social code enforced by the public opinion of the neighborhood group was effective only upon the elements which led its life in the street.[105]
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> 1. Charles H. Cooley. Social Organization. New York. 1925 p. 23

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103. Bessie C. McClenahan. The Changing Urban Neighborhood. University of California Studies, Social Science Series No. 1. University of Southern California, Los Angeles. 1929. p. 103

104. Ibid., p. 108

105. Caroline F. Ware. Greenwich Village: 1920-1930. Houghton Mifflin Co. Boston, 1935. p. 82

In a more recent discussion of the concept of the neighborhood, Dewey is also somewhat critical of the concept. He suggests that, ". . .homogeneity of income classes, nationality, racial and religious composition. . ." make random neighboring possible.[106] He also questions the functions which the primary group performs, and suggests that many of these functions can be performed by primary groups centered around the place of work.[107]

It is evident that these studies discussed above have introduced factors which Wirth did not consider in his treatment of urbanism. The three variables with which Wirth dealt -- numbers of population, density of settlement, and heterogeneity of inhabitants and group life -- are supplemented by others, having to do with social class membership, occupation, and some social psychological factors. The addition of these other variables means that the possible logical relationships between the variables is increased. It also means that until it is known which of the various logically possible relationships do obtain in a specific urban area, there is little basis for the selection of one hypothesis in preference to another. For example: On the basis of the reported research on Paris, it was found that the bourgeois exhibited behavior which was more 'urban' -- in Wirth's sense -- than the behavior of the working class. Yet on the basis of Wirth's theory of urbanism, the contrary should be the case, since high income makes possible greater selectivity of residence, increases ability to use land extensively (thus decreasing density), and increases the possibility of home

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106. Richard Dewey. "The Neighborhood, Urban Ecology, and City Planners," American Sociological Review. 15:4 p. 506

107. Ibid., p. 507

ownership, thus making for stability of residence and maintenance of social organizations. But, in support of the Paris findings, it might also be pointed out that high income increases accessibility to any other area of the city, and makes for relative independence of local facilities.

What is suggested here is that the general relationships which are assumed to hold between these variables do not furnish an adequate basis for the selection of one proposition rather than its contrary, in the study of a specific area, where these general relationships may be considerably modified by factors which are not considered in the original theoretical formulation. Unless the specific conditions under which the theoretical generalizations hold are stated, and unless the specific relationships between the variables in a given area are known, the basis for the selection of hypotheses is unsatisfactory.

Lest this be taken as too harsh a criticism, let it be pointed out that the generalizations made on the basis of these variables are at least 'sensitizing' ones. Even though the specific propositions which state the results if certain conditions obtain, are not possible, still the factors that 'should' be taken into account are specified.

One of the purposes of this research, then, is the specification of the relationships between the suggested variables, together with an attempt to show how they are related to residence in a specific area.

Generalizations To Be Tested

The relatively explicit statement of the theoretical orientation which is used in this study, together with the review of the research in the field of intra-urban area analysis, make possible the selection of generalizations which may be tested on the basis of the research on which this study is based. The following generalizations are those which guided the selection of data in this study.

Ecological Generalizations to be Tested

The hypotheses derived by Hawley which were selected for discussion in Chapter II were those which were most applicable to the analysis of residential areas.[108] The first four of these hypotheses state, in effect, that residential units are distributed with regard to specialization of the unit, transportability, ability to pay costs of occupancy and transportation, and degree of intensity of land use. Since residential units are relatively unspecialized and are characterized by non-intensive use of land, they have a high location tolerance and are not likely to be located at points of high accessibility. Furthermore, if 'function' is broadly interpreted, hypothesis five means that residential units of a given economic class will be found grouped within the city.

It is clear that major emphasis in Hawley's approach is placed on ability to pay costs of land occupancy. For the resident, this ability is indicated by his economic status. This emphasis suggests that the income of the urban dweller is an important factor in determining his

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108. See Chapter II, page 29.

residential location and thereby in influencing other aspects of his social life. Thus, the delineation of residential areas of specific economic categories becomes a necessary task for the analysis of intra-urban areas. Accordingly, the distribution of economic classes of dwelling units for Lansing was determined from census data, using the average land value of the dwelling unit as the best available indication of income. Not only does this permit the isolation of specific types of residential areas, but it also permits the comparison of these economic areas with social areas -- delineated on the basis of inter-personal contacts -- so that the relationship between economic status and some aspects of social behavior may be determined. The role of accessibility in the determination of the location of residential areas can also be examined by calculating the distance from the point of maximum accessibility of the dwelling units in specific economic classes. In this way, generalizations concerning the relationship between accessibility and income can be tested for their applicability to Lansing.

The sixth hypothesis selected from Hawley's paper states that exchanges between residential units and other functional units will be most frequent between the residence and the units which are closest to the residence. Data available on the shopping patterns of Lansing residents enable a test of this hypothesis concerning the importance of accessiblity in the performance of routine daily activities.

The major concepts utilized in this examination are those dealing with economic status and accessibility, both of which play an important part in ecological theory.

Sociological Generalizations to be Tested

Some of the generalizations of urban sociological theory also deal with economic factors, and these generalizations are examined on the basis of residential areas of specific economic status. Urban sociologists have assumed that 'choice' of residence and home ownership are directly related to the social stability and social organization of an area. The relationship of economic status and home ownership to the degree of personal contact and interaction within a local area can be examined in order to determine whether the expected relationship does, in fact, obtain. It would be expected that those residential areas characterized by higheconomic status and a high proportion of home ownership would least exhibit 'urban' characteristics. Consequently, these areas should be high in degree of personal interaction and contact.

Data from another study of Lansing are utilized to examine the relationship between the definition of high status areas based on economic characteristics of the dwelling units and the social psychological definition of high-status areas offered by Lansing residents. The examination of the relationship between the two definitions tests the importance of economic status for a more general social status.

The delineation of residential areas on an economic basis permits a comparison and analysis of these areas from the point of view of both ecological and sociological theory. From a sociological point of view, there are general characteristics of urbanism, not necessarily related to income, which are also examined in this study. The assumption of the urban sociologist that the city dweller is, and must be, a member of a large number of formal organizations can be examined in the light of data

gathered in this study. Furthermore, the importance of the locality basis of the formal organization can also be examined, by comparing the proportion of respondents who belong to both local and non-local organizations. The expectation is that in areas characterized by a high degree of personal contact and interaction, local formal organizational membership will also be high.

The importance of the 'neighborhood' in a strictly functional sense as well as in a social sense is explored. The relationship between the neighborhood as defined by the respondent, the functional neighborhood as defined by the performance of routine economic activities, and the social neighborhood as defined by the performance of activities of a social nature is examined, and the importance of the local area for both economic and social activities can be determined.

Throughout the analysis, the social areas -- delineated on the basis of interpersonal contact -- will be treated as the 'independent' variable. These social areas are analyzed on the basis of the generalizations described above. The principle variables are those of economic status, accessiblity of the residence to other functional units of the community, those social characteristics which have been presumed to make for stability within an area, i.e., a high degree of home ownership, lengthy residence within the area, and low physical mobility within the area.

The methods utilized in the determination of intra-urban areas on the basis of social characteristics, and the limitations of these methods, are described in the following Chapter.

CHAPTER IV

METHODS OF INVESTIGATION

Introduction

In previous chapters, the theoretical and empirical generalizations which guided this research and analysis were discussed. In this chapter, the methods of investigation which were utilized in this study are described. The reasons for the selection of the methods used are indicated, and some of the conditions under which the study was done are discussed.

Urban sociologists have long recognized the necessity of dividing the city into small units which could be studied by an individual or a small group of individuals. The studies of the 'Chicago school' of urban sociology approached this necessity in two ways. Wirth's study of The Ghetto and Zorbaugh's study of The Gold Coast and the Slums are examples of intensive studies of specific areas within the city. Cavan's study of Suicide, Thrasher's analysis of The Gang and Faris and Dunham's study of the distribution of mental illness within Chicago, are illustrative of another approach; the study of a specific class of events, with particular emphasis upon the location of the occurrence of these events. In both cases, the areas and events to be studied were usually selected because of their apparent differences from the rest of the city or from

other events. Often they were taken to be at least symtomatic of social and/or personal disorganization.[109]

In most large U.S. cities, the necessity for intra-urban classification has been dealt with by the establishment of census tracts, which supplies a degree of homogeneity with respect to number of inhabitants, demographic characteristics of the inhabitants, and character of land use within the tract.[110] This procedure has proved to be quite satisfactory for many purposes. For example, many of the studies of Chicago, the Shevky-Williams analysis of Los Angeles, and other studies were possible only because of the establishment of census-tract plans. However, this procedure utilizes criteria which are not primarily sociological, and in fact the studies cited have been in part, an effort to analyze areas on the basis of additional, and presumably more sociologically significant criteria.

In this study, the concern is primarily with intra-urban areas delineated on the basis of sociological criteria, rather than demographic or ecological criteria.[111] The research was not directly concerned with

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109. Anderson suggests that this concern with these particular aspects of city life may be related to the early interest of the sociologist in social reform. See: Nels Anderson. "The Trend of Urban Sociology" in Trends in American Sociology. edited by G.A. Lundberg, R. Bain, and N. Anderson. Harper and Borthers. New York. 1929.

110. See: Calvin F. Schmid. "The Theory and Practice of Planning Census Tracts." Sociology and Social Research. 22: (1938) pp. 228-238; Census Tract Manual, Bureau of the Census, January, 1947; Donald O. Cowgill, The Methodology of Planning Census Tracts for Wichita, Kansas. Bulletin No. 19, University of Wichita, Kansas. February, 1949

111. For a discussion of the treatment of demographic data, see: Joel Smith, "A Method for the Classification of Areas on the Basis of Demographically Homogeneous Populations." American Sociological Review 19:2. pp. 201-207

the final establishment of census tracts, a procedure which involves a number of necessary compromises in order to conform to the requirements of formal agencies. The study was, however, concerned with a comparison of social areas with other data. In order to make this comparison possible, information on the social organization of intra-urban areas and the activities of the inhabitants of these areas was obtained. This information on the social characteristics of the residents of social areas makes possible comparisons on these bases. The methods by which this information was obtained are discussed in this section. Before beginning this discussion, the more important conditions which influenced the research are indicated.

Conditions and Limitations of Research

A major assumption upon which this research was based, and which guided the entire research design, was that within an urban area there are sub-areas which are sociologically distinguishable, and that the inhabitants of these sub-areas differ in social and economic characteristics. The emphasis, then, is upon the sub-area, and not upon the city as a whole. The acceptance of this assumption influenced the sample design, and the gathering of the relevant information from the sample selected.

The funds allocated to the research committee for the project were limited. As a consequence it was impossible to hire fully trained interviewers, or to obtain a sample which was both representative of the population of Lansing, and which also constituted an areal sample of the city.

Many of the comparisons made in this study involve the comparison of sets of data from different periods of time. The interviews were

gathered in 1952 and 1953, while census data on the population were gathered in 1950, and census data on some of the functional characteristics of the city were compiled in 1947 and 1948. No complete land-use maps of the city were available, and the expense involved in the construction of such maps was prohibitive.

This research was viewed by the research committee as the first step in a long time research program in the city. One of the functions of the research was considered to be that of a pilot study which would lay the groundwork for continuing urban research, and which would point out problems which merited future exploration.

The above is a partial list of the conditions under which this research was done. None of these conditions nor limitations is thought to be peculiar to this research, but rather seem to be present in a great deal of sociological research of a similar type. They are made explicit here solely for the purpose of clearly stating the background and characteristics of this research, and to indicate an awareness on the part of the writer of the conditions under which the research was done.

Delineation of Social Areas

Data on the demographic characteristics of the Lansing population and block data on housing characteristics were secured from the U.S. Bureau of the Census. In addition to the published census bulletins, copies of the ennumeration district counts were secured from the Bureau of the Census. These data furnished the basis for one set of comparisons which is discussed in the analysis.

Information on the social and economic activities of the population could not be secured from any formal source. The only feasible way to get this information was to ask the residents of the city about their social and economic activities. Two questions arise when this is considered: What questions are to be asked? and of whom are they to be asked?

In regard to the first question, the general orientation of this research was one of the determinants of the questions selected. Four main categories of questions were devised, relating to informal associations within the area; formal associations within the area; the social activities carried on within the area; and the routine daily economic activities carried on within the area. Since these questions were asked prior to any attempt to secure a definition of what the respondent considered to be his 'neighborhood,' it is possible to compare the area within which certain funtions take place with the area defined by the respondent as constituting his neighborhood. The original questionnaire was pre-tested on 184 informants, and was revised on the basis of these interviews.*

The selection of those to whom the questionnaires would be administered was also guided by the principle assumption of the study, thus the sample to be interviewed was a sample of areas in the city. A listing of all blocks in the city was used as the source of the sample. Every other block which had at least two dwelling units was selected. Within the block, the selection of the dwelling unit in which the interview was to be taken was determined by a regular rotating selection of

* Appendix A contains a copy of the final questionnaire. It is not an identical copy, since it has been typed on 8½ by 11 inch paper, rather than the legal-sized paper which was used in the actual questionnaire. The wording and order of the questions in identical

dwelling units by location on the block. The interviewers used were students in the research committee members' classes. Sets of general and specific instructions were furnished each interviewer, and before beginning the task the interviewers were verbally instructed by one of the committee members. Each interviewer's first assignment was treated as a 'practice interview,' and was closely examined by a member of the committee, to see that the instructions had been followed. The use of relatively untrained and inexperienced interviewers is a limitation of the study, but one that could not be avoided.

Interviewing was completed in the Spring of 1953, and 573 completed interviews were obtained. The sample unit was the city block, and since these blocks differ in size, population, and density, representativeness of the sample in terms of characteristics of the population was not possible. However, representativeness in terms of area, i.e., blocks distributed throughout the city, is claimed. This characteristic of the sample should be kept in mind when examining the comparison of the sample with the Lansing population, which is presented in Table I.

In general, the sample is composed of a much higher proportion of females than the city. Occupationally, there is an over-representation of retired persons, skilled workers, and managers and proprietors, and an under-representation of professional, clerical, and service workers. It should be mentioned here that the occupational categories used in this study were not strictly comparable to the census categories, and that some categories from the sample were combined to enable a comparison. It should also be mentioned that the census data include all workers, while the sample consisted largely of families. This may be one of the reasons why clerical workers are under-represented and why skilled workers are over-represented in the sample. The sample and the city are

Table I. DEMOGRAPHIC, ECONOMIC EDUCATIONAL, AND HOUSING CHARACTERISTICS OF LANSING POPULATION, 1950, AND OF SAMPLE, 1953

	Lansing	Sample
Demographic Characteristics	Percent	Percent
Sex		
Male	48.4[a]	21.3
Female	51.6	78.7
Race		
White	96.7	95.3
Negro	3.2	4.7
Other	0.08	0.0
Economic Characteristics		
Occupation		
Professional and semi-professional	11.9[b]	9.6
Managers and proprietors	6.6	10.6
Clerical (office)	19.3	7.2
Clerical (sales)	9.9	5.9
Skilled workers	14.9	25.8
Semi-skilled workers	21.7	21.8
Service and domestic	11.4	3.7
Retired, occupation not reported	1.3	11.9
Median family income	$4,097	$4,628
Educational Characteristics		
Median school year completed	11.5[c]	12.0
Housing Characteristics		
Number of persons per household	3.6[d]	3.4
Percent owners	63.5	80.8
Percent renters	36.5	19.2

a. U.S. Bureau of the Census. U.S. Census of Population: 1950 Vol. II Characteristics of the Population. Part 22, Michigan. Chapter B. U.S. Government Printing Office, Washington, D.C. 1952. Table 34, p. 80.

b. Ibid., Chapter C. Table 75, p. 246. Categories of less than one percent not included for Lansing.

c. Ibid., Chapter B. Table 34, p. 80

d. U.S. Bureau of the Census. U.S. Census of Housing: 1950. Block Statistics. Vol. V. Part 95. U.S. Government Printing Office. Washington, D.C. 1952. p. 3.

quite similar in racial composition, educational status, and number of persons per household. The sample contained a larger proportion of home owners than the city.

In a study of the distribution of community knowledge, Sykes concluded that as the proportion of home owners increases, the proportion of knowledgable individuals increases.[112] The same is true in the case of income, educational status, and occupational status. This would seem to indicate that the composition of the sample might be such that would constitute a favorable factor in gaining knowledge about the community.

The responses to four questions of the interview schedule, all of which related to social contacts within the area, were selected for the purpose of delineating social areas within the city.[113] The responses to these questions were assumed to indicate a certain degree of 'intimacy' within the area.[114] Each of these responses to these questions was assigned a numerical value from zero to four, with zero indicating no intimacy and four indicating high intimacy. The combination of these numberical values was taken to indicate a relative ranking of the degree of social interaction for the block concerned.[115] By plotting the values on a block map of the city, it was possible to determine the areas in which blocks with similar scores were located. The areas characterized by blocks with similar responses to these questions were then delineated. These areas are presented in Figure 1.

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112. Gresham M. Sykes. "The Differential Distribution of Community Knowledge." Social Forces. (May, 1941) p. 382.

113. These questions were questions 10, 11, 12, and 13 of the interview schedule. (See Appendix A). For a more extended discussion of this procedure, see: W.H. Form, G.P. Stone, J. Smith, and J. Cowhig. "The Compatibility of Alternative Approaches to the Delineation of Urban Sub-Areas." American Sociological Review. (In press).

114. 'Intimacy' is used here to signify the relative rank of areas on the basis described. No other significance is intended.

115. It is recognized that this procedure treats non-additive quantities as though they were additive.

These social areas, then, were treated as the 'independent variable,' and the social and economic characteristics of the residents of the social areas were analyzed and compared on the basis of the generalizations discussed in Chapter III. The respondent's estimate of the degree of interpersonal contact was part of the basis for the delineation of the intra-urban social areas.* Since some of the characteristics of these respondents are compared with the characteristics of the entire social area, the sample was examined in order to indicate possible sources of bias. This examination is contained in Appendix B, and is summarized below.

The analysis indicated, in general, that there was a close relationship between high land value of the dwelling unit and high monthly rental, justifying the use of average land value of the dwelling unit as the unit of measurement of economic status for the total area; and that variation of average land value within the area was not significantly related to the size of the area. It also indicated that areas which had the lowest average land value of the dwelling units were the most economically homogeneous areas. The sample had a higher proportion of females than the entire city, but this over-representation of females was characteristic of each of the three types of social areas. The fact that the interviews were obtained during the day-time probably accounts for this bias. The median age of the respondents was the same in each of the three types of intimacy areas. Thus, there seems to be no reason to think that the differences in the responses among the social areas are a result of differences in the age-sex distribution of the sample. On the basis of occupation, high social intimacy areas had a significantly higher proportion of persons in higher status occupations, a finding which may also indicate higher socio-economic

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* In a sense, the respondent was viewed as an 'informant' in regard to the local area.

status. Middle social intimacy areas had a significantly greater proportion of service workers and a significantly lower proportion of skilled and semi-skilled workers than either of the other two types of areas.

The aspects of the sample which have been discussed thus far indicate the ways in which the sample deviates from the total city. In spite of these differences, it would seem that the sample is not seriously distorted, and is adequate for the purposes at hand. In the course of the analysis, further comparisons of the sample with the total area are made in connection with specific relationships.

Perhaps it should also be mentioned that although the sample is relatively small when compared with the total population of the city, it constitutes a very large sample when this research is compared with previous research of a similar nature.

In order to furnish information on the social structure of Lansing and to enable a comparison of Lansing with other U.S. cities, the following chapter is devoted to a demographic and functional analysis of the Lansing Standard Metropolitan Area and the central city of Lansing.

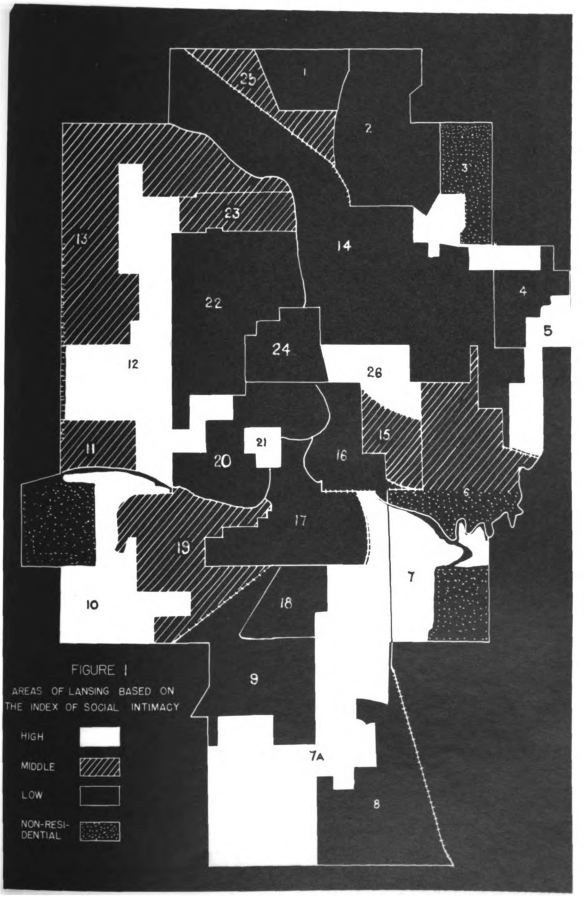
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FIGURE 1
AREAS OF LANSING BASED ON THE INDEX OF SOCIAL INTIMACY
HIGH
MIDDLE
LOW
NON-RESI-DENTIAL

CHAPTER V

A FUNCTIONAL DESCRIPTION OF LANSING

In preceding chapters, it has been seen that both the ecologist and the sociologist attach considerable importance to the city's role as a service, business, and industrial center, and to the size and population composition of the city, in influencing the structure and development of the city and the community. It is obvious that a city which is primarily a manufacturing center will differ in some respects from a city which is a resort center or governmental center. These differences will be reflected not only in the physical structure of the city, but also in the types of groups within the city. For example, the labor force of a manufacturing city will not be the same as the labor force of a resort or governmental center. Therefore, it is important to know the functional position and economic basis of a city. This information not only provides a fuller description of the city, but makes it possible to relate these factors to whatever other description or analysis may be desired. In addition, a complete functional description of the city should be offered, in order to facilitate an evaluation of the study and the extent to which the results of this study may apply in the case of other cities.

The present chapter is devoted to a functional analysis of Lansing, Michigan. First a very brief description of the conditions under which the city was founded and developed is presented. Second, the Standard Metropolitan Area* of which Lansing is the central city, is considered

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* The abbreviation, SMA, will be used for Standard Metropolitan Area.

in relationship to other SMA's in the United States from the point of view of population growth since 1900. Third, the growth and distribution of the population within the Lansing SMA is examined for a similar period with particular attention to the population of the central city. Fourth, the role of the central city as an economic center for its SMA is examined, and its importance as a trade center, service center, and manufacturing center discussed. Use will be made of current research on the subject of the functional classification of cities in order to classify Lansing.

The analysis of the Lansing SMA serves to overcome some of the limitations of the restriction of this study, for the most part, to the political area of the city. It also provides a basis for determining the functional importance of Lansing for the rest of the 'community.'

The Founding of Lansing

Lansing has been the capitol of Michigan since March 16, 1847. The selection of the city as the State Capitol has a rather unusual background:

> Lansing was developed by a legislative prank. Until 1847, Detroit was Michigan's capitol. The constitution of 1835 provided that the capitol 'shall be at Detroit. . .unitl 1847, when it shall be permanently located by the legislature.' The legislators, after two of their number had been burned in effigy by a gang of rowdies, concluded that Detroit, being on the border, was in danger of a foreign invasion and were glad enough to abide by the constitution. For months the legislature wrangled, as every settlement in lower Michigan was considered. When, in light humor, "the township of Lansing" was suggested, the impasse was relieved amid laughs, and, for want of a better solution, the seat of government was moved to a wilderness location that had but one log house and a sawmill.[116]

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116. Michigan. A Guide to the Wolverine State. Compiled by workers of the Writers' Program of the Works Progress Administration in the State of Michigan. Oxford University Press, New York. 1941. pp. 331-332.

The city's industrial growth centered around the automotive industry:

> When the gasoline engine and the automobile were made commercially practical in the latter part of the nineteenth century, the city had three or four large carriage and wagon factories and a wheel company, which were converted into automobile body and wheel factories. An important factor in Lansing's industrial development was the ability to finance the 'radical' proposals of automobile inventors. Six or eight local men had accumulated large fortunes by developing the surrounding country and selling dense timber stands, and, when the timber gave out, they were interested in new business ventures. . .
>
> Gasoline engines and automobiles made Lansing a manufacturing and trading center. More than 200 manufacturers established themselves in the area. In 1904, Lansing was a world leader in the production of agricultural implements, automobiles, and gasoline engines, and held second place in the manufacture of wheel-barrows, trucks, and store-fixtures. The industrial age inaugurated an area of unprecedented expansion. The population increased from 16,000 in 1900 to 32,000 in 1910. . .[117]

Some idea of the historical development of residential areas in Lansing can be gained from an examination of Figure 2, which shows those city blocks on which at least one-third of all dwelling units standing in 1940 were constructed in 1899 or earlier. (The concentric circles in this figure are drawn at one-half mile intervals). As this figure indicates, early residential development took place along the Grand River in the northern, central, and southern parts of the city. The greater development seems to have taken place in the western part of the city along east-west transportation routes; and a lesser development in the eastern part of the city along north-south transportation routes.

In the next section, the growth and distribution of population in Lansing and in the Lansing SMA is analyzed in order to see what effect industrialization had upon the population size and distribution, and to determine the relative importance of the central city for the SMA

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117. Ibid., pp. 331-332 This account, while lacking the embellishments of, Lansing and Its Yesterdays, Lansing, Michigan, 1930, pp. 10-15, is in agreement with this latter version.

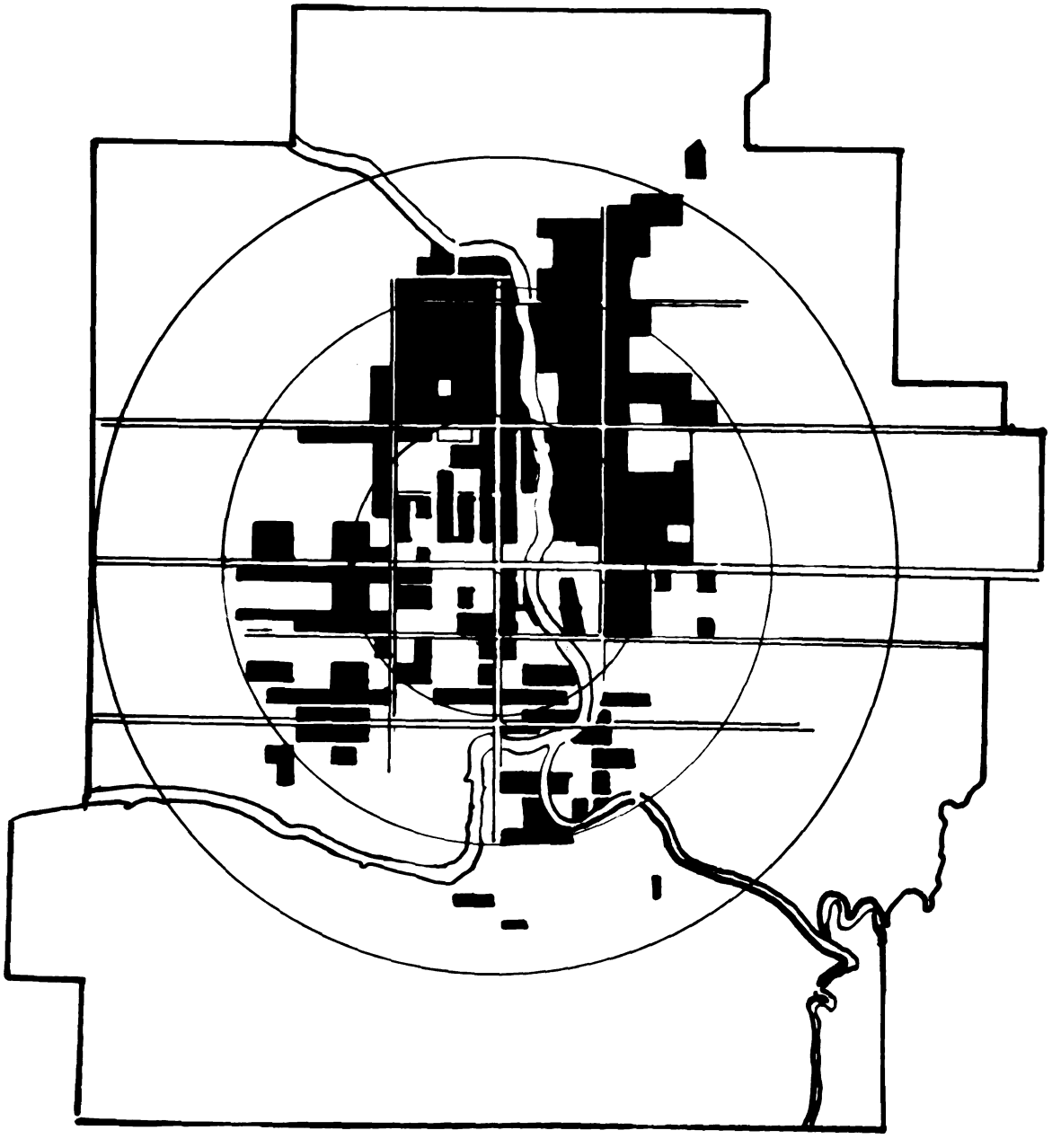

FIGURE 2

BLOCKS WITH ONE-THIRD OR MORE DWELLING UNITS CONSTRUCTED IN 1899 OR EARLIER AND STILL IN USE IN 1940

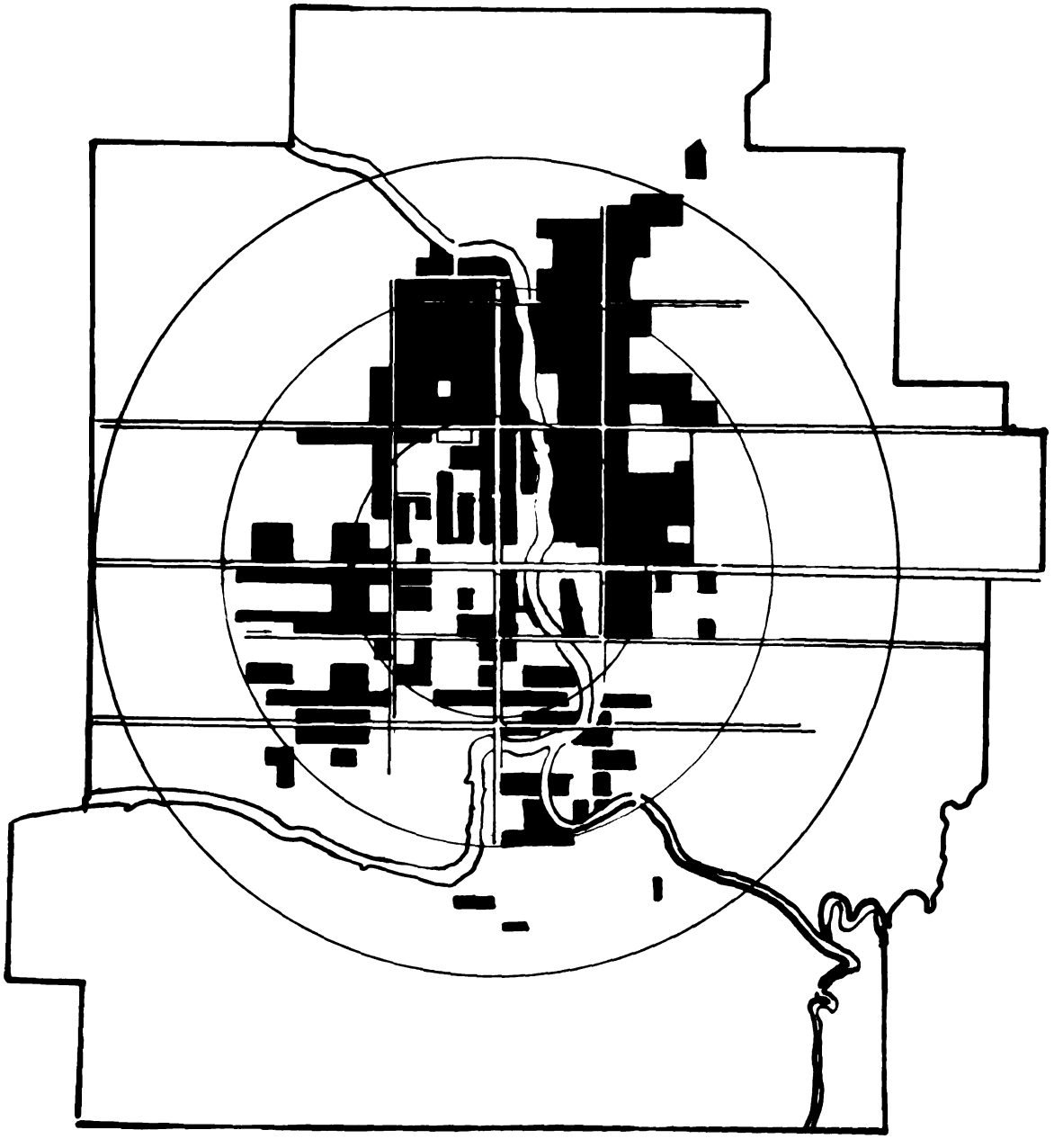

FIGURE 2

BLOCKS WITH ONE-THIRD OR MORE DWELLING UNITS CONSTRUCTED IN 1899 OR EARLIER AND STILL IN USE IN 1940

Population Growth and Distribution in the Lansing SMA

The Lansing SMA qualified as a 'principal SMA' in 1930, and on this basis is placed in Class IV.[118] A principal SMA is defined as, ". .(one) with a central city of 50,000 inhabitants and a total population of 100,000 or more at a given census. . ."[119] In Table II, the Lansing SMA is compared with all SMA's of its class, with all SMA's of its region, and with all SMA's of the same region, size, and class.

Table II. PERCENT POPULATION INCREASE BY CLASS, SIZE, AND REGION OF SMA, 1900-1950

Decade	Lansing SMA	All Class IV SMA's	North Central SMA's	SMA's of Same Region Size and Class
1940-50	32.4	28.2	18.1	21.4
1930-40	12.0	11.3	5.3	7.5
1920-30	43.0	29.1	29.9	27.3
1910-20	53.0	28.0	32.2	26.6
1900-10	33.9	36.6	29.9	24.0
1900-50	334.3	221.9	177.3	160.9

Source: Donald J. Bogue. Population Growth In Standard Metropolitan Areas: 1900-50. Housing and Home Finance Agency. U.S. Government Printing Office, Washington, D. C. 1953.

From an examination of Table I, it can be seen that the pattern of percent of population increase in the Lansing SMA was the same as the pattern of increase in all North Central SMA's, and that the Lansing SMA

118. Donald J. Bogue. Population Growth in Standard Metropolitan Areas: 1900-50. Housing and Home Finance Agency. U.S. Government Printing Office, Washington, D. C. 1953. p. 10

119. Ibid., p. 10

grew at a more rapid rate than any of the other three classes of SMA's with which it can be compared. It can also be seen that the greatest percentage increase in the population of the SMA was during the period of industrial expansion.

The changing distribution of the population within the Lansing SMA indicates in what areas of the SMA the greatest growth of population has occurred. Table III presents this comparison.

Table III. PERCENT POPULATION INCREASE WITHIN THE LANSING SMA, 1900-1950

Decade	Lansing SMA	Central City	Ring	Urban	Rural
1940-50	32.4	17.0	55.8	173.8	32.0
1930-40	12.0	0,5	35.8	25.0	38.2
1920-30	43.0	36.8	57.6	...	28.9
1910-20	53.0	83.6	9.7	...	9.7
1900-10	33.9	89.4	94.6	...	-5.4
1900-50	334.3	458.9	246.3	...	144.2

Source: Donald J. Bogue. Population Growth in Standard Metropolitan Areas: 1900-50. Housing and Home Finance Agency. U.S. Government Printing Office. Washington, D.C., 1953. Table 1, p. 65

Table III indicates that the period of greatest population growth for the Lansing SMA occurred a decade later than for the central city, and that for both the SMA and the central city the period from 1900-1920 was marked by the greatest population increase. It is also evident that the growth of the central city has been at a slower rate than that of the SMA or the ring. In order to examine this development more closely, the proportion of population in the central city is compared with the proportion of population in the entire SMA. This comparison is made in Table IV.

Table IV. NUMBER AND PERCENT OF POPULATION IN LANSING SMA AND IN CENTRAL CITY, 1900-1950

Year	Lansing SMA Population	Central City Population	Percent Population within the Central City
1950	172,941	92,129	53.3
1940	130,616	78,753	60.3
1930	116,587	73,397	62.9
1920	81,554	57,327	70.3
1910	53,310	31,229	58.4
1900	39,818	16,485	41.4

Source: Donald J. Bogue. Population Growth in Standard Metropolitan Areas: 1900-50. Housing and Home Finance Agency. U.S. Government Printing Office, Washington, D. C. 1953. Table 1, p. 65

Table IV indicates that the central city had the greatest proportion of the SMA population in 1920 — the time of industrial expansion during and immediately following the first World War.— and that this proportion has constantly decreased since that time. Schnore has analyzed all U.S. SMA's on this basis, and has pointed out seven distinct types of SMA's on the basis of the percent of population in the central city at various decades since 1900.[120] The Lansing SMA is one of 42 SMA's which shows an increasing proportion of population in the central city from 1900 to 1920 and a decreasing proportion from 1930 to 1950. Schnore suggests that this may be an indication of centralization from 1900 to 1920, and of decentralization from 1930 to the present.

120. Leo F. Schnore. Suburbs and Satelites, University of Michigan, 1954. This comparison was suggested by Schnore on the basis of a preliminary report of his study. The writer wishes to express his appreciation to Schnore for making these preliminary findings available. Of the eight Michigan SMA's, only Flint and Saginaw are of a different type, and in both cases, decentralization began a decade later.

These data indicate that the greatest growth of Lansing and the Lansing SMA in population occurred during the period of industrial expansion. They also suggest that additional growth since 1920 has taken place in areas outside the central city.

The age-sex distribution of the Lansing population is compared with the age sex distribution of the urban part of the State for 1950. Any comparison of the age-sex distribution of the central city with the remainder of the SMA would be of only limited utility, due to a change in the classification of the place of residence of college students by the Bureau of the Census in 1950. Since the Lansing SMA is the location of Michigan State College, this comparison would show a disproportionate increase of persons between the ages of 20-24, and would also indicate a high birth rate. However, the comparison of the central city with the urban part of the State indicates the similarity of the age-sex distribution of these two areas. In Figure 3, the calculation of the urban part of the State was made by subracting the appropriate amounts for the Lansing population, so that Lansing is compared with the urban part of the State <u>minus</u> the Lansing population.

Figure 3. AGE-SEX COMPOSITION FOR LANSING AND FOR THE STATE, URBAN, 1950

Lansing

State, Urban

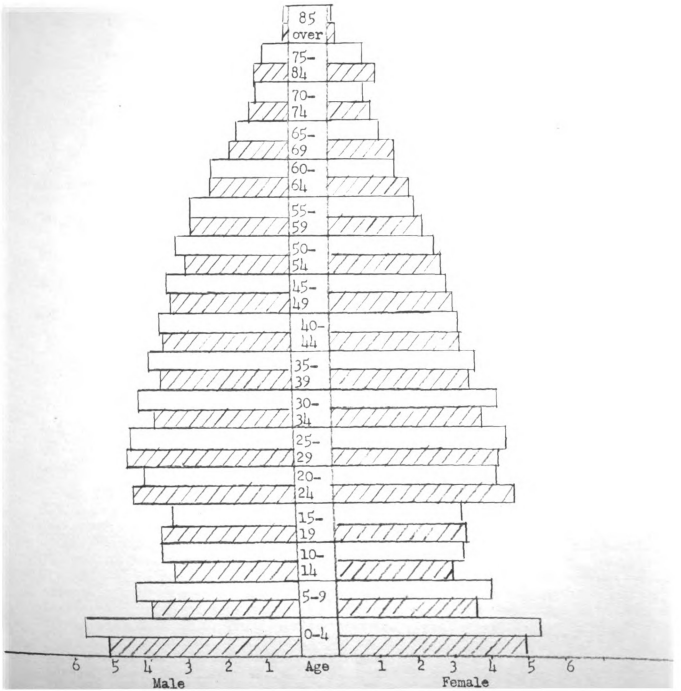

Figure 3 indicates that the age-sex distribution of the Lansing population closely resembles that of the urban part of the State. Lansing resembles the urban part of the State more closely in fertility ratio and in birth rate, than it does the rest of the Lansing SMA. Both the fertility ratio and birth rate are lower for the central city than for the rest of the SMA.[121]

In regard to the growth and distribution of the population and the age-sex structure of the population, it would seem that Lansing resembles the urban part of the State more closely than it does the Lansing SMA; and it would also seem that decentralization of the population has taken place since 1920, which marked the peak of industrial development within the central city.

In the following section, the function of the central city as a business and service center for the SMA is examined, and the functional and economic base of the city are described.

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121. These conclusions were derived from the following sources: U.S. Bureau of the Census. U.S. Census of Population: 1950. Vol. II Characteristics of the Population. Michigan. U.S. Government Printing Office, Washington, D.C., 1952. Data for Lansing were taken from Table 33, p. 7. Data for the Lansing SMA were taken from Table 33, p. 64.

A comparison of 1940 data with 1950 data showed that increase in both measures took place for all three areas, but that the Lansing and urban part of the State increases were less than those of the Lansing SMA. U.S. Bureau of the Census. U.S. Census of Population: 1940. Second Series. Characteristics of the Population. Michigan. U.S. Government Printing Office, Washington, D.C., 1942. Data for Lansing taken from Table 32, p. 129; for the Lansing SMA, Table 22, p. 45; and for the State, Urban from Table 7, p. 14

Lansing as a Functional Center

From both an ecological and sociological point of view, the city serves as a business, industrial, and service center both for the resident population and the population in the surrounding area. This section is devoted to an examination of the role of Lansing in this respect. The relative importance of the central city as a trade and service center is examined by comparing Lansing with the rest of the Lansing SMA. The occupational and industrial structure of Lansing and the Lansing SMA is described in order to indicate the functional and economic base of the city, and the importance of the central city for the SMA.

Table V presents a comparison of Lansing with the Lansing SMA in regard to the proportion of retail and wholesale trade, and business, professional, and repair services, which takes place in, or is provided by, the central city.

The data presented in Table V clearly indicate that the central city serves as a trade and service center for the SMA. This function is seem most clearly when the proportion of wholesale trade establishments, employees, and sales of the central city is compared with the rest of the Lansing SMA.

Table V. DISTRIBUTION OF RETAIL TRADE, WHOLESALE TRADE, AND BUSINESS, PROFESSIONAL AND REPAIR SERVICES BY ESTABLISHMENTS, PROPRIETORS, EMPLOYEES, AND YEARLY SALES, FOR LANSING AND THE LANSING SMA, 1948.

Function	Total	Area	
		Lansing	Lansing SMA
		Percent	Percent
Retail Trade*			
Establishments	1582	61.8	38.2
Active Proprietors	1554	53.2	46.8
Unpaid Family Workers	638	52.2	47.8
Paid Employees	10,410	79.5	20.5
Sales (in thousands)	184,181	77.5	22.5
Wholesale Trade@			
Establishments	202	82.7	17.3
Active Proprietors	95	70.5	29.5
Paid Employees	2089	93.1	6.9
Sales (in thousands)	148,568	90.6	9.4
Business, Professional, and Repair Services#			
Establishments	446	70.6	29.4
Proprietors	451	68.1	31.9
Paid Employees	1354	86.9	13.1
Receipts	8335	84.8	15.2

* U.S. Bureau of the Census. Census of Business. Vol. III, Retail Trade, 1948. Data for Lansing taken from Table 105; for the Lansing SMA, from Table 102.

@ U.S. Bureau of the Census. Census of Business. Vol. V. Wholesale Trade. Data for Lansing taken from Table 103; data for Lansing SMA, from Table 102.

U.S. Bureau of the Census. Census of Business. Vol. VII. Service. 1948. Data for Lansing taken from Table 103A, data for Lansing SMA taken from Table 102A

The industrial basis of Lansing and the Lansing SMA is analyzed in Table VI, where the percentage of persons employed by industry for Lansing and the Lansing SMA is shown, together with the proportion of the total employed by industries in Lansing.

Table VI. INDUSTRY OF EMPLOYED PERSONS IN LANSING AND LANSING SMA, 1950

Industry	Total	Area		Percent Lansing of Lansing SMA
		Lansing	Lansing SMA	
	65,584	Percent	Percent	
Agriculture	2,817	0.4	4.3	0.1
Construction	3,645	5.2	5.6	56.3
Manufacturing	20,218	33.8	30.8	65.6
Transportation	3,192	5.6	4.9	68.3
Wholesale and Retail Trade	12,927	20.9	19.7	63.4
Finance, Insurance, Real Estate	2,587	4.6	3.9	69.7
Business and Repair Service	1,495	2.4	2.3	62.5
Personal Service	2,879	4.7	4.4	63.8
Professional	9,167	9.3	14.0	39.9
Public Administration	4,627	8.7	7.1	73.4
Not Reported	1,400	1.6	2.1	45.6

Source: U.S. Census of Population: 1950. Vol. II. Characteristics of the Population. Part 22, Michigan. Chapter C. U.S. Government Printing Office, Washington, D.C. 1952. Table 81, pp. 293 and 298. Industries with less than one percent not included.

Table VI indicates the dominance of manufacturing in both Lansing and the Lansing SMA. That the central city is the location of the great majority of manufacuring establishments can be seen from an examination of Table VII.

Table VII. DISTRIBUTION OF MANUFACTURING ESTABLISHMENTS, AND PERCENT OF PERSONS EMPLOYED IN MANUFACTURING IN LANSING AND LANSING SMA, 1947

Function	Total	Area	
		Lansing	Lansing SMA
		Percent	Percent
Manufacturing			
Establishments	140	77.3	22.7
All Workers	25,852	96.3	3.7
Production Workers	21,355	96.2	3.8

Source: U.S. Bureau of the Census. Census of Manufacturers. Vol. III, 1947. Table 2, p. 102

The manufacture of automotive vehicles and equipment is the largest single specific industry in the manufacturing group, employing 67 percent of all persons engaged in manufacturing.[122]

The functional basis of the SMA of which Lansing is the central city has been described, and in the next section, attention is focused upon the central city itself.

122. U.S. Bureau of the Census. Census of Manufacturers. Vol. III. 1947. Table 83.

The Functional Position of Lansing

The rate of population increase within the central city of Lansing has been traced from 1900 to 1950. The increase in population from 1940 to 1950 is partly due to the increase in the administrative city through annexation which occurred during this decade. Thus, in 1940 the population of Lansing was 78,753, distributed within an 11.6 square mile area. In 1950, a population of 92,129 was distributed within a 14.1 square mile area. Approximately 49 percent of the population increase in Lansing was the result of annexation of land.

The functional basis of Lansing is presented in Table VIII, where Lansing is compared with the other central cities of Michigan SMA's.[123] The basis of this classification has been modified recently, and it should be noted that the employment-manufacturing ratio for 1950 is not comparable to the ratio for 1940 or earlier years. Jones makes this clear:

> This study differs from Grace Kneedler Ohlson's in that service industries are excluded from the employment-residence ratio. The ratio used here also differs from Ohlson's in that the ratio of employment in manufacturing and trade is not to the total resident population of the city. Separate ratios were obtained for manufacturing and trade employment to the resident labor force in these cities. . .The employment-residence

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123. These data are taken from: Victor Jones. "Economic Classification of Cities," Municipal Year Book. Vol. 20. 1953 p. 50. The classification is that developed by Harris (Chauncey Harris. "A Functional Classification of Cities in the U.S." Georgraphic Review, January, 1943, pp. 86-99 and his "Suburbs," American Journal of Sociology, July, 1943, pp. 1-13) which was modified by Ohlson (Grace Kneedler Ohlson, "Economic Classification of Cities." Municipal Year Book, 149. pp. 51-70

Table VIII. A FUNCTIONAL CLASSIFICATION OF MICHIGAN CENTRAL CITIES, 1950

Central City	Economic Base*	Employment-Residence Ratio@	Manufacturing Ratio#
Lansing	Manufacturing	177	66
Bay City	Manufacturing	120	65
Detroit	Manufacturing	110	60
Flint	Manufacturing	140	74
Grand Rapids	Manufacturing	149	63
Jackson	Manufacturing	165	62
Kalamazoo	Manufacturing	161	59
Saginaw	Manufacturing	134	65

* A 'manufacturing city' is defined as a city where, "Employment in manufacturing is at least 50 percent of aggregate employment in manufacturing, trade, and service; and employment in retail trade is less than 30 percent of aggregate employment." Municipal Year Book. 1953. p. 50.

@ The employment-residence ratio is the ratio of the number of employees in the city in manufacturing, retail, and wholesale trade, and personal, business, and repair services to the number of employed people who live in the city. Municipal Year Book, 1953. p. 50

The manufacturing ratio is the number employed in manufacturing as a percent of aggregate employment in manufacturing, retail and wholesal trade, and business, personal, and repair services. Municipal Year Book. 1953. p. 50. Lansing is also classed as an 'employing city,' i.e., more people work within the city in manufacturing and trade than are in the resident labor force for those industries. Municipal Year Book. 1953. p. 50

> ratio differentiates three types of cities on the basis of net daily migration to and from the city for purposes of working in manufacturing and trade.[124]

Thus, in the case of Lansing, the employment-residence ratio indicates that for every 177 workers in manufacturing, trade, and service, 77 workers in these categories do not reside in Lansing. It can be seen from Table VIII that Lansing has the highest employment-residence ratio of any of the eight Michigan central cities.

For Lansing, as for the Lansing SMA, the largest single industry is manufacturing which employs over one-quarter of all employed persons in Lansing.[125] The specific occupational structure of Lansing and the changes in this occupational structure over the past twenty years are presented in the following tables.

The data presented in Table IX are for the entire labor force. When the labor force was analyzed on the basis of sex, it was found that the greatest changes in the male labor force took place among professionals and operatives which increased 5.53 and 5.29 percent respectively; and among laborers, which decreased 7.67 percent. In the female labor force, the major changes occurred in the clerical category which increased 9.63 percent, and in the service worker category which had a similar decrease of 9.59 percent.

When the occupational structure of Lansing was compared with that of the urban part of the State and with the urban part of the U.S., it

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124. Victor Jones. op. cit., p. 74

125. U.S. Bureau of the Census. U.S. Census of Population:1950 Vol. II. Characteristics of the Population. Part 22. Michigan, Chapter C. U.S. Government Printing Office, Washington, D.C. Table 81, p. 298

Table IX. PERCENT DISTRIBUTION OF EMPLOYED PERSONS BY OCCUPATION IN LANSING, 1930-1950, AND PERCENT CHANGE, 1930-1950

Occupation*	Year 1950	1940	1930@	Change 1930-1950
Professional, technical and kindred workers	11.29	8.20	7.45	3.84
Managers, Officials, and proprietors, except farm	6.29	8.88	6.69	-0.70
Clerical, sales, and kindred workers	27,84	24.33	22.87	4.97
Craftsmen, foremen, and kindred workers	14.15	12.57	21.99	-7.48
Operatives and kindred workers	20.65	19.90	19.17	1.48
Private household workers	1.15	3.20	1.07	0.08
Service workers, except private household	9.74	8.08	9.11	0.63
Laborers, except farm and mine	2.63	4.92	9.31	-6.68

* Categories with less than one percent and 'occupation not reported,' not included

@ Percentages for 1930 were computed on the basis of the correction factors given by: Alba Edwards. Comparative Occupational Statistics for the U.S. 1870-1940. U.S. Government Printing Office, Washington, D.C., 1943. Comparability of these data is nonetheless open to question, since the correction factors are given for the Nation and not for the State. The greatest change due to this correction was in the category, 'operatives and kindred workers' which was increased by 25 percent.

was found that Lansing resembled the urban part of the U.S. more closely than it did the urban part of the State. This was due to the relatively low proportion of operatives and kindred workers and the relatively high proportion of clerical sales, and kindred workers, in Lansing as compared to the urban part of the State.

In order to determine the period at which various segments of the labor force underwent the greatest change, coefficients of dissimilarity were computed. The results of this computation are presented in Table X.

Table X. COEFFICIENTS OF DISSIMILARITY FOR SEGMENTS OF THE LANSING LABOR FORCE, 1930-1950

Period	Total Labor Force	Male Labor Force	Female Labor Force
1930-1940	22.1	24.8	40.7
1940-1950	17.5	16.4	19.7
1930-1950	26.2	29.9	23.2

Source: U.S. Bureau of the Census. U.S. Census of Population: 1950. Vol. II Characteristics of the Population. Part 22. Chapter C. U.S. Government Printing Office, Washington, D.C., 1952, for 1950 data
U.S. Bureau of the Census. U.S. Census of Population: 1940. Characteristics of the Population. Second Series, furnished 1940 data.
U.S. Bureau of the Census. U.S. Census of Population: 1930. Vol. IV. Occupation, was the source of 1930 data

It can be seen from Table X that the greatest percentage change in both the total labor force and male labor force took place from 1930-1950, while the female labor force changed most from 1930 to 1940. This was largely the result of approximately a ten percent decrease in the percentage of service workers and approximately a ten percent increase in the proportion of clerical, sales, and kindred workers.

It was also found that the percentage of females in the labor force in Lansing has increased steadily since 1920. The proportion of females in the labor force in 1920 was 23.1 [126] and in 1950 it was 36.3.[127] It will be remembered that it was suggested that one index of urbanization is an increasing proportion of women in the labor force. It would seem then, that this increase in the Lansing female labor force may be an indication of increasing urbanization.

Summary

In this chapter, data have been presented on the Lansing SMA, and the Lansing SMA was compared to other SMA's of its size, region, and class. An analysis of population growth and distribution within the SMA was made, and an analysis of the central city was based upon its population growth and distribution; its economic base; and its industrial and occupational composition.

These data make it possible to relate information on other more specific characteristics of Lansing with which this study deals, to these general characteristics. They also permit a comparison of Lansing with other cities in regard to the relationship of the central city to the SMA and the functional position of the central city.

It was found that the Lansing SMA resembles other SMA's of its class, size, and region in the pattern of population growth since 1900,

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126. U.S. Bureau of the Census. Fifteenth Census of the U.S. 1930. Population. Vol. IV. Occupation by States. U.S. Government Printing Office. Washington, D.C., 1933. The data for 1930 are not strictly comparable with those for 1940 and 1930, due to a change in the definition of the labor force.

127. Ibid., Table 2, p. 780

although its growth, in general, has been more rapid than that of the other SMA's with which it was compared. Since 1920, the population of the central city has been a decreasing proportion of the population of the SMA, and it was suggested that this was an indication of decentralization since 1920. Data on retail and wholesale trade, and business, professional, and repair services indicated that Lansing functions as a trade and service center for its SMA. The central city itself has an age-sex composition similar to that of other urban areas of the State. Lansing is classed as an employing city, with an employment-residence ratio higher than that of any other central city in Michigan, and a manufacturing ratio which ranks second among Michigan central cities. Lansing's economic base is manufacturing, and the major industry is the manufacture of automotive vehicles. The Lansing labor force has decreased in the proportion of skilled workers and laborers and has increased in the proportion of semi-skilled workers and white collar workers since 1930. An increasing proportion of females have been in the labor force since 1920, perhaps an indication of increasing urbanization.

Thus far, the theoretical framework within which this study was done, the generalizations selected for testing, the methods utilized in the study, and a functional description of Lansing, have been presented. It is now possible to begin the analysis of the social areas of Lansing. In the following chapter, the relationship between economic areas of Lansing and the social areas is discussed.

CHAPTER VI

AN ANALYSIS OF THE GROWTH AND LOCATION OF RESIDENTIAL AREAS IN LANSING AND A COMPARISON OF THE ECONOMIC AND SOCIAL CHARACTERISTICS OF RESIDENTIAL AREAS

Introduction

The occupational and industrial composition of Lansing which was described in the previous chapter, furnishes information as to the economic base of Lansing and the economic status of the city. This chapter is concerned with the further analysis of the economic status of the residents of the social areas. It was pointed out in Chapter II that both the ecologist and urban sociologist view the city as, at least in part, an economic response, in that the city is essentially a service center, business and financial center, and often an industrial and manufacturing center. In an urban environment with the specific aspects of contemporary technology and economy, the possession of a minimum level of income is a necessary condition of urban life.[128] Thus, to ignore the economic characteristics of urban residents would be to ignore a most significant facet of city life.

For the ecologist, the ability to pay costs of land occupancy is of great importance in influencing the location of residential areas. It has also been seen that the urban sociologist is concerned with the same

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128. Simmel has stressed the importance of a money economy for the urban dweller. See: "The Metropolis and Mental Life," in The Sociology of Georg Simmel. Translated by Kurt Wolff. The Free Press. Glencoe, Illinois. 1950. pp. 409-424

factor. For example, Wirth maintains that 'choice' of residential area is an important element in determing the social organization and stability of an area,[129] and choice, it might be added, is dependent upon the ability to pay costs of land occupancy. The possession of an income at a level sufficient to pay a given cost means that any location with a cost equal to or less than that amount is a possible residential site. This implies as Hawley says, ". . .(that) the limiting influence of rent declines with an increase in income."[130]

The possession of a given level of income — referred to here as economic status[131] — is taken by both the ecologist and the sociologist to be an index of other characteristics, either 'similar location requirements,' or 'homogeneity of groups and interests.' The assumption seems to be that areas which are homogeneous in regard to economic status are homogeneous in other respects, some of which are not solely economic. Thus, in an area of relatively high economic status, land may be used more extensively, thereby decreasing density; the fact that only a small proportion of the population is able to pay the necessary costs of occupancy restricts the possible number of inhabitants, and may well 'select' those who are similar in other economic and social characteristics. In this

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129. Louis Wirth. op. cit., p. 43

130. Amos H. Hawley. Human Ecology. op. cit., p. 286

131. This is a restricted use of the term, and implies only the possession of an income sufficient to pay the necessary costs of occupancy. Until further research is completed, no information as to the source of income, or the amount of income in excess of this minimum will be available.

chapter, the relationship between economic areas and social areas of the city, and the economic characteristics of the social areas is examined.

First, in order to furnish a basis for possible generalization, a comparison of the Lansing SMA with the other Michigan SMA's is made in terms of economic criteria. Next, the city of Lansing is compared with the other cities of Michigan in regard to these same criteria. These comparisons indicate the relative standing of the Lansing SMA and of the central city in regard to these economic criteria.

Second, the way in which various types of economic areas within the city have developed within the past twenty years is examined. Although this study is primarily concerned with the structure of Lansing as of 1950, this description makes possible the isolation of those areas within the city which have maintained a relatively stable economic position. It also permits the delineation of those areas of the city which are characterized by a relatively recent development.

Third, the relationship between economic areas and social areas is examined. An attempt is made to determine what economic variables are related to local intimacy.

Fourth, the relationship between accessibility and economic status is analyzed. Since accessiblity is a 'key concept' for the ecologist, it is important to determine the relationship between various types of residential units and other functional units of the community.

Finally, the social psychological identification of high status residential areas is compared with the actual economic structure of the areas.

A Comparison of the Lansing SMA and Lansing with other Michigan SMA's and other Michigan Cities

The economic characteristics with which this analysis deals are land value of the dwelling unit, and the proportion of owner-occupied dwelling units within the social areas. These variables were selected because it was believed that the former is the best available indication of economic status for the intra-urban areas, and the latter is a minimum indication of the stability of an area.

The Lansing SMA ranks fourth among the eight Michigan SMA's in median value of one-unit dwelling structures. In proportion of owner-occupied dwelling units, the Lansing SMA ranks seventh, with only the Detroit SMA having a lower proportion.[132]

Compared with the urban part of the State, Lansing's median value of one-unit dwelling structures of $7,336 is below that of the rest of the urban part of the State at $8,182. While 64.4 percent of Lansing's one-unit dwelling structures were owner-occupied in 1950, 62.8 percent of all urban one-unit dwelling structures were owner-occupied. Of the 57 urban places in Michigan, Lansing ranks 25th in value of dwelling units, and 34th in percent of owner-occupied dwelling units.[133]

These data indicate that neither the Lansing SMA nor the central city are unusual when compared with other Michigan SMA's and other Michigan cities in terms of economic characteristics.

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132. U.S. Bureau of the Census. U.S. Census of Housing: 1950. Vol. 1, General Characteristics. Chapter 22, Michigan. U.S. Government Printing Office, Washington, D.C., 1952. Calculations made from table 1, p. 3. The proportion of owner-occupied dwelling units ranged from 37.0 in Highland Park to 94.3 in Allen Park.

133. Ibid., The range of land values in Michigan cities was from $4,364 in Ironwood to over $20,000 in Grosse Pointe Park.

Residential Areas in Lansing: 1934-1950

In order to show clearly the present location of residential areas in Lansing and the development of these areas, the location of specific economic residential areas in 1950 was compared with the location of economic areas in 1934.

In 1934, on the basis of a real property inventory, Hoyt plotted the distribution of dwelling units having a given range of rent. This distribution is presented in Figure 4.[134] From this map, it can be seen that the highest rent areas ($50.00 and above) were located in the western part of the city, and that the majority of low-rent dwelling units were located in the eastern part of the city.

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134. Homer Hoyt. The Structure and Growth of Residential Neighborhoods in American Cities. Federal Housing Administration, Washington, D.C., 1939. p. 77. It should be pointed out here that Hoyt was concerned with the examination (and refutation) of the Burgess Zonal Hypothesis, and that this is the theoretical pattern of distribution. On the basis of an examination of the distribution of rents in 142 American cities, Hoyt suggests the following description of the structure and growth of residential areas:

> The highest rent areas of a city tend to be located in one or more sectors of the city. There is a gradation of rentals downward from these high rental areas in all directions. Intermediate rental areas, or those ranking next to highest rental areas adjoin the high rent area on one or more sides and tend to be located in the same sector as the high rental areas. Low rent areas occupy other entire sectors of the city from the center to the periphery. On the outer edge of some of the high rent areas are intermediate rental areas. (p. 76)

For an analysis and critique of Hoyt's theory, see: Lloyd Rodwin. "Middle Income Housing Problems in Boston." Unpublished PhD. dissertation. Harvard University, 1949. Part of this dissertation was reprinted as: "The Theory of Residential Growth and Structure," The Appraisal Journal: 18:3 (July, 1950) pp. 295-317. Rodwin suggests the necessity for the consideration of additional factors in the analysis of residential location, particularly an emphasis on class structure, and "greater emphasis on a functionally adequate physical and social environment." (p. 317) For a rather unusual rejoinder to Rodwin, see: Homer Hoyt. "Residential

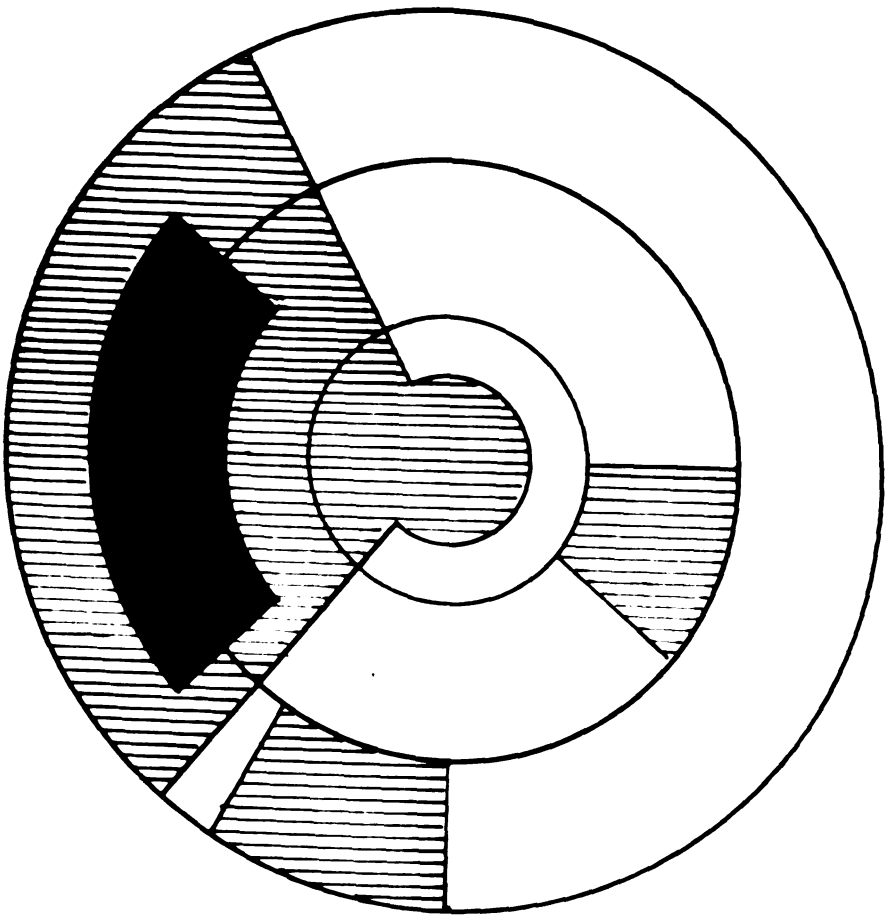

FIGURE 4

THEORETICAL DISTRIBUTION OF RENT AREAS IN LANSING, MICHIGAN, 1934

AVERAGE MONTHLY RENT

$ 50.00 OR MORE

$ 20.00 - 29.99

$ 10.00 - 19.99

In the analysis of the distribution of economic areas in Lansing for 1950, several problems were encountered. In the first place, the use of rent as the criterion of economic status means that over one-half of the units would not be considered, since they are non-rental properties. In addition, rents were under economic control during a large part of the 1940-1950 decade, and the average rent in 1950 was actually lower than the average rent in 1940, when compared on the basis of dollars of constant purchasing power.[135]

For these reasons, the measure of economic status used in this study was the average land value of owner-occupied dwelling units, i.e., ". . .the amount for which the owner estimates that the property, including such land as belongs with it would sell under ordinary conditions, and not at a forced sale."[136] Table XI presents the distribution of dwelling units by average land value for the city of Lansing, and Figure 5 presents the spatial distribution of these dwelling units.

134. (con't) Sectors Revisited." The Appraisal Journal. 18:4 (October, 1950) pp. 445-50, Rodwin replies to Hoyt in, "Rejoinder to Dr. Firey and Dr. Hoyt," ibid., pp. 454-57. The discussion in which these authors engage is stimulating and instructive, but it also indicates the difficult problems which must be faced in dealing with the analysis of residential areas.

135. Dollars of constant purchasing power were calculated on the basis of: 1913 = 100; 1940 = 72; 1950 = 110. Real Estate Market Price Indicator, 1954. Roy Wenzlick and Co., St. Louis.

136. U.S. Bureau of the Census. U.S. Census of Housing: 1950 Vol. V. Block Statistics, Part 95. U.S. Government Printing Office, Washington, D.C., 1952. p. 2

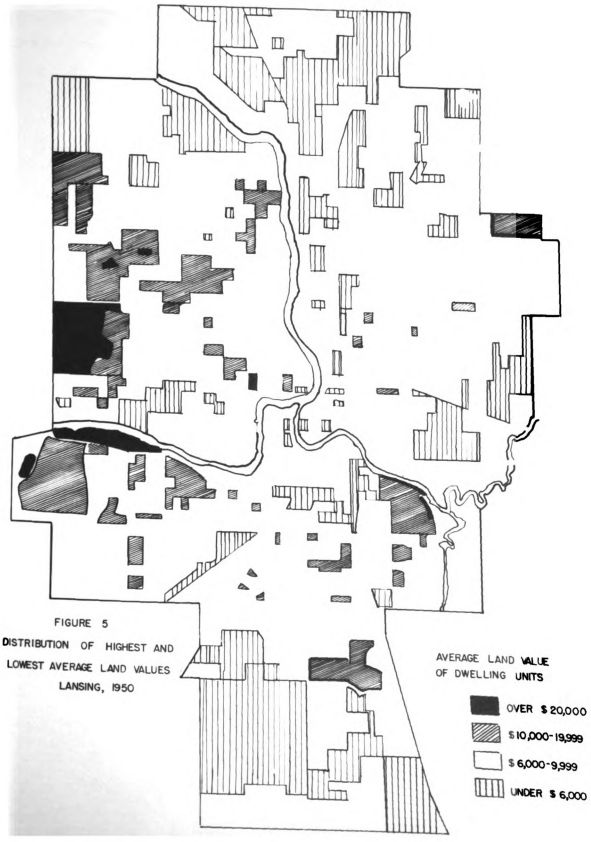

FIGURE 5

DISTRIBUTION OF HIGHEST AND LOWEST AVERAGE LAND VALUES LANSING, 1950

Table XI. DISTRIBUTION OF ONE-UNIT DWELLING STRUCTURES BY AVERAGE LAND VALUE, FOR LANSING, 1950

Value of One-Dwelling Unit Structures*	Number	Percent
Less than $2,000	122	0.8
$2,000 to $2,999	281	1.8
$3,000 to $3,999	609	4.0
$4,000 to $4,999	1,035	6.7
$5,000 to $5,999	1,755	11.4
$6,000 to $7,499	3,112	20.2
$7,500 to $9,999	3,285	21.4
$10,000 to $14,999	2,386	15.4
$15,000 to $19,999	507	3.3
$20,000 or more	261	1.7
Not reported	2,035	13.2
Total	15,386	100.0

* Restricted to owner-occupied, one-dwelling unit structures.

Source: U.S. Bureau of the Census. U.S. Census of Housing:1950 Vol. 1, General Characteristics. Chapter 22, Michigan. U.S. Government Printing Office, Washington, D.C., 1952

While the data in Table XI present information as to the total distribution of dwelling units of various income classes within the city, they do not permit analysis of the spatial distribution of these dwelling units. In order to determine the actual physical location of the dwelling units, reliance must be placed on block statistics for the city, which report the average land value for each block. Thus, the distribution of land values calculated from block data differs from the distribution given in Table XI. In order to determine the relationship between social areas and residential areas of specific economic categories, the social areas were analyzed on this basis.

As the first step in the analysis, the distribution of all dwelling units and owner-occupied dwelling units within the three types of social intimacy areas was determined. Table XII summarizes these data.

Table XII. DISTRIBUTION OF ALL REPORTED DWELLING UNITS BY TYPE OF SOCIAL INTIMACY AREA FOR LANSING, 1950 AND FOR SAMPLE, 1953

Type of Social Intimacy Area	Percent All Dwelling Units*		Percent Owner-Occupied	
	Total	Sample	Total	Sample
High	24.0	28.1	70.2	89.5
Middle	16.6	24.4	42.6	85.0
Low	59.4	47.5	57.9	73.1
Total Dwelling Units	28,887	100.0	573	63.5**

* Source: U.S. Bureau of the Census. U.S. Census of Housing: 1950. Vol. V. Block Statistics. Part 95. U.S. Government Printing Office. Washington, D.C. 1952

** This figure differs from that given in: U.S. Census of Housing: 1950. Vol. 1. General Characteristics. Chapter 22, Michigan, Table 1, p. 3, which figure is 64.4 percent. There is no explanation for this difference, and since other data are taken from the source cited first, the same source was utilized for all data.

Table XII indicates that the majority of dwelling units in the entire city, and a plurality of the dwelling units in the sample, were located in areas of low social intimacy. It also indicates that the sample had a consistently higher proportion of owner-occupied dwelling units than did the total city. This would seem to indicate that the sample was biased in this respect. A goodness of fit test revealed that the distribution of all dwelling units among the three types of social intimacy areas in the sample differed significantly from the

distribution in the entire city.* Thus, it would seem that the sample considered as three general types of areas, differed significantly from the city in respect to the distribution of dwelling units.**

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* Chi square = 24.93, $p < .01$.

** In order to examine the effect of this possible bias more closely, the 27 separate social areas were analyzed in regard to the proportion of owner-occupied dwelling units within the sample and within their respective universes. The association between the rank of the social intimacy areas in intimacy and home ownership in the universe was .627 (the statistic used was the tau rank-order correlation). The same association when the areas were ordered on the basis of data derived from the sample was .604. The same test was applied in the case of the relationship between intimacy and economic status. The association between the rank of the social area in intimacy and average land value in the universe was .648; when the areas were ordered on the basis of data derived from the sample in regard to average weekly family income and intimacy, the association was .645. It would seem then, that when the 27 social intimacy areas were considered as separate areas and were ranked and compared in terms of owner-occupancy and economic status, that there was a close relationship between the sample and the universe. (Due to the nature of the sample, the computation of the standard error of the association would not be legitimate). Since the sample consisted of blocks, there was a variation in the sample rate among the areas, and the combination of the 27 areas into three general types of areas does not take this variation into account.

That this is the case is also suggested by the results of an analysis of the total variation among and within the social intimacy areas. The statistic used in the analysis was that described by Kruskal and Wallis,[1] which is called the H test and deals with the ranks of sets of data. H may be interpreted as chi square. When both the sample data and the total area data were analyzed in regard to the relative position of the social areas in proportion of owner-occupied dwelling units, it was found that for both sets of data there was not a significantly greater amount of variation among the three types of areas than there was within the area. (For the total area, $H = 5.92 \sim .10 > p > .05$; for the sample data, $H = 4.62 \sim .10 > p > .05$.) However, when the significance of difference between the mean ranks of the areas was computed it was found that differences between high and low and middle and low social intimacy areas in proportion of owner-occupied dwelling units were statistically significant for both sets of data, while the difference in the ranks of

1. William H. Kruskall and W. Allen Wallis. "Use of Ranks in One-Criterion Variance Analysis." Journal of the American Statistical Assocation. Vol. 47: 260. pp. 583-621.

The next step in the analysis was to determine the location of dwelling units of specific economic status (as indicated by average land value of the dwelling unit) in the general type of social area. These data are presented in Table XIII.

Table XIII. PERCENT DISTRIBUTION OF OWNER-OCCUPIED DWELLING UNITS BY AVERAGE LAND VALUE AND SOCIAL INTIMACY AREA

Land Value	Type of Social Area			Total	
	High	Middle	Low	Number	Percent
$4,999 or less	29.2	22.8	38.0	505	100
$5,000 to $9,999	28.6	24.4	47.0	9,953	100
$10,000 to $14,999	34.4	36.7	28.9	1,484	100
$15,000 to $19,999	83.5	5.1	11.4	255	100
$20,000 or more	90.5	0.0	9.5	95	100

Source: U.S. Bureau of the Census. U.S. Census of Housing: 1950. Vol. V. Block Statistics. Part 95. U.S. Government Printing Office. Washington, D.C. 1952

Chi square = 701.23, degrees of freedom = 8, $p < .01$.

Table XIII indicates that over four-fifths of all dwelling units in the two highest land value categories were located in areas of high

* (con't) high and mieel areas was not statistically significant for either of the sets of data. (For the total area, the significance of the mean rank difference between high and low social intimacy areas had a z of 2.28 and a p of .0113; between middle and low social intimacy areas, z equalled 2.28, p equalled .0113; between high and middle social intimacy areas, z equalled 1.18, p equalled .12. For the sample data, the significance of the mean rank difference between high and low social intimacy areas had a z of 2.91 and a p of .0018; between middle and low social intimacy areas, z equalled 1.66, p equalled .0484; between middle and high social intimacy areas, z equalled .438, p equalled .33).

social intimacy, while less than one-third of the dwelling units in the two lowest economic classes were located in high intimacy areas. The two lowest economic categories have the two highest percentages of dwelling units in the low intimacy area. The middle economic category is the only one with a plurality of dwelling units in the middle intimacy category. The relationship between high intimacy and high land value is most pronounced at the highest average land value level, and least evident in the middle economic category.

A further examination of the relationship between high intimacy and high economic status was undertaken both for the total area and for the sample. Table XIV indicates the average land value of all reported dwelling units in the three general types of social intimacy areas.

Table XIV. AVERAGE LAND VALUE OF ALL REPORTED DWELLING UNITS BY SOCIAL INTIMACY AREA FOR LANSING, 1950.

Type of Social Intimacy Area	Average Land Value
High	$8,771
Middle	7,869
Low	7,048
Total city	$7,911

Source: U.S. Bureau of the Census. U.S. Census of Housing: 1950. Vol. V. Block Statistics. Part 95. U.S. Government Printing Office. Washington, D.C., 1952.

Table XIV shows that average land value decreases as intimacy decreases. Unfortunately, strictly comparable data on economic status are not available for the sample areas. However, data on average

weekly family income are available for the sample, and Table XV presents these data.

Table XV. AVERAGE WEEKLY FAMILY INCOME BY SOCIAL INTIMACY AREA FOR SAMPLE, 1953.

Type of Social Intimacy Area	Average Weekly Family Income
High	$109.89
Middle	93.93
Low	89.59
Total sample	$ 93.44

Differences in average weekly family income between high and middle and high and low social intimacy areas were found to be statistically significant. The difference between middle and low social intimacy areas was not statistically significant.*

These two measures of economic status, while not strictly comparable, are rather closely related, and furnish the best available comparison of the sample and the total area.** Both measures (average land value of the dwelling unit and average weekly family income) indicate that as economic status declines, so also does the degree of intimacy.

It is suggested here that these various analyses point to the same general conclusions. Differences among the sample areas in income and proportion of owner-occupied dwelling units are reflected

* The measurement used was the significance of difference between means. For the difference between high and middle intimacy areas, $t = 3.91$, $p = < .01$; between high and low intimacy areas, $t = 5.37$, $p = < .01$; between low and middle social intimacy areas $t = 1.10$, $p = > .25$.

** The rank-order correlation between average land value and

in differences in their appropriate universes in average land value and proportion of owner-occupied dwelling units. In addition, the fact that high social intimacy areas have a significantly greater proportion of high status occupations and that in these areas are located over ninety percent of the highest land value dwelling units and over eighty percent of the next highest land value dwelling units, would seem to indicate that high intimacy is associated with a relatively higher economic status. It is also suggested that the middle intimacy areas may be better characterized as 'mixed' intimacy areas, since they exhibit the characteristics of both high and low social intimacy areas.

These analyses also made it possible to determine those specific social areas which held ranks they 'should not' have held if the general relationship between high socio-economic status and high intimacy had been perfect and direct. That is, some areas which ranked high in land value, proportion of owner-occupied dwelling units, and income, were relatively low in degree of intimacy. Since one of the purposes of this study was to point out areas for future research, the isolation of intra-urban areas for additional investigation is of some importance.

Social area 18, which ranked ninth in land value and seventh in proportion of owner-occupied dwelling units was characterized by low intimacy. Social area 24 ranked lowest in both of these characteristics, yet was classed as an area of high intimacy. Social area 26 ranked 18th in land value and 23rd in proportion of owner-occupied dwelling units, but was characterized by a high degree of intimacy.

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* (con't) and average family weekly income was .877, significant beyond the .01 level. (See Appendix B)

Some plausible explanations can be suggested, e.g., social area 24 is ecologically isolated, a situation which may make for a higher degree of interaction within the local area; social area 18 is adjacent to an industrial site and is characterized by heterogeneity of land values; social area 26 has long been a residential area. None of these suggested explanations is satisfactory, and additional investigation is required. The important point is, however, that these anomalous cases can be distinguished and singled out for further investigation. For example, the demographic composition of these areas can be examined in order to see if the composition differs from that of other areas. Availability of complete census data will permit an examination of the occupational structure of the areas. It is also possible to investigate the social organization of the area from the point of view of formal and informal associations and activities, in an attempt to ascertain the role of organizational activity.

The economic analysis with which this chapter has been concerned makes possible the examination of the social areas from two additional points of view. The first of these, that of the human ecologist, is discussed in the following section, in which the relationship between economic status and accessibility is examined. The second point of view is that of the social psychologist, which is discussed in the last section of this chapter, where the social psychological definition of high status areas is compared with the economic definition of residential areas.

Accessibility as a Factor in Residential Location

Since accessibility is a 'key concept' for the ecologist, it would be expected that the location of residential units in relationship to the functional center of the city would be of interest to the human ecologist.

Implicit in much of the sociological treatment of the city have been assumptions concerning accessiblity. For example, the Burgess Zonal Hypothesis has as an assumption that value of land for residential purposes varies with distance from the city center; in general, this variation is assumed to be direct.

From an ecological point of view, Hawley assumes an inverse relationship between rent for business sites and rent for residential sites, i.e., the latter increase with distance from the city center. For Hawley, the tendency to seek a location of maximum accessiblity is one of the major determinants of location for the functional units of the community.[137] Since residential units cannot compete efficiently with other types of functional units for maximally accessible locations, they must utilize other less accessible sites.

Although Hawley recognizes that other factors enter into the determination of residential location, he does not make clear the role of accessibility for residential units. One purpose of this

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137. Amos H. Hawley. Human Ecology. op. cit., pp. 280-281

discussion is to show the relationship between economic status of the resident -- as indicated by the average land value of the dwelling unit -- and the accessiblity of the resident to the functional center of the city.

In this discussion, data on the location of residential units of highest and lowest economic status with reference to the point of maximum accessibility (the central business district) in Lansing, are compared with data from a study of Flint (Michigan) which was concerned with the same question. Linear distance from the functional center of the city is used as the measure of accessibility, since the difference between time-cost distance and linear distance has been found to be negligible in an area the size of Lansing, possessing abundant transportation routes.[138]

In Kantner's study of Flint, the hypothesized relationship was, ". . .that the socio-economic status of residential land -- as indicated by monthly rental of housing, number of persons per room, occupation of resident -- varies directly with distance from the center, or inversely with accessibility to the center."[139] The similarity of this statement to the propositions of the Burgess Zonal hypothesis should be clear. However, it was found that this relationship did not hold.[140] Kantner's conclusion is that, "Flint

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138. John Kantner. The Relationship between Accessibility and Socio-Economic Status of Residential Lands, Flint, Michigan. (Mimeographed) Institute for Human Adjustment, University of Michigan. March, 1948. p. 12, fn. 18.

139. Ibid., p. ii

140. Ibid., pp. 29-32

is an atypical city with respect to the status distribution of its population."[141]

In the analysis of Lansing data, the only measure used as an indication of socio-economic status was average land value of the dwelling unit, and in this sense was not as refined a measure as that used by Kantner, who was able to utilize census-tract data for Flint. On the other hand, block statistics, rather than census tract statistics, were utilized in this analysis, a procedure which Kantner suggested as lending a greater degree of accuracy to the findings. The results of this analysis are summarized in Table XVI.

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141. Ibid., p. 29. This conclusion in regard to 'atypicality' is discussed below.

Table XVI. AVERAGE DISTANCE OF HIGHEST AND LOWEST LAND VALUE DWELLING UNITS FROM THE POINT OF MAXIMUM ACCESSIBILITY BY INCOME CLASS OF DWELLING UNIT, LANSING, MICHIGAN

Average Land Value	Average Distance in Miles, 1950 City Definition*	Average Distance in Miles, 1950 City by 1940 Definition*
$3,999 or less	1.86	1.65
$4,000 to $4,999	1.96	1.60
$5,000 to $5,999	1.65	1.44
$10,000 to $19,999	1.48	1.39
$20,000 or more	1.28	1.28

Source: U.S. Bureau of the Census. U.S. Census of Housing: 1950. Vol. V. Block Statistics. Part 95. U.S. Government Printing Office. Washington, D.C. 1952.

* Distance measured radially from the city center.

When average distance from the central business district was calculated for the 1950 city, a general decrease in distance with increase in land value was found. However, the position of the two lowest economic classes of dwelling units is 'reversed.' If area is held constant, i.e., if the location of dwelling units in 1950 is calculated on the basis of the 1940 city area, a consistent decrease in distance is found. This is taken to be an indication that the increased area of the city in 1950 was an area characterized by low land value dwelling units, a conclusion which is substantiated by Figure 5.

The conclusion, on the basis of the evidence presented in Table XVI is similar to that of Kantner. That is, the relationship between

land value and accessibility is a direct and not an inverse one -- from the standpoint of accessibility.

It is suggested that Lansing and Flint may not be 'atypical' in this respect, but that this relationship may be characteristic of the cities of the same functional type and size. This latter hypothesis can be readily tested, and the extent of 'atypicality' can be determined.

These findings should be interpreted with caution, due to the following theoretical and methodological limitations of the analysis which was made:

(1) The analysis of the city -- defined as an administrative area -- necessarily ignores other areas of the community which might concievably show a different pattern of development, e.g., fringe areas and high-status residential suburbs. (2) The fact that 77 of every 177 workers employed in manufacturing and trade in Lansing live outside the administrative limits of the city, is evidence that accessiblity is not a major factor in the residential location of this segment of the labor force. Kantner also suggests that, "Another contributing factor to this configuration is the desire for small holding of land and home ownership on the part of workers in the highly seasonal automobile industry. This is reinforced by the vulnerability of such a durable goods industry to cyclical economic changes."[142] (3) As in the case of Flint, there is some evidence

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142. Ibid., p. 30

to suggest that the orientation of Lansing is to the periphery of the city rather than to the city center, e.g., the increase in the proportion of population in the area outside the central city, and the development of an urban fringe and suburban developments. It may also be the case that accessibility to the central business district is not the most important point of accessibility, but rather accessibility to work plants in the city is more important. (4) As Figure 2 indicates, early residential development in Lansing took place to the west and north of The Grand River. This area is presently characterized by a high proportion of high land value dwelling units (only 16.4 percent of low land value dwelling units are located in this area). Since this area contains the central business district, those residents who are able to pay the highest costs of land occupancy within the city will necessarily be closer to the central business district than those of a lower economic status who cannot afford to pay the high costs of occupancy within the city.

One of the conclusions then, is that in the case of Lansing, as in the case of Flint, the factor of accessibility offers a more satisfactory explanation of the location of residential areas than does the explanation suggested on the basis of the Burgess Zonal Hypothesis. In spite of the limitations of the analysis, the importance of accessibility <u>within</u> the city is clear. Investigations of areas outside the city can further test the role of accessibility for those areas.

In the next section of this chapter, the relationship between the economic status of areas within the city is compared with the social-psychological definition of high status areas within the city.

The Social-Psychological Definition of High-Status Areas

In a study of social stratification done in Lansing by Form and Stone, residents of the city were asked to specify residential areas of the city which they considered to be 'upper,' 'middle,' or 'working,' class areas.[143] Although only 34 respondents replied to this question, this information may serve to suggest, at least, the degree to which the social psychological definition of certain types of residential areas corresponds to an economic definition of the area.

The great majority of the respondents (30) named the Moores River Drive area as an upper class area. This area is in the southwest corner of the city, and is the location of the highest land value dwelling units in the city. The southeast corner of the city was named by four respondents as an upper class area, and the high rent area of 1934 and high land value area of 1950 located in the western portion of the city was named by five respondents. In all cases, the areas named as upper class areas were those of high land value.

The majority of respondents considered the 'middle' class to be distributed in residential areas throughout the city, and in no case was an area named as both an upper-class and as a middle-class area.

Lower class or working class areas were located by the respondents as, ". . .along the River." (13); ". . .in the North End of town. ." ". . .in the old section of town." (12); ". . .around the Olds(mobile) plant. . ." (6); and in an area on the east-central edge of the city.(7) These areas identified as lower class areas correspond to low land value areas as indicated in Figure 5. Once again, no area named as either a

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143. W. H. Form and G. P. Stone. "Tests of Status in Anonymous Urban Situations." Unpublished monograph, Department of Sociology and Anthropology, Michigan State College, East Lansing, Michigan. 1954 A total of 112 interviews were obtained.

middle class or upper class area was also named as a lower class area. The only low land value area which was not named as a lower class area was in the southern part of the city, a district which was annexed by the city between 1940 and 1950, and is characterized by a high degree of home ownership of relatively recently constructed low land value dwelling units.

This evidence suggests that high land value areas determined on the basis of economic criteria, are socially defined as high-status areas; that areas of low land value are defined as low status areas; and that middle class areas are broadly and rather vaguely defined. In no case was there any contradiction between the social psychological assessment of residential areas and the economic status of the area.

While this evidence is admittedly based on a very small number of responses, the close correspondence between the social identification of residential areas and the economic status of the area, suggests that economic status is related to the social status of the area

Summary

In this chapter, it has been shown that Lansing resembles other cities in Michigan in regard to the economic characteristics of dwelling units, and in proportion of owner-occupied dwelling units.

It was also shown that, in general, high social intimacy is directly related to high economic status and high proportion of home ownership. There were significant differences in the occupational structure of the three types of social areas. This finding lends support to the conclusion that high socio-economic status is directly related to intimacy.

A direct relationship between high land value and accessibility was shown to exist in Lansing, and it was suggested that this relationship may be characteristic of cities of a certain functional type, rather than an 'atypical' relationship, as the Burgess Zonal Hypothesis would indicate.

The social-psychological definition of high status areas was found to be compatible with the economic definition of high status areas.

In the following chapter, the economic and social activities of the residents of the three types of social intimacy areas are analyzed, with particular reference to the role of the local area.

CHAPTER VII

THE DISTRIBUTION OF SOCIAL AND ECONOMIC ACTIVITIES IN THE SOCIAL AREAS

Introduction

In this chapter, the ways in which various social and economic functions are performed by the inhabitants of the social areas are investigated. First, the role of the formal organization in the social areas is considered. In this consideration, sociological and ecological theory are used as guides, and some of the empirical research which has been done on the topic of formal organizational membership in urban areas is examined. The three types of social areas are compared with reference to membership and participation in various types of formal organizations.

Second, those social and economic activities which are not of a formal nature, e.g., the use of local area facilities for shopping, recreation, and other activities are investigated. The expectation is that social areas which differ in regard to the use made of local facilities and membership and participation in formal organizations, also differ in regard to economic status and degree of social intimacy within the local area.

Formal Organizational Membership and Participation

The traditional sociological view of the urban dweller is characterized by a strong emphasis upon the importance of voluntary organizations in the life of the urbanite. This view is well illustrated by Wirth:

> Being reduced to a stage of virtual impotence as an individual the urbanite is bound to exert himself by joining with others of similar interests into organized groups to attain his ends. This results in the enormous multiplication of voluntary organizations directed toward as great a variety of objectives as there are human needs and interests. . .It is largely through the activities of the voluntary groups, be their objectives economic, political, educational, religious, recreational, or cultural, that the urbanite expresses and develops his personality, acquires status, and is able to carry on the round of activities that constitutes his life career.[144]

If this rather extreme view is correct, then organizational membership becomes an absolute necessity for the urban dweller.

From an ecological point of view, Hawley has pointed out that increasing specialization and division of labor result in a large number of corporate groups, and that for every one of these corporate groups, one or more categoric groups are possible. Unlike Wirth, however, Hawley cannot attribute any great importance to these categoric groups, since he is not at all sure of the relevance of these groups for the community. He does suggest, however, that group activity is more likely to occur in those areas inhabited by people with similar location requirements.[145]

Empirical investigations of the place of voluntary organizations in a city suggest that some modification of Wirth's view is required. Komarovsky's study of voluntary associational membership in New York City in 1935-36 suggests that the urbanite as described by Wirth is the deviant — at least in a statistical sense. She concludes that, ". . the majority of citizens remain completely outside the stream of organized

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144. Louis Wirth. op. cit., p. 47

145. Amos H. Hawley. Human Ecology. op. cit., p. 282

social life."[146] The social and economic differences in organizational membership which Komarovsky found, i.e., a direct relationship between economic status and occupational status and membership, are confirmed in a more recent and broader study of U.S. cities, in which it was reported that 42 percent of all respondents reported no formal group membership of any kind. Table XVII summarizes the findings of this research.

Table XVII. PERCENTAGE OF PERSONS HAVING NO FORMAL GROUP MEMBERSHIP, BY FAMILY INCOME AND OCCUPATION OF HEAD OF HOUSEHOLD

Family Income	No Formal Group Membership	Occupation	No Formal Group Membership
$5,000 or more	33	Professional	23
$4,000 to $4,999	34	Self-employed	42
$3,000 to $3,999	43	Other White collar	37
$2,000 to $2,999	53	Skilled and semi-skilled	44
$2,000 or less	51	Unskilled and service work	45
All respondents	42	All respondents	42

Source: Ronald Freedman, et. al. Principles of Sociology. Henry Holt and Co., New York. 1952. p. 494. Quoted from an unpublished study directed by Burton R. Fisher and George M. Belknap, Survey Research Center, University of Michigan.

A study of Michigan's largest central city shows that 37 percent of the population of Detroit belongs to no formal organization, and that of those who do belong, 47 percent belong to less than three. The two most important organizations (numerically) are church-connected organizations and labor unions which account for 58 percent of all memberships.[147]

146. Mirra Komarovsky. "The Voluntary Associations of Urban Dwellers." American Sociological Review. December, 1946, pp. 686-98. Reprinted in: Wilson and Kolb. Sociological Analysis. Harcourt Brace and Co., New York, 1949. pp. 378-91. Page numbers refer to this source.

147. A Social Profile of Detroit. University of Michigan. October, 1952. p. 14

Data from this study also indicate that a majority of Detroiters either do not belong to any organization, or if they do belong, do not attend any meetings.[148]

On the basis of this brief review of literature and research, certain general conclusions seem warranted, and perhaps some comments may be in order. One conclusion which is evident is that the role assigned to organizational membership by the urban sociologist differs from the role which the organization actually plays in urban life. Organizational membership does seem to be directly related to high occupational and economic status in the urban community. There seems to be little reason to suppose that organizational membership has any very definite locality basis, since the greatest percentage of membership occurs in organizations which are only indirectly related to residence in a specific area.

Of more importance than these general conclusions is the lack of evidence as to just what organizational membership signifies. Whether organizational membership is to be taken as an indication of some kind of 'integration,' or to indicate that those who, ". . .are isolated and lonely and who seek satisfactions which other segments of the population find more fully in unorganized social relations of a neighborhood, a gang, or a strong family unit. . ."[149] are more likely to belong to voluntary organizations, is not clear. It is suggested here that the term 'voluntary' may be a misleading term, since membership in some formal organization may be a requirement of the occupation of the person, e.g., the professional association for the physician, or the labor union for the skilled

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148. Ibid., p. 18

149. Mirra Komarovsky. op. cit., p. 391

worker. For this reason, the term 'formal' rather than 'voluntary' is used in this discussion.

The analysis of membership and participation in formal organizations was based, in part, upon responses to question 15 of the interview schedule, which was designed to gain information as to the number and type of formal organizations within the local area. It has already been shown that previous research has established a direct relationship between high socio-economic status and general organizational membership. Thus, the expectation is that organizational membership would be highest in the areas of high social intimacy — which are generally of a high socio-economic status. If this is found to be the case, then it would seem that organizational membership may indicate some type of locality orientation, and may reflect a higher degree of personal contact within the local area. In the analysis, social characteristics which are presumed to influence organizational membership are examined.

The most striking aspect of the analysis is the relative absence of locality based organizations in all types of social intimacy areas. TableXVIII shows the percentage of respondents in each social intimacy category and their organizational membership status. From an examination of this table, it can be seen that approximately seventy percent of all respondents said either that there were no formal organizations within the local area, or did not know whether there were. It can also be seen that knowledge of locality-based organizations decreased with a decrease in degree of social intimacy. If a distinction is made between those who said that they belonged to at least one organization and those who

Table XVIII PERCENTAGE OF RESPONDENTS IN TYPES OF SOCIAL AREAS BY MEMBERSHIP IN LOCAL FORMAL ORGANIZATIONS

Type of Social Area	Response to question 15: "Are there any organizations around here mainly for the people of this neighborhood?"			Belongs to at least one local Organization	Participates in at least one local Organization
	No	Don't Know	Yes		
High	57.4	13.0	29.6	29.6	22.9
Middle	52.1	15.7	32.2	31.4	16.4
Low	54.3	23.6	22.1	22.1	11.6

said that they belonged and participated, i.e., attended meetings, then it is found that organizational participation was highest in high intimacy areas and lowest in low intimacy areas. While over three-fourths of the respondents in high intimacy areas who belonged to formal organizations also participated in the organizations, only about one-half of those in the other two areas belonged and participated.*

Although information on the types of organizations in which the residents participated was limited due to the small number of cases, certain tentative conclusions may be drawn in regard to the relative importance of various kinds of formal organizations. In all three social areas educational organizations (mainly P.-T.A.'s) were named most often in regard to both membership and participation. Recreational and fraternal organizations ranked second in both membership and participation in high intimacy areas, and second in membership in the other two areas. However,

* The difference in participation between high and low intimacy areas was statistically significant beyond the .01 level; the difference between high and middle intimacy areas was not statistically significant.

in the middle and low social areas, actual participation was greatest in church-connected organizations, and recreational and fraternal organizations were third in actual participation. These data suggest that formal organizational membership has but slight locality basis. It is possible to compare membership and participation in locality based organizations with participation in organizations which are located outside the local area, by analyzing the responses to question 16 of the interview schedule. Table XIX summarizes these data.

Table XIX. PERCENTAGE OF RESPONDENTS BELONGING TO AND PARTICIPATING IN NON-LOCAL FORMAL ORGANIZATIONS BY TYPE OF SOCIAL INTIMACY AREA

Type of Social Area	Response to question 16: "Are there any other organizations, lodges, or clubs in which you participate at least once a month?"			Total	
	No	Yes	No Answer	Number	Percent
High	54.0	45.3	0.7	161	100.0
Middle	56.4	42.9	0.7	140	100.0
Low	64.3	34.6	1.2	272	100.0

From Tables XIX and XVIII it can be seen that a higher proportion of respondents in each of the social intimacy areas belonged to and participated in formal organizations which had no necessary locality basis, than participated or belonged to organizations which were located within the local area. A significantly greater proportion of residents in high social intimacy areas participated in formal organizations. Church-connected organizations and lodges, fraternities, sororities and auxiliaries had the highest proportion of reported participation.

A comparison of the membership in organizations within the local area with membership in organizations outside the local area was made in order to determine the relative importance of each type of membership. Table XX presents these data.

Table XX ORGANIZATIONAL MEMBERSHIP BY LOCATION OF ORGANIZATION AND TYPE OF SOCIAL INTIMACY CATEGORY

Type of Organization	Type of Social Intimacy Area		
	High	Middle	Low
	Percent	Percent	Percent
All organizations	53.4	50.7	41.2
Percent of organizational members who belong to:			
Non-local organizations only	57.0	66.2	69.6
Non-local and local organizations	27.9	18.3	14.3
Local organizations only	15.1	15.5	16.1
Number of cases	86	71	112

It should be noted that the above Table refers to organizational membership only, and not to organizational participation. These data indicate that organizational membership -- including local and non-local organizations -- decreases as intimacy decreases.* It should also be noted that membership in non-local organizations only is greatest in areas of low social intimacy, and that dual membership is highest in the areas of high social intimacy. These data indicate that, in general, membership

* The difference in percentage of organizational membership between high and low social intimacy areas was statistically significant beyond the .05 level.

and participation in formal organizations is highest in areas of high social intimacy, and that the local formal organization is of less importance than those with no necessary locality basis.

When a comparison of members of organizations with non-members was made, it was found that the only characteristics in which members and non-members differed in all three areas were occupational status and average weekly income. In each of the social intimacy areas, members of organizations were characterized by higher occupational status than non-members. The differences were statistically significant, whether high-status occupations were defined as including professional, managers and officials, and skilled workers; or as also including white-collar workers. Differences in income were not as marked, and only within the high intimacy category was the difference statistically significant.

It would seem then, that organizational membership is a consequence of socio-economic status — as indicated by occupation and income — rather than of differences in length of time lived in the area, mobility within the area, age, or family structure. This conclusion is compatible with the finding that organizational membership within the local area was less important than organizational membership in non-locality based organizations. This conclusion was based on an anlaysis of these factors as they were related to organizational membership, and more generally, as they were related to residence in the three types of social areas. It would be expected that length of time of residence within the area would be positively related to a high degree of social intimacy, since the longer a person has resided in a specific location, the greater the possibility of personal contacts with others in the locality, and presumably the greater the stability of the locality. However, when this relationship

was examined it was found that there was no direct relationship between length of residence at a specific address and the type of social intimacy area.[150] These data are presented in Table XXI.

Table XXI LENGTH OF RESIDENCE AT PRESENT ADDRESS BY TYPE OF SOCIAL INTIMACY AREA

Year Moved to Present Address	Type of Social Area		
	High Percent	Middle Percent	Low Percent
1953-1952	4.9	14.3	16.2
1951-1949	30.8	28.6	23.5
1948-1945	21.7	19.3	18.8
1944-1937	24.7	17.8	15.9
1936 or earlier	17.3	20.0	24.9
Median year moved to present address	1946-45	1948-47	1948-47

It can be seen from the above Table, that the lowest social intimacy category had the highest proportion of long-time residents. It should be noted, however, that in areas of high social intimacy there was a very low proportion of newly-arrived residents. This may indicate a lower rate of physical mobility within these areas. When the three types of social intimacy areas were compared on this basis, with the number of houses lived in since 1946 used as an indication of mobility, it was found that mobility was lowest in the high social areas. Table XXII presents these data.

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150. For further discussion of these and related factors, see: Joel Smith, William H. Form, and Gregory P. Stone. "Some Characteristics of Locality Based Intimacy in a Middle-Sized City," The American Journal of Sociology. (In press).

Table XXII MOBILITY OF RESIDENTS BY TYPE OF SOCIAL INTIMACY AREA

Number of houses Lived in Since 1946	Type of Social Intimacy Area		
	High	Middle	Low
	Percent	Percent	Percent
Two or less	85.7	81.4	73.2
Three	4.3	9.3	10.3
Four	6.8	5.7	7.4
Five or more	3.1	2.1	4.8

Approximately one-quarter of all respondents in low social intimacy areas have lived in three or more houses since 1946, while less than one-seventh of all respondents in high social intimacy areas have lived in three or more houses since 1946.* It will also be remembered that high social intimacy areas showed the highest proportion of home ownership, a factor which quite probably decreases mobility.

The relationship of several other variables which might be presumed to affect intimacy was also considered. These variables were age, family structure, and location of previous residence.

In both the middle and low social intimacy areas, the median age of the chief wage earner was 49.5 years; in the high social intimacy areas, the median age of the chief wage earner was 39.5 years. In all areas, the largest single age group was the 35 - 54 group. High intimacy areas had the highest proportion of young people (20-34) and the lowest proportion of old people (over 55). Middle intimacy areas

* There was a statistically significant difference (beyond the .01 level) between the proportion of residents who had lived in only one or two houses since 1946 in the high social intimacy areas and low social intimacy areas. The difference in proportions between high and middle intimacy areas, was not significant.

had the lowest proportion of young people and the highest proportion of persons 35-54. Low intimacy areas had the highest proportion of old people, and were in an intermediate position in regard to the other age groups. It was found that high and middle social intimacy areas had a significantly greater proportion of persons in the middle age groups, and a significantly lower proportion of persons in the oldest age groups. There were no significant differences among the social areas in proportion of persons in the youngest age group.*

Neither previous residence within the community nor previous residence within an urban area were significantly related to degree of intimacy.

In all three social areas, over 80 percent of all respondents reported membership in a family unit. Low intimacy areas had the highest proportion of non-family unit respondents, but this difference was not statistically significant.

Economic Activities in the Social Areas

In Chapter II, it was pointed out that the chief concern of the ecologist is with the performance of routine daily activities by the population of a community. The units of a community are necessarily distributed in space, and their distribution is influenced by the type of function performed. A 'key concept' in the analysis of the community is accessibility. In this section, the role of accessibility, as indicated by distance travelled in the exchanges between units is examined. Two types of activity are considered. The first general type of activity

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* The .05 level was used as the level of significance.

considered is that which may be broadly termed 'economic,' i.e., the routine daily activities directly related to the maintenance of the population. The second type of activity considered includes those activities which are primarily social and not directly related to population maintenance. In the analysis of both types of activity, the residential unit is of major interest, and the accessiblity of the residential units to other units of the community receives most attention.

Before beginning the analysis, it might be wise to mention once again some of the theoretical limitations suggested earlier in the discussion of ecological theory. Most important is the fact that the community — in an ecological sense — is not the subject of this study. The ecologist might well point out that residence within a city provides maximum accessibility, as well as other location requirements — for the resident population. In addition, the ecologist has been more concerned with the location and function of units of the community other than residential units, and has somewhat neglected the analysis of residential areas. These limitations should be kept in mind during the following discussion.

It has been shown that, for the ecologist, 'occupation' is of great importance in the analysis of the structure of the community.[151] Thus a logical point of departure in the analysis of economic activities is to begin with an analysis of the relationship between the location of the residential unit and the location of place of work.

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151. It is suggested here that the sociologist and ecologist have a mutual and potentially beneficial interest in the role of occupation in the community. For example, Engel-Frisch arrives at conclusions concerning occupation through an analysis of the temporal aspects of community life (Gladys Engel-Frisch. op. cit.) which are quite similar to those at which Cottrell arrived at in a social-psychological study of the railroader. W.F. Cottrell. The Railroader. Stanford University Press. 1940.

It will be remembered that the ecologist defines occupation as "any sustenance producing activity." Under this definition, illegal occupations and occupations such as that of the housewife, are included. It is clear that the housewife is immediately accessible to her place of work. However, the relationship between occupation, considered as the principal work done by the person who is the chief wage earner in the residential unit, and place of work is not so easily determined.

Evidence was presented in Chapter IV to indicate that accessibility plays a minor part in determining the residential location of the labor force within the city. It was shown that 43 percent of all persons employed in manufacturing in Lansing lived outside the political limits of the city. Clearly, maximum accessibility is not an important factor for this segment of the labor force.[152]

The present study tended to confirm this conclusion, even though it was necessarily restricted to intra-urban residents. In order to determine the relationship between residential area and work area, the city was divided into seven rather large areas, using main thoroughfares and 'natural barriers' as boundaries of these areas. For each respondent information was obtained regarding the location of his place of work, and whether the work area was the same as the residential area. In areas of

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152. A large proportion of thse employed in manufacturing are in relatively low-status occupations, and there is some evidence to suggest that settlement of workers in low status occupations at the periphery of the community may be characteristic of cities of the same functional type as Lansing. See: Norman Kantner. op. cit; Walter Firey, Social Aspects to Land Use Planning in the Country-City Fringe: The Case of Flint, Michigan. East Lansing, Michigan. Michigan State College. Agricultural Experiment Station, Special Bulletin, 339. 1946; Solon T. Kimball, The New Social Frontier. The Fringe. East Lansing, Michigan. Michigan State

high social intimacy, 87.5 percent of the respondents worked in a different section of the city than the section in which they resided; 68.5 percent of respondents in middle social intimacy areas, and 69.3 percent of respondents in low social intimacy areas worked in an area other than that of residence. These data indicate that even within the city, maximum accessibility to work area is not of great importance in determining residential location. In other words, location requirements other than maximum accessibility to place of work are involved in the residential settlement within the city. This is scarcely a surprising conclusion, in view of the growth of urban fringes, residential suburbs, and 'bedroom' towns. The ecologist would maintain that the development of these residential areas has been made possible only by the development of means of transportation which decrease time-cost distance and thereby increase accessibility, in spite of an increase in actual mileage travelled.

It would seem then, that in the case of Lansing, the separation of place of residence from place of work — a development characteristic of urbanism — is intensified. Furthermore, if it is true that decentralization of population is taking place in Lansing, then this separation of residence from work will continue.[153]

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152. (con't) College, Agricultural Experiment Station, Special Bulletin 360, 1949; Leo F. Schnore. "The Separation of Home and Work: A Problem for Human Ecology," Unpublished monograph, University of Michigan, 1954.

153. The treatment of this topic has been necessarily brief. For a more complete treatment, see: Kate K. Liepmann. The Journey to Work, Oxford University Press, New York, 1944. For an analysis of the city of Flint, Michigan, see: L.F. Schnore, op. cit.

In regard to exchanges between residential units and non-residential units of a relatively unspecialized type, accessibility would, theoretically, be of greater importance. For instance: In a city such as Lansing, with a manufacturing economy based largely on the automotive industry, there are relatively few industrial units. These few units are highly specialized units which require a large supporting population, i.e., labor force and market. But when the function of the non-residential unit is to provide fairly general requirements for a relatively small population, possible sites for the location of the unit are increased. A retail outlet, e.g., grocery store, may be located at any one of a number of sites, where a sufficient supporting population and adequate transportion routes are available. Therefore, the exchanges between residential units and units supplying economic necessities would be expected to be frequent, and distance minimized. It would also be expected that retail units with similar location requirements would be found grouped together.

The Use of Local Facilities

In this section, the use of local facilities by the respondents in the three types of social areas will be examined. This examination indicates the relative importance of accessibility for various types of activity. The first general type of activity to be considered is that which may be considered as 'economic' activity, i.e., those activities which are essential for the maintenance of the population. The second type of activity considered is that which is of a more 'social' nature, i.e., those activities which are not directly related to the maintenace of the population. Before beginning the discussion of the use of local facilities, a brief statement concerning the theoretical location of these facililities is made.

Ratcliff reviews some of the studies concerned with the location of retail outlets.[154] He points out that,"It is a common misconception that the majority of retail trade is done in the central district,"[155] and suggests that the community business areas are the most important in supplying the routine daily requirements of the population. The relative importance of these community business areas is indicated by the proportion of stores and sales of a given business group which are located in community business areas. On the basis of a study of Philadelphia in 1935, it was found that 81.9 percent of all food stores, 85.4 percent of all filling stations, and 77.2 percent of all drug stores, were located in community business areas.[156] It would be expected, then, that the use of these three types of retail outlets would exhibit most clearly the relative importance of accessiblity; while the examination of the performance of social activities should indicate the importance of the local area in regard to non-economic activity.

Some indication of the presence of community business areas in Lansing is furnished by the results of another phase of the research upon which this study is based, in which some 80 areas within Lansing were found to be characterized by the presence of three or more retail outlets in one location. The following analysis is based upon responses to question 19 of the interview schedule, which had reference to the

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154. Richard U. Ratcliff. "The Problem of Retail Site Selection." Vol. IX, No. 1. Michigan Business Studies, University of Michigan, School of Business Administration, Ann Arbor, Michigan. 1939.

155. Ibid., p. 9

156. Ibid., p. 9-10

utilization of various facilities and the performance of various activities within the local area. If the respondent considered the facility to be located within the local area, the location of the facility was obtained. On the basis of this information, it was possible to determine the frequency of utilization of the facility as well as the distance travelled to the facility. Table XXIII summarizes this information on the utilization of three specific facilities by frequency of utilization and distance travelled to the facility, and by social intimacy area.

Table XXIII. UTILIZATION OF ECONOMIC FACILITIES WITHIN THE LOCAL AREA BY TYPE OF SOCIAL INTIMACY AREA

Economic Activity	Median Frequency	Median Distance*
Grocery shopping		
High Intimacy Areas	2-4 times per week	3-4 blocks
Middle Intimacy Areas	2-4 times per week	3-4 blocks
Low Intimacy Areas	2-4 times per week	5-6 blocks
Drugstore Shopping		
High Intimacy Areas	2-4 times per week	3-4 blocks
Middle Intimacy Areas	2-4 times per week	3-4 blocks
Low Intimacy Areas	2-4 times per week	3-4 blocks
Purchase Gasoline		
High Intimacy Areas	2-4 times per week	3-4 blocks
Middle Intimacy Areas	2-4 times per week	3-4 blocks
Low Intimacy Areas	2-4 times per week	3-4 blocks

*Distance calculated was linear distance. Three to four blocks is equal to .11 to .14 miles; five to six blocks is equal to .19 to .23 miles.

It can be seen that these three types of economic facilities are utilized frequently be all respondents, and that distance travelled is minimized.

A more detailed comparison of the use of these three types of economic facilities, showing the percentage of respondents and the distance they travelled to each facility, is presented in Table XXIV.

Table XXIV. PERCENTAGE OF RESPONDENTS IN SOCIAL INTIMACY AREAS WHO UTILIZE LOCAL SHOPPING FACILITIES, AND DISTANCE TRAVELLED TO FACILITY

Economic Activity	Never use local facilities	Percent of others who use local facilities at least once a week	Number of blocks* travelled by those who use local facilities	
			5-6	9-10
Grocery Shopping				
High Intimacy Areas@	27.9	94.8	74.1	89.3
Middle Intimacy Areas#	22.8	96.2	68.0	85.6
Low Intimacy Areas&	24.6	93.4	58.0	92.8
Drugstore Shopping				
High Intimacy Areas	22.4	67.2	81.1	94.2
Middle Intimacy Areas	20.7	60.4	81.6	91.8
Low Intimacy Areas	30.5	58.0	81.6	93.6
Gasoline Purchases				
High Intimacy Areas	47.8	85.9	78.7	92.5
Middle Intimacy Areas	49.9	83.3	66.1	89.8
Low Intimacy Areas	54.4	87.7	74.3	87.6

* Five to six blocks equals .19 to .23 miles; nine to ten blocks equals .34 to .38 miles.

@ Total respondents equals 161

Total respondents equals 140

& Total respondents equals 272

There is no statistically significant difference between the proportion of respondents who use the various facilities in the three types of social intimacy areas. Utilization of grocery facilities was most frequent in all areas, if both frequency of utilization and number of respondents utilizing the facility are considered. In all cases, the

great majority of respondents travelled less than four-tenths of a mile to the facility, and over half travelled less than one-quarter of a mile to the facility.

These data would seem to indicate that these routine daily activities are carried on within what the respondent considers to be the 'neighborhood,' and what has here been termed the 'local area.' It would seem also that accessibility of functional units is high, and that for respondents in all the social intimacy categories, economic requirements are provided by units within the local area or neighborhood.

In order to compare the use of local facilities and the performance of other activities within the local area with the utilization of the economic facilities discussed above, the proportion of respondents utilizing the facilities or performing the activities listed in question 19 was calculated for each of the social intimacy areas. The items listed in question 19 were classified into five categories. Included in the category of economic activities were grocery shopping, drugstore shopping, purchases of gasoline, shopping for clothes, and shopping for shoes. Activities which were considered to be primarily social were, visiting relatives, playing cards, viewing television outside of the home, and going to a park. Activities classed as commercial recreation were attending movies, bowling, going to a tavern, and eating in a restaurant. Service facilities included car repair services, barber and beauty shop utilization, shoe repair services, and banking services. Church attendance was treated separately. Data on the utilization of these facilities and the performance of the activities within the local area are presented for the types of social intimacy areas in Table XXV.

Table XVV. PERCENTAGE OF RESPONDENTS WHO NEVER UTILIZE FACILITY NOR PERFORM ACTIVITY WITHIN THE LOCAL AREA, BY TYPE OF SOCIAL INTIMACY AREA

Type of Activity	Type of Social Intimacy Area: High (N=161) Percent	High Range of Percent	Middle (N=140) Percent	Middle Range of Percent	Low (N=272) Percent	Low Range of Percent
Social	76.7	73.3-83.2	72.7	66.4-80.0	80.1	78.3-83.1
Commercial Recreation	92.7	91.3-95.7	85.5	84.3-90.0	85.5	80.1-90.4
Service	71.4	66.5-80.7	71.4	62.6-80.0	67.0	61.7-80.1
Economic*	83.5	79.5-87.6	80.7	79.3-82.1	77.6	76.8-78.3
Religious	67.7	-------	65.7	-------	68.0	-------

* Data on grocery shopping, drugstore shopping, and gasoline purchases, not included.

It is apparent from Table XXV that the local area is not the place wherein most activity — other than the economic activities discussed earlier — takes place. Utilization of business, personal, and repair service; and religious activities are the categories which rank highest in percentage of local users in all three intimacy categories, but even here, less than 35 percent of the respondents in any category consider these activities to be performed within the local area or neighborhood. The performance of social activities within the local area accounts for less than 28 percent of all respondents in any social intimacy area.

It would seem then, that the local area, which does seem to function as a shopping center for the purchase of groceries, drugs, gasoline, does not serve as an area in which social or recreational activities are carried out. The pattern of facility use and performance of activities was similar in all three social intimacy categories.

There remain at least two other types of social factors which have not been considered, and which may have a locality orientation. One type of relationship is informal association within the local area, the other, the presence of friends within the local area. Data are available which enable an exploration of these remaining possibilities of locality orientation. Question 17 of the interview schedule was designed to gain information as to informal meeting places and associations within the 'neighborhood.' The pattern of responses to this question was similar to that in regard to formal organization membership within the local area. Table XXVI summarizes the responses to this question.

Table XXVI DISTRIBUTION OF RESPONSES CONCERNING INFORMAL MEETING PLACES WITHIN THE LOCAL AREA, BY SOCIAL INTIMACY AREAS IN LANSING

Type of Social Area	Response to Question 17: "Are there any places in the neighborhood, such as stores, restaurants, lodges, taverns, or halls where people get together informally?" Percent			
	No and Don't Know	Yes: Type of Place		
		Taverns	Grocery Stores	Drug-Stores
High (N=161)	71.0	6.2	6.2	4.3
Middle (N=140)	75.8	8.6	2.9	1.4
Low (N=272)	72.3	10.0	2.9	2.2

In all three types of social intimacy areas, some type of business establishment accounts for over one-half of all the informal meeting places which were indicated. It should be noted however, that over 70 percent of the respondents in all three categories either said that there were no informal meeting places within the neighborhood, or knew of none. None of the differences among the types of social areas in this regard were statistically significant.

Whether or not the respondent had friends within the area as well as the distance to the friend's residence was determined from data gained on the basis of question 14 of the interview schedule. Although over 90 percent of respondents in all social intimacy areas named at least one friend, there was no tendency for the friend to be located within the neighborhood or local area. For example, in the high social intimacy areas, the median distance to the residence of all three friends was 21-30 blocks, or approximately three-quarters to over one mile. If the local area is assumed to consist of no more than five or six blocks, which was the median distance travelled for the use of economic facilities,

then there is no significant association between the social characteristics of the residents of the social areas and the presence of friends within the local area. However, there was a statistically significant difference between high and low social intimacy areas in the proportion of respondents who named three friends and those who did not name three friends. As would be expected, the residents of high social intimacy areas named three friends significantly more often than residents of low social areas. This may indicate that the presence of friends within the city is related to intimacy, but that there is no basis for expecting friends to be located within the local area.

Summary

Formal organizational membership in the social areas was shown to have but slight locality basis. Members of formal organizations in each of the social intimacy areas were characterized by a higher socio-economic status than non-members.

The facilities used most frequently within the local area were economic facilities (shopping for groceries, shopping for drugs, and purchases of gasoline). Distances travelled to these facilities were less than the distances travelled to any other facilities, an indication of the importance of accessiblity for the location of these functional units. There was no statistically significant difference between the proportion of residents in the three types of social areas who used local economic facilities.

The performance of other types of activities; social, recreational, service, and religious, showed a different pattern of use both from the

the point of view of distance and frequency. For none of these non-economic activities was the local area, as defined by the respondent, the area in which these other activities were carried out. Fewer than thrity-five percent of respondents in all types of social areas performed these activities within the local area. These data were taken to indicate that the local area, as defined by the respondent and by the use of economic facilities, was not the same as the area or areas in which other types of activities were performed. This conclusion applied to all the social areas.

Informal associational participation followed a pattern similar to that found in the analysis of formal organizations. That is, fewer than thirty percent of all respondents in all social areas utilized local meeting places for informal assocations. The local tavern was the place most often named by those who did take part in informal associations within the local area.

There was no tendency for the friends named by the respondents to reside in the local area. However, those respondents in high intimacy areas were significantly different in that they most often named three friends.

CHAPTER VIII

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

Introduction

This study has constituted an attempt to apply selected propositions of ecological and sociological theory to the analysis of intra-urban areas delineated on the basis of sociological criteria. The social and economic characteristics of the respondents in the social areas were examined in order to discover the differences among social areas. In this final chapter, the substantive conclusions of the study are summarized, and topics for further research are suggested. Before beginning this presentation, however, some brief comments on the theories utilized in this study are made, and an attempt is also made to indicate the relationship between Hawley's approach to human ecology, and the approach of the urban sociologist.

Theoretical Conclusions

One of the reasons why Hawley's approach was selected for use in this study was that it offered a more coherent approach to human ecology than did other views.[157] It will be remembered from the discussion of

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157. That this state of affairs has not improved is indicated by an examination of a recent sociological journal devoted to human ecology, see: Social Forces. Vol. 32:4 (May, 1954). This was published after the discussion of ecological theory in Chapter II had been written. The topics considered range from a consideration of 'political ecology,' to spatial relationships within a work plant; and the terminological usage is just as varied, and includes the use of psychological concepts.

ecological theory presented in Chapter II that Hawley emphasizes the relevance of general ecology for human ecology. Related to this emphasis is the assumption of a 'unity of science.' One question which he does not attempt to answer has to do with the meaning of the phrase, 'unity of science.' If this is to be a unity of language, then serious difficulties arise when general ecological concepts or propositions are applied to human societies, e.g., although the human ecologist has stated that he is concerned with the 'web of life' the great majority of his work has been restricted to a single species. The use of the concept community raises problems relating to the delineation of the boundaries of the 'community.' Hawley does recognize the difficulty of determining the boundaries, and also recognizes the difficulty of ascertaining the relevance for the community of some of the groups within the community.

It is suggested here that Hawley's view of ecology entails a greater separation of human ecology from sociology. Hawley suggests that this separation may be beneficial, not for the reason that one discipline is in any way superior to the other, but solely on the basis of a division of labor and along lines of personal interest. To use ecological terminology, the relationship might well be a symbiotic rather than a commensalistic relationship. It is also suggested here that this orientation of Hawley's will lead to a type of research which will differ greatly from the research which has been termed 'ecological' in the past.*

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* Perhaps a brief illustration of the possible differences in approach might be suggested. It has been mentioned that the area of 'occupation' is one which may be of mutual interest to the ecologist and the sociologist. If the ecologist were to make a study of an occupation, he would be concerned with a functional analysis of the

The alliance of human ecology with general ecology may be relatively slow in producing any new developments, since general ecological theory is not noted for coherence. However, one of the principle virtues of Hawley's view of human ecology is the possibility of deriving testable hypotheses. It is suggested that a rigorous logical analysis of the assumptions, propositions, and hypotheses of the theory would be helpful in this respect.

The emphasis upon the community and upon the study of groups within the community only insofar as they affect the functioning of the community leaves a wide range of behavior untouched by the ecologist.[158] The social function of the groups which may have no direct relevance for the functioning of the 'community' may be a subject in which the sociologist is interested.

The point of the discusssion is simply this: Ecology and sociology seem to be proceeding in increasingly divergent directions; there is no cause for alarm about this development, but the development should be recognized if the two disciplines are to benefit from it.

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157. (con't) occupational structure of the community, and the ways in which one occupation was related to another. He would not be concerned with the 'conception' that the person held of his occupation, nor with the 'conception' which others held of it. Labor force statistics rather than interview schedules or participant observation would be his main source of information. This illustration could be elaborated, and others could be suggested. It is offered only as a suggestion as to the likely development in the relations between human ecology and sociology. No invidious distinctions are intended.

158. For suggestions as to areas for further research, see: William H. Form. "The Place of Social Structure in the Determination of Land Use: Some Implications for a Theory of Urban Ecology." Social Forces: Vol. 32:4 (May, 1954) pp. 317-23

General Conclusions

The analysis of intra-urban areas has been chiefly concerned with the social and economic characteristics of the residents in three types of social areas; those distinguished by a high, middle, and low degree of social intimacy.

It was found that the great majority of dwelling units in the city were located in areas characterized by low intimacy. When compared to areas of high social intimacy, the low intimacy areas were found to be in a lower economic position and to have a lower proportion of owner-occupied dwelling units.

The degree of intimacy within the local areas seemed to be a concomitant of high socio-economic status and low physical mobility within the area. The expected differences in length of time lived in the area between high and low social intimacy area residents were not found to be significant. Differences in family structure in the three types of social areas were not significant, but there was a significantly greater proportion of older persons in areas of low intimacy.

Contrary to the Burgess hypothesis, land values of dwelling units did not increase with distance from the center of the city. High land value dwelling units were, in general, located nearer to the city center than low land value dwelling units. This finding was in accord with the results of a study of Flint, Michigan.

The social-psychological definition of high status areas was found to be compatible with the economic defintion of high land value areas. In no case was there any contradiction between the social psychological definition of an area and the economic defintion of an area.

Organizational membership, in general, was found to exhibit characteristics similar to those found in studies of other urban areas in the U.S. Organizational membership and participation within the local area were less frequent than participation in organizations located outside the local area. Formal organizational membership was significantly greater for residents in high social intimacy areas than for residents in low social intimacy areas. Differences between members and non-members were found to reflect occupational and economic differences in each of social intimacy areas.

The use of local facilities showed a pattern in which accessiblity was greatest between residence and the functional units which provided economic requirements for the population. The neighborhood as defined by the respondent and by the use of economic facilities was not the area in which social activities took place, an indication that the local area was not of great social significance for the performance of these social activities. There was no tendency for friends to be located in the local area, although there was a significant difference between high and low intimacy areas in the proportion of respondents who named three friends. In no case was there a tendency for the friends named to be residents of the local area.

Informal associational participation was low in all social areas, and no significant differences were found among the social intimacy areas in this respect. The places named most often as meeting places within the local area were business establishments; mainly taverns, grocery stores, and drug stores.

In general, then, it would seem that degree of intimacy as indicated by the extent of personal relationships within the local area,

was most closely related to socio-economic status, and bore little relationship to the performance of routine economic activities, or the performance of other social activities within the local area. Formal organizational membership was significantly greater in areas of high intimacy than in areas of low intimacy. Expected differences in the length of time that the respondent had lived in the neighborhood or city; previous residence in an urban area; and family structure were not found to be significant when the three types of social intimacy areas were analyzed in these terms.

This evidence suggests that the neighborhood is of little importance for the performance of social activities, but that it does form a functional area for the provision of economic goods and services for the population.

Suggestions for Further Research

It has been pointed out earlier that this study was a pilot study, based on the first stage of a contemplated long-range sociological research plan for Lansing and for the Lansing SMA. It can hardly be overemphasized that unless continued research is carried out, a major goal of this study — that of providing guides for further research— will have been lost. The discussion of possible topics for this research is restricted to those subjects which have been considered in this study. The discussion is also restricted to ecological and sociological problems.

From an ecological point of view, future research should not be confined to the political and administrative boundaries of the city, but should also include, at the very least, the urbanized area which

surrounds Lansing. Investigations of these urbanized areas could be made in order to discover if the relationships which were found to exist within the city also existed outside of the political city, e.g., the relationship of land value to accessibility.

The analysis should also be broadened to include other functional units of the community, e.g., the retail outlets which provide economic necessities for the residents of an area. The location of the labor force in relationship to place of occupation also demands further investigation.

The shifts in population distribution within the central city and the SMA which were discussed call for additional research. The location of types of functional units in relationship to the population is a question which can be explored.

Of interest sociologically, are those intra-urban areas which deviate from their surrounding area, or which exhibit characteristics which are associated with low intimacy, and yet fall into a high intimacy category. For example, social areas eighteen and five might be further investigated in order to discover in what ways they differ from other areas of the same type.

The social functions of the units of the community in relationship to the social organization of the area require examination. The relationship of other types of behavior, e.g., political, to the economic and social characteristics of the area might also be investigated.

It has been indicated that the local area plays a relatively minor role in the social life of the residents of the area. It may well be that occupation and place of work are of more importance to the resident, than his area of residence. It might be asked, then, if those sub-areas

which are characterized by high intimacy also characterized by occupational homogeneity?

The areas of high economic status delineated in this study furnish a general basis for a more refined approach to the analysis of the social class structure of the city. Reliable evidence has been presented as to the location of the extreme economic status groups within the city, and thus the analysis of other differences may be facilitated.

These are but a few of the possible areas of further research which may be suggested. The major problem would seem to be not one of seeking subjects and topics for research, but of doing a certain amount of basic research.

In addition to these proposed studies, it should not be overlooked that a great deal of information on the structure of Lansing and the Lansing SMA as of 1950 has been presented. The growth and structure of residential areas of various economic types has been described, as has the occupational and industrial structure of the area. This, together with the demographic analysis of the area, furnishes a basis for the analysis of future developments within the community.

APPENDIX

INTERVIEW SCHEDULE

Resident Interview Schedule
Census Tract Study II

Social Research Service
Michigan State College

1. What year did you move to this part of town?_____(YEAR NUMBER)

2. How many different houses have you lived in since 1946?_____

3. What year did you move to this address?_____

4. Was your last address in either Lansing or East Lansing?

___Yes: What was It? _____

___No: Where was it? _____(NAME OF PLACE)
_____(NAME OF COUNTY)
_____(NAME OF STATE)
_____

About how many people lived there?_____(GET A NUMBER)

Did you live in town or open country?_____Town
_____Open Country

5. How did you happen to move to this part of town rather than somewhere else?

6. If you had your choice, would you continue living in this neighborhood?

_____Yes: What do you like about it?

_____No: What do you dislike about it?

Where would you move?

(IF A DEFINITE LOCATION IS GIVEN) What do you like about that place?

_____Don't Know: Do you have any reasons for wanting to stay?

Do you have any reasons for wanting to move?

(IF REASONS FOR MOVING ARE GIVEN) Where would you want to move?

(IF A DEFINITE PLACE IS GIVEN) What do you like about that place?

7. Do you have definite plans for moving in the near future?

_____No

_____Yes: Where are you moving to?

(IF A DEFINITE LOCATION IS GIVEN) How did you come to decide on this place?

8. For the most part what kinds of jobs do people in this area have?

9. Where do most of them work?

10. How well do you think that the people in the neighborhood around here know each other?

(READ)
___Not at all
___Not so well
___Fairly well
___Quite well
___Very well

(DON'T READ)
___Don't Know

11. About how many of them would you say that you know by name?

___None
___A few
___About half
___Most
___All

12. About how many families in your neighborhood do you come in contact with for at least a few minutes every day or so?_____(NUMBER)

13. About how many do you spend a whole afternoon or evening with every now and then?_____(NUMBER)

14. Will you think for a moment of your three best friends--we can call them 1, 2, and 3--and tell me where they live?

	(IF IN LANSING OR EAST LANSING) Street	Nearest two crossing streets	(IF OUTSIDE LANSING) Name of place
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

15. Are there any organizations around here mainly for the people of this neighborhood?

___No
___Don't Know
___Yes

	What are they?	Which of these do you, or members of your family, belong to? Belong	Don't Belong	(ASK ONLY FOR THOSE ORGANIZATIONS BELONGED TO) What proportion of the meetings do you or members of your family attend? None	Few	Half	Most	All
1.								
2.								
3.								
4.								

16. Are there any other organizations, lodges, or clubs in which you participate at least once a month?

___Yes
___No

17. Are there any places in the neighborhood, such as stores, restaurants, lodges, taverns, or halls where people get together informally?

___No
___Yes: What are they?

18. Do you think that this neighborhood is getting better or getting worse?

___Don't know
___Getting better: How did it happen? Can you give some examples?
___Getting worse:

19. Could you please tell me how often you do any of these things? (INTERVIEWER: ASK EACH ACTIVITY FOR BOTH "INSIDE" AND "OUTSIDE THE NEIGHBORHOOD." SPECIFY THE FREQUENCY FOR ONLY ONE TIME PERIOD. FOR EXAMPLE: "ONCE A WEEK," WRITE IN "1" IN THE "WEEK" COLUMN. "THREE TIMES A YEAR," WRITE "3" IN THE "YEAR" COLUMN, ETC. GET LOCATIONS FOR ACTIVITIES WHICH TAKE PLACE ONLY IN THE NEIGHBORHOOD).

HOW OFTEN DO YOU. . .	IN YOUR NEIGHBORHOOD					WHAT IS STREET AND NEAREST CROSS STREETS	OUTSIDE NEIGHBORHOOD				
	week	month	year	less often	never	street nearest cross streets	week	month	year	less often	never
go to visit relatives											
go to a movie											
go bowling or engage in other indoor sports											
go shopping for groceries											
go to a park											
go to play cards											
go to a nightclub or tavern											
go watch TV outside your home											
go out to eat in a restaurant											
buy gasoline											
have work done on your car											
go to a drugstore											
go to a barbershop or beauty parlor											
take shoes out for repair											
buy shoes											
bank											
go to church											
(If they go) Denomination_____											

20. On the average, how many times a week do you go downtown? _____

21. How do you usually get there?

22. We've been using the word neighborhood for some time now, and we'd like to get an idea of what area you're thinking of when you talk about your neighborhood. (INTERVIEWER: RECORD STREET NAMES)

About how far north does it go?
About how far east does it go?
About how far south does it go?
About how far west does it go?

How did you decide on these boundaries?

23. a. Does this neighborhood have a name?
____No
____Yes: What is it?

b. Do you think of it as part of a larger area?
____No
____Yes: What is the name of this larger area?

24. Do you own or rent this place?
____Own
____Rent

25. How many:

____Bedrooms do you have?
____Living rooms do you have?
____Dining rooms do you have?
____Kitchens do you have?
____Bathrooms do you have?
____Other rooms do you have? What are they? (INTERVIEWER SPECIFY)

____Total

____Closed Porch
____Finished Basement: (INTERVIEWER: DO NOT INCLUDE IN "TOTAL")

26. Would you mind telling us where you grew up?

____Lansing or East Lansing
____Elsewhere: Where? _____ (TOWN) _____ (COUNTY) _____ (STATE)

Did you live in town or open country?
____Open country
____Town: About how many people lived there then?

_____ (NUMBER)

27. Where were your parents born?

Father
____Lansing or East Lansing
____Elsewhere: Where?_____

Mother
____Lansing or East Lansing
____Elsewhere: Where?_____

28. Are you married or single?

___Married
___Single
___Widowed
___Divorced

29. We'd appreciate knowing who else lives with you and what their approximate ages and education are.

Relationship to Respondent	Approximate Age	Last Grade Completed in school
Respondent	_____	_____
_____	_____	_____
_____	_____	_____

_____Total living in dwelling unit

(IF THERE ARE CHILDREN UNDER 12 YEARS OLD)
Do you use baby sitters?

		YES	NO
___No			
___Yes:	Are they from an agency?	___	___
	Are they relatives?	___	___
	Are they adult friends?	___	___
	Are they adolescents?	___	___

(IF EITHER "RELATIVES," "ADULT FRIENDS," OR "ADOLESCENTS" ARE USED) For the most part, do they come from inside or outside the neighborhood?

___Inside neighborhood
___Outside neighborhood

30. For the purposes of our survey, we need to have a rough idea of your family's total weekly income. Would you mind telling me into which of these classes it falls? (INTERVIEWER: HAND CARD TO RESPONDENT)

(INTERVIEWER: ENTER CODE NUMBER) _____

31. a. What contributes the most money to the family income?

____Respondent
____Other: Who?_____

(INTERVIEWER: ASK B-F ONLY FOR THE MAIN WAGE EARNER IN THE FAMILY)

b. What is your (his, her) job called? (INTERVIEWER: MAKE THIS AS SPECIFIC AS POSSIBLE)

c. What kinds of things to you (does he, does she) do on the job?

d. Where do you (does he, does she) work?

_____(STREET)
_____(TWO NEAREST
_____CROSS STREETS)

e. How do you (does he, does she) get to work?

f. What is the name of your (his, her) place of employment?

32. Do you own a television set?

____Yes
____No

The college is going to establish an ultra-high frequency television station. Will you have your set adapted to receive this new station?

___Yes
___No
___Don't know

Will the opening of the college station influence you to purchase a set?

___Yes
___No
___Don't know

****

(INTERVIEWER: DO NOT ASK FOR ANY OF THE FOLLOWING INFORMATION UNLESS NECESSARY)

What kind of a residence is it?

___House
___Apartment
___Room
___Other: What?_____

Sex of respondent.

___Male
___Female

Race of respondent.

___White
___Negro
___Other: What?_____

AREA NUMBER_____

LOCATION OF INTERVIEW: Street_____ (IF IN THE MIDDLE OF THE BLOCK)
Side of Street_____
Two nearest cross streets:
1._____
2._____

(IF ON A CORNER)
Other street forming corner_____
Location of corner:
NE__ SE__ SW__ NW__

INTERVIEWER: Name_____ Class_____ Section_____
DATE:_____

INTERVIEWER: Enter here your impressions of the respondent and the residence, covering all those matters suggested in the instructions, and anything else that may strike you as important.

APPENDIX B

APPENDIX B

This appendix contains an analysis of the sample upon which this study was based. The analysis is concerned with a fuller description of the characteristics of the sample and the examination of possible sources of bias in the sample. First, the characteristics of the respondents in the three types of social intimacy areas are examined. Next, the relationship between various housing characteristics of the social areas is discussed, and the housing characteristics of the sample are compared with those of the total area of which the sample is a part. The major purpose of the analysis is to discover whether or not differences among the social areas could be a consequence of bias in the sample.

Characteristics of the Respondents

As was shown in Table I (Chapter IV) 78.7 percent of all respondents were females. In areas of low social intimacy, 80.7 percent of all respondents were females; in middle social intimacy areas, 77.1 percent were females; and in high social intimacy areas, 77.2 percent were females. These differences were not statistically significant, and thus there seems to be no reason to think that there was a sex bias among the social areas.* The median age of the respondents in each of the three types of social intimacy areas was 39.5, an indication that the age differences of the respondents were not a factor in the responses given.

* The test of significance used was that of the significance of difference between percentages. The level of significance accepted was the .05 level.

The occupational distribution within the three types of social intimacy areas is presented in Table 1.

Table 1. OCCUPATIONAL DISTRIBUTION WITHIN THE THREE TYPES OF SOCIAL INTIMACY AREAS

Occupation*	Type of Social Intimacy Areas		
	High (N=161)	Middle (N=140)	Low (N=272)
	Percent	Percent	Percent
Professionals	9.9	4.0	5.9
Semi-professionals	3.1	10.9	2.6
Proprietors	7.4	2.3	2.9
Managers and officials	6.8	4.0	5.2
Clerical (office)	5.6	6.3	8.9
Clerical (sales)	7.4	9.1	5.5
Skilled workers	23.5	17.7	26.6
Semi-skilled workers	24.1	12.6	21.4
Unskilled workers	2.5	8.6	4.4
Service and domestic	1.9	13.7	2.2

* Occupation not reported and retired, not included. Chi square = 75.99; degrees of freedom = 18; $p < .01$

It was found that the proportion of high-status occupations (professionals, semi-professionals, proprietors, and managers and officials) in high social intimacy areas was significantly greater than in low social intimacy areas.* There was also a significantly greater proportion of skilled and semi-skilled workers in both the high and low social intimacy areas,# while middle intimacy areas had a significantly greater proportion of domestic and service workers.** Differences in

* The test of significance used was that of the significance of difference between percentages. $t = 2.36$, $p < .01$

\# The test of significance used was that of the significance of difference between percentages. $t = 3.35$, $p < .01$

** The test of significance used was that of the significance of difference between percentages. $t = 2.96$, $p < .01$

proportions of white collar workers were not statistically significant.

These data on the occupational distribution within the three general types of social areas suggest that areas of high intimacy are characterized by a significantly greater proportion of high status occupations, which is generally taken to indicate higher socio-economic status.

Housing Characteristics

Since Chapter VI deals with the housing characteristics (average land value of the dwelling unit and proportion of owner-occupied dwelling units) of the sample on which the social areas were based as well as those for the entire area, an analysis of these characteristics is called for. The relationship between land value and rental is examined, since average land value is the criterion used for the classification of economic areas. The factor of size of area is examined, insofar as size is related to the economic homogeneity of the area. For each of the twenty-seven social intimacy areas, the distribution of average land value of the dwelling units was determined, and the median and mean land value for each of the social intimacy areas were obtained from this distribution. The percentage of owner-occupied dwelling units together with the mean monthly rent for all rental units within the area were computed. As an indication of relative dispersion, the coefficient of variation for each of the areas was computed. These measures made it possible to rank the social areas as to their relative position in each of these respects, and this relative position could be compared with the intimacy category into which the area fell, as well as compared with the other social areas.

The rank-order correlation between average land value of the dwelling units within the social areas and the average monthly rental was

.790, significant beyond the .01 level.* This would indicate that the use of average land value of the dwelling unit as the basis of classification for economic areas has the additional justification of being significantly related to the average monthly rental of the dwelling unit. This relationship also held for the total area.** Data from the sample on average family income permitted a comparison of the sample in terms of income with the total area of which the sample was a part, in terms of average land value of the dwelling units within the area. The rank-order correlation between these two variables was relatively high and statistically significant ($R = .877$, $p < .01$). Thus, it would seem that average land value may be rather closely related to income, and constitutes the best available index of the economic status of the total area.#

In order to determine whether variation within the area was related to the size of the area, a rank-order correlation was calculated between the size of the area (as indicated by the number of dwelling units) and the relative dispersion of average land values within the area (as indicated by the coefficient of variation). R equalled .260, which was not significant at the .05 level. That the areas which were economically most homogeneous were areas of relatively low average land value, was indicated by the fact that the relationship between rank order in coefficient of variation and rank in low land value of the dwelling unit was .771 which was significant beyond the .01 level.

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* These computations were made on the basis of the formulas given in: Helen M. Walker and Joseph Lev. Statistical Inference. Henry Holt and Company. New York. 1953. pp. 272-80.

** R equalled .757, $p < .01$

Neither data on income for the total area, nor average land value for the sample were available; thus a precise comparison of economic status was not possible.

The above analysis indicated, in general, that there was a close relationship between high land value of the dwelling unit and high monthly rental, justifying the use of average land value of the dwelling unit as the unit of measurement of economic status for the total area; and that variation of average land value within the area was not significantly related to the size of the area. It also indicated that areas which had the lowest average land value of the dwelling units were the most economically homogeneous areas.

Since the sample data form the basis for the classification of the social areas, these sample data are compared with census data for the entire area thus delineated. This examination permits a further comparison of the sample data with complete census data. As was shown in Table I (Chapter IV) the sample used in this study was characterized by a higher proportion of owner-occupied dwelling units than the city as a whole. When the sample on which the social areas were delineated was compared with the total area of which the sample was a part, it was found that the rank-order correlation between proportion of owner-occupied dwelling units in the sample areas and in their appropriate universes was .610, significant at the .01 level. Table 2 presents a comparison of the sample with the total universe in this respect.

Table 2. PERCENTAGE OF OWNER-OCCUPIED DWELLING UNITS BY SOCIAL INTIMACY AREA FOR LANSING, 1950 AND FOR THE SAMPLE, 1953.

Type of Social Intimacy area	Lansing (N=18,285)	Sample (N=573)
High	26.6	31.2
Middle	19.1	25.7
Low	54.3	43.1
Total	100.0	100.0

This analysis indicated that the relative position of the social areas, delineated on the basis of the sample, and the relative position of the total social areas as indicated by census data, were significantly related in respect to the proportion of owner-occupied dwelling units, and that the relatively slight differences between the sample and the total city were not of major importance.

Summary

The sample upon which this study was based had a higher proportion of females than the entire city, but this over-representation of females was characteristic of each of the three types of social areas. The fact that the interviews were obtained during the day-time probably accounts for this bias. The same bias is characteristic of most census population data. The median age of the respondents was the same in each of the three types of social intimacy areas. Thus, there seems to be no reason to suspect that the differences in the responses among the social areas are a result of differences in the age-sex composition of the sample. It was found that areas of high social intimacy had a significantly greater proportion of persons in higher status occupations, perhaps an index of higher socio-economic status.

It was also found that there was a significant relationship between average land value and average monthly rental. There was not a significant relationship between size of the area and the relative dispersion of land values within the area. The rank-order correlation between average land value and income was relatively high and statistically significant.

The aspects of the sample which have been examined indicate the ways in which the sample deviates from the total city. These differences limit the applicability of the findings of this study, and this should be kept in mind when reading the analysis of the social areas.

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