DOCTORAL DISSERTATION SERIES

PUBLICATION:5715

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University of Michigan

TITLE: THE IMPACT OF TRANSPORTATION CHANGE AND OF FLINT METROPOLITAN EXPANSION ON THE LINDEN COMMUNITY: A CASE STUDY OF ECONOMIC CHANGE FROM 1900 TO 1950

University Microfilms, Ann Arbor, Michigan, 1953

THE IMPACT OF TRANSPORTATION CHANGE AND OF FLINT METROPOLITAN EXPANSION ON THE LINDEN COMMUNITY

A Case Study of Economic Change
from 1900 to 1950

by
Samuel A. Pratt

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in the
University of Michigan
1953

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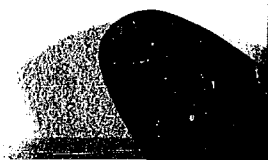
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ABSTRACT

THE IMPACT OF TRANSPORTATION CHANGE AND OF FLINT METROPOLITAN EXPANSION ON THE LINDEN COMMUNITY

by Samuel A. Pratt

This study is a case analysis of the changes from 1900 to 1950 in the business functions of a small community and the relationship of these changes to transporation alteration and to the absorption of the small community into an expanding metropolitan community. The conclusions are based on cross-section reconstructions of Linden, Michigan in 1900 and 1950 and analysis of the conversion from rail to motor vehicle transportation and the increased interaction of Linden with Flint city. Linden was a community of 2,200 in 1900 and 4,450 in 1950.

Under the conditions of rail and horse transportation in 1900, Linden was relatively self-sufficient locally and dependent in a regional and national economy. The village was solely a farm center meeting all the basic needs of the farm business and farm population markets. General farming was the economic function of the village trade area. The community was organized around the balanced interdependence of the village and farm sub-systems. In the ensuing 50 years the automobile and truck were substituted for the railroad as the principal means of transportation. The resulting reduction in time-cost distance in the local area led to absorption of Linden into the growing Flint metropolitan community. Flint provided a few infrequent services for Linden in 1900 but in 1950 nearly half of Linden's labor force worked in Flint and the city provided many economic and social services for the small community. As a sub-community in 1950, Linden had a specialized economic structure. The village specialized in frequently-needed, inexpensive consumer commodities and services while the farm system was concentrating in dairying and livestock. The non-agricultural labor force replaced the farm system as the principal income source of the community, and the locally balanced interdependence of farm and non-farm systems was disrupted.

The major conclusions were: 1) the independent community of 1900 was converted to a sub-community; 2) the general trend was toward sub-community specialization,



though Linden did not become a one-function town; 3) functional expansion was concentrated in the non-agricultural functions, village businesses increasing nearly 100 per cent while the number of farms remained about the same; 4) increased specialization in the village was marked by growth in retailing, home construction, real estate, insurance, and recreation functions and a relative decrease in manufacturing, personal and professional services, repair services, and communications, and an actual decrease in marketing, financing and specialized transportation; 5) village change occurred through discontinuance of half of the 1900 units, modification of the business units continuing from 1900, and the addition of new units and functions; 6) non-agricultural functions, particularly recreation and construction, developed in the service area; 7) the general farming system was converted to a specialized system in which milk was the largest income producer; 8) farm marketing was oriented to a metropolitan market in 1950 as compared with a national market in 1900; 9) generally, the transformation was from a locally independent community to a metropolitan sub-community, in the latter form serving as a residential, recreation, and a perishable food production and processing area for the metropolitan community. The economic changes had general impact on the bases of integration in the community, the economic system declining as a small community integrative force.

Metropolitan expansion was the major source of change but national economic change was also important. The metropolitan influence was felt through suburbanization, decreased individual dependence on the local community, development of a transient market, farm producer mobility, and the rise of new competitive factors within the expanded community.

PREFACE

This dissertation attempts to analyze the changes from 1900 to 1950 in the economic structure of Linden, Michigan, a small village community. While other sources of change were obviously present the principal force is conceived to be the introduction of the motor vehicle and the consequent creation and expansion of the Flint metropolitan community. The analysis of the change in economic functions is seen as the first step in a series. It is planned to report later on the change in the school, associations, church, and prestige structures. The ultimate purpose is to contribute to a general theory of community structure and to the theory of the metropolitan community in particular.

I am indebted to the Social Science Research Project of the University of Michigan for funds which permitted the collection and codification of the data during the years 1949 to 1951. I am particularly grateful for the extension of funds to redo much of the field work following the Haven Hall fire. I am also indebted to the Charles Horton Ccoley Fund for a grant for assistance in codification of the data.

Professor Amos Hawley has given guidance throughout the study, first as Chairman of the Social Science Research Project, and later as Chairman of my committee. I most

gratefully acknowledge his guidance.

Many others had important roles in this study. The members of my committee assisted in many ways, for which I express my thanks. As members of the Social Science Research Project, Professors Arthur Bromage, Robert Hall, Gardner Ackley, and John Hyde gave valuable and appreciated direction. Dr. Douglas Carrol's suggestions and criticisms, particularly during the field work, were of inestimable assistance.

Many graduate students offered direct and indirect services during the development and field work stages of the project. I wish to thank them as a group. In this regard the assistance offered by Harry Sharp, Robert Cohen, David Varley, and Bessie Young is especially appreciated.

There were many individuals and families in Linden who unhesitatingly offered their services during the two years of field work. Their patience during the second year is particularly appreciated, as many had to answer questions a second time, after destruction of the first year's data by fire. Mr. and Mrs. Russell Judson were the first informants contacted in Linden and remained faithful friends throughout, offering valuable advice on every request, even reading an early draft. Mr. and Mrs. Scott Stimer, publishers of The Linden Leader, offered excellent assistance during the field work. Without their loan of back copies of the village newspaper the research would not have been possible. I wish also to thank Mr. Guy Webber, Mr. and Mrs. Eugene Farner, and Mrs. Mae Hyatt.

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CHAPTER ONE

THE PROBLEM

Linden, Michigan was selected in 1949 for a case study of the change from 1900 to 1950 in community organization, particularly as it related to transportation change. The problem analyzed in this study is the change in the business functions of the village community. The analysis involves describing the economic functions of business units in 1900 and 1950, noting the changes in the functions, and relating these to transportation change and some consequences of transportation change, especially the increased interaction of Linden and Flint.

The hypothesis of the study is: The motor vehicle has led to a reorganization from generalization to specialization in the business functions of small communities located near large cities.

Hypothesis Development

The key to the change after 1900 in the organization of small communities which lie near large cities is the drastic reduction in time-cost distance by the motor vehicle. The great time-cost savings have increased the interaction among small communities and between them and

nearby large cities, inducing many changes in the organization of the village community. The transformation in the small town has been produced through many processes, such as the alteration of population structure, the increased mobility of the labor force, consumers, and business units in the small communities, the increased mobility of central city agencies, and the alteration of specific unit functioning. The culmination has been the creation of the metropolitan community through the weaving of many loosely interrelated self-sufficient communities into a closely interdependent whole organized around a dominant center. Naturally, the whole industrial development of western civilization lies behind the growth, but the pattern of distribution of functions known as the metropolitan community did not develop until the appearance of motor transport.

Others have stressed the recency of the metropolitan community. McKenzie wrote, "It cannot be too strongly emphasized that the modern metropolitan community is practically a new social and economic entity...."[1] The new community was first defined in the United States census in 1910, when forty-four were delineated. There has been an increase in each decade since, with 168 listed in 1950. While change in definitions has played a small part in the increase, the growing number of large cities illustrates it is real growth. All metropolitan communities are organized

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[1]R. D. McKenzie, "The Rise of Metropolitan Communities" in Recent Social Trends (New York, 1933), p. 444.

around large central cities, most of which are over 100,000 population. The United States had one city of this size until 1830, thirty-eight in 1900, and 106 in 1950.

The essence of the new community form is an intricate meshing of functionally differentiated sub-centers organized around a dominant central city.[1] A 1948 definition of the Flint metropolitan community placed at least twenty-six sub-communities within the area of Flint dominance and an additional eight within the area of strong Flint influence.[2] Some of the sub-centers had primarily a residential function, others a sub-manufacturing role, and some others farm service center functions.

Hawley has shown such functional differentiation to be the general pattern. He reports that, "small cities within twenty miles of large centers are relatively undeveloped in their service structure as compared with a random sample of cities of the same size." Deficiency in retail services, however, is accompanied by specialization in some other service such as production of electrical power, recreational services, or sub-manufacturing.[3]

There are four general elements in the theory of metropolitan community development; they are:

1. Redistribution of population and functions.

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[1]See Don J. Bogue, The Structure of the Metropolitan Community (Ann Arbor, 1949), Chapter Three.

[2]See Map I, Chapter Two.

[3]Amos Hawley, Human Ecology (New York, 1950), p. 273.

2. Absorption of all segments and their inhabitants in a single comprehensive organization.

3. Specialization of activity in each segment of the total area.

4. Reorganization within previously relatively free and stable communities as they changed to sub-communities.

It is hypothesized that the developmental process is based upon technological development. The concept of industrialization summarizes the many changes that are thought to have led to the continuing centralization of social organization. Transportation is ascribed a central role in the spatial distribution of functions. Mechanization of industry under conditions of water, and later, railroad, transportation led to great regional complexes and to large compact cities in each region. The major cities in each region were more tightly interdependent than a given city and its immediate hinterland. The invention and improvement of the motor vehicle has altered this pattern and reorganized the nation into a mosaic of expanded communities in which the central city and the hinterland are highly interdependent.[1]

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[1]The point here is not that transportation determines the functions of a <u>society</u> but that it does determine the spatial distribution of the functions. Hence, it has a strong determining influence in the structure of a given community. In the case of any particular metropolitan community it is the predominant determinant of the spatial distribution. This occurs because as the variation of any other determinant, say soil conditions, decreases, it becomes less of a local discriminating factor. That is, soil conditions would tend to distribute equally over the whole area given no friction of space. But because of the friction this does not occur and the distribution takes a form most closely correlated with the ability to overcome this friction. Thus the form of transportation creates the

The general theory is that before the invention of the automobile and its concomitant inventions of traffic control and high speed highways, the small community was adjusted to (a) the local habitat, (b) surrounding small communities, and (c) a national economic organization based upon rail and water transportation. In the structural equilibrium established under conditions of wagon and rail transportation, the distance of local hauling and travel was restricted by the relative inability to overcome inexpensively local space. It follows that the centrally organized local area was small. Communities separated by a few miles were not within easy daily access of one another. In effect, they existed as relatively independent com-

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pattern, and change in transportation is the dynamic that alters it. The change creating the expanded local community was the motor vehicle.

The automobile has had many effects, of course. One survey suggested changes in the cultural pattern as including:

1. Forms of manufacturing (mass production by expansion of market)
2. Raw materials now vital to economy were previously of minor importance, as (a) rubber (b) petroleum.
3. "Daily distance."
4. Expectancies and conception of ability to move.
5. Family budget.
6. Highway development (a) engineering (b) financing.
7. Street and highway safety regulation (a) type of mortality.
8. Competition with other transportation forms, as (a) decline of rail passenger traffic.
9. Forms of crime, courting, shopping habits, visiting patterns, recreation patterns, etc.
10. Auxiliary services as (a) road houses (b) tourist camps (hotel replacement).
11. New forms of community (collective) organizations.

<u>An Economic Survey of Motor Vehicle Transportation in the United States</u> (Washington, D.C., 1933).

munities.[1]

Each community had a comprehensive business structure which was a direct link between the community and the regional economy. Associational life was almost entirely within rather small geographical areas. Recreational life was a local community phenomenon. The industrial organization was restricted. For instance, the size of plant was limited by the distance workers could conveniently and inexpensively commute to work. In some centers mass transportation permitted commuting, but it was limited to the very large centers. The small plant and the small community remained important in spite of the fact the railroad network had created a potential market for mass production by permitting a wide distribution of products. Small community organization remained independent until after 1900.

As the twentieth century began, the motor vehicle was introduced and local travel was altered radically. The local community boundaries expanded and a thorough reorganization of community structure was initiated. The metropolitan community system has not matured as yet, but it has grown enough so that some of its more important aspects can be observed and analyzed. This study, accepting previous

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[1]In this study the concept village community is used to refer to the 1900 status. Each small community is assumed to be relatively comprehensive in services and controlling its own adjustment to the national and regional structure. The concept sub-community is used to refer to the 1950 status. The small community is relatively specialized and its national and regional adjustment is controlled by a metropolitan center.

research, assumes the rise of the metropolitan community, its essential nature as a multi-centered community, and the primacy of technological, particularly transportation, change in instituting the changed community form.

While the influence of the motor vehicle in the general development of the metropolitan community has been well documented, there has not been detailed analysis of the changes in the internal organization of the previously independent small community as it was absorbed into the daily interaction pattern of the large central city. McKenzie, writing in 1933, stated, "The economic and political position of the subordinate center, within the metropolitan region is still far from settled,"[1] Bogue, in a continuation of McKenzie's work, speaks of a "temptation" to consider these hinterland communities as simply "vestiges of a former era."[2] However, Bogue found it necessary to introduce a concept of subdominance which emphasized the integration of the sub-community. He further stated that the concept implies that "the communities which have survived from a pre-metropolitan era have done so by undergoing an internal reorganization and reorientation of their activities." He concludes that the importance of the local hinterland community as a unit of social organization will not diminish with time.[3] The present study extends this research by focusing on the change

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[1]R. D. McKenzie, The Metropolitan Community (New York, 1933), p. 159.

[2]Bogue, p. 63.

[3]Ibid., p. 63.

in business structure in the village community from 1900 to 1950, as it was absorbed by Flint.

The business system was selected as the first problem because its functioning is basic to the other systems of the community. What occurs in the economic system is soon transmitted to the other systems and induces changes there. Changes in the hours of work directly affect the functioning of the family and the leisure time social units. The growth of formal recreation in the community is directly related to the substitution of the eight hour day for the twelve hour day. Changes in farming practices and crops reduce the need for certain village units and create the need for others. Thus analysis of the economic system provides a basis for later analysis of other community systems.

While the present study has important suburbanization aspects, it is stressed that it is not merely a study of that population movement. There has been the usual redistribution of population around Flint that is incident to metropolitan expansion. Population in the two townships forming the basic framework for the Linden community increased thirty-six per cent in the last decade, according to the decennial censuses. Since there has not been a comparable increase in local employment opportunities it seems reasonable to infer that most of the increase is due to the suburban movement. The focus of this study is, however, upon village community functional readjustment to the

environmental change involved in the rise of the metropolitan center. It is this aspect of metropolitanism that is generally overlooked.

Usefulness of the Study

Two correlated national trends have operated in the past century: centralization and decentralization. The first is the trend toward concentration of population and functions in metropolitan areas. During the period 1900 to 1950 the proportion of the total national population living in metropolitan communities increased from thirty-seven to fifty-five per cent.[1] At the same time, decentralization has involved redistribution within these areas of concentration.

Knowledge of these movements and of their impact on already developed communities surrounding central cities can immeasurably aid community planners, sociologists, and others. For instance, the decentralization of large cities has been a goal of planners for over fifty years.[2] Planning for this goal could be improved by a more thorough understanding of what happens to small communities as the goal is realized. The sociologist is concerned because of

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[1]The definition of the metropolitan community differed in the two periods but this does not disturb the central point of the size of the change. The figure for 1900 was calculated by McKenzie for sixty-three metropolitan districts while the 1950 figure was based on the most recent census. R. D. McKenzie, Recent Social Trends, p. 447 and U. S. Census, 1950, Series PC-14, No. 1.

[2]See Hans Blumenfeld, "On the Growth of Metropolitan Areas," Social Forces, Vol. 28, October 1949, pp. 59-64.

the problems of village and rural residence caused by the superimposition of new population and functions onto existing social organizations.[1] The new population needs educational, economic, religious, cultural and congeniality services. Existing village and rural facilities are often adjusted only to the needs of an agricultural population. Analysis of the reorganization of the small community within the metropolitan complex can contribute to appreciation of the problems of readjustment of established residents and functions as well as to those arising from the decentralization of cities.

The national scope and dynamic nature of the problems involved in centralization and decentralization is illustrated by a summary of data on the number of villages and on population redistribution. The redistribution of people is indicative of the equally important redistribution of functions.[2]

There are perhaps 15,000 villages today. In 1930 there were 7,224 incorporated villages and another 7,601

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[1]For example, see: Solon Kimball, The Fringe (East Lansing, 1949); Richard Dewey, "Peripheral Expansion in Milwaukee County," The American Journal of Sociology, Vol. 53, May 1948, pp. 417-422; Walter Firey, Social Aspects of Land Use Planning in the Country-City Fringe (East Lansing, 1946).

[2]See Amos Hawley, Human Ecology, pp. 410-420, "Redistribution of Community Units" for a discussion of some of the theory and literature on this problem. His statement demonstrates decentralization in producing, retail and personal services, and suggests the change in education, religion, congeniality and so on. Centralization is also stressed in some retail services emphasizing variety, and administrative control of economic and non-economic units.

unincorporated places between 250 and 999 population. Numerous studies covering trends from 1900 to 1940 conclude that the number of both incorporated and unincorporated places over 250 population has remained stable or increased slightly.[1] It seems safe to assume that the small locality group is still important, numerically at least, in the nation's social structure.

A count is not available of the number of these villages located within metropolitan communities, but a rough estimate indicates the number may be as much as eighty per cent of the total. The estimate is based upon the median number of incorporated villages under 2,500 population in the ten largest metropolitan districts in 1940.[2] The distribution of places under 1,000 is assumed to follow that of places over 1,000 but under 2,500.

The number of small village centers takes on added significance when related to the dramatic suburban movement of population in recent years. An estimate made on the basis of the 1920 census placed approximately fifteen million in the suburban population. Attempts at comparable estimates placed in the suburban population a total of twenty-three million in 1940 and thirty-five million in 1950.[3] During the thirty years the suburban population

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[1]See Charles P. Loomis and J. Allan Beegle, Rural Social Systems (New York, 1950), pp. 217-221.

[2]Hawley, p. 272, Table 28.

[3]Wilbur C. Hallenbeck, American Urban Communities (New York, 1951), p. 207.

increased from fifteen per cent of the national population in 1920 to nearly twenty-five per cent in 1950. Most of this suburban population is in metropolitan areas. Hallenbeck lists 10.6 million living outside central cities in 1920 and 34.9 million in 1950.

The study of village sub-communities within metropolitan areas is also important from a trend standpoint. According to Hawley, the most rapidly growing populations in the last thirty years have been those in rural areas and small cities within metropolitan districts.[1] He shows that the national population was increasing 7.2 per cent from 1930 to 1940, while the unincorporated area within metropolitan districts was increasing twenty-nine per cent. Places of 2,500 to 5,000 increased by twelve per cent and as size of place increased the growth gradually declined so that places of over 100,000 increased only four per cent.[2]

Hatt and Reiss reported that more than eighty per cent of the national population increase from 1940 to 1950 took place within the 168 metropolitan areas. The hinterland areas again grew the fastest. The authors wrote, "Since standard metropolitan areas are very largely urban, the population changes of the last decade point to an increasing urbanization of the country, with the more spectacular development occurring in the smaller urban and suburban communities adjoining our metropolitan centers."[3]

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[1]Hawley, p. 420.

[2]Ibid., p. 422, Table 55.

[3]Hatt and Reiss, p. 68.

The cumulation of this growth has increased the proportion of the total metropolitan community population living outside central cities from twenty-eight per cent in 1910 to forty-two per cent in 1950.[1]

Methodology

The analysis of the business structure in Linden, Michigan, in 1900 and 1950 and the observation of the changes and of their relationship to transportation change is not a test of the hypothesis. This is a case study. A specific community taken under its own peculiar conditions cannot test a hypothesis. It can do no more than lend credibility and suggest refinements of predictions that could then be tested either statistically or experimentally. However, both of these tasks -- establishment of credibility and exploration -- are valuable processes that adequately justify the effort.

The research was accomplished with the customary sociological methods. Data were collected by both field and library methods. In general the background material was obtained through the libraries. Most of the information on the community was obtained through field techniques.

Field collection extended from August 1949 to July 1951. There were several intensive periods of two to three weeks' duration, but the general procedure was one or two day-long visits by the author every week. Fieldwork

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[1]Hallenbeck, p. 226, Table 26.

was contributed by others when required by special demands.

All available avenues to information were utilized. Data for 1900 are based upon old volumes of the village newspaper, maps, gazetteers, directories, county histories, organizational records, and aged informants. The organizational records include church, associational, government, school and cemetery materials.

The aged informants were interviewed by formal and informal techniques. Close friendships were developed with many during the two-year field period, and frequent specialized interviews with these people were held rather than single comprehensive interviews. The latter type of interview was planned originally but it was found that this exhausted the informants over sixty, resulting in unnecessary errors.

As a general rule the aged informants were not asked to summarize conditions in 1900 but were interrogated only on activities with which they had been associated regularly. Depending on the specific circumstance, aged informants were considered to be respondents who had lived in the Linden community prior to 1911, and who were at least ten years old at that time. There were about ninety in this group in Linden and the surrounding villages. Informants were not limited to those who were adults in Linden in 1900 because for specific units a migrant or child could report conditions of a few years after 1900 and older sources were then asked to check the report to insure that things had not changed in the few intervening years. For

instance, reports on a grain elevator were taken from the 1908 owner rather than from earlier owners. Secondary checks then showed the 1908 situation to be the approximate 1900 condition. This technique was not used for more than a ten year period.

About half of the aged informants lived in 1900 in the village itself and the other half on surrounding farms. Males and females were about equally represented. Property owners were predominant.

The methods used for the collection of 1950 data parallel those for 1900, but with greater concentration on formal methods. Virtually everyone in the village was interviewed at least once. Ten interviewers made a ninety-five per cent coverage of the village population during a two-week period in June of 1950. Formal interviews were made in July of 1951 with the proprietor of each business. There are seventy-eight business units in the village, forty of which were interviewed with a formal schedule. In addition, there were less formal interviews which covered all businesses.[1] Interviews on the agricultural system were informal.

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[1]The less formal interview technique implies several things. It means that a printed form covering all aspects of interest was not used. Most often they were short, revolving about a specific problem, such as function. However, questions were prepared in advance of the interview. It also means that general problems of all units of that particular type were discussed. Sometimes, this form was used because it overcame rapport problems. The informal interviewing was all done by the author.

Observation was a major tool in 1950. Repeated visits to the community permitted many inspections of nearly every business.

Recorded materials were extensively used in 1950. They included the village newspaper, village council meetings, church records, associational materials, maps, and directories.

Reduction of the data to manageable form was performed by standard mechanical and hand coding procedures. The analytical methods involve nothing unusual and will become apparent as the report progresses. The conceptual tools are similarly standard. There are a few definitions which it might be well to review for the reader.

Basic Concepts

The research is based upon the economic functions of the community. Function is defined on three levels. It is first the specific commodities or services provided by a business unit in relation to the specific group served. It is second the organization of these specific functions into classes. For instance, all stores combined form the retail class. It is third the generalization of classes into systems, such as combining of retail, wholesale, and other classes into the exchange system.

The functions analyzed are those carried by the corporate business units of the community. The definition of corporate unit given by Hawley is:[1]

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[1] Hawley, pp. 209-210.

> Such a group is internally differentiated and symbiotically integrated; it constitutes an organ of the larger communal organism. (Further) ... it assumes a unique functional position in the communal structure.

In this study the essential aspect of this definition is the unique function of the corporate unit. The corporate unit at any given time is a concrete group, or individual, carrying on the unique function in the community.

The units have been classified as continuing, deceased, and new. The first type are those for which there were comparable types in 1900 and 1950. Continuity of the unit does not mean continuity of personnel. Comparability of units is measured by the specific function and in no other way. The deceased units are simply the reverse of these. The new units are those introduced into the structure after 1900, or those where there was a conversion of function during the fifty years.

Operationally, the corporate business units vary from one man places without internal differentiation to places of about ten employees, internally differentiated. The smaller units are included as corporate groups because of their unique role in the structure. To omit these groupings in the small village would be to ignore much of the economic activity.

The units were used to count and measure the functions. Operationally, functions were counted present in the community when they were carried on by a specially organized corporate business unit. The number of business units

is greater than the number of functions and has been used to measure the extent of a particular function in the village community. The measure is a rough one. The number of units should have been weighted by size of unit for an accurate measure of the extent of the function. Size should be measured by such things as the number of persons employed, number of hours of operation, weeks of operation annually, gross annual income, and square feet of building needs. The present study could not be refined to this degree.

Change is defined as a nonrepetitive movement. Since the study is only of accomplished change, the method of determining change was to prepare cross-sections of the community economic units and functions in 1900 and 1950 and then to compare the two and observe the differences in types and in the size of any function. A conclusion of change was made when it was observed that functions were present in 1950 which had not been organized in economic units in 1900. Change was also concluded if it was observed that functions and units present in 1900 were missing in 1950. The processes of addition and subtraction were very important in the total community change. There was another type of change.

Some units (the continuing units) were present in 1950 as modified forms of 1900 units. Change or stability in these was observed with the aid of several guides. The degree of stability was first gauged by a simple criterion: To what extent could a community resident obtain in 1900

and 1950 the identical service from the same type of unit. The concept of similar service relies on precise independent definition of specific functions in both years. Further, informants' judgments of change in specific continuing units were obtained by asking how a service they were recalling was different from an apparently similar one observed in 1950.

A second criterion applied to functions with similarities in the two years was a rough measure of the quantity of the function. An expansion or contraction of the function was measured by an increase or decrease in the number of units carrying any specific function.

The relative stability of a specific function was also estimated by the degree of alteration in units closely interdependent with it. The greater the change in a related unit the more likely the unit under observation had also changed. The technique was to analyze the activities in which two units were specifically interrelated and if the using agency was so changed as to no longer need the service it was taken as evidence that the serving unit had also changed. For instance, there was a blacksmith in both years but the activities of farmers to which the blacksmith was related had so changed that there was little similarity in the functions in the two periods.

The concept of stability, as used in this report, implies a range of modification from steadfastness to near conversion of the specific function. The operational problem was simple as far as determining high stability was

concerned. The procedure of clearly defining specific functions in each period without reference to each other and then comparing them quickly demonstrated any similarities. Informants' judgments of change in continuing units were valuable guides also. Some modification was always found.

There was greater operational difficulty in observing whether or not the modification of the specific function was so great as to be called a conversion. It was called a conversion when the specific function was so changed as to radically alter the relationship of the unit to the market. If it were a conversion -- as from a general farm to a dairy farm -- the unit was also put in the "new" unit classification rather than the continuing unit group. In general, the rule was to understate change by defining the alteration as a modification and thus increasing the number of continuing units.

Throughout the analysis the community is divided into village and service area. Village always refers to the area within the legal incorporation boundary, and includes all of the built up area as well as the inner fringes of the farm area. The service area includes the adjacent farm and lake residential zone within which the population is functionally related to the village for economic services. The areas are shown in Map 2. When "Linden" is used alone it refers to the total community.

CHAPTER TWO

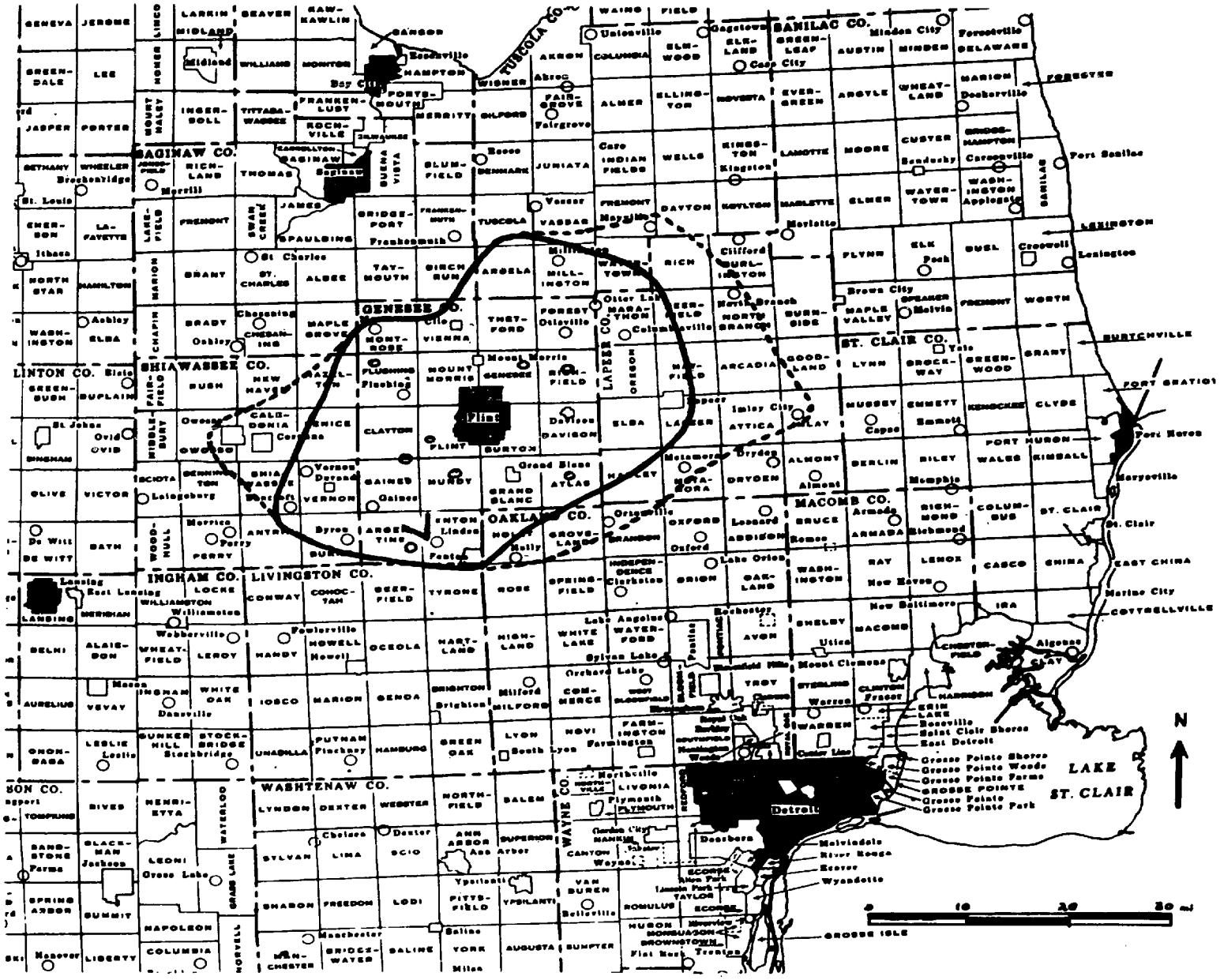
LINDEN DELINEATED

Linden is a small community seventeen miles southwest of Flint and sixty miles northwest of Detroit. The community lies in four townships in southwestern Genesee County and two townships in northeastern Livingston County.

Physical Influences

The four physical assets of good agricultural land, water power, numerous lakes, and southern hills have been important in the location and development of the village community. The village center is located on the Shiawassee River, at a point which was first important as a river crossing. Early farmers transporting wheat to Pontiac for marketing crossed at Linden. But the major value of the river was its power. Almost immediately upon settlement the river was dammed and put to work running a saw mill. A flour mill was soon added. Power for industrial use has since been taken from the river. Even today, the flour mill uses it for power, though imported power is now more important.

Informants felt that the water power potential of the river was one of the most important assets of the village in earlier years. Physical evidence substantiates



Map 1: The Flint Metropolitan Community.(Adapted from Marian E.Dunlap, The Urban And Metropolitan Status Of The City Of Flint, Figure 6)

Legend

____ Area of Flint dominance

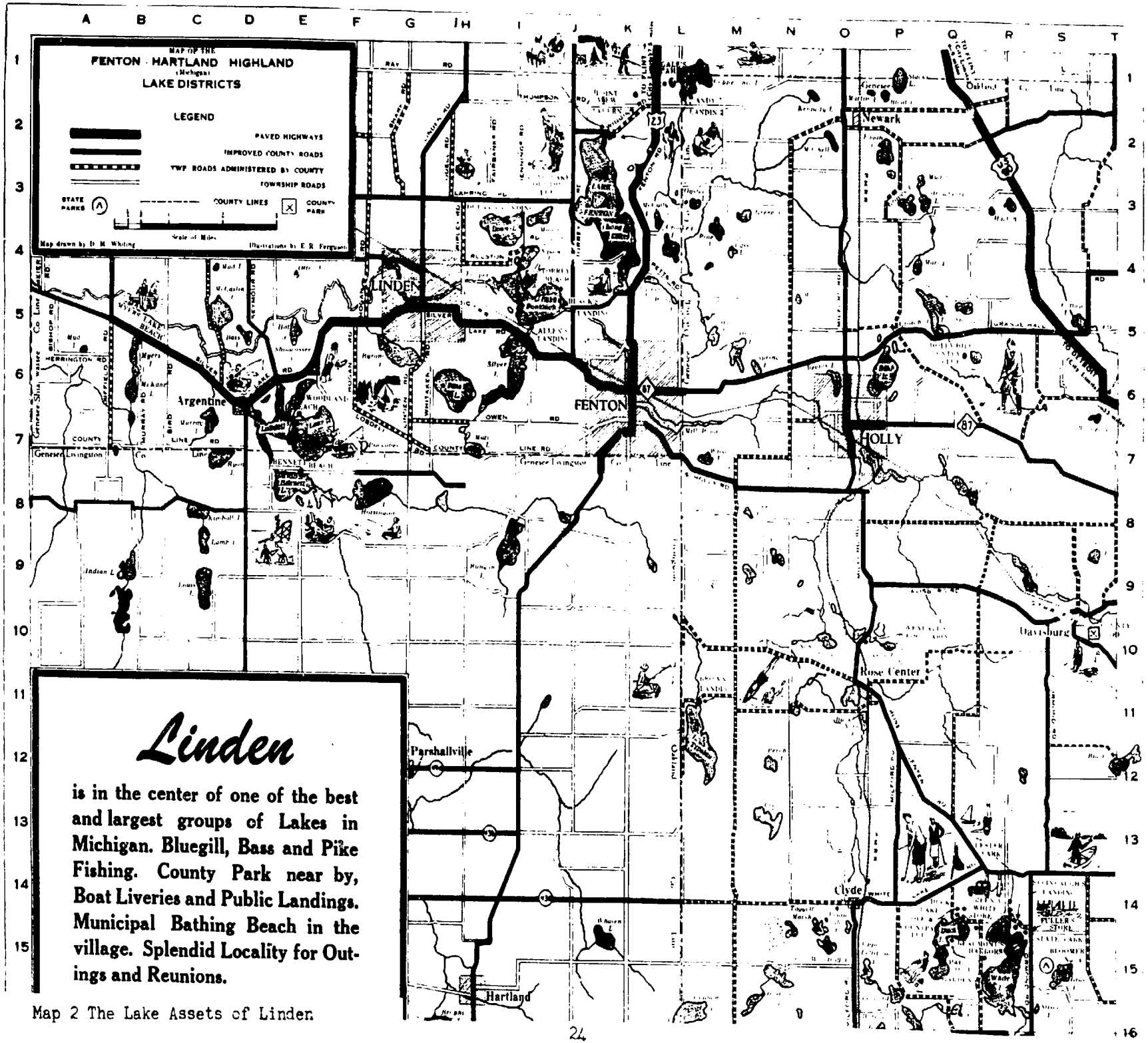
---- Area of strong Flint competition

this. The business center of the village is located about one-half mile south of the railroad station. This is most unusual since village businesses in 1900 were completely dependent upon the railroad for shipping. It was reported that immediately after the railroad was completed a migration began from the original village location on the river to the railroad. But the need to be near water power quickly halted the change, and residential and business lots around the railroad remained undeveloped. Most of the platted streets were never opened. Wholesale marketing businesses were about the only ones to survive there.

Other physical factors were also important in the holding of the business center at the original location. The investment in business buildings was one. But it was probably more important that the village center was on the intersection of the main east-west and north-south roads. The river and lake distribution prevented the northward relocation of the east-west road.

Good agricultural land was the fundamental reason for the settlement of the community. The first settlers were looking for land suitable for wheat. The community has always exported farm products, and, until recent years, they have been the major source of income.

The many recreational lakes are the third physical asset. Map 2 is a recent publicity release extolling their value. Change in their utilization is one of the major



Map 2 The Lake Assets of Linden

alterations in the community structure. In 1900 they were camper sites. By 1950 they had become year-round residential developments for Flint's labor force.

For the most part Linden is set in relatively flat land but about three miles to the south of the village begin a series of steep, sandy hills. Their impact on the community has been both to protect and limit it in that direction.

Informants reported that it was nearly impossible for Tyrone township farmers with loaded grain wagons to climb the hills and get into Linden village. The wagons too easily bogged down in the soft sand. It was much more convenient to move to the northeast into Fenton, which most did.

Even today the same roads and hills are limiting the community area. The unpaved roads constantly hinder the buses that now criss-cross the area to collect children for the Linden public school. In the spring of 1950 the whole area was closed to the buses for more than a week.

Pine and Silver Lakes, shown on Map 2, also form a barrier to community expansion to the southeast. The lakes north of Silver Lake and directly to the east of the village continue the barrier to the north, limiting Linden's eastward expansion.

It is likely that the road and lake barriers have also had a beneficial influence on the community. Fenton village is much larger than Linden village and it seems likely that it would have captured most of Linden's eastern

area if it were not for the lakes. Only five miles separate the two villages.

Community Boundary Delineation

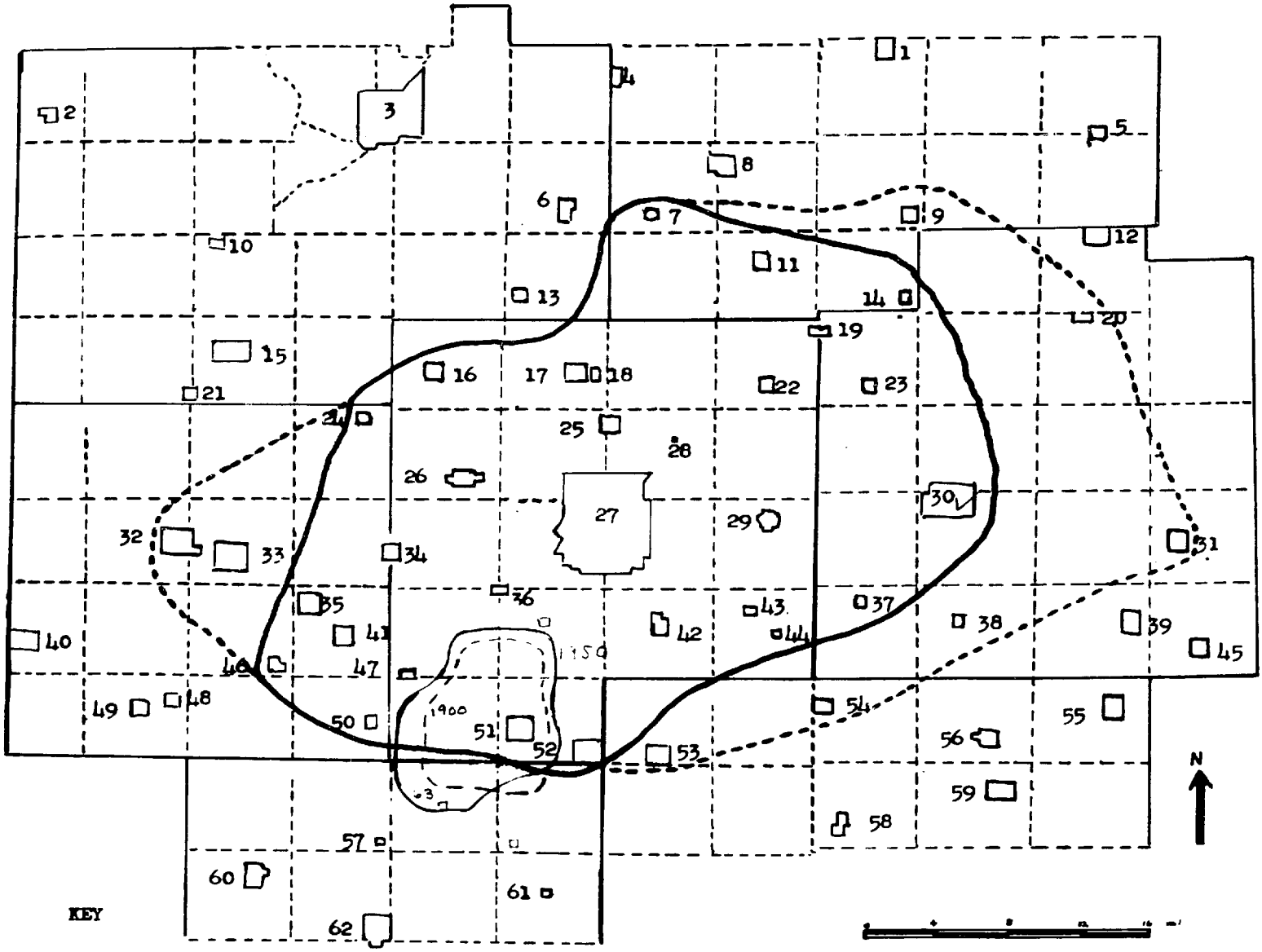
Map 3 outlines the Linden community area in 1900 and 1950. In 1900 the functional area extended about five miles to the north of the village center, four miles to the west, four miles to the south, and one and one-half miles to the east. In 1950 the functional area was about six miles to the north, five miles to the west, six and one-half miles to the southwest, and one and one-half miles to the east.[1]

In both years the functional boundary is based upon statements by associational members, businessmen, and other residents about their service area and their opinion of the general community area. The high school service boundary was also used in 1950. Reports of rural residents who had lived around the peripheries of the community in 1900, a listing of farms lying closest to the Linden Post Office published in 1881, and newspaper personal notices were used to check the 1900 line.[2] An informal estimate was made for both periods of the likely attractive power of competing centers.

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[1]The average distance of Genesee farmers to the trading center most frequently visited was four miles, while for Livingston County farmers it was seven miles. (U. S. Census of Agriculture, 1950, Farms, Farm Characteristics, Farm Products, preliminary report)

[2]H. G. Osborne's Flint City and Genesee County Directory 1881-1882 (Flint, 1881), The Linden Leader, Vol. 5, August 1, 1901-July 24, 1902.



KEY

1. Caro
2. Merril
3. Saginaw
4. Reese
5. Kingston
6. Frankenmuth
7. Tuscola
8. Vassar
9. Mayville
10. St. Charles
11. Millington
12. Clifford
13. Birch Run
14. Fostoria
15. Chesaning
16. Montrose
17. Clio
18. Pine Run
19. Otter Lake
20. North Branch
21. Oakley
22. Otisville
23. Columbiaville
24. New Lothrop
25. Mount Morris
26. Flushing
27. Flint
28. Genesee
29. Davison
30. Lapeer
31. Imlay City
32. Owosso
33. Corunna
34. Lennon
35. Vernon
36. Swartz Creek
37. Hadley
38. Metamora
39. Dryden
40. Laingsburg
41. Durand
42. Grand Blanc
43. Atlas
44. Goodrich
45. Almont
46. Bancroft
47. Gaines
48. Morrice
49. Perry
50. Byron
51. Linden
52. Fenton
53. Holly
54. Ortonville
55. Leonard
56. Oxford
57. Oak Grove
58. Clarkston
59. Lake Orion
60. Fowlerville
61. Hartland
62. Howell
63. Deerfield Center

Map 3: The Linden Community Area in 1900 and 1950. (Adapted from Marian E. Dunlap, The Urban And Metropolitan Status Of The City Of Flint, Figure 5)

Legend
____ Area of Flint Dominance
---- Area of strong Flint competition

The two boundaries are considered reasonable estimates. As lines, they are artificial. The attraction power of the village center declined gradually with distance in both periods, though there was a steeper gradient in 1900 than in 1950. Because of the gradient the actual boundary in both periods was an indefinite zone encircling the village with approximately the same contours as the illustrative lines. The blurred boundary was at least one mile wide, except to the east. Most informants on 1900 stated their conception of the trade area in such a framework, saying, for example, five to six miles to the north, five to six miles to the west, three to four miles to the south and one and one-half to two miles to the east. Statements for 1950 were in the same pattern.

The two boundaries are also broad bands because of the variation in the service areas of retail stores. In 1900 the largest unit, a hardware store, was believed to have a selective trade area up to five miles beyond that outlined. The smallest unit served an area more than one mile inside the given boundary. There was similar variation in 1950, with a lumber yard having the most extensive trade area while one grocery unit was serving an immediate neighborhood area.

The boundary differed also for classes of functions. The service and manufacturing unit functional areas were larger than the retail trade area. The wholesale area was about the same as the retail area in 1900, but by 1950 it had

expanded well beyond the retail zone. The wholesale area remained small in 1900 because of the bulk of the farm products in relation to horse hauling power, dirt roads and hilly terrain. In general, the size of the service area for specific functions depended on the bulk of the goods, the type of competition from some nearby town, the frequency with which an item was needed, and the quality of the merchandise.

The community service area means something different in the two periods. The 1900 area, despite the blurred boundary line, was dominated by the village center. Rural residents could, and did, get most basic needs satisfied in the village. In 1950, however, the boundary enclosed only an area in which all parts are extensively served by at least one, but usually more, village agencies, such as the school, a business, or an association. The growth of the metropolitan community has so altered the distribution of functions among communities that it is no longer possible to speak of a dominated area in reference to sub-centers, except in regard to a specific function.[1] The 1950 line was placed so as to include those families tending regularly to use more than one of the village services.

Linear distances are used to compare the two boundaries in Map 3, and this hides a second difference

[1]Farm marketing services are a good example. In 1900 the Linden area farmer could market his grain, livestock, wool, poultry, butter and eggs in Linden. By 1950 he marketed his eggs and cream in Linden, his field crops in Fenton, his livestock in Howell, his milk in Flint.

between the two periods. In time-distance, as shown in Figure 1, the two boundaries are very different. The most distant point in 1900 was approximately one hour from the village. In 1950 the same point was only fifteen to twenty minutes from the center. It is on this basis it was stated above that the trading gradient was steeper in 1900 than in 1950.

Population Size and Distribution

Linden was a community of approximately 2,200 population in 1900 and 4,450 in 1950. Table 1 lists the data. Approximately twenty-five per cent in 1900 and twenty per cent in 1950 were village residents. Virtually all the service area residents in 1900 were in the farm population. By 1950 the farm population had declined to about forty-eight per cent of all service area residents.

Village population growth, shown in Table 1, is an actual increase, as the village area today is somewhat smaller than in 1900. Population growth in the rural area reflects an increase in the community area from fifty-two to sixty-six square miles, as well as the increase in the rural non-farm population. Within the 1900 community area, the farm population has steadily declined.

The population totals and distributions are approximations based upon the boundaries drawn in Map 3. In some instances the population served by a village business would be larger than the approximate figures and in other cases it would be smaller since the community boundary was blurred

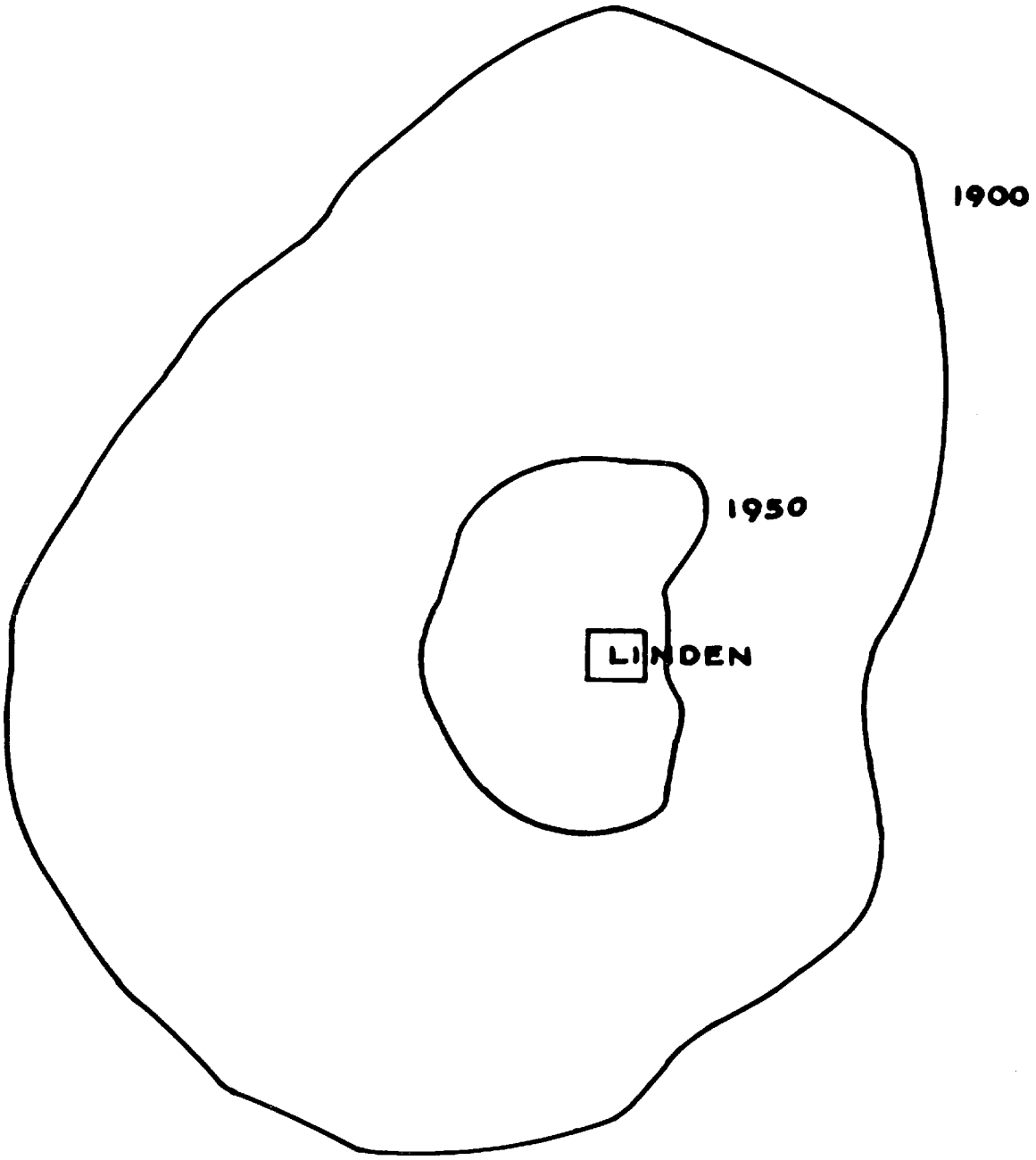


FIGURE 1: A COMPARISON OF THE TIME REQUIRED TO REACH ANY POINT ON THE COMMUNITY BOUNDARY FROM THE CENTER, 1900 AND 1950

Scale: 1 inch = 20 minutes

TABLE 1

ESTIMATED POPULATION SIZE AND DISTRIBUTION OF THE LINDEN COMMUNITY, 1900 AND 1950

Year	Population			
	Community	Linden	Rural Farm	Rural Non-Farm
1900	2,203	543	1,560	100[a]
1950	4,465	933	1,695	1,837[b]

Source: Basic data were taken from the U. S. Census, 1900 and 1950.

[a]Argentine Center, a sub-shopping center, was estimated on the basis of informants' reports and inspection.

[b]It is only a very approximate figure. Rural area population was estimated on the basis of computed density per square mile. Land area of the six townships surrounding Linden was computed from maps and census figures for townships used to obtain density. Division between farm and non-farm was estimated by assuming size of farm population in the six townships in 1940 remained constant to 1950. The proportion this was of total township rural population was then applied to estimated total rural population in the community.

TABLE 2

THE TOTAL POPULATION, BY DECADES, 1890-1950 OF THE SIX TOWNSHIP ENVIRONMENT OF THE LINDEN COMMUNITY

Township	Population						
	1890	1900	1910	1920	1930	1940	1950
Mundy	1,390	1,368	1,168	1,170	1,552	1,884	2,694
Gaines	1,735	1,619	1,469	1,593	1,858	2,132	2,418
Argentine	1,069	927	821	723	763	936	1,330
Fenton	3,667	3,843	3,667	4,997	4,887	6,018	8,245
Tyrone	1,076	911	829	737	823	920	1,039
Deerfield	1,072	898	816	771	695	789	919
Totals	10,009	9,566	8,770	9,991	10,578	12,679	16,645

Source: U. S. Census, 1890-1950.

in both periods. It is difficult to give the range of population with any precision, but it is known to fall definitely between the village population and a point below the total population of the six townships in which Linden is located. The populations of these townships are given in Table 2.

While the geographical and population dimensions of the community have some fluidity, it does not mean that the approximations are without purpose. They do represent an area and people effectively organized into a functioning group. This will be readily apparent as the cross-sections for 1900 and 1950 are reviewed.

Inter-community Relationships

The village community is situated among a cluster of small villages and towns located five to eight miles apart. In both 1900 and 1950 its position relative to these places was important for its own structure. The size of the community area is the most obvious case. Each village served a zone immediately surrounding it and competed with Linden at its periphery. The list of principal competing places is shown in Table 3. The list is ordered counter-clockwise, beginning due east in Fenton.

A visual picture of the relationship of these places to Linden can be obtained from Map 3. It was found by a comparison of Genesee County maps for 1873 and 1907 that there was a reduction in the number of centers during that period, with "corners" tending to disappear. The cen-

TABLE 3

THE SMALL TOWNS COMPETITIVE TO LINDEN, SHOWN BY DISTANCE AND POPULATION SIZE, 1900 AND 1950

Place	Miles from Linden	Population	
		1900	1950
Fenton	5	2,408	4,226
Grand Blanc	9	unknown	998
Swartz Creek	8	unknown	896[a]
Durand	11	2,134	3,194
Gaines	7	240	352
Byron	8	432	439
Howell	15	2,338	4,353
Linden		543	933

There are some very small centers within this area which provide groceries and gasoline competition. These include Oak Grove, Livingston County; Argentine, Genesee County; Parshallville, Livingston County; Rankin, Genesee County.

Source: U. S. Census, 1900 and 1950.

[a] Flint Market (Flint, 1948).

ters functioning in Genesee County in 1907 tend to be active today, though not all have grown. Some minor places in Livingston County have declined or disappeared. Deerfield Center, shown on Map 3, is no longer active. Oak Grove, Parshallville, and Hartland are all less active today than in 1900. The extension of the Linden community into Livingston County is due partly to their decline. The tendency to decline seems to have varied with distance from Flint.

The places surrounding Linden in 1900 and 1950 were not equally competitive. Rather, the communities may be ordered in a hierarchical pattern according to size and function. Each succeedingly larger town tended to exert selective functional control over the service areas of the surrounding smaller places, with all being influenced by the top competitive positions of Flint and Detroit. The hierarchical patterns were different in the two study periods.

Linden was about midway in the size hierarchy in 1900. Below Linden were the very small places on the order of Argentine Center and the somewhat smaller places such as Parshallville and Gaines. Then at about Linden's own size were Byron and Grand Blanc. Immediately above Linden in the hierarchy of business centers were Howell, Fenton, and Durand. Owosso (8,896 in 1900) and Flint (13,103) were at the top of the Genesee County hierarchical system. Detroit (285,704) dominated the region, with some competition from Saginaw (42,345). Each step, except the last, in the 1900

size hierarchy was relatively small.

The communities remained in the same relative order during the ensuing fifty years but the gap between size classes greatly increased, particularly between the middle and the top. Flint is now the dominant with a population of 163 thousand in 1950.

In the functional hierarchy in 1900 the village centers smaller than Linden tended to concentrate on satisfying the personal needs of the immediately surrounding farm population. At Linden's size the places had a more balanced economy, catering to both the personal and general business needs of the farmer, and perhaps having some manufacturing. The next larger places had a similarly balanced economy but also had more expensive "shopping" functions in clothing, furniture, and other less frequently needed goods. Owosso and Flint had even more broadly balanced economic systems; each had specialized services catering to the whole trade area. Detroit was the wholesale center.

There was more specialization in 1950 among the towns equal to or smaller than Linden. These small places all tended to concentrate in frequently needed personal services with a specialized and limited business service function. Even towns the size of Fenton played more specialized roles than in 1900, though they still had a higher function than Linden. Flint had greatly expanded its services to the whole area. Detroit was much less important as Flint replaced it as the wholesaling center.

Saginaw also expanded its wholesaling function at the expense of Detroit. Owosso was much less important than in 1900.

Temporal Delineation

Now a sub-community in the Flint metropolitan community, Linden has had two earlier forms. From its founding in 1835 to about 1860, it was primarily a self-contained farming and farm service community. Following the introduction of the railroad in 1857 Linden entered a second form as a territorial unit still based upon agriculture but closely dependent upon exchange within a regional complex dominated by Detroit and mediated by direct rail connection to Detroit. The community had this general form until about 1925. Beginning around 1915, however, the automobile steadily increased the interaction of Flint and Linden. Flint gradually replaced Detroit as the dominant center, and Linden changed to a specialized sub-community in the Flint metropolitan community. The process was completed by 1940.

Settlement

Linden was settled as part of the rapid occupation of Genesee County land after 1823. Nearly all county lands were settled by 1836. In 1830 the first permanent settler located at the Flint river crossing that was later to be Flint.[1] Linden village had only ten to fifteen people in

[1]Orin E. Wood, History of Genesee County, Michigan (Indianapolis, 1916), pp. 199ff.

1840, but it grew rapidly to 271 people in 1860, the first year it is listed separately in the national census. During these twenty years the county increased from four thousand to twenty-two thousand.

The settlers had a common cultural background, migration history, and economic interest. The common background speeded the creation of a stable society in Genesee County and Michigan soon after settlement.[1] Homogeneity meant the transplanting of a workable social system from the eastern states rather than the difficult meshing of differing social systems that is implied by the settlement of heterogeneous populations. Thus Linden began with the favorable situation of having initially an accepted social pattern for adjusting to the physical environment.

Early Functional Growth

Township organization of Genesee County began in 183? and was completed in 1855.[2] Linden village was platted

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[1] This point is emphasized in John T. Blois, Gazetteer of the State of Michigan (Detroit, 1838), pp. 157-161. In part, it reads (referring to the state):

> Of foreigners, the Germans are c nsidered the most numerous. Of the native American citizens, there are many from Pennsylvania, Ohio, and New Jersey, and some from Virginia; but the greater portion, estimated by competent judges, at nearly two-thirds of the entire white population, is from New England and Western New York, and the larger part from the latter.
>
> The habits, manners, customs and character of the people, partake much of that of the two sections last mentioned, where the force of circumstances has not wrought a change. (p. 157)

Later the account referred to them as being "mostly young or middle aged ... very few, who do not own, or possess the means of owning, a farm" (p. 158)

[2] Wood, County History, 1916, p. 198.

as part of Fenton township in 1840. The township, like the others in the county, was organized as an open pattern farming community. Linden was planned as service center for the immediately surrounding agricultural population.[1]

At the time of its platting Linden village had several economic functions. The first village unit was the Lamb House, a tavern for travelers crossing the Shiawassee River. This was the only unit before 1860 not oriented primarily to the resident farm population. The second village unit was a saw mill.

A grist mill was added in 1838. Then came a general store in 1839 and a drug store in 1840. The village was

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[1]Blois, 1838 Gazetteer, pp. 219-220 and p. 287 described Genesee County and Flint in these terms:

> Organized townships -- Argentine, Flint, Flushing, Fenton, Genesee, Grand Blanc, Mundy, Vienna. Villages-- Flint, Leroy, Grand Blanc, Fentonville.
>
> The face of this county may be said to be rolling. The soil is mostly a dry, sandy loam, and generally free from stone, but there is a sufficient supply, however, for farming purposes. In the southern part are found oak openings -- the remainder is timbered land, and what is there termed, "hazle brush." On the Flint river are found tracts of excellent pine timber, which are very valuable. The country is said to be good for grazing, and generally brings good crops of wheat, rye, oats, corn, potatoes, etc. The Flint river and its branches furnish plenty of mill sites. This county has been settled principally within three years past, and emigration to it is increasing...
>
> Flint, a village, post office, and seat of justice for Genesee county, situated on Flint river. It has a banking association, an edge tool manufactory, saw mill, two dry goods stores, two groceries, two physicians, a lawyer, and the land office for the Saginaw land district. The United States road passes through it. There is a good supply of water power in and around it. The emigration to this place has been very great the past two years, and still continues. The village is flourishing and the farming country around it excellent. It is estimated to contain 300 families. Distant 58 miles north-west Detroit, and 584 north-west Washington city.

then able to meet the basic needs of a relatively self-contained farming population. There was apparently little change until about 1851 when a carding machine and cloth dressing machine were installed in the village.[1]

The growth of the village paralleled the development of a general farming system.

Local Independence

In the horse and wagon period Linden was an isolated community. The pattern of local independence is seen in these first economic units. The source of timber for the village saw mill was the local area. Its product was consumed within the community. The source of raw material for the grist mill was the local farms. Its market was the local farms and the few village families.

However, at no time was there complete independence. A homogeneous population had brought with it a social organization adaptable to the environment. The technical implements -- the saw mill, the foundry, the farm implements -- were also transported. The community began as a part of a larger society, however loosely knit, which reserved to itself certain decision rights, and which established the legal pattern within which Linden functioned. The legal relationship is seen in the assignment of county functions to Flint and of state functions to Lansing. From the first, representatives to county and state and nation

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[1]Franklin Ellis, History of Genesee County, Michigan (Philadelphis, 1879), p. 231ff.

were elected by the local community.

The larger society also established the price structure for the agricultural and other implements needed but not produced within the local community. A farmer might have taken his grain to the Pontiac market only once a year but every day he used some implement produced and priced in the larger society.

The community dependence on the larger society applied in many other ways. The county statistics show that in 1848-49, $125,000 of goods were brought into the county for resale.[1] The general store and drug store were the Linden expressions of this dependence. Agriculture was the income producer.

The high degree of local independence was based on poor transportation. Linden was connected with Flint by a dirt wagon road to Fenton, five miles east, and then by plank road to Flint. The plank road remained in operation as a toll road until 1872.[2]

Connections with Detroit were no better. It was a three to four day trip by wagon. Even so, the basic grain crops were marketed at Pontiac.

During its first period Linden was constantly changing. However, the impetus of change was coming from the larger society and largely consisted of the growth of

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[1] Statistics of the Conditions and Products of Certain Branches of Agriculture, Manufacture, and Construction, in the State of Michigan 1848-49 (Lansing, 1850).

[2] Ellis, History of Genesee County, Michigan (Philadelphia, 1879).

Linden in the pattern of the parent society. Without new inventions it seems likely that the relatively self-contained economic system that existed in Linden about 1850 might have soon reached an equilibrium. The land could not absorb many more people. But before a balance was reached a major stimulus was introduced.

The Railroad Period Begins[1]

The basic railroad system linking Linden to local regional and national markets was laid down from 1850 to 1880. Railroad development began with the chartering in 1848 by the state of the Oakland and Ottawa Railroad Company to build a railroad connecting the Pontiac terminus of the Detroit and Pontiac Railroad to the Milwaukee steamer port of Grand Haven, Michigan. The track laid for the new railroad went through Fentonville in 1856 and about one-half mile north of Linden in 1856 or 1857. Since then, Linden has had direct rail connections to Detroit and to eastern manufacturers. The community contact with the west through Grand Haven was completed in 1858.

Other railroad developments in the county were oriented to Flint but they did influence Linden. The Flint and Holly Railway Company, after several failures of other concerns beginning in 1846, completed the track from Flint to Holly in 1864. There it joined the railroad between Detroit and Grand Haven. This indirect route through Holly

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[1]Based upon Genesee County Histories for 1879 and 1916.

was the first rail connection between Linden and Flint.

A railroad northward from Flint to Luddington was completed in 1874. Linden was more affected by the development in 1877 of a direct line linking Flint to Lansing and westward to Chicago. This line crossed the Detroit-Grand Haven route at Durand, twelve miles west of Linden. It was Linden's second indirect connection with Flint.

Railroad routes between Linden and Flint never developed beyond the two transfer linkages at Holly and Durand. Rail travel remained difficult; even at the end of the century it required careful planning and a full day for a round trip. Linden's relationship was altered more drastically with Fenton and Durand than with Flint. Since these were still villages in 1877, the national environment of Linden was more significantly affected than its immediate environment.[1]

In twenty years the railroad changed Linden from an isolated community to a locally independent community with efficient transportation to all of the industrialized northeast. The community structure had to readjust. It could no longer be adjusted primarily to the local geographical environment but had to adapt to the enlarged

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[1]The railroad reoriented the relationship of Linden to the larger social environment but left relatively untouched its adjustment to the local social environment. The automobile, on the other hand, radically altered the local social environment and the adjustment of Linden to that environment. In most respects the local adjustment of Linden at the beginning and the end of the railroad era would be similar.

social environment. Goods and people from the national society flowed into Linden much more cheaply than just a few years earlier. Linden products were more easily marketed in competition with eastern agricultural areas.

Effects of the Railroad

The railroad immediately stimulated growth in Linden village. At the end of the pre-railroad period the village had a population of 271.[1] From its founding in 1835, it had increased about 108 people in each decade. In the decade following the railroad's introduction, 1860-70, the village increased by 294 to a population of 565. The increase was nearly three times that of the previous decades. In the same period Fenton village, five miles to the east, and also on the railroad, more than tripled its population to 2,353, although it had grown only to 735 in its first twenty-five years. After 1870 the rate of village population growth declined and, as shown in Figure 2, population remained relatively stable until the introduction of the automobile and truck. While the villages were growing, the farm population was declining.

The village economic system was also altered by the railroad. The business functions and number of units in 1860 and 1881 and the changes over that period are shown in Table Four. Retailing, wholesaling, and hotel functions

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[1]Actually this was three years after the railroad and undoubtedly reflects increase due to the railroad.

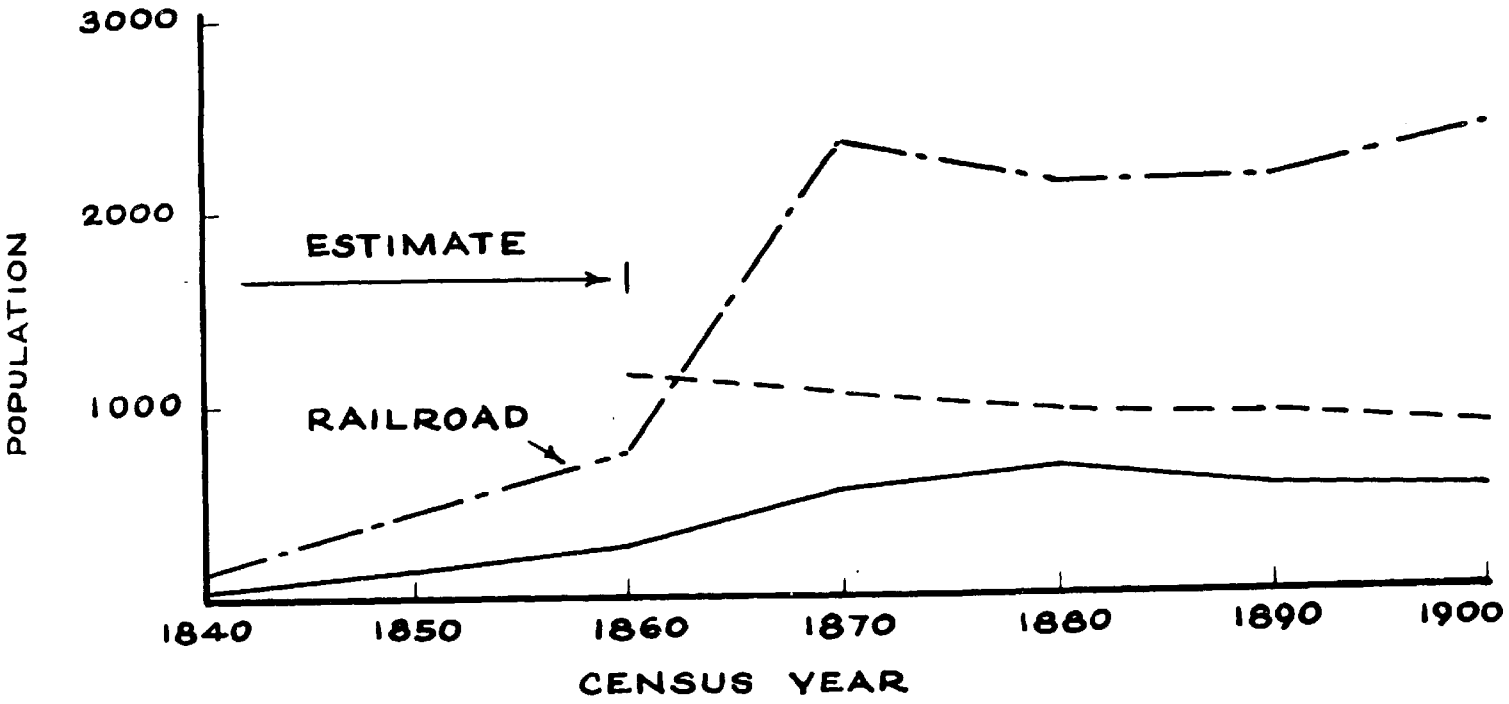


FIGURE 2: POPULATION TRENDS IN LINDEN VILLAGE, FENTON VILLAGE, AND RURAL FENTON TOWNSHIP 1840 - 1900

LEGEND

——— LINDEN

—·— FENTON

– – – – RURAL FENTON TOWNSHIP

SOURCE: U.S. CENSUS 1840 - 1900

TABLE 4

THE ECONOMIC FUNCTIONS AND NUMBER OF BUSINESS UNITS IN LINDEN VILLAGE, 1860 and 1881

Function	Number of Units 1860	1881
PART A, THE PRODUCTION FUNCTIONS		
Construction	11	6
Manufacturing	20	19
Carding Mill	1	1
Sash, blind, doors	1	1
Brick Yard	2	1
Chair	1	1
Butcher	1	1
Dyer	1	1
Cooper	1	2
Flour	1	1
Saw mill	1	1
Saddle and harness	1	1
Carriage makers	1	1
Boot and shoe	3	1
Wagon factory	1	2
Handle factory	1	1
Iron wagon parts	1	1
Newspaper	1	1
Cabinet maker	1	1
PART B, THE EXCHANGE FUNCTIONS		
Transportation	3	(2)[a]
Railroad	1	1
Livery	1	0
Telegraph	1	1
Retail	11	17
Edge tools	1	0
Ag. implements	3	1
Lumber yard	1	0
Boot and shoe	1	0
General merchant	2	3
Drugs	2	0
Drugs and groceries	0	2
Groceries	1	3
Saloon and grocery	0	1
Furniture	0	1
Meat market	0	1
Millinery	0	1
Hardware	0	1
Confectionery	0	1
Clothing	0	2

[a]Not shown in directory but clearly present.

TABLE 4--Continued

Function	Number of Units 1860	1881
Real Estate	1	0
Insurance	1	0
Wholesale		
Commission merchant	1	0
Grain and produce elevator	0	2
PART C, THE MAINTENANCE FUNCTIONS		
Personal Service	3	4
Dressmaker	1	1
Tailor	1	0
Hotel	1	2
Barber	0	1
Professional Service	6	4
Physicians	3	4
Lawyer	1	0
Surveyor	1	0
Dentist	1	0
Repair Services	3	4
Blacksmith	2	2
Foundry	1	1
Paint shop	0	1

Sources: George W. Hawe's Michigan State Gazetteer, 1860 and H. G. Osborne's Flint City and Genesee County Directory, 1881-1882 (Flint, 1881).

increased, reflecting increased dependence on the national society since there was little change in local manufacturing. The implication is that farm production was more extensively exchanged for urban production and that home non-farm production decreased.

The community economy stabilized in the 1881 pattern of a village center active in durable goods manufacturing, farm products wholesaling, retailing, transportation and communication, and a few service functions and catering to a general farm trade area. Exports were mainly wheat, wool, flour, handles, carriages, and wagons. This is essentially the pattern to be described in detail for 1900. Thus for over twenty years prior to the first cross-section of the Linden economy the community had an established, stable business system, apparently well adapted to both the local and national environments.

The Automobile Period

Since the change that followed introduction of the motor vehicle is the major part of the study, only a simple demonstration is given here of the size of the change. Figure 3 illustrates the impact of the automobile on population structure.

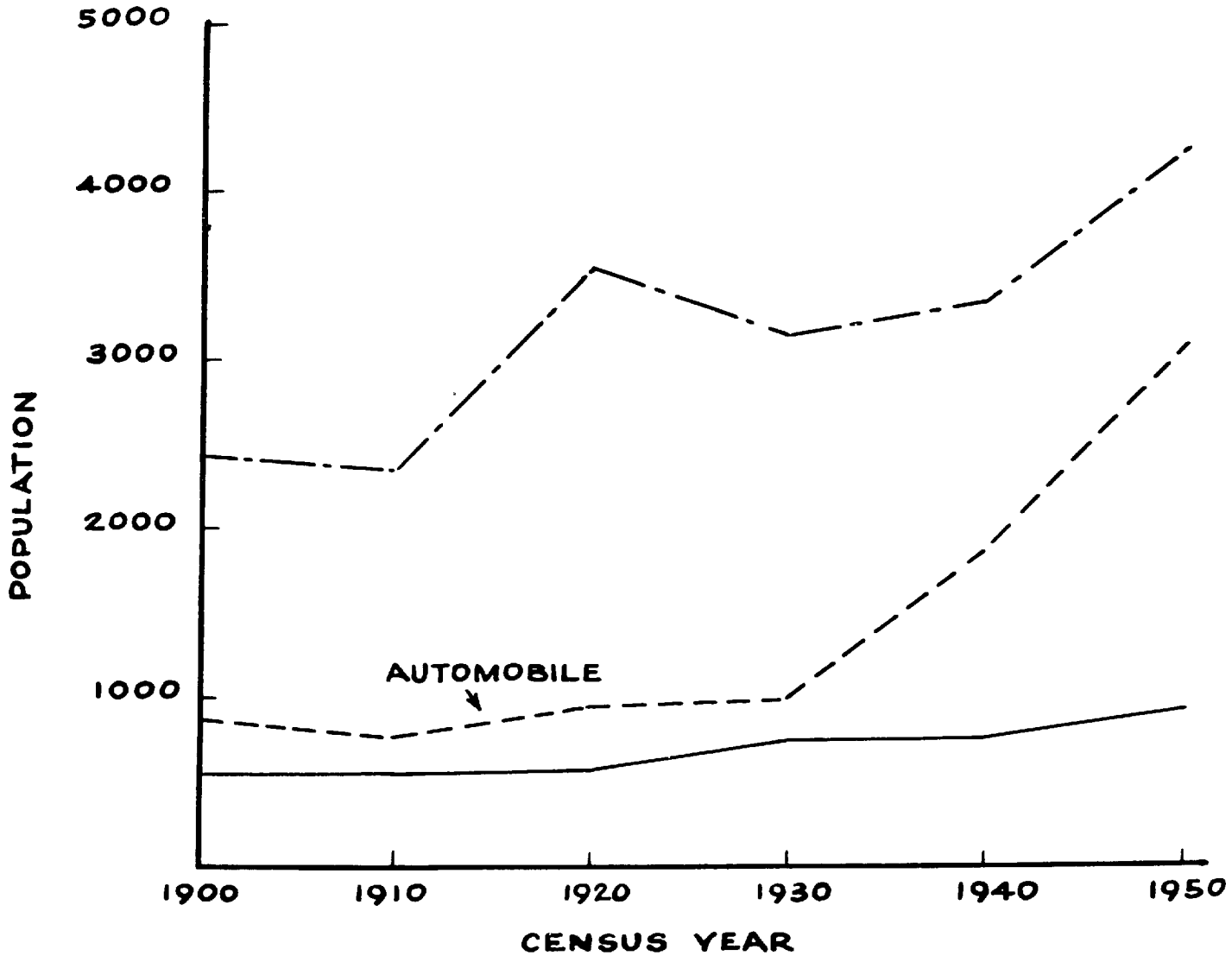


FIGURE 3 : POPULATION TRENDS IN LINDEN, FENTON, AND RURAL FENTON TOWNSHIP 1900-1950

LEGEND

——— LINDEN

—.— FENTON

— — — RURAL FENTON TOWNSHIP

SOURCE : U.S. CENSUS 1900 - 1950

CHAPTER THREE

THE ECONOMIC FUNCTIONS IN 1900

The economic structure of Linden consists of the pattern of interdependencies among the distinguishable communal units which carry on sustenance functions. In 1900 the business units of the village and rural area organized nearly all the work activity of the community labor force. The units were specialized, most having one principal function. Many village business units were very small and none were large. Over half needed less than 500 square feet of building space and only four required more than 5,000 square feet. The average farm was about ninety-five acres, but they varied from three acres to 700 acres. Most village businesses were personally operated by the village resident proprietor. The largest unit employed no more than ten people; most units employed none or one. Very few units had any sort of formal tie to another business.

The business units varied from independent craftsmen, generally lacking in specialized building space, internal differentiation, and formal organization, to a carriage manufacturing plant with approximately ten employees, highly specialized building space, internal functional differentiation, and a formal organization. As a group, the retail units were the most highly organized. All business units fitted a minimum

definition of being oriented to a market for the sale of goods or services.[1]

The General Pattern

There were 455 business units in the community, functionally distributed as shown in Table 5.[2] The units formed three functional systems -- the production, exchange, and maintenance. The three functional systems were a comprehensive business structure with the production system balanced against the exchange and maintenance systems. The agricultural units exported commodities while the non-agricultural units imported them.

The community was based upon a farm economy. Agricultural units were eighty-seven per cent of all business units. Farming enterprises created the principal local markets, since there were seven times as many farm units as non-farm businesses and the farm population was three

[1]"Market" refers to the public, or a segment of the public, which purchases the commodity or service. The purchasing group may be defined by some general characteristic, type of need, or area. For instance, it may be referred to as the farm market or village market. The business need market and individual need market are also used, meaning that the item purchased satisfies a requirement of a business or a personal requirement of some individual. The market is sometimes identified by its location, such as the internal market, referring to the community, and the external market, referring to purchasers outside of the community.

[2]Significant economic activities were organized by non-business units such as the family, school, and associations. The family engaged in food production, processing, preparation, shelter, and sanitation. Other non-business units carried on insurance, welfare, labor force training, entertainment, professional services, police and fire protection, and road construction. A complete study of the economic system would examine all of these units; however, they are beyond the scope of the present report.

TABLE 5

THE ECONOMIC FUNCTIONS AND APPROXIMATE NUMBER OF CORPORATE BUSINESS UNITS, BY VILLAGE AND NON-VILLAGE, 1900

Functional Type	Number of Units			
	Village	Non-Village	Total	Per Cent of Total
Production				
Agriculture	17	380	397	87
Construction	6	0	6	3
Manufacture	5	1	6	
Sub Total	28	381	409	90
Exchange				
Transportation	3			
Communication	3			
Retail	17			
Wholesale marketing	3			
Finance and Insurance	1			
Sub Total	27		27	6
Maintenance				
Business Repair	6			
Personal Service	8			
Professional Service	5			
Sub Total	19		19	4
TOTAL	74	381	455	100

Source: The village units are based on an actual count. The farm units in the rural area were estimated. The distribution of functions by number of units has been on the basis of the primary activity of the corporate groups.

times as large as the village population.

While exchange functions, maintenance functions, and non-agricultural production functions were numerically minor parts of the total community, it does not mean that they were not fundamental components. In some cases a single unit, such as the railroad, performed a crucial community function.

The agricultural and non-agricultural units will be described separately, with the emphasis on the village non-agricultural functional structure. The village farms will be included in the general discussion of farms.

Village Business Structure

The non-agricultural phase of the village community structure consisted of fifty-seven business units carrying forty-two specific functions. The diversity of specific functions shows that the village business structure was broadly based and able to supply a wide variety of community needs. Exchange units were forty-eight per cent, maintenance thirty-three per cent, and production nineteen per cent of the total village non-agricultural units.

The basic functions of the village were expressed in the spatial organization. Retail, personal service, and repair units were concentrated in the village center at the intersection of the two main community highways. Within an area of about 225 feet by 250 feet, thirty of thirty-six such units were located. Their function was to purchase nationally produced goods and import them for redistribution

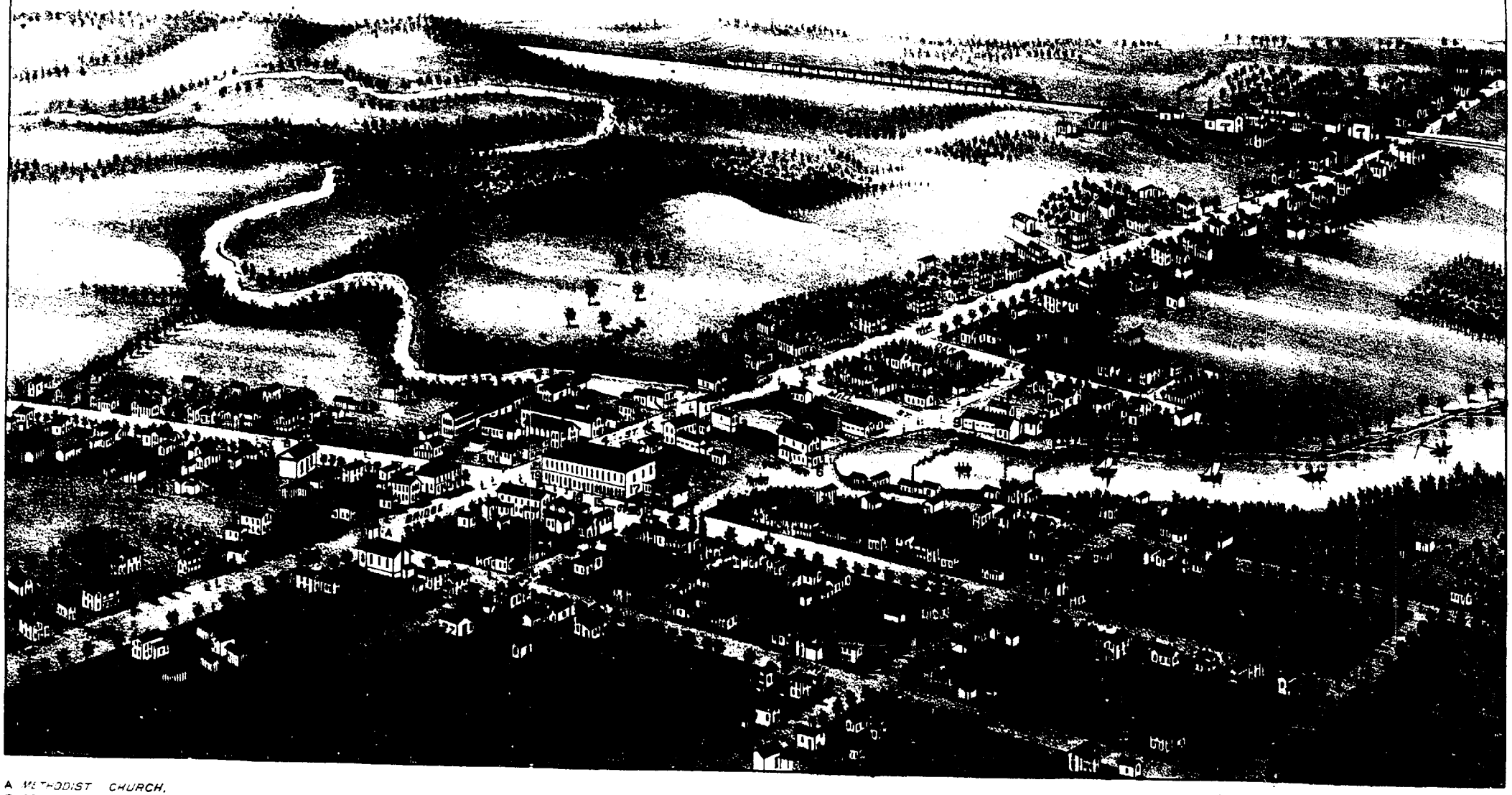
within the community, particularly to the farm population. The wholesale units were located on the railroad at the north end of the village. Their function was to serve the farmer through collecting and exporting his commodities to regional markets. The village production function was minor and essentially oriented to a local market. Hence, they were located near the village center. Farms formed a zone around the whole village.

Stability of the Village System

The spatial relations, and hence the social relations from which they developed, were well stabilized by 1900. The village was well established as a business center by 1860. Map 4 is an artist's conception of the village in 1881. The spatial distribution of businesses is so similar to that in 1900 that it serves as an illustration of the village in that year.

There were no competing business units in the farm area before 1900 which would have delayed the establishment of firm relationships between the village and farm systems. A county map for 1873 showed a few small cross-road places, but the railroad had by-passed them in 1858 and they were disappearing.[1] Map 5 of four townships in

[1]This has been reported in other studies. For instance, Thompson and Warber writing in Minnesota in 1913 stated, "Whereas, there used to be numerous cross-road post-offices and general merchandise stores, the beginning of railway traffic soon gave a decided advantage to those merchants whose stores were located at the railway station. Gradually the cross-road stores went out of business. The advent of the rural free mail delivery service finally did away with practically all of them. The close country store is now a thing of the past in this part of the country." C. W. Thompson and G. P. Warber, Social and Economic Survey of a Rural Township in Southern Minnesota, p. 21.



A METHODIST CHURCH.
B PRESBYTERIAN "
C CEMETERY
1 SCHOOL HOUSE.
2 ENGINE HOUSE
3 D.G.R.& M. R.R. DEPOT.
4 LINDEN CARRIAGE & WAGON WORKS, J. BEACH & SON.
5 LINDEN WAGON WORKS, MYRON HARRIS
6 " FLOURING MILL, " "
7 A.J.BEACHE'S LINDEN WAGON WORKS.
8 FOUNDRY & MCH. SHOP, SADLER & SON
9 BEACH, GEAR COMPANY.
10 HANDLE FACT. THOMAS GEROW.
12 ELEVATOR, I.B.HYATT.
" J. MIDDLESWORTH & SON.

PANORAMIC VIEW OF

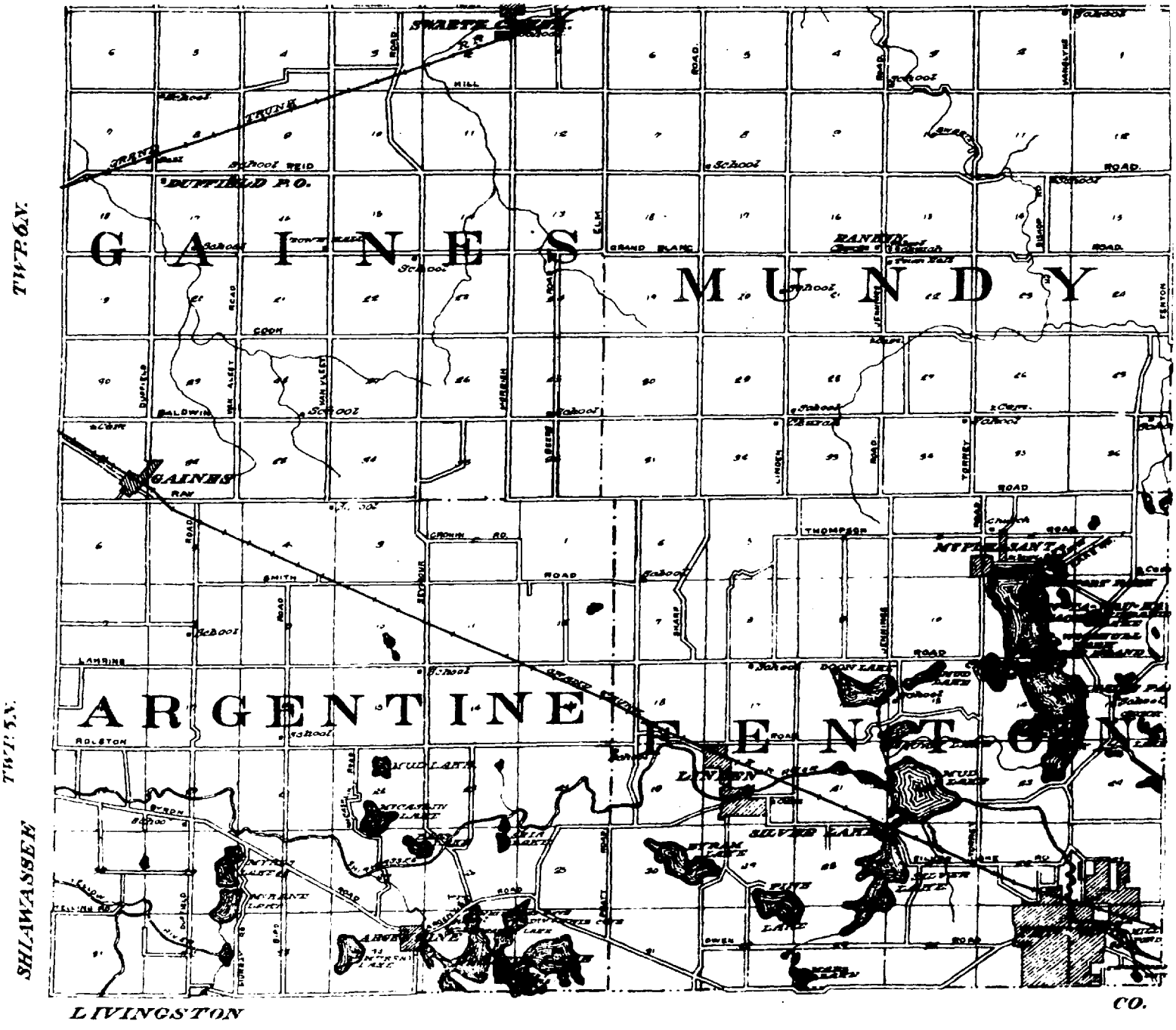
LINDEN

GENESSEE CO. MICHIGAN.

1881.

14 HARDWARE, MYRON HARRIS.
15 GEN. STORE, J.H.LEAL.
16 DRUG & BOOK STORE, J.L.SPENCER.
POST OFFICE, N.B.COCHRAN, P.M.
17 CLOTHING, GENTS. FURNISHING GOODS, & C WM HYATT
18 GROCERIES & PROVISIONS, A.E.DOWNER.
19 " " " E.H.SPENCER.
20 M.AGER.
21 MEAT MARKET, C.E.BUCK.
22 HARNESS, TRUNKS & C C.S.LUCE.
23 FURNITURE & UNDERTAKING, A.J.TICKNER.
24 BLK. SMITH & WAG. REPAIR SHOP B.PERRY.
25 BOOT & SHOE SHOP, COX & HERD.
26 DRUGS, TOILET ART. & C S.D.HARRIS.
27 C.H.LAMOREUX, PHISICIAN & SURGEON.
28 J.B.MOSHIERS, OFFICE.

Map 4: Linden Village, 1881



Map 5: The Area Surrounding Linden Village, 1907
(Adapted from " Outline Map of Genesee County, Michigan",
Standard Atlas of Genesee County, Michgian, 1907)

1907 does not even record some of them.[1]

The stability of the village business structure is indicated also by optimistic newspaper comment in 1900. Two of the articles read:

> Despite the fact of old croakers who have been looking for the chariot of destruction to sweep through the town and crush our fondest hopes, the sloop of Linden before a fresh breeze glides gracefully forward toward the harbor of success. Never before was the town in better shape to take care of the products of the farm -- two modern elevators. Never before have the merchants so crowded the stores with fall and winter goods -- a good sign. Never before has the town been without a marshall -- peace reigns. Never before were the buildings about town in better shape and repair -- a sure indication of thrift. Never before has the place afforded a better grist mill -- flour of industries. And so it goes all along down the line, a prosperous bank here and a Twentieth Century newspaper there, over yonder two excellent drug dispensaries, across the way a hotel, and all around cobbler's shops, barber shops, butcher shop, etc. However, we could use a clothing store very handily, and shall have it too ere the moon eclipses many times -- watch our smoke.[2]

> There is every evidence that the coming spring will be a busy time in Linden, with all the industries working and flourishing, new stores going up, improvements to be made on village property, etc., we open our arms and welcome the advance agent of progression.[3]

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[1]It is interesting that the village was so little the result of a centralization process relocating non-agricultural open-country business units to the village. Accounts of specific units showed that they first located in the village, even before the railroad. Only one unit was found to have moved into the village -- a veterinarian. There was a small reorientation of trade when the cross-roads places died after the advent of the railroad. However, this was only a general store and post-office change. The settlers in the Linden area had to market and trade in Pontiac, some fifty miles to the east. Then as population moved west, marketing centers followed. Linden was more a reorientation of trade relations from more eastern points than a local realignment.

[2]The Linden Leader, November 14, 1901.

[3]Ibid., March 20, 1902.

The Exchange Function

Exchange functions were the core of the village business system in 1900. Linden village was a transportation, communications, marketing, and retail center. These activities formed the basic framework of a comprehensive business center meeting the dual market of farm business needs and individual consumption requirements. The list of specific functions and the units carrying them on is given in Table 6, Parts A and B. Twenty-seven units were primarily exchange units and another fourteen units, otherwise classified, provided additional exchange activities. Of all village business units, seventy per cent had some exchange function.

The critical function -- the one needed if the others were to exist -- was the transportation function.

Transportation

The three transportation units were complementary. The railroad handled the external movement of goods, persons, and ideas; the dray line carried out the internal movement of goods; the livery met needs for personal movement within the community. The livery function was supplemented by a bus line operated by the village hotel. Advertisements stated the horse bus met every train.

The railroad served the marketing needs of the farmer and small village manufacturer. It transported the farmer's beans, corn, wheat, hay, produce, and livestock

TABLE 6

A DETAILED LISTING OF THE SPECIFIC FUNCTIONS OF CORPORATE BUSINESS UNITS IN LINDEN VILLAGE, 1900

PART A, THE EXCHANGE FUNCTION, EXCEPT RETAIL

Specific Function	Number of Units with Primary Function	Number of Units Otherwise Classified, but supplementing this Function	List of Supplementary Units
Transportation			
Railroad	1		
Dray Line	1	A	
Livery	1	1	Hotel
Communication			
Telephone Company	2	1,B	Village newspaper
Telegraph	1		(Railroad)
Wholesale Marketing			
Bean and grain Elevators	2	11,C	Hay & Produce Dealer (1)
Livestock Dealer	1		Livestock Dealer (1)
			Flour Mfg. (1)
			Food Stores (6)
Finance, Insurance and Real Estate			
Bank	1	D	
Insurance		2	Druggist, general merchant
Real Estate		1	Lawyer

[A]A few farmers competed with the dray line, particularly in the low activity winter months when their teams and wagons were not busy. However, it was for special needs such as hauling gravel for township and village roads or hauling lumber from their own land for the village handle and wagon factories.

[B]The United States Post Office, of course, was extremely important to the village.

[C]There was limited direct wholesale marketing by farmers.

[D]Personal credit by retail stores was a common practice.

and the village manufacturer's flour, tool handles, and carriages. The volume of the latter was very minor. The railroad also met the supply needs of the village merchants and, hence, the individual and business consumption needs of the community. Finally, the railroad was the agency for personal travel, both local and long distance. In this way the railroad made Linden village a transport center for the community.[1]

The principal function of the livery stable is suggested in this statement from the village newspaper, "We wish them success. They are well equipped for taking care of summer tourists and traveling men."[2] The reference to traveling men is particularly important. Drummers arrived regularly in Linden by train with as many as ten to twelve trunks of sample goods for display to merchants. While stopping in Linden for one to two weeks, they would rent rigs from the livery in order to make a circuit of nearby small business centers which were not on the railroad. Other than this, rig rentals were limited to village families and summer visitors since most farmers had their own horse and wagon or carriage. The stable served also as a feed barn.

Merchandise was delivered by rail to the village every day from Detroit and other wholesaling centers. It

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[1]The functions of the railroad are given in detail in Chapter Four.

[2]<u>The Linden Leader</u>, April 17,1902.

was the principal function of the dray line to transfer the supplies the half mile from the depot to the village merchants. There was very little other freight hauling by the dray line. The manufacturers and farmers did their own hauling. Few families changed houses within the community, and any move outside of the community was made by rail. A former member of the dray line recalled one move of twenty miles by dray but this was very unusual. Virtually all business was within the village itself. Freight hauling was insufficient to support the unit so that its functions included milk delivery, village garden plowing, and ice, coal, and wood delivery.

Communications[1]

The village was a communications center as well as a transportation center in 1900. The function was based upon the telegraph, village newspaper, and distribution of Detroit newspaper and national magazines. The telegraph was the principal means of rapid external communication. It operated in the railroad station twenty-four hours a day with three telegraphers. The function was fundamental to the operation of the railroad and it was frequently used by village businessmen. The two telephone companies were primarily for external communication but they were only "branches" in two village stores. Their minor function is

[1]The post office was as important as the business units, particularly since rural free delivery had not yet begun in Linden.

indicated by the failure of one in 1901. Apparently there were very few home installations.

Another form of external communication was the newspaper and periodical deliveries to the village by rail. A Detroit newspaper was delivered to village homes daily while farms received it through the post office. The village newspaper regularly carried tie-in advertisements featuring a combination subscription with Detroit newspapers or national farm journals.[1]

Communication within the community was principally by inter-personal exchange, but the village newspaper played an important role. It was a weekly with perhaps 300 subscriptions in the local area. When the paper stock was purchased, it was already imprinted on its inner four pages with state and national feature stories and national advertising. The village printer then added four pages of local news.

Marketing

Linden village was an important farm products marketing center in 1900. Most farms were too small to do their own shipping directly to the ultimate processor. Consequently, they marketed in small nearby railroad centers.

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[1]At the same time the editor was not entirely happy with the competition. It is possible the city paper sold his paper rather than the reverse as he wrote this plaintive note once: "Do the city papers say anything in regard to your locality asks an exchange. Do they contain notices of the schools, lodges, and hundreds of matters of local interest which your home papers publish? Not an item. Do they publish a word calculated to draw trade to your town?" The Linden Leader, Jan. 2, 1902.

Because the function was so crucial to the farmer, the basic income producer of the community, the specialized marketing units were a basic element in the village business system. The marketing units operated by purchasing products at prevailing regional market prices, preparing them for shipment, and exporting them to larger wholesalers or processing plants in the region.

The central function of the two elevators was to coordinate the marketing of beans and grains. The two elevators processed each year about eighty carloads of beans, the principal commercial crop. As many as twenty-five women at one time were employed to clean beans for packaging in one hundred pound sacks. Grain was handled in much lesser volume. Shipments totaled about thirty-five to forty carloads per year. Only two men were needed for grain processing, as it was shipped in bulk. Wool also was marketed through the elevators but it was a minor product.

The grain elevators also had minor retail functions, particularly the distribution of seed, feed, and coal. The feed retailing was insignificant because the farmers were largely self-sufficient in this respect.

Livestock was marketed in Linden or shipped from there by the farmer. The railroad provided the storage pens. Most farms had a few head of cattle and marketed them through a village cattle and horse trader. He then resold them in Detroit and Buffalo. Sheep operations were generally large so that the farmer shipped to Buffalo without selling

to a village wholesaler. A single liverstock shipment seldom exceeded eight to ten cars.

The activities of the specialized village marketing units were supplemented by other village and rural units. The largest of these was a rural produce and hay dealer who, during the last three months of 1901, shipped from Linden sixty-two carloads of hay and an unspecified amount of potatoes and other crops. The implication was that all were relatively non-perishable crops.

The village grocers and general stores bought eggs and butter from farm housewives and resold them to collectors. The actual trading in the commodities was less important to the storekeepers than the insurance that farm housewives would trade in the store which bought her products. Farmers also did a minor amount of selling to the village hotel, butcher and consumer. Only a few commodities, such as eggs, butter, and chickens, were marketed in Flint.

Finance, Insurance, and Real Estate

The only specialized financial unit in 1900 was the small Bank of Linden. It had a capital of $5,000 and a total financial responsibility of $40,000. The bank needed only enough space for a desk and a safe in part of a grocery store. Village newspaper advertisements show it had both commercial and savings departments. It apparently concentrated on real estate loans.

There is little evidence of what proportion of local lending and savings activity was handled by the bank.

However, it must have been a small proportion. The bank's own financial structure was weak. Notices in the village newspaper that Mr. X had funds to lend suggest private credit, particularly for real estate, was commonly available. Consumer credit was offered by the stores. Business credit was extended from the supplier to the local store.

Insurance was only a sideline to other businesses in 1900. Several merchants represented local mutual insurance companies with fire and wind damage protection for the farmer. Life insurance was sold through fraternal associations such as the Macabees, Gleaners, and Modern Woodmen of America. Except for a local lawyer who checked the details of the transaction, real estate exchanges were made by direct sale between owner and buyer.[1]

Retail Trade

Linden was a retail center in 1900. It included seventeen units devoted exclusively to retailing, and ten other units having retail activities as secondary functions.[2]

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[1]Business listings for 1860 included a real estate agent. This was the settlement period in the village so that property exchange and homesteading was still fairly frequent. Apparently the agent function disappeared with full settlement of the area. The lack of an agent in 1900 may be taken as an index to the low volume of land exchange. Informants commonly stated that land turnover and migration were very infrequent.

[2]Village merchants were expecting further retail functions. One newspaper article stated, "The time is not far distant when a good substantial clothing business will be able to flourish and live in progressive Linden. First come, first serve." The Linden Leader, April 10, 1902. A dry goods and furnishing store actually did locate in the village by 1905. There has been a men's clothing store ever since.

The central function of this group of units was to import already processed or fabricated merchandise and to resell it in small lots to consumers living within a five mile radius of the village. Detroit was the major supply center.

Data on the amount of floor space used show that the major units were the general merchandise, hardware, farm equipment, drug, and grocery stores. These nine units utilized more than eighty-five per cent of the total square feet of retail floor space. All except one were located on the intersection of the two principal streets of the village. Even though the units have been classified by a single product line all the larger units sold a variety of merchandise. Only the smaller units, such as the millinery units, were specialty stores.

The village retail functions were determined by the two markets of individual needs and farm business needs. There were twelve specialized units primarily oriented to the first, one to the latter, and four were mixed. The seventeen principal units were supplemented by ten non-retail units which had five specific functions oriented to the farm business market and eight to the individual market. Six of the secondary functions -- harness, luggage, milk delivery, furniture, liquor, and stock feed -- were not otherwise available in the village.

The range of quality of the goods sold throws further light on the nature of the retailing function. In general, the stores sold to both markets frequently needed,

inexpensive, standardized merchandise. The yard goods sold in the general stores were indicative of this. A former clerk stated that they had no "fancy" bolts of wool for dresses. When a woman wanted cloth for a "good" dress she went to Fenton, or more likely, to Flint. Another informant answered questions on the problem of quality by saying that when one wanted something "really good" he went to Flint. The merchandise was also standard in design and limited to necessities. Utilitarian work pants were available but the "Sunday" suit was not.

Table 6, Part B, lists the retail functions. The following text describes the principal and supplementary units in detail.

The Principal Units

The three grocery stores concentrated upon staple, relatively non-perishable commodities, such as tea, coffee, sugar, preserved meats, and canned goods, though the last had not appeared in great variety in 1900. Perishable vegetables were scarce since it was difficult to transport and preserve them. Informants stated even the self-preserving vegetables such as carrots, beets, and potatoes were limited "as everyone had his own." Fruits were carried only in season. The groceries also carried other family items such as wash boards, tubs, and gloves.

The three other food stores were more specialized. The confectionery had some groceries but its advertising lines were "canned goods, choice eatables, baked goods, ice

TABLE 6
Continued

PART B, THE RETAIL FUNCTIONS, BY MARKET TYPE

Specific Function	Number of Units with Primary Function	Number of Units Otherwise Classified, but Supplementing this Function	List of Supplementary Units
Individual Need Stores			
Staple Groceries	3	3	General Store(2)
Confectionery and Groceries	1	1	Drug Store(1)
Meat	1		
Bakery	1		
Restaurant	1	1	Hotel Restaurant
General Stores	2		
Millinery	2		
Jewelry	1		
	12		
Individual and Business Need Stores			
Drug Stores	2		
Hardware	1		
Lumber Yard	1		
	4		
Business Needs			
Farm Implement	1	4	Auctioneer Harness Shop Wagon Factory Carriage Factory
	1		
Additional Secondary Functions of Units Otherwise Classified	(A)		
Individual Need			
Liquor		1	Hotel
Milk		2	Dray Line, Farmer
Ice, Coal, Wood		1	Dray Line
Furniture		2	Funeral Home, Auctioneer
Farm Business Need			
Harness & Luggage		1	Harnessmaker
Feed, Seed, Coal		2	Elevators

[A]There were further retail activities in the form of individual agents and salesmen for companies outside of the village. These seemed to be part-time activities or the means of livelihood for aged males. Examples of these were the cemetery laborer who was an agent for a northern New York State nursery, another was an agent for gasoline lamps made in Ann Arbor, and a retired farmer sold butter churns. There probably were others but all played a very minor role in the structure of the retail system.

cream, and pop corn" and "lunches and meals at all hours." The one meat store had both fresh meat from local farms and imported salt meats. A small bakery completes the list of food stores.

The confectionery was supplemented by a small restaurant. Informants had great difficulty recalling the latter, indicating its trade was with non-village people. The only newspaper mention was incidental to a holiday visit of a group of Owosso citizens who lunched there.

The two general merchandise stores were the largest retail outlets. Staple groceries and dry goods were carried by both units, though in different proportions. In one, both types of goods were on an equal basis but in the other, dry goods were predominant. The dry goods included table linens, sheets, blankets, curtains and towels and yard goods. There was a range of inexpensive clothing from underwear to overshoes.

"All the latest and nobbiest get-ups in headgear for the ladies" sums up the activities of the two millinery shops.[1] Only one of these was in regular daily operation in 1900. It was active enough to sponsor fall "openings," with punch served to the ladies.

Classification of the final individual need oriented retail unit as a jewelry store was little more than an accommodation to the name given the unit by the owner. In

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[1]The Linden Leader, 1901.

addition to minor amounts of jewelry, the store sold musical instruments, sewing machines, gasoline lamps, bicycles, and was an agent for a Fenton steam laundry.

Two units were classified as drug stores in 1900, but each had a variety of sidelines which placed it in a special niche in the business structure. According to newspaper advertisements, prescriptions were compounded for both man and animals. Other advertisements listed prepared food for horses, poultry, stock, chicken cure and egg producer, and other "condition powders." It was for this reason that the drug stores were placed in the mixed category in Table 6. One of the units also carried staple groceries, tobaccos, games and toys, school books, and stationery. The second had a soda fountain, jewelry, school books, school supplies, sports equipment, hammocks, and wallpaper. One personal note in the newspaper said of the wallpaper, "Every available place in his store is filled and even the cellar is utilized. Nothing like it ever in Linden before."[1]

The hardware store advertised itself as having everything to build a house. Its other goods included household appliances such as ranges, stoves, and utensils. For the farm it had hay forks, anti-rust tinware, milk pans, pumps, pipes, and windmills. For the person it had shoes and overshoes.

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[1]The Linden Leader, Feb. 27, 1901.

In addition to the building supplies sold at the hardware store, there was a small lumber yard. It was one of the two retail units located at the railroad in North Linden rather than in the village center.

The farm implement store alone catered primarily to farm business needs. It sold such expected items as ploughs, cultivators, drags, binders, and mowers. Carriages, road wagons, and surreys were also sold. When the carriage factory closed in 1902 the owner of the implement shop bought out the remaining stock of twenty carriages. The store also had washing machines and other appliances.

The Supplementary Units

Food retailing was supplemented by several units. One of the farmers maintained a milk route in the village, carting the milk in large containers and measuring it out to the customer at four cents a quart. Other farmers close to the village sold produce to consumers. The dray line also peddled milk and ice. The small restaurant was supplemented by a hotel with a restaurant and bar. The restaurant was primarily for five or six bachelors living at the hotel and the traveling salesmen. Townspeople did not customarily eat "out." The bar was one of the most important functions of the hotel. When a village temperance ordinance was passed in 1902, the hotel and restaurant closed.

Furniture was sold as a sideline to undertaking. The informant reported that the store customarily stocked

inexpensive living room, kitchen, and bedroom furniture. If a customer wanted variety or higher quality furniture, the store owner took him into the Detroit wholesale house where he selected the desired pieces. A county auctioneer was an important agent in used furniture retailing in the community. He was also a focal point for used farm equipment sales.

One of five units oriented to farm business needs was a repair shop which sold harness, whips, carriage robes, horse blankets, trunks, suit cases, and other travel merchandise. The wagon manufacturing and carriage manufacturing plants sold directly to consumers, primarily farmers.

Maintenance Services

The community was serviced by nineteen maintenance units and two supplementary units. The maintenance group is less important than the retail group since only thirty-seven per cent of all village business units had such functions. As their central function, the maintenance units organized diverse repair, personal care and professional skills which were needed by the individuals and farm organizations in the community. The personal and professional services catered to the individual and the repair services were oriented primarily to the farm.

Maintenance services, like retail functions, were standardized and inexpensive. The repair services were the most complete but even these were restricted. The foundry had to ship large farm equipment to Fenton or the farmer

had to take it to Flint. Medical services were largely limited to home care treatment; newspaper notices indicated patients needing specialized hospital care went to Flint, Detroit, or Owosso. The personal services were similarly routine: the barber worked for fifteen cents per hair cut; the photographers had small shops and seemed to be learning the skill after opening; the undertaker was self-trained.

The detailed functions are listed in Table 6, Part C. Each unit is discussed in the following section.

Repair Services

The combined repair services of the village were comprehensive enough to take care of the basic necessities of the farmer. According to informants blacksmithing was a crucial function. The merchants felt that skilled blacksmithing was so important to the farmer that a good blacksmith would draw trade to the village and the lack of one would lose it. The two Linden blacksmiths did general iron repair, including horse-shoeing, setting buggy tires, ironing whiffletrees and sharpening plow points. This village iron repair function was extended by the foundry. While it did other equipment repairs, plow repair was the basic function of the foundry. It was completely oriented to farm requirements, operating only in the growing seasons.

The woodworking unit concentrated upon farm wagon repair. The wagon repairer and a blacksmith found it mutually beneficial to locate in one building since the farmer often needed both woodwork and iron repair on his

TABLE 6
Continued

PART C, THE MAINTENANCE FUNCTIONS

Specific Function	Number of Units with Primary Function	Number of Units Otherwise Classified, but Supplementing this Function	List of Supplementary Units
Individual Need			
General Personal Services		A	
Hotel	1		
Shoe Repair	2		
Barber Shop	2		
Funeral Home	1		
Photography Shops	2		
	8		
Professional Personal Service			
Medical Men	4	B	
Lawyer	1		
	5		
Farm Business Need			
Repair Services			
Blacksmith Shops	2		
Foundry	1		
Woodworker Shop	1	2	Carriage Factory
Harness Shop	1		Wagon Factory
Tinsmith Shop	1		
	6		

[A]There were part-time dressmaking, private family boarding, and domestic help, and a Fenton laundry agent.

[B]According to informants, the two druggists and farm housewife "home remedy" might be counted here. The village also had a practical nurse.

wagon. Carriage and wagon repair were also available in the two manufacturing plants. Nearby was a harness maker and repairer, completing the essential transportation repair services.

Tinsmithing was the final repair function. Advertisements of the unit requested repair work on milk pails, windmills, and steam and hot water devices. Household equipment, including kitchenware, stovepipes, and eve troughs, were probably as important as the strictly farm requirements.

Personal Services

The units catering to personal needs were much less adequate than the repair services. The hotel was the largest of the personal service group, having a bar, restaurant, banquet hall, lodging services, and a free bus "to all trains." Drummers were about the only transients to lodge at the hotel. The other units had very limited services: each barber shop operated with the owner and one apprentice, serving adult males primarily; the photography shops were new, struggling enterprises; the shoe repair units were long established and perhaps still manufacturing a few shoes; the undertaker had to supplement his income with a furniture outlet.

Professional Services

In a minor way Linden village was a medical center. Advertisements in the village newspaper indicate that each

doctor tried to perform a somewhat different service. Harvey Chase simply promoted himself as a surgeon, M. A. Tibbitts called himself a physician and surgeon, Chas. Taylor's advertisements read "Special Attention Given to Gynecology and Pediatric's." Mark Topping was a homeopath. Each of the doctors was an independent operator needing only a small amcunt of office space in his home. Most of the services were performed in the patient's home. The only other professional service was that supplied by a lawyer who was primarily a druggist.

Village Production Functions

The village construction and manufacturing units significantly contributed to making Linden a relatively self-sufficient community. They were slightly less than twenty per cent of all village business units. The central function of the group was to produce relatively durable products for the individual and farm markets within the community. Only the carriage and handle factories were primarily oriented to export markets. They produced relatively little income for the community. The specific functions are listed in Table 6, Part D.

Construction Industry

Home construction and repair within the community were the principal functions of the six specialized units in 1900. Business building was too irregular to maintain specialized units for that purpose. The construction units

TABLE 6
Continued

PART D, THE NON-AGRICULTURAL PRODUCTION FUNCTION

Specific Function	Number of Units with Primary Function	Number of Units Otherwise Classified, but Supplementing this Function
Construction		
Carpenter, Contractor and Builder	1	A
Cement Layer	1	
Mason	2	
Painter and Decorator	1	
Painter	1	
	6	
Manufacturing		B
Wagon Works and Saw Mill	1	
Carriage Factory	1	
Handle Manufacturing Co.	1	
Milling Company	1	
Printing Company	1	
	5	
Part-Time Manufacturing		
Carpet Weaver	1	
Cabinet Maker	1	
Cane Chair Maker	1	
Shoe Maker	1	
Harness Maker	1	
Buggy top Dressing Maker	1	
	6	

[A]There were other craftsmen in the village, particularly carpenters, but these seemed to be all primarily engaged in construction work.

[B]Supplemented by a brick and tile yard in the open country, butter making was the only farm manufacturing market oriented to any significant degree.

were independent craftsmen who were hired directly by the person desiring the construction. As one informant stated, "When a man proposed to build a house he merely called in a carpenter and together they drew up plans and he, the carpenter, proceeded with the construction."[1]

The craftsman usually worked alone but he occasionally hired an assistant. Village government records show the cement layer hired help for sidewalk and other community construction work. In the same way the contractor-carpenter employed young, semi-skilled men when the job demanded it. The organization was very informal; the craftsman and his assistants were not even bound by master-apprentice rules.

There was not enough home construction and repair to keep the craftsman busy more than three-quarters of the year. An informant said, "The rest of the time they would take any job that came along, especially would they go out into the country and help the farmer with his work."[2]

Manufacturing

Linden's factories were on a more substantial scale than its construction industry. They all had specialized buildings, were formally organized as companies, had regular employees, and served a regular market. Three companies -- the milling, carriage, and handle factories -- exported

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[1]Guy H. Webber, Letter dated June 19, 1952.

[2]Ibid.

in the Detroit-Saginaw region. The wagon company, printing plant and the six part-time craftsmen manufacturers produced only for the local market. Standardized, semi-durable, handcraftsmanship products predominated.

The carriage factory was the largest and one of the oldest manufacturing plants in Linden in 1900 but it had been declining for some years. Several newspaper accounts suggested that the production was only one or two carriages per week in 1900. At one time the local market had given the Beach factory a price advantage over imported carriages but the growth of Flint as a carriage producer eliminated the advantage. In 1900 most sales were outside the community. The newspaper reported that each spring the carriages were hooked together and pulled by horses to a northern Michigan sales area. The factory closed in Linden in 1902 and moved to a northern village closer to raw materials and the market.[1]

The wagon company custom-built heavy and light duty farm wagons. The local demand was only enough to keep the plant active during the spring and summer months. In addition, the unit did its own lumbering and milling of local

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[1] "The car arrived last Friday and all the carriage making tools in the Beach shop were loaded and shipped to Petosky, where Mr. Beach will open a new factory. Thus one of the oldest industries of the village has passed into oblivion, and the celebrated Linden buggies will be known no more. The big buggy trusts have made it decidedly hard sledding for the little factories during the last few years." The Linden Leader, Jan. 30, 1902.

timber. Custom saw mill work and wagon repair were two other activities.

The handle manufacturing company fashioned neck yokes, whiffletrees, axe, hoe, sledge, pick, fork, and hammer handles. According to the 1900 owner, capacity was twenty-five dozen handles per day. Raw materials were obtained by purchasing local timber and lumbering and milling it. The bulk of the handle production was distributed in wholesale lots to middlemen and manufacturing companies outside of Linden. The plant operated only during good weather months.

Flour, feed, and meal ground from local grains were the major products of the milling company. Custom grinding for local farmers was probably half of the total production. Some of the production was exported.

The printing company published the village newspaper weekly and did job printing for local concerns and the village and county governments. It was operated by the owner with only the occasional assistance of a typesetter. Many subscriptions were paid in kind, indicating the marginal nature of the plant.

The Agricultural System

The basic production phase of the village community structure consisted of over 200 commercial general farms.[1] The farm system produced field crops and livestock for a

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[1]There was a small amount of hickory and walnut lumbering in 1900.

regional and national economy and thus earned the income that made possible the specialized village business structure. The farm system was part of a state economy in which the principal source of income was hay and grain or livestock on fifty-three per cent of the farms.[1] The annual per square mile income was $2,500 to $5,000 in the farming area around Linden.[2]

The average farm of approximately ninety-five acres was operated by the owner with the aid of his family and one hired hand. In Genesee County, seventy-eight per cent of the farms were either wholly or partly owned.[3] Farming had passed out of the "hoe-farmer" stage by 1850 and the Lindenite was almost exclusively a horse powered "machine-farmer" in 1900.[4] He had plows, cultivators, drags, binders, mowers, and reapers. The thresher was steam operated. The average farm in Genesee County had over $150 invested in machinery. Throughout the state the

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[1]The distribution of Michigan farms by principal source of income was:

Type	Per Cent of All Farms
Hay and Grain	19
Livestock	34
Dairy Products	7
Vegetables	4.6
Fruits	2.6
Other Miscellaneous	32.4
	100.0

Census Office, Twelfth Census of the United States, Agriculture, Part One (Washington, D.C., 1942).

[2]Ibid.

[3]Ibid.

[4]See Leon E. Truesdell, Farm Population of the United States (Washington, D.C., 1926), pp. 19-21.

value of machinery varied from $30 on farms with no income to $515 on farms with over $2,500 income.[1]

The Linden farmer was partially self-sufficient. He raised feed for his livestock and poultry. He did much of his construction work, although he was more and more turning to hired skilled labor from the village center. With the help of the farm wife, vegetables, eggs, and dairy products were produced and preserved for home consumption. He did his own slaughtering. Most of the perishables produced were for home use rather than the market. Home manufactures, with the exception of butter, were also for his own use.

The Number of Farm Units

It is estimated that the total farm base of the Linden community was 394 farms, 380 in the service area and fourteen in the village. It is emphasized that this is nothing more than an approximation. The village farms were determined from a map, but the service area farms were only roughly estimated on the basis of the number of farms in Fenton township.[2] Since the number of farms in Fenton township was slightly greater than in the other townships, the estimation procedure somewhat expands the number of

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[1]U. S. Census of Agriculture, 1900.

[2]Fenton had 218 farms in 1900. Total farm acreage was 19,553, or thirty sections. Average number of farms per section was 7.3. It was assumed all sections in the service area had the same average. On the basis of the service area outlined in Chapter Two there were fifty-two sections. Census of the State of Michigar (Lansing, 1905-6).

farms, particularly to the west and south.

There were several reasons for using a simple but effective way of approximating the farm base of the community. First, exactness is unnecessary, for the boundary is a broad band rather than a sharp line. A slight change in the placing of the boundary changes the number of farms. Further, it is probable that the number of farms within any given boundary is not the same thing as the number trading in Linden. Trading relations in 1900 varied in gradient fashion, their frequency declining gradually with distance from the business center. Consequently, the farms at the outer community limits were less strongly attached to Linden than those closer to the center. Thus any given point on a radius from the center meant something different in terms of trading in Linden.

The gross total of farms is greater than the number of commercial size farms. The latter was obtained by estimating the distribution of farms by size, as shown in Table 7, and applying informants' judgments of what constituted an adequate commercial farm in 1900. It was estimated there were 266 farms of over fifty acres. Informants felt a fifty-acre farm was generally a marginal commercial farm and that seventy to eighty acres were probably needed to earn an adequate commercial income in the Linden area. In order to estimate the total farms larger than seventy acres it was assumed that the number of farms was distributed evenly throughout the fifty to one hundred acre size group.

TABLE 7

THE ESTIMATED DISTRIBUTION OF FARMS BY SIZE, LINDEN COMMUNITY, 1900

Size Class (Acres)	Number of Farms	Per Cent
Under 3	2	.4
3 - 10	12	3.2
10 - 20	16	4.2
20 - 50	98	24.9
50 - 100	135	34.2
100 - 175	97	24.6
175 - 260	24	6.1
260 - 500	9	2.2
500 - 1000	1	.2
1000 -	0	-
TOTAL	394	100

Source: The estimate is based on the distribution of all farms in Genesee County, 1900, according to the United States Census, 1900. The percentage distribution for the county was applied to the 394 farms in the Linden trade area.

The total is 212 farms over seventy acres. This is the group of farms that basically formed the farm business and individual needs markets. The rough estimation procedure yielded about the same number of commercial size farms as was estimated by key informants. They estimated about 200 farmers traded regularly in Linden.

Commercial Activities

Linden was a general farming community in 1900. Nearly all commercial production was concentrated in relatively non-perishable products capable of withstanding slow transportation to market. About two-thirds of all farm income was derived from field crops.

The major field crops are shown in Table 8. Farming throughout the service area was the same as that in Fenton township so that the pattern of crops shown applies to the whole community. The overall pattern is that of a general farming area; the largest acreage crop -- hay -- was planted to less than a third of the major crop acreage.

The value of the crops shown in Table 8 does not represent market income to the farmer. According to informants, beans were the "money" crop. Much of the other crop production was consumed on the farm, but beans were generally marketed sometime during the year. The Linden grain elevators shipped twice as many carloads of beans as of grains even though the volume of grains produced was much larger. One reason was that beans earned much more per bushel. The Linden Leader quoted these prices on

TABLE 8

THE MAJOR FIELD CROPS, BY ACREAGE, VOLUME, AND DOLLAR VALUE, FENTON TOWNSHIP, 1904

Field Crop	Number of Acres	Volume	Value (In Thousands of Dollars)
		Tons	
Hay	3,434	4,925	32
		Bushels	
Oats	1,596	56,935	18
Beans	1,417	20,156	24
Corn	1,412	43,502	22
Wheat	486	6,850	5
Rye	463	6,501	4
Barley	286	6,368	4
Potatoes	192	11,516	6
TOTAL INCOME			115

Source: Census of Michigan, 1904.

October 17, 1901:

Beans	$1.45-1.55
Wheat	.65- .67
Oats	.22
Rye	.48

It is clear, however, that the farmer did not depend solely on beans for his income. The value of field products sold was $704 on the average farm in Genesee County.[1] Assuming this is the average for Linden farms, the total farm crop income was $277,000.

Livestock was as important a commercial product in 1900 as any single field crop. The income from livestock amounted to thirty-five per cent of the total value of major crops and twenty-seven per cent of estimated crop income. The total income from the sale of live animals was $41,000 in Fenton township.[2] Table 9 shows that sheep were the most numerous livestock, followed by swine and cattle. Sheep were the only livestock in large numbers on any one farm, according to informants. Excepting sheep, the average farm had twenty-three head of all types of livestock, illustrating again the general farming character of the area.

Dairy production was an insignificant part of the commercial activities of Linden farms. Informants stated that nearly every farm had some dairy cattle, but that many produced milk only for home use. Most of the milk sold was first turned into butter on the farm. Fluid milk was

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[1]U. S. Census of Agriculture, 1900.

[2]Census of Michigan, 1904.

TABLE 9

THE NUMBERS OF LIVESTOCK AND POULTRY, FENTON TOWNSHIP, 1904

Livestock and Poultry	Number
Horses	695
Sheep	4,306
Swine	2,306
Cattle, except Dairy	1,094
Dairy Cattle	749
Chickens	8,925
All Others	224

Source: Census of Michigan, 1904.

TABLE 10

THE VOLUME OF DAIRY PRODUCTS PRODUCED AND SOLD, GENESEE COUNTY, 1900

Product	Volume Produced (Thousands)	Volume Sold (Thousands)	Per Cent Sold
	Gallons	Gallons	
Milk	8,453	1,510	17
Cream	unknown	4.6	
	Pounds	Pounds	
Butter	1,607	979	61
Cheese	9.6	9.1	94

Source: U. S. Census of Agriculture, 1900.

generally sold only in the immediate area of the farm. Table 10 gives the dairy production for Genesee County in 1900, which is assumed to reflect the local pattern. Eighty-one per cent of all farms in the county reported some dairy production. Only seventeen per cent of the production was sold as fluid milk, while sixty-one per cent of the butter production was marketed.

The minor crops listed in the 1904 Michigan census included vegetables such as peas, cabbages, sweet corn, onions, and celery. Fruit, primarily apples, but including peaches, pears, plums, and cherries, was planted to only 338 acres. Most of the production of these crops was consumed on the farm. Eggs were more commonly marketed, yielding approximately $12,000 in 1904 in Fenton township.

The majority of Linden farms operated as general farms, planting acreage in each of the basic field crops, raising some livestock, producing some dairy and poultry products, and growing fruits and vegetables. There was some variation, of course, in size, commercialization, and product distribution. At the low end of the scale were the small acreage farmers who consumed most of what they produced and supplemented their farming by hiring out to larger farmers, helping part-time on threshing gangs, and so on. Perhaps a third of the total number of farmers were in this category. For the state as a whole, twenty-eight per cent of the farms had a value of products not fed livestock of under $250 and sixty per cent were under $500.[1]

[1]U. S. Census of Agriculture, 1900.

At the upper end of the scale were a few fully commercialized farms that specialized in lamb fattening. The son of a former lamb feeder reported perhaps fifteen to twenty farms operated on a large scale. His father fed 800 head during a winter.

There was also a scattering of crop specializations. One farm was advertised as a fruit farm, another as a vineyard, a third had 125 acres in cabbages, and one was named the "Riverdale Dairy." But in spite of the range, the majority of farms were commercial enterprises operating in essentially similar ways and having about the same role in the community structure.

The following account from the village newspaper described the commercial aspect of one of the larger farms in Argentine township. His total income was about $2,800 when the beans were marketed at the 1901 market price of $1.45 to $1.55 per bushel.[1]

> Halsey Whitehead raised this season 1,420 bushels of beans on 80 acres; four jersey cows have paid him $50 each; he sold $300 worth of hay in the Gaines market and from 23 Ewes sold $100 worth of lambs at three months old, realizing $2.50 each. Halsey has a faculty for making things go, and is among the best natured North Argentine farmers who come to town.

Village Units

There were seventeen agricultural units within the corporate limits of the village. Fourteen of these were

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[1] *The Linden Leader*, Dec. 12, 1901.

farms; the others were a veterinarian, hay presser, and thresher. In general, the farms were similar to those in the service area. One specialized in fruit, several were subsistence units, but the rest were general farms.

The veterinarian, threshing, and hay pressing units were all small and highly specialized. The veterinarian worked alone to earn a cash income of about $500 per year, plus barter. His total investment was not over $100. Nearly all his business was outside the village, but within the community. He also carried on a minor sideline of manufacturing a preservative for buggy tops and a harness oil.

The threshing unit operated within a very restricted radius of two to four miles outside of the village. August, September, and October were about its only months of operation. Wheat, oats, and beans were threshed by steam power. The total investment was about $1,500.

Summary

Under the conditions of rail and horse transportation, the village community was relatively self-sufficient. The comprehensive functional system was organized by small, specialized, individual proprietor communal units. The total business system was divided into two major sub-systems and the whole organized around the balanced interdependence of the two.

The general farm structure was one sub-system. Its function was to produce and export commodities. The

village business structure was the second sub-system. Its function was to provide the services and skills necessary to assist in exporting farm products and to import and redistribute within the community nationally produced goods. The village was solely a farm center, manufacturing only negligible amounts for export.

The major functional components of the village sub-system were transportation, communications, wholesale marketing, retailing, farm repair services, and medical and personal care services. Most of the commodities and services were those that were frequently needed, standardized, and inexpensive. Retailing was the function with the most units. The village sub-system was oriented to two principal markets: the operational needs of the farm as a business enterprise and the personal requirements of the population. The basic requirements of both were met by the village businesses.

Transportation was the crucial component in the functional structure of the village business system. The railroad provided the rapid external transportation needed for exchange within the regional and national economy. The limitation of the horse and wagon restricted local travel and imposed pressures on the individual farm businessman and consumer to concentrate his trading in one center.

CHAPTER FOUR

THE TRANSPORTATION TRANSFORMATION

A revolution in transportation technology has been hypothesized as the basis of the development and expansion of the metropolitan community. As a consequence, small places on the outer rim were absorbed and their internal structures were simultaneously transformed. The fundamental technological change was the automobile and the high speed highway. The cost and time required for local travel were sharply reduced.[1] This chapter is concerned with the problem of transport change in Linden from 1900 to 1950.[2]

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[1]For a general discussion see Hawley, p. 405ff. For a quick summary of transportation changes see, Malcolm M. Willey and Stuart A. Rice, "The Agencies of Communication," in Recent Social Trends, and Frederick Lewis Allen, The Big Change (New York, 1952), pp. 121ff.

[2]While the importance of transportation in transforming the structure of the local community is being stressed the significance of general technological development is not underestimated. It was industrialization in all its aspects that produced the Flints. But it produced them as compact cities until the invention of the automobile. It was the motor vehicle which has most successfully made effective the pulsations sent out from compact cities and drastically altered the life conditions of surrounding village communities. The process has been the productive mechanization with stationary steam and fixed rail routes yielding compact cities until motor transport created the expanded local community.

Transport Organization: 1900

The economic structure of Linden in 1900 was a function of the interaction of relatively fast and cheap external transportation by railroad with the slow and expensive local transportation by horse and wagon. The difficulties of horse travel forced localization of many activities. The railroad allowed the products of the small community to be exported and needed goods to be imported cheaply. The first kept the community small but the second relieved its isolation and placed it in a regional economy.

Importance of the Railroad

The railroad was the principal link to other communities.[1] All exchanges -- whether goods, persons, or ideas -- that moved more than twenty miles were transported by rail. The importance of the railroad to the village is indicated in the fact that ninety-one per cent of the non-agricultural business units depended on external sources of supply. Agricultural dependence on the railroad was equally great.

The land and buildings required by the railroad were the most extensive of any business unit in the village.

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[1]This was the national pattern. For instance, "By 1900 the railroads had become the outstanding and virtually unrivalled agencies of transportation in the United States." Malcolm Willey and Stuart Rice, Communications Agencies and Social Life (New York, 1933), p. 8.

There was a passenger and freight station, buildings for the tools of the section repair crews, a stock yard, a freight siding, a water tank, and the right of way. Approximately 400,000 square feet of land were needed for Linden operations.

There were seven passenger trains each day. The number of freight trains is unknown but there was at least one each way every day. In addition there was a county freight train and a special stock train to Buffalo on Mondays and to Detroit on Wednesdays. The village had direct rail connections to the east with Fenton, Holly, and Detroit, and to the west with Durand, Owosso, and Chicago. Flint could be reached by changing trains at Durand, the usual place, or at Holly.

The efficiency of the railroad was such in 1900 that development of alternative means of inter-community travel was neglected.[1] Before the railroad, wagon roads -- dirt, gravel, and plank -- were energetically developed by village promoters. Linden had once maintained its connections with the east by wagon hauling to Pontiac and Detroit. A toll company had built a plank road from Fenton to Flint. Others were planned. But after the arrival of

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[1]Based upon Edwin Wood, History of Genesee County, Michigan (Indianapolis, 1916); Robert S. Ford and Marvin Bacon, Michigan Highway Finance (Ann Arbor, 1943); Roger Morrison, "The History and Development of Michigan Highways," University of Michigan Official Publications, Vol. 39, No. 54 (Ann Arbor, 1938).

the railroad very little effort was made to maintain or to expand the inter-community road system. All roads were maintained by township officials and the road network in 1900 was the same as existed in 1850.[1] Virtually no improvements were made in many of the roads during that period. The local roads system mainly provided access to railway centers and did little to facilitate inter-community exchange.

The extreme importance of the railroad to village businesses is indicated by the sources of supplies. The principal wholesaling point was Detroit. At least half of the village business units bought all or part of their supplies in that city. Other wholesale centers were Akron, Lansing, Chicago, Grand Rapids, and Owosso. In only one case was Flint a supply point. Nor were other nearby communities used as supply depots for the village. The regular, direct, and convenient railroad connections gave larger,

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[1]Under Michigan statutes of 1827 and the constitution of 1835, the townships elected three commissioners of highways and one overseer of highways in each road district in a township. Under these acts the township officials had ultimate authority and responsibility for roads. The overseer in the small road districts actually had administrative and repair responsibilities.

In a consolidation of highway acts in 1881, the township system was retained with the provision that all highway money levied had to be spent within the township. The tax was limited to a half day's labor or 50¢ for each $100 of property with a minimum rate of 1/10 day's labor or the money equivalent for each $100 valuation. The amount in each township was determined at the annual township meeting. The option of paying the road tax by labor was not eliminated until 1907. Permission to issue road bonds was given in 1903. Morrison, "History of Michigan Highways" and Ford and Bacon, Michigan Highway Financing, pp. 7-32.

though distant places, a distinct advantage over local centers as sources of supplies.

Village businessmen were quite conscious of their dependence on rail transportation. The village newspaper noted in 1901 that a group of capitalists had secured all the lands about Loon, Tupper, and Squaw lakes (northeast) and urged the village to try to get the new line located near Linden because "the nearer to Linden the spur hits the main line of the railroad the surer we are to get the business."[1]

A description of the activities of the railroad will clarify its significance for the small village center.

Shipment of Goods

Every businessman informant -- merchant, manufacturer, farmer -- stated he received or shipped his goods by rail. The farm products wholesalers reported that their business depended entirely on the railroad. Villages off the railroad had great difficulty attracting the farmer as a businessman. Retail merchants also depended on rail transportation. The railroad transported the staple groceries, hardware, dry goods, millinery, farm implements and the numerous other products bought on the national market for local consumption.

The railroad was even the means for distribution within Genesee County. A regular freight train with

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[1]Linden Leader, Aug. 8, 1901.

switching yards at Montrose served the county. A village dray line, which might have served the county, was limited entirely to carting goods the one-half mile from the railroad siding to the merchants at the village center. In nearly every case of movement beyond the bounds of the local community the railroad was the primary carrier.

In this way the railroad had linkages with all local business units whether in the village or open country. It was intermediate to every significant interconnection of the local units with the regional and national society.[1]

Personal Movement

Inter-community personal movement also depended on the railroad. According to a Linden Leader advertisement in February, 1902, three of seven daily passenger trains went to the west and four to the east. The Linden resident used these for both short and long distance travel.

Something of the volume of travel to nearby communities is indicated by a 1901 village newspaper item

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[1]The railroad also helped partially free the individual consumer of local monopolistic control by merchants. The local resident was a frequent "shopper" with mail order houses. The Linden Leader on several occasions had articles warning consumers against this practice "which profits only the R.R. and city millionaire merchant." Reports on the Post Office also suggest a large volume of mail order buying. When rural free delivery was introduced the merchants were worried the farmer would stay home and do all his shopping by mail.

which reported that Durand was to build a new union terminal. Durand was the junction for the Ann Arbor and Grand Trunk railways, and it was there that Linden passengers going to Flint or other northern or southern points transferred from the Grand Trunk. It was estimated that more than one thousand people a day transferred there.

Linden passenger travel was much less than Durand, of course, but all aged informants reported that the railroad was the important form of travel for villagers and nearby rural people. They agreed it was as much used for travel to nearby communities as for long distance travel. Some even felt short trips were more important. One respondent remembered occasions when the railroad station was so crowded that he had to stand while waiting for the train. He also reported it was sometimes necessary to stand during the trip to Durand.

Village newspaper stories also show that the railroad was used for a variety of short passenger trips. Personal items frequently listed social visits to friends in small towns on the rail line. Individuals kept active their lodge memberships in Owosso, Fenton, and Detroit by rail travel. Small town inter-lodge visits were by rail. Holly figured prominently in this type of travel, with exchange visits several times a year, particularly by the Odd Fellows and Modern Woodmen of America. Business buying trips to Detroit were made by rail. The short distance passenger movement stimulated congeniality and business

relations with other nearby places on the railroad. There was much less interaction with nearby places not on the railroad, such as Flint.

The number and success of the excursions out of Linden indicates the importance of the railroad for long distance personal travel. During 1901 at least eight excursions with special fares were advertised by the local station. The list included excursions to Milwaukee, Detroit, Lansing, Pontiac, Buffalo, Chicago, Grand Rapids, and Battle Creek.[1] A one-day excursion to a Pontiac fair sold 150 tickets at the local station. The trip to Lansing and the agricultural college sold over forty tickets. During the summer of the 1901 Exposition in Buffalo a small party took the excursion trains nearly every week.[2]

Communication of Ideas

Ideas were also most frequently shipped into and out of the community by the railroad in 1900. Mail was the major form. Newspapers, magazines, and books were brought into the village by rail. The preprinted newsprint for the local paper was carried by rail. Ideas were also transported into and out of the village through personal travel.

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[1]The excursions to Detroit suggest this trip was not a common experience.

[2]Based on The Linden Leader, 1901-1902.

Rail Limitations

The extreme importance of the railroad to the village, however, does not mean that it was a fast, convenient transportation in the modern sense. For example, shopping trips to other centers were inconvenient. Trains traveled east to Fenton four times a day beginning at 5:00 a.m. and ending at 7:00 p.m. Return trips could be made three times a day between 8:00 a.m. and 5:00 p.m. The west bound trains could also be used for shopping and business in Durand or Owosso. The trip to Fenton or Durand required from twenty-five to forty-five minutes. The trip to Flint required from one and one-half to three hours, depending on the length of time required by the transfer at Durand.

Frequent train travel was also impractical because of its cost. It was reported that the round trip to Fenton cost fourteen cents and that to Flint cost one dollar. With a wage rate of from $1 to $1.50 per day, frequent trips were economically impossible, except for the most prosperous.

The shipment of farm products usually involved delays at the Linden siding. When cattle were brought to the stock pens they generally had to wait several days for the proper freight train. Deliveries of supplies from Detroit to the village stores reportedly took a week or more unless they were expressed, which required at least two days.

The inflexibility of the railroad in the local community was another limitation. The travel time to the station, particularly for rural residents, was important since the horse and buggy averaged only around five miles per hour. According to informants the trip to Flint from points four to five miles north of the village was made as easily by buggy as by rail from Linden.[1]

While the railroad had these limitations, its vital role in the small community was, in large part, due to the more severe limitations of the horse and buggy and local roads. There was no other form of local travel in 1900 as Linden had no automobiles.

Local Travel Conditions

The slowness of the horse combined with poor roads severely limited the spread of the community away from the railroad center. The roads around Linden were generally unpaved dirt roads, often made impassable by spring thaws and rains, and layered in sand and dust during the summer.[2] A Genesee County historian, in reporting on the

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[1]The railroad did have some other disadvantages. "The Michigan farmer who is hanging on to his potatoes for higher prices would do well to see what he is up against. For instance, the lowest freight rate on potatoes to the eastern markets is 54 cents, while the rate from European shipping points, from whence shiploads of potatoes are now coming, is 24 cents. A difference of 30 cents in freight means something for the Michigan grower in competition with the foreign producer." The Linden Leader, Feb. 20, 1902.

[2]For a good account of roads around 1900, see Lloyd Morris, Not So Long Ago (New York, 1949), pp. 241ff.

adoption of the county good road system in 1909, wrote, "At that time no roads in the county could be classified as good roads, except some small isolated stretches."[1] A village news item read:

> It is seldom that the roads are in better condition than they are at present (January 1902), seems to be the general verdict in the rural districts. In about two months, however, they will be in as different a state as is possible, and then every man who has occasion to drive over them will be an advocate of highway improvement -- until the roads dry out. Then he will forget all about it until the fall rains turn them into elongated mud holes again.[2]

The main roads out of Linden were as poor as those in the rural districts. The main southern road was very sandy where it traversed steep hills in Tyrone township, about two miles south of the village. Travel to Linden village from Tyrone was restricted because of the difficulty of carting farm products. The farmers found it much easier to travel to Fenton.

Travel was also difficult on the main road to Fenton. The road, about two and one-half miles from Linden, where it curves around Silver Lake, was often under water during spring months. Alternative roads to Fenton added approximately an hour to the trip.

The principal road to Flint was unsurfaced, but it did not face these extra physical difficulties. The dirt was hazard enough, however, because as one informant

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[1]Wood, History of Genesee County (1916), p. 275.

[2]The Linden Leader, Jan. 23, 1902.

said, "in the spring you just couldn't move."

Many roads were so poor that some business operations were adjusted to seasonal changes in road conditions. The wagon and handle factories reportedly cut timber during the winter because it was easier to move the logs over hard winter roads than over summer roads, particularly in the most rural parts of the community. Other informants suggested that farmers sometimes did not market beans and grains until the roads were winter hardened.[1] Winter, however, did have its special travel problems. Snow storms held people at home. Newspaper accounts relate the canceling of events for storms of less than two feet.

Local Travel Time

Travel times were slow over these roads. A horse and buggy might average as much as five miles per hour. The village newspaper congratulated one man for making an eight mile round trip to Mundy Church in one hour and five minutes. That was certainly the most favorable time possible. Horse and wagon travel was slower, averaging two to three miles per hour.

All informants were agreed that Flint, seventeen miles from Linden, was about as far as one could travel in one day by horse and buggy and still return home. Under the best conditions Flint was three to four hours of

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[1]Other factors, such as more team time available to farmers, were also important.

jolting travel over a winding dirt and gravel road. When the dirt turned to mud in the spring, eight hours was the usual time, if the trip could be made at all. The buggy trip "seemed to take forever" and was so arduous that the round about train trip was the more frequent means of travel. This was less true of the northern farming areas of the community.

Even Fenton, five miles away, was beyond daily commuting distance. For instance, Linden students who went to Fenton for a high school education had to board there, since the trip from the village required at least one hour under the best conditions.

Intra-community travel was also difficult and time consuming. Merchant informants reported that farmers, even a mile beyond the village boundary, limited themselves to one all-purpose trip per week to the village. Implement repair, marketing, stocking up for farm and home, and visiting, were all saved for the Saturday trip to the village. Purchasing was for an extended period. Grocery advertisements of the period advocated getting in a winter's supply of basic foods. The market area was limited to four or five miles.

Interaction of Train and Wagon

The interaction of the laborious local area horse and wagon travel and the relatively fast, convenient external travel by rail gave the village its particular business structure. The two transport systems were tightly

locked in a mutually supporting pattern. The grain elevators offer an excellent example. Grain could not be moved profitably over long distances without the railroad. The presence in every Genesee County railroad village of a grain elevator was based on the limitations of horse and wagon travel. Farmers, for reasons of cost and time, could not profitably travel more than ten miles for grain marketing.[1]

The Conversion to Motor Transport

The transportation pattern of 1900 was completely altered in the ensuing fifty years. The horse was seldom seen on Linden's roads in 1950. It was rumored in the village that the railroad station would be closed. The effect on the Linden community would be negligible. The automobile and truck were the transportation determinants of the structure of the village sub-community.

Horse and wagon transportation was affected first. Automobiles appeared in Linden about 1902 but were few

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[1]The cost of hauling to the wholesaler was not computed. But a report prepared for Minnesota in 1913 is thought to describe the local situation. It was reported that for the township the average distance hauled was 3¼ miles with an average load of 1.14 tons in winter and 2.00 tons in fall, with good roads. The time required in winter was 3 and 2/7 hours while in the fall it took 2 and 3/5 hours. At 15¢ per hour per man and 8¢ per hour for horses, the per ton mile cost in winter was 30.3¢ and 12.8 in the fall, over good roads. The average number of loads of grain was 15 per farm. In spite of the difference in cost the farmer still preferred to market in the winter as that was when he had the most team time. Carl Thompson and G. P. Warber, Social and Economic Survey of a Rural Township in Southern Minnesota (Minneapolis, 1913), p. 18.

for at least another ten years. According to informants there were still only two in 1910, both belonging to doctors. The transition after 1910 was rapid, however, with the horse largely replaced by 1930.

A jitney service to Flint began operation shortly after 1910. A few years later farmers and businessmen began acquiring automobiles and trucks. The flour mill, for instance, bought its first truck in 1918. Perhaps as many as half the farmers had automobiles in 1920.[1]

The switchover from horse to auto and truck was completed during the next few years. In 1930 there were automobiles on more than nine out of ten farms in Genesee County.[2] Travel by horse was a thing of the past.

In the beginning the auto and truck were used for local transportation, simply replacing the horse and wagon, but gradually an inter-community function developed in competition with the railroad. The timing of the shift to inter-community uses is seen in the improvement of roads.

Basic improvement of the primarily dirt surfaced inter-community roads began after 1909 when county control

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[1]Traffic problems were already beginning. For instance, "Oakland county reaped a harvest of $600 last week by simply collecting fines from auto speeders. If all the speeders in Linden were fined each for fracturing the limit law, the business section could be paved and even the ruts filled in on the roads approaching the village. Wow!" The Linden Leader, June 8, 1917.

[2]Bureau of the Census, Fifteenth Census of the United States: 1930, Agriculture, Vol. II, Part I (Washington, D.C., 1932).

replaced local supervision. Gravel roads from Flint to all county villages were first financed by a bond issue in 1912. The graveling of the road to Linden was begun in 1913 and completed in 1916. When the reconstruction was completed it was still a slow speed road since the gravel was only nine feet wide. It was also possible in 1916 to travel on improved road to Flint from Linden by using a gravel road to Fenton and a hard top road from there.

Automobile and truck travel was still very difficult after the completion of the gravel roads. Robert Taylor, the circulation manager of the Flint Journal, reported their harrowing experiences when they began motor delivery throughout the county. During the early 1920's the outlying roads were so muddy in the spring that the trucker always carried heavy planks. They were laid over the mud to assist him when he got stuck. Until 1920 then, the automobile, though rapidly replacing the horse, was easing the travel of the farmer to the village rather than altering the relations of Linden to Flint or affecting the role of the railroad.

The need for better inter-community roads was recognized even before the gravel system was completed. Another bond issue was approved in 1921 for hard top roads. Although Linden was included in the plans, other centers were considered more closely linked to Flint and the hard surface roads were built to them first. A part of the

hard road to Linden, beginning in Flint, was built in 1927. The largest section of the road was completed in 1931, and by 1934 Linden had an all hard surface road to Flint.

Thus, twenty years after the automobile and truck began replacing the horse for local travel, the motor vehicle was able to compete with the railroad for inter-community business. The motor vehicle itself had greatly improved and it now had a good county road system, closely tying all small communities to Flint. The village merchant also had new freedom to buy his supplies in Flint. He was no longer dependent on Detroit.

While the inter-community network was improved the internal community system was also rebuilt. By 1930 a majority of the farmers in the county were living on gravel roads. The U. S. Census reported in that year:

Number of Farms	Kind of Road Located Upon
289	Concrete
	Brick
19	Asphalt
10	Macadam
1,727	Gravel
34	Sand-Clay
264	Improved dirt
468	Unimproved dirt
96	All other
2,907	

The new roads enabled the farmer to select his marketing center with more freedom. While it was easier to get into Linden more than once a week it was also easier to take grain five miles further into Fenton. The automobile and truck affected the railroad by reducing

the farmer's dependence on a given center. And he was the main source of out-going freight.

With the improvement in the roads the importance of the railroad to the village began declining. It was still the crucial inter-community link in 1920. Informants stated that the dray line, which depended on the volume of rail traffic, was definitely not affected before that date. The decline began sometime between 1920 and 1930. It was in the next few years that the substitution of the truck for the railroad was clearly apparent.

Road improvement continued after 1930, gradually increasing the network and quality of hard roads. By 1950 both the rural and inter-community systems tied both villager and farmer into the Flint metropolitan community. Very few farms are now on dirt roads -- only seven per cent in 1950, while thirty-seven per cent were on hard roads and the rest on gravel.[1]

Transportation Organization: 1950

The railroad had only a very small village function in 1950. The station handled approximately ninety cars of out-going and 115 cars of in-coming freight during 1950. Hay and straw were the bulk of the out-going freight, with seventy-six cars of hay and twelve of straw. The largest import was seventy cars of coal. Lumber and build-

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[1]U. S. Census of Agriculture, 1950, Farms, Farm Characteristics, Farm Products (Preliminary Report).

ing supplies accounted for thirty-seven carloads. Mail was the only other thing dependent on the railroad. There were few less than carload shipments. Express shipments averaged only $200 per month. Only five retailers regularly received express shipments; only two were regular "less than carload" customers.

Personal travel by rail likewise had all but disappeared. The station agent estimated that ten passengers per month was the average in 1950. The figures for 1951 show 4, 3, and 5, in January, February, and March. There were none in April.

The Importance of Motor Transport

The basic means of transportation both within and without the community was the truck and automobile. Every business unit, every family unit, every associational unit depended almost exclusively on motor transport. In a village business structure of seventy-eight units only three had any serious dependence on the railroad.

Linden village, however, has had no specialized bus and truck companies. The main state and national highways connecting Flint with other large cities do not pass through the village. Consequently, inter-state and inter-county companies completely by-passed the village. Fenton is the nearest bus station. Nor do county bus lines serve the area. Adult personal travel is entirely by automobile.

Trucking facilities were obtainable in Flint. A prospectus designed to attract new business to Linden listed five interstate trucking companies that would serve the village. Actually the village business units had little need for outgoing long haul facilities. The need was for short hauls, within the metropolitan area and just beyond its boundary, since most shipments were to destinations within a seventy-five mile radius of the village. The small community trucking service located in the Linden trade area was inadequate for these needs so that each business or family furnished its own transportation or depended upon the receiving units to furnish transportation.

Approximately twenty per cent of the village business units distributed goods in their own trucks. The remaining units sold directly to the consumer, who provided his own transportation.

Transportation of goods bought by village businesses was provided by interstate trucking companies or by suppliers. For instance, all grocery supplies were delivered in trucks operated by wholesalers. Drug, cosmetics, gasoline and fuel, repair parts, and other supplies were similarly delivered by truck from the nearby supply points of Flint, Saginaw, and Detroit. More distant supply centers shipped in less than truck lots via commercial trucking companies. Much of the clothing, for example, was

delivered in this way.[1]

Farms also depended on the automobile and truck. The preliminary reports of the 1950 Census for Genesee County list 953 trucks, 4,374 automobiles, and 3,770 tractors on the 3,691 farms of the county.

The community labor force was dependent on the automobile. Over sixty per cent of the village workers were employed outside the sub-community, some as far away as Detroit, but most in Flint. Commuters to Flint travel forty miles each working day. More than half of the rural working force was similarly dependent for income opportunities on the speed and flexibility of the automobile. In 1900 farm exports were the major source of income to the village. By 1950 the auto had made labor export the significant source of income for the sub-community.

The distribution by resident and non-resident pupils of the total school pupulation on November 1, 1950 illustrates the importance of the motor bus to the village school.

	Grade		Total
	K-6	7-12	
Non-resident pupils	113	209	322
Resident pupils	146	91	237
Totals	259	300	559

[1]The clothing merchant reported, during a 1952 social visit, that he may shift to the railroad for long deliveries. He now feels that recent truck rate changes have made rail freight cheaper for long hauls.

Thus fifty-eight per cent of all pupils were transported by school bus.

Finally, the dependence of the whole metropolitan community on the motor vehicle in its relations with the sub-communities is shown in the extensive network of improved roads. There were 1,528 miles of county maintained roads and streets in 1949.

The basis for the conversion in transportation is the flexibility, lower cost, and time savings of the motor vehicle. This latter element is probably the most important. For instance, railroad freight time to Detroit for less than carload shipments was five days and for a full car it was two days. Truck time was a matter of hours. Freight to Flint by rail was not even considered. Truck time was only one-half hour.

The Motor Vehicle and Linden's Metropolitan Role

Linden has become increasingly subordinated to Flint in the past fifty years. The small community remained relatively independent until 1930 and then rapidly changed to a metropolitan sub-community. There is a close correlation between the timing of the absorption process and the timing of the conversion to motor transport. The motor vehicle has made possible a great reduction in the time-distance to Flint and in intra-community time-distance. In this change can be found much of the explanation of how the motor vehicle has changed Linden's business structure.

CHAPTER FIVE

THE METROPOLITAN ABSORPTION OF LINDEN

Transportation improvement is the generator of change in Linden. But the character of the changes is molded by intervening stimuli.[1] The major stimulus, in this case, is the absorption into the expanding Flint metropolitan community of the previously locally independent, although subordinated, village community. This involves, among many things, an expansion of services from

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[1]It was for this reason that it was emphasized that the present analysis is a case study.

Because of the system of mutual dependence that exists among the many centers of the metropolitan community, the type of readjustment made by a previously independent community depends in great part on the nature of the central city in the metropolitan community. The absorption of a small village into a community based on a commercial central city would mean something very different from absorption into a community based on an industrial or political city.

The maturity of the central city would also be an important fact in the type of adjustment expected on the part of the village. The formation of a metropolitan community will be much different in the case where the central city has had many years to work out a stable adjustment within its own boundaries.

A third factor is the spatial relationship of the metropolitan center to other large centers. When large centers are close they tend to specialize.

Of course, it is to be expected that in certain respects there will be similar adjustments in all types because the metropolitan community structure will have certain basic items in common.

In this particular case Flint is hemmed in by Detroit, Saginaw, Grand Rapids, and Lansing. It has specialized in durable goods manufacture and is less than 50 years old as a large center.

and demands on the central city, an outward redistribution of population, absorption of much of the resident labor force of the small community into a larger economy, and reorientation of most of the daily activities of the small community population. Description of the change from 1900 to 1950 in the relationship between Linden and Flint is necessary in order to establish an important basis of the Linden changes later outlined.

The Early Relationship

Flint provided a few infrequent services for Linden in 1900. It was the county seat and as such was the center for legal and political business. Linden even sent a county clerk to Flint about the turn of the century. Flint was also the center for "major" purchases by Linden community residents. A "Sunday best" suit, a good woman's dress, a new buggy, and home furnishings, among other "quality" merchandise, required an occasional trip to Flint. Hospital care, specialists' services, and teacher training were other reasons for making the three to four hour trip.

Flint was also the entertainment center for the small community. For some, the annual circus trip was a necessity. The Genesee County Agricultural Fair drew others to its Flint fair grounds. When the Elks gave a full week carnival in 1902, The Linden Leader, the village newspaper, advised all to be sure to attend. For the event, the railroad gave one-third rates for a round trip within

fifty miles of the city. Younger people "who didn't mind the long buggy ride" would go to Flint for a "feed" and a "show."

To a limited extent Flint was a marketing center for the farmers to the north of the village. Hogs, chickens, butter, and eggs were the products marketed there most frequently.

Entertainment was about the only service sent out from Flint to the village. A Flint orchestra occasionally played for Linden dances.

As a bustling carriage manufacturing center, Flint attracted some labor from Linden. Perhaps as many as three or four Linden men worked in Flint and traveled home weekends. But Linden's economic system organized virtually all of the work activities of the community labor force.

Informants were convinced that the village population had little social contact with Flint. Personal columns in the village newspaper noted only infrequent exchange of visits -- and usually it was with relatives and involved an overnight trip. Trips of all types to Flint did not average over three or four per year per person.

Going to Flint from Linden in 1900 required planning and considerable preparation, particularly from the most distant western and southern part of the community. There was no direct rail connection between the two towns. With the closest connections, the railroad trip could be made in about one and a half hours. The alternative was a horse

and buggy trip of nearly three hours under the best of conditions. If the dirt roads were muddy the trip took as much as eight hours.

In spite of the meager dependence of Linden on Flint in 1900, the small community was still subordinate to it. The change in the past fifty years in the relationship of the two communities is not a change in kind but one of degree. As the first step in illustrating the increased interaction, the growth of Flint will be summarized.

Growth of Flint

Flint in 1900 was a small city practically coterminous with its political boundaries.[1] Advertised (see Plate 1) as the Vehicle City, the manufacture of carriages and carts was the basic industry. The Durant-Dort Carriage Company, shown in Plate 3, was one of its major companies, producing as many as 150,000 carriages a year. At least one other company was as large.

Although a small town, Flint's carriage manufacturing made it a possible employment center for Linden area

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[1]Flint had first been a fur trading center, then an agricultural settlement, and next, a lumber center from 1860 to 1885. When the pine lumber failed, it returned to an agricultural center and as a county history stated, "... and for a few years, Flint, the county seat of Genesee, although slowly growing, had practically settled down to become the entrepot of a prosperous agricultural region." (p. 773) A new kind of cart that was claimed to neutralize the motion of the horse then led to the opening of its export carriage business in 1886. Wood, Genesee County History (1916), Chapter 14.

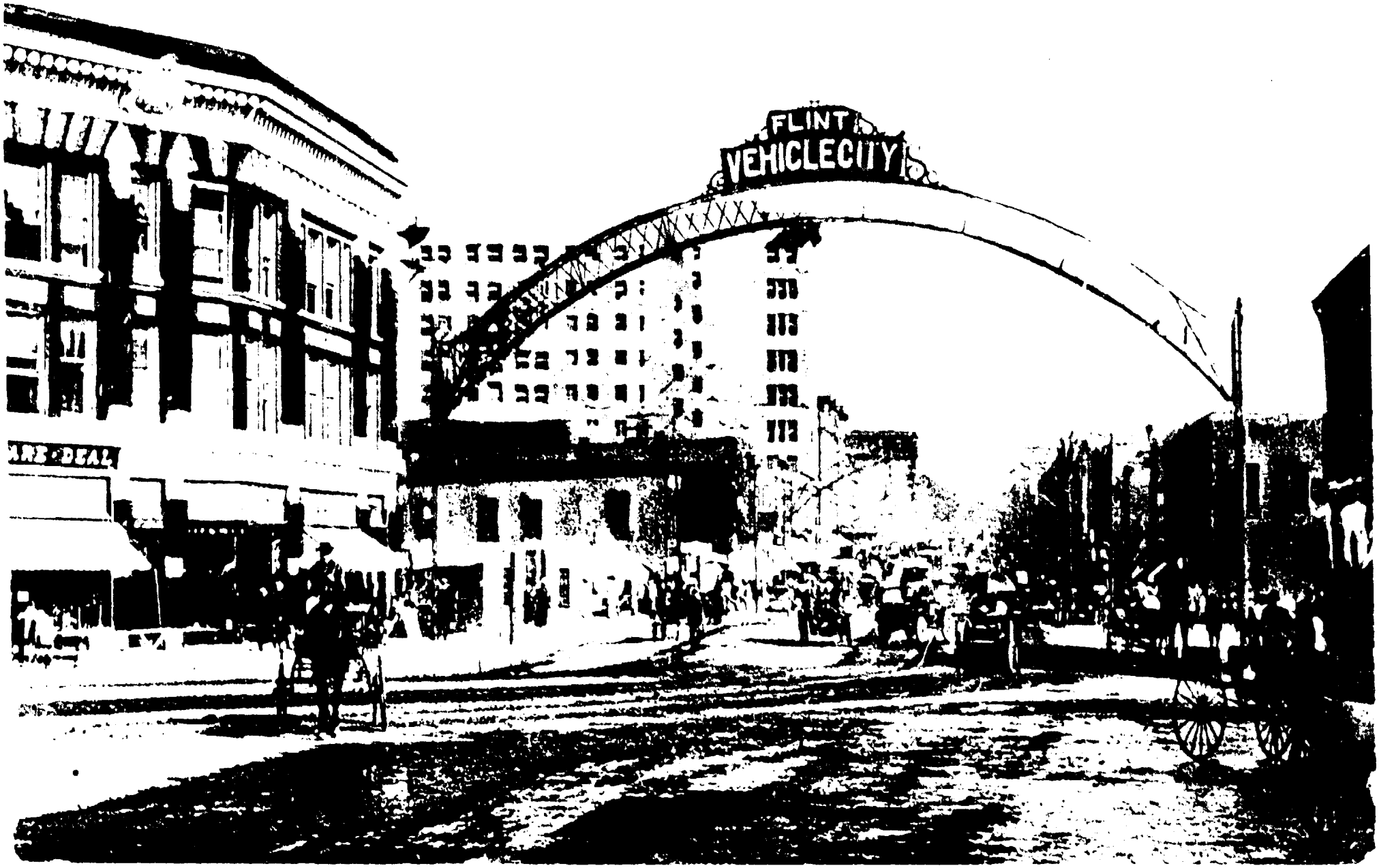


Plate 1: Flint, The Vehicle City, About 1900



Plate 2: The Business District of Flint, About 1900

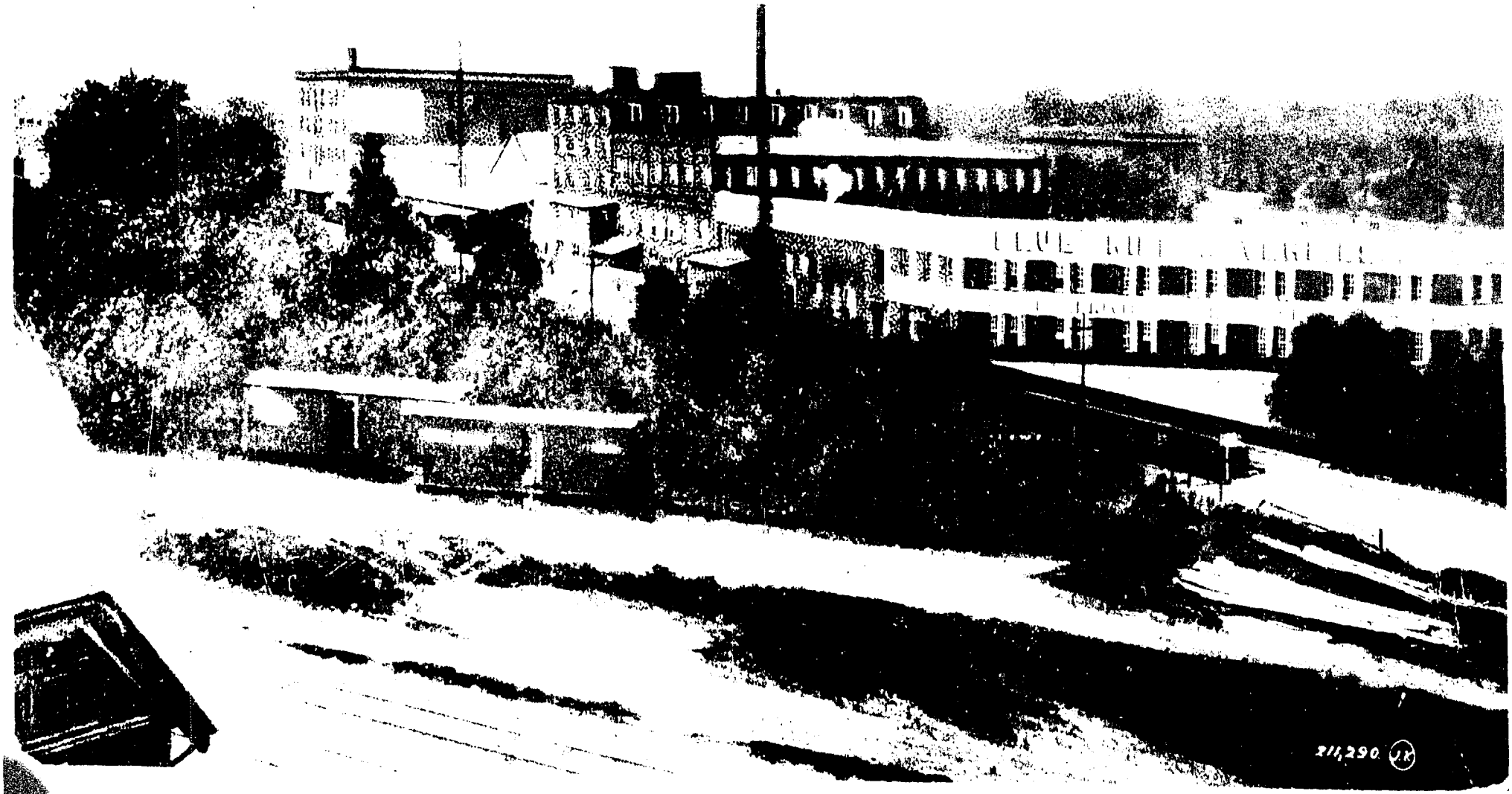


Plate 3: The Durant-Dort Carriage Company, About 1900

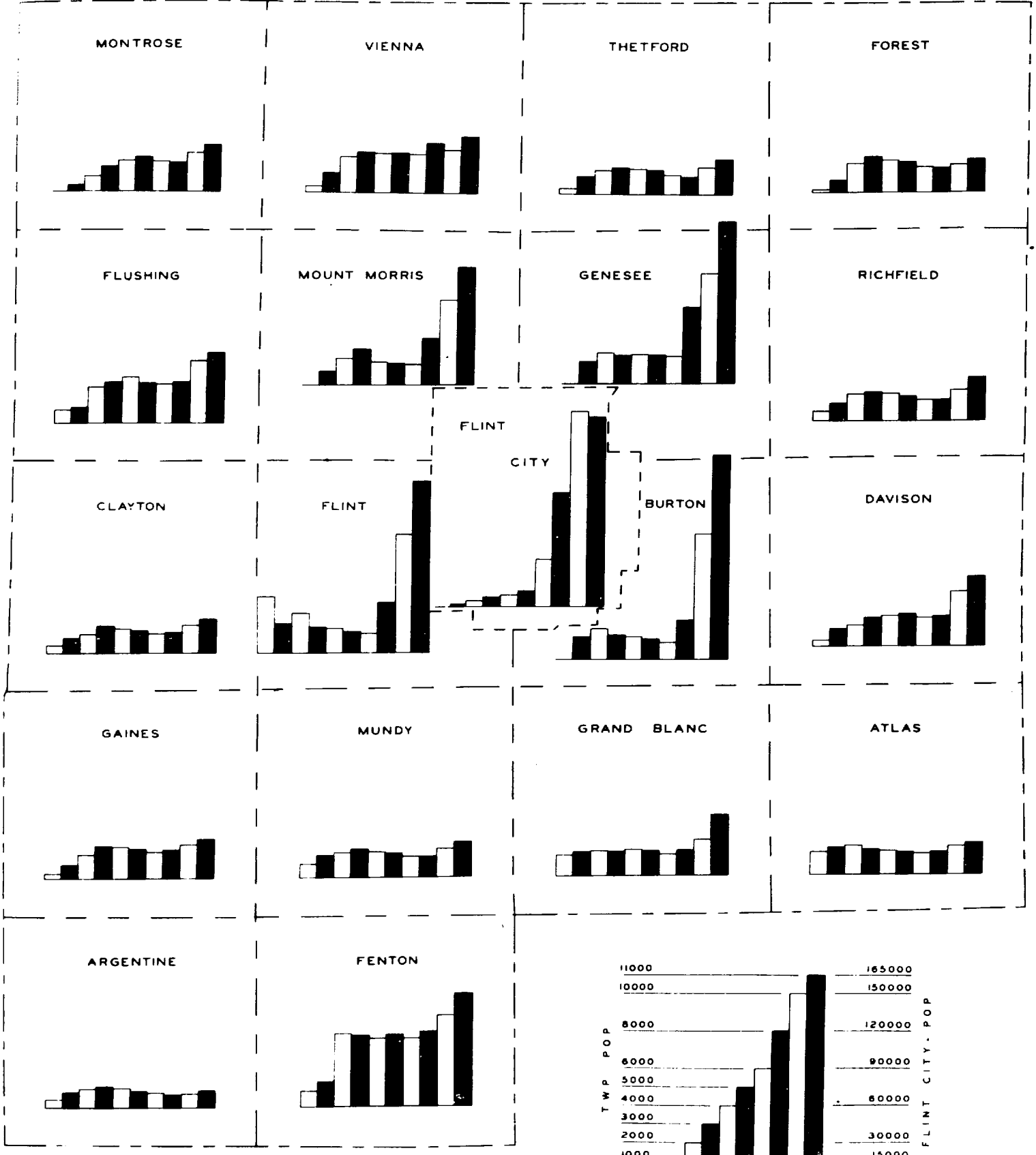


Figure 4: Population Trends in Genesee County, 1850 - 1940.(From Population Trends Flint Area 1850 - 1940, Social Science Research Project, University of Michigan)

residents. The village newspaper recorded several migrations to the city to accept carriage manufacturing jobs. The pressure on Linden is partly reflected in the demise of Linden's own carriage works in 1902. Informants speculated that competition from Flint for skilled labor was one of the important reasons. However, Flint's pulling power was not effective since transportation was so difficult.

Flint had a substantial business section in 1900, as shown in Plate 2, a reproduction of a penny postcard of that period. It is a picture of Saginaw Street, still the major avenue of the business center.

The expansion of the carriage industry and of the automobile industry after 1905 greatly stimulated the growth of the city. Figure 4 illustrates the sudden spurt in the first decade of the new century, the accelerated growth from 1910 to 1930 and the reduction of city growth after 1930. The population totals are given in Table 11.

TABLE 11

POPULATION GROWTH OF FLINT AND GENESEE COUNTY 1890-1950

Year	Population		Per Cent of County in Flint
	County	Flint	
1890	39,430	9,803	25
1900	41,804	13,103	31
1910	64,555	38,550	60
1920	125,668	91,599	73
1930	211,641	156,492	73
1940	227,944	151,543	67
1950	270,963	163,143	60

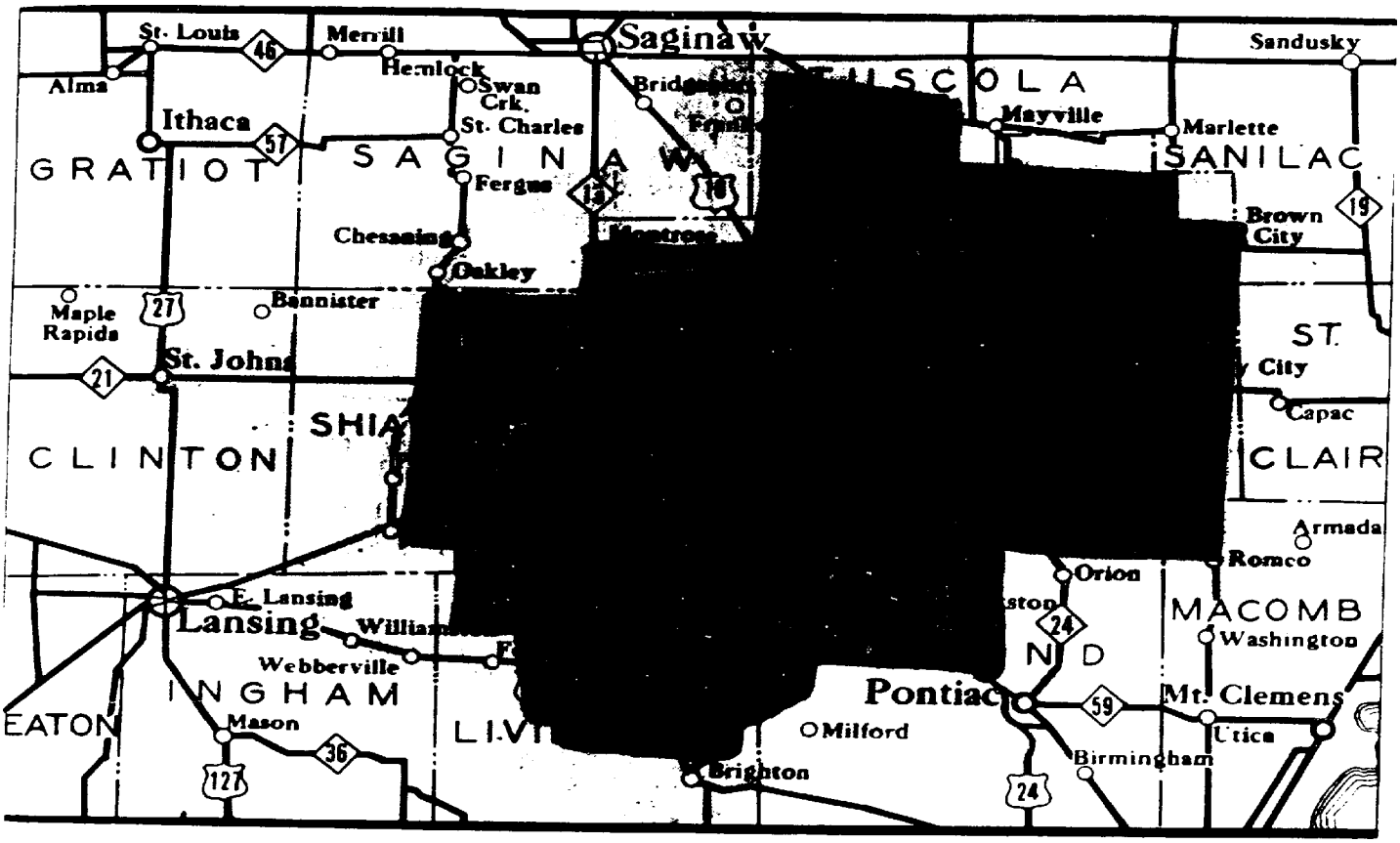
Source: U. S. Census, 1890-1950.

The change in the proportion the Flint city population was of the county total population expresses the changed relationship of the two areas. In 1900 it was only thirty-one per cent, but by 1950 it was doubled.

The low proportion of the county population residing in Flint in 1900 suggests that the population was distributed relatively evenly throughout the county and that the village centers all had relatively equal status. It is probable that each small center was directly related to the regional and national economy by its railroad connections. The high proportion of county population in Flint after 1920 illustrates the unequal distribution of population and the extreme variation in the role of village centers as compared with Flint.

Before 1920, the proportion of the population concentrated in Flint increased rapidly, illustrating that before the automobile became the popular means of getting to work, Flint grew compactly and exerted relatively little population pressure on other parts of the county. Figure 4 shows a general decrease in township population until 1920, even in the areas immediately surrounding the city. Rural population in the county decreased 9.4 per cent from 1900-1910, while Flint increased nearly 200 per cent.

Suburban expansion began after 1920. The growth started in the townships closest to Flint during the 1920-30 decade, while townships more distant were not affected as strongly until the following decade. The suburbanization



Shaded area shows density of the Journal circulation coverage. Solid area represents trading area.

Map 6: The Influence Area Of The Flint Business District
(Adapted from "Flint Market", November 1,1948,
issued by Flint Journal)

of the Linden area was most pronounced after 1940.

Linden and Flint: 1950

Linden was a sub-community of the Flint metropolitan community by 1950. The metropolitan community was defined in 1947 on the basis of, among other indexes, department store sales, women's apparel sales, newspaper circulation, wholesale grocery sales, and bank correspondence data.[1] Linden, as shown on Map 2, is within the dominance region of Flint, except for the southwestern part of the trade area. This is to be expected since Linden is located at the outer rim of the dominance area and metropolitan boundary lines fade gradually from a central area of greatest dominance to rim areas of lesser influence. Map 6 shows all of the Linden sub-community is within the area of Flint influence defined in an analysis of the Flint market by the Flint Journal.

The increased subordination of Linden is also depicted in the increased employment of its workers in Flint. Only forty per cent of the village labor force worked in Linden in 1950, while forty-six per cent worked in Flint and the remainder worked in surrounding towns and cities.[2] Analysis of Linden high school registration cards indicated that fifty percent of the Linden service area labor

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[1]Marian Dunlap, The Urban and Metropolitan Status of the City of Flint (Ann Arbor, 1948).

[2]David Varley, Unpublished Masters Thesis, University of Michigan (Ann Arbor, 1951), p. 12.

force also worked in Flint.

The increased Flint employment of sub-community residents is related to two trends. One is the suburbanization movement. Linden has gained population from the migration, as shown in Table 12, and many of the migrants work in Flint. The second trend has been a reorientation of the native Linden labor force. In 1950 Linden village natives were employed in Flint in the same proportion as were migrants.[1]

TABLE 12

THE PERCENTAGE INCREASES IN POPULATION IN LINDEN VILLAGE, 1900-1950, BY DECADES

Year	Percentage Increase in Decade
1900	
1910	1.3
1920	5.3
1930	23.8
1940	9.1
1950	19.3

Source: U. S. Census, 1900-1950.

Flint newspaper distribution change is another index of increased interaction of Linden and Flint. A majority of families had newspapers delivered daily in 1950 while in 1900 there were none. The increase in interaction with

[1] Ibid., p. 12.

Flint is further shown by an analysis of visiting relationships in Linden village in 1950. The study found that forty per cent or more of the village families had members who participated in cliques, some of whose members lived outside of Linden.[1] Many of the externally resident members of the clique lived in Flint itself, although they were spread throughout the metropolitan area. Observation showed that many other families had occasional visiting relationships outside the community. Finally, in 1950, the trip to the city was an everyday experience, requiring little planning, and creating no excitement. Direct contact was by automobile over concrete pavement. Rail travel rarely occurred. From any point in the community the central business district of Flint was within one half hour.

The change from being a distant neighbor to member of the family of sub-communities making up an expanded community did not occur overnight. Rather it was a process that began slowly and gradually accelerated. As the motor vehicle improved and the good road system pushed farther and farther out from Flint, the Linden area residents began participating in city life as part of their daily experience.

Timing of the Change

Since the present analysis is of the accomplished change and not of the process of change, there was no

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[1]Bessie Young, "A Study of Informal Family Visiting Patterns in Linden, Michigan," Unpublished Master's Thesis, University of Michigan (Ann Arbor, 1951), p. 21.

detailed investigation of the timing or sequence of change. However, it is possible to gauge the changing relationship of Linden and Flint by data on employment, village and rural population growth, newspaper circulation and suggestions of informants. It would seem that Linden's change was slow until at least 1920. Then it began to undergo more rapid change in the twenties and thirties, and then, with increasing speed, became fully absorbed into the metropolitan community in the last decade of the fifty year period.

Employment Change

The absorption timing is shown by the change in place of employment. There was no commutation to work in Flint in 1900. The evidence indicates it did not begin until after 1920. An informant with personal knowledge of a jitney service operated during the second decade could not recall any regular passengers. He stated a high estimate of travel was one trip per month per Lindenite and an average of five passengers per day. Further, he could recall no one commuting privately.

Other informants stated men began commuting early in the twenties. But it was still far from accepted practice.[1] It was reported that in the early twenties it was

[1]A romanticized version of the story of one Linden farmer who in 1918, went to Flint to work is described in Gordon Weber, Years of Eden (Boston, 1951), Chapter 3.

"looked down upon" to take a factory job in the city. As late as 1929 only about twenty-nine men were working in Flint. A 1929 directory listed twenty-four auto workers, three machinists, and two inspectors. It is assumed that these were all employed in Flint. They were fourteen per cent of the reported village labor force.[1]

During the thirties employment in Flint of Linden residents continued to increase. The depression seriously limited employment opportunities in the early thirties and probably slowed the rate of absorption. But in 1939 a directory listed at least thirty-nine as working in Flint. Although it was difficult to determine the place of work accurately, it is probably true that fifteen to twenty per cent of the village force was so employed.[2]

There was a large increase in the proportion working in Flint following the national defense build up after 1939. Farmers, as well as others, were seeking employment in Flint in increasing numbers. The proportion working in Flint doubled by 1950.

The labor force shift was so important that a lack of workers was a common complaint among village and farm employers. In 1900 nearly every farmer with more than fifty acres had a hired hand. In 1950 informants said hired hands

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[1] Polk's Fenton, Holly, Davisburg, and Linden (Michigan) Directory 1929 (Detroit, 1929).

[2] Orrin Hart, Hart's Directory, Fenton-Linden-Argentine Center (Fenton, 1939).

were unobtainable. Village employers reported workers chose jobs in Flint as readily as in Linden. Linden and Flint had become merged into a single labor market.

Village Population Growth

Population increase in Linden was negligible from 1900 to 1920, rapid during the third decade, minor during the depression and then greatly accelerated during the last decade. The growth was a response to the suburban movement from Flint and to the increased market for village businesses represented by suburbanization. It thus reflects the timing of the absorption of the whole community.

Rural Non-Farm Population Growth

Population growth in the Linden service area, as reflected in rural non-farm growth in the six townships, is due almost entirely to the expansion of Flint, for there was relatively little economic growth in the Linden community. Table 13 demonstrates that the population movement began slowly but accelerated after 1930.

The growth of the townships' non-farm population is important to Linden village because much of it has settled along the lakes within the community. The increase in this population has been one of the major factors in the changes in Linden's business system.

Lake Fenton, on the eastern boundary of Linden's service area, is a good example of the development of the

TABLE 13

THE PERCENTAGE INCREASES IN SIX TOWNSHIPS TOTAL RURAL AND NON-FARM POPULATIONS, 1900-1950, BY DECADES

Decade	Percent Increase	
	All Rural	Rural Non-Farm
1900-1910	-11.0	
1910-1920	00.1	
1920-1930	14.0	
1930-1940	28.0	61.0
1940-1950	35.0	106.0

Source: Basic data from U. S. Census, 1900-1950. Computation of Rural Non-Farm, 1950, is based on the assumption that farm population remained constant from 1940.

lake rural non-farm population.[1] In the 1880's and 1890's tents were the most common form of summer housing. However, many "sought out" nearby farms for food.[2] The first subdivision of the lake property was in 1893. The Linden Leader reported in May 1902, that Flint men were talking

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[1]The account is based upon Orrin Hart, Lake Fenton Directory, 1938-1939 (Fenton, 1939).

[2]The Linden Leader began carrying notices in its personal columns about May. For instance, "The time is approaching when campers from foreign parts will flock to the lakes in this vicinity..." (May 22, 1901). "Campers have begun to arrive here on every train and hie themselves to various nearby lakes. The watering places in this vicinity are certainly the tourists' paradise and are becoming more popular every year." (July 18, 1901)

about making the lake into a summer resort.[1] By 1907 plats had been made at the north end and east shores of the lake. Between 1910 and 1940 cottage developments were completed along nearly all of the twelve and a half miles of shoreline. The most active development was during 1920-1930. However, lying closest to Flint, Fenton Lake was developed before the others.

Permanent construction of summer cottages on lakes closer to Linden village began during the First World War.[2] Summer residential construction began at this time on Byram Lake, which is partly within the corporate limits of the village, and Lobdell Lake, in the heart of the service area. By 1939 the latter's shorelands were plotted in seven subdivisions with a total of 148 property owners.[3]

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[1]Action must have been sudden for in August the newspaper wrote: "Vast crowds of people are at Long Lake today picking hairs out of their butter, cutting watermelon, shooing away yellow jackets, riding on the boats, swapping lies, taking trips on the merry-go-round, biting on the sharper's game, taking in the shows, drinking lemonade, looking for beer, mashing the girls, making dates for the evening, dancing, playing ball, fighting, getting gay, and go home all but tired to death. Such is life although not always a picnic." (August 29, 1901)

[2]Prior to this travel was too difficult to most lakes. For instance, to reach Lake Fenton, the best developed of the lakes, visitors traveled by Grand Trunk railway to Fenton, then took a narrow gauge horse car to the southern end of the lake. There they boarded a steamer for whatever landing they desired. The automobile did not change this until 1916.

[3]Hart, Fenton-Linden-Argentine Center Directory, 1939, p. 70.

Summer development of the lakes was a forerunner to the growth of the rural non-farm population that so radically altered the character of the Linden service area. While sub-divisions were made frequently during the twenties and thirties, summer cottages rather than permanent residences were built. The rebuilding of summer cottages into year-around homes was delayed until after 1940. Then, with a war-time shortage of housing in the city of Flint, increasing numbers of the lake property owners began living year-around in the Linden service area. Linden lumber merchants estimated the average number of cottage conversions at thirty to forty a year by 1950. Home building and cottage reconversion attained such volume by 1947 that the lumber company, for the first time in the history of Linden, was able to operate without a seasonally balancing trade in coal. New inquiries concerning lake year-around resident construction are made every week during the building season.

The suburban migration has had less influence on the use of land located away from the lake shores. Most of the community area is still farmed. The impact on good farm land has been mainly along the major highways. Twenty-five years ago the main routes to Flint were lined with farms but now suburban homes have replaced them. Sub-division of whole farms as well as roadside development has taken place.

Newspaper Circulation

The slow, steady growth of the relationship of Linden and Flint is also shown in the changes in readership of the leading Flint newspaper. The per capita readership rates, given in Table 14, climbed steadily after 1917, when only thirty-eight papers were delivered in the village. The increase in the next three years was due to a special selling drive and the beginning of daily truck delivery to the village.

Village Functioning

Two indices of change in the functioning of the village also suggest Linden and Flint remained relatively independent until after 1920. Informants reported that before 1920 Saturday night crowds were so heavy that one could hardly move along the street. Traffic dwindled perceptibly in the following years until the crowds had disappeared in the early 1930's. Shopping with much socializing ceased to be a once a week affair.

Merchant informants pointed to the timing of the change in the alteration of their own temporal cycle. There seemed to be three periods. Before 1925, while Linden was primarily an agricultural center, spring and fall were more active than summer and winter. The last season was the least busy. When the summer use of the lakes expanded, income from summer business activities became most important. The summer continued to be the peak income

TABLE 14

THE NUMBER AND PER CAPITA READERSHIP OF FLINT NEWSPAPER CARRIER-DEALER SALES IN THE VILLAGE OF LINDEN, 1920-1949

Date	Total Sales[a]	Newspaper Per Capita[b]
December 1917	38	
December 31, 1920	110	.19
December 8, 1930	166	.23
September 30, 1939	213	.27
September 26, 1949	290	.31

Source: Circulation Manager, Robert W. Taylor, Flint Journal.

[a]The dealer sales include some sales in the service area as well as the village. Change from day-late RFD mail delivery to same day motor carrier delivery has altered the rates of carrier to dealers so that by 1949 a proportionately greater amount of the total village sales were distributed within the village. Thus the change is greater than the amount actually shown.

[b]Based on nearest census year.

period until about 1940 when permanent lake residence began. Summers are still the most active period but the peaks are much lower. Merchants no longer say that they make all their money in the summer and just hold on during the rest of the year. Instead, seasonal cycles have been smoothed into a more even flow of business.

General Conclusion

The evidence indicates that Linden remained relatively independent of Flint until 1920. The dependence of Linden on Flint then grew at an increasing rate, first slowly during the 1920's, then more quickly during the next decade, and finally at a greatly accelerated rate during the last decade.

Importance of the Transformation

The increased interaction of Linden and Flint has been described because, according to our hypothesis, that event is one of the fundamental causal factors in the transformation of the business structure of the community. The conversion of the local clientele for village services from an agricultural population to a predominantly factory employed population -- through suburbanization and change in occupation of Linden residents -- has had direct effects on the village and trade area business structure. The increased accessibility of the Flint population has strongly influenced the farm pattern. The ease of shopping in Flint has critically altered local consumer-merchant relations.

CHAPTER SIX

THE ECONOMIC FUNCTIONS IN 1950

Approximately 531 small, specialized business units made up the corporate economic structure of Linden sub-community in 1950. It was found that nearly two-thirds of the village units had only one function. The farms were also specialized. Over ninety per cent of the units were owned and operated by sub-community residents but nearly twenty per cent of the village units had agency and dealership relationships with national organizations. Only six per cent of the village units were branches of externally owned and operated companies.

Nearly half of the village units used less than 500 square feet of building space, fifty-nine per cent less than 1,000, and eighty-five per cent less than 5,000 square feet. The largest area used by any unit was 9,000 square feet. While all units were small, the variation was still important. They varied from the independent construction craftsmen, lacking specialized building space, internal differentiation, and with a minimum financial investment, to retail and manufacturing units with specialized buildings, internal differentiation and a relatively large investment. The average farm was approximately 100 acres,

but there was great variation.

The General Pattern

The business units were distributed in three major functional systems as shown in Table 15. The production system was ninety-three per cent farms -- predominantly dairy farms oriented to a Flint market and livestock farms serving a regional market. The exchange and maintenance systems were internally oriented, serving farm and non-agricultural labor force populations. About thirty-eight per cent of the sub-community was in the farm population market and sixty-two per cent in the non-agricultural labor force market.[1]

TABLE 15

THE GENERAL ECONOMIC FUNCTIONS AND THE APPROXIMATE NUMBERS OF CORPORATE BUSINESS UNITS, BY VILLAGE AND NON-VILLAGE, 1950

Functional System	Number of Units			
	Village	Non-Village	Total	Per Cent
Production	25	426	451[a]	85
Exchange	40	10	50	9
Maintenance	19	11	30	6
Total	84	447	531	100

Source: See footnotes to Tables 5 and 16.

[a]416 Farm units, 412 in non-village area.

[1]Based on the percentage the farm population was of the six township population, excluding Fenton town, in 1950.

Exchange functions predominated among non-agricultural functions in 1950, as shown in Table 16. Production and maintenance had about the same number of units. The largest functional class was retailing, which had thirty-one per cent of all non-agricultural units and seventy-two per cent of all exchange units. Construction was the next largest group with twenty-six units, while the remaining functional classes ranged from two units to nine units. Because of the variation in size of unit the number of units is not always a good index of the volume of activity in any function. For instance, the few manufacturing units were as functionally significant as the more numerous one man construction units. The description of each functional class will clarify the differences among classes.

The functional systems did not form a locally self-sufficient structure in 1950. Farm and manufacturing income was inadequate to support the other two systems. The major income source was the wages of the non-agricultural labor force employed outside of Linden. A transient population of summer lake vacationers helped support the non-agricultural units, but it was much less important than the other population groups.[1]

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[1]The transient market was more important from 1920 to 1940 than in 1950. Permanent lake residents are replacing the summer vacationers.

TABLE 16

THE COMPOSITION OF NON-AGRICULTURAL FUNCTIONS AND APPROXIMATE NUMBERS OF ECONOMIC UNITS FOR THE SUB-COMMUNITY, 1950

Functional Type	Number of Units			
	Village	Non-Village[a]	Total	Per Cent
Production				
Construction	14	12[b]	26	
Manufacture	5	2	7	
Sub-total	19	14	33	29
Exchange				
Transportation	2	1	3	
Communication	2	-	2	
Retail	31	5	36	
Wholesale Marketing	-	-	-	
Real Estate and Insurance	5	4	9	
Sub-total	40	10	50	44
Maintenance				
Business and repair	5	1	6	
Personal	7	1[c]	8	
Professional	6	1	7	
Entertainment	1	8	9	
Sub-total	19	11	30	27
Grand Total	78	35	113	100

Source: Village units are based on a field count and personal interviews. Non-village units are based on road tour, village newspaper, and telephone directory. The total given is the minimum and is probably an underestimation.

[a]Only open-country units are included. In addition there was Argentine Center, a subshopping area three miles to the west of Linden with approximately fourteen units.

[b]Based on estimate by village lumber dealers.

[c]Lake cottages for rent might be included as a personal service.

The non-agricultural units did not furnish to the farm system all the business services it required. The lack of wholesale marketing units shown in Table 16 illustrates this but as each functional class is described it will become clearer that only part of the farm business market was supplied from the village. Instead, the non-agricultural units were concentrating on supplying personal services. Some manufacturing units were the principal units specifically organized to serve the farmer as a businessman.

Even though thirty per cent of the non-agricultural units were located in the service area, the sub-community was divided into functional zones. Nearly all farm units were located in the service area and most other units were concentrated in the village. Only entertainment and recreation units were concentrated in the service area while construction and real estate and insurance selling were about equally divided between the two sub-community zones.

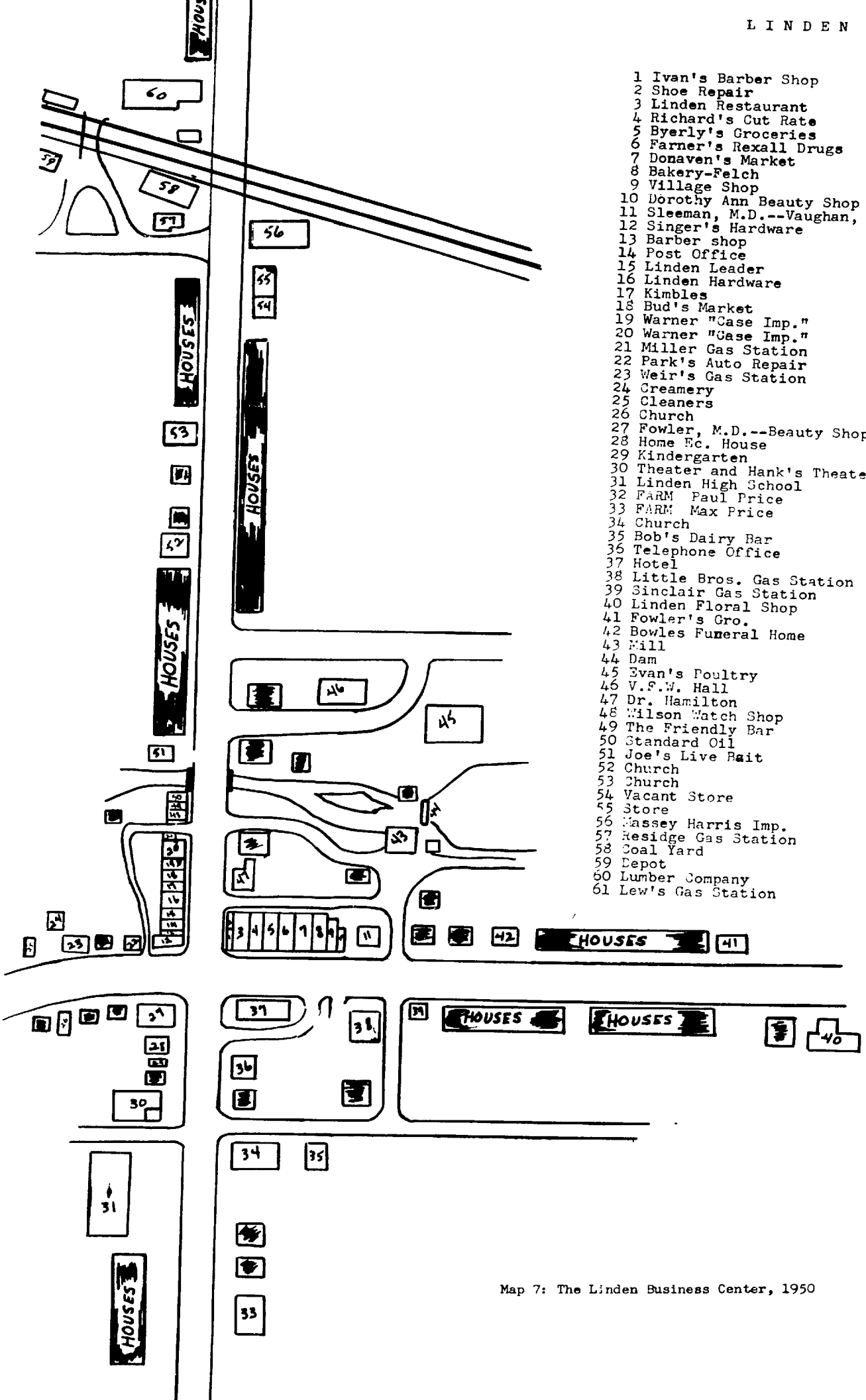
Village Business Structure

The business structure of the village was made up of forty-six specific functions carried by seventy-eight units. The units varied from one with an annual gross income of a few hundred dollars to one grossing over one-half million dollars. Retail units were forty per cent of all village businesses. No other function had half as many units as the retail function and most had only a sixth or

less. The retail, real estate, construction, and maintenance units were eighty-eight per cent of the village units. All were directly related to the individual consumer requirements market within the sub-community. Four manufacturing units marketed in the whole metropolitan area.

The spatial pattern of business units shown in Map 7 reflects the relative importance of the functions and expresses the essential relationship to the local area. The village has never had a zoning ordinance to create the concentration. Most units were tightly clustered around the intersection of the two main roads in the community. The retail units had the most accessible locations; of the thirty-one units, fourteen were located within one hundred feet of the intersection, while twenty-three were within 160 feet of it. Five of the remaining eight retail units were located at the railroad crossing.

The other functions were in concentric zones around the nucleus. Sixteen of the maintenance units were on the outer edge of the retail area, while only four were right in the center. Three manufacturing units had sites within 1,200 feet of the center. The newspaper plant was right in the center and the fifth unit was located near the railroad. The residential ring which surrounded the village center contained the finance, insurance, real estate, and construction units. Residence and business location were one for these. Farms were in the outer zone.



1 Ivan's Barber Shop
2 Shoe Repair
3 Linden Restaurant
4 Richard's Cut Rate
5 Byerly's Groceries
6 Farner's Rexall Drugs
7 Donaven's Market
8 Bakery-Felch
9 Village Shop
10 Dorothy Ann Beauty Shop
11 Sleeman, M.D.--Vaughan, M.D.
12 Singer's Hardware
13 Barber shop
14 Post Office
15 Linden Leader
16 Linden Hardware
17 Kimbles
18 Bud's Market
19 Warner "Case Imp."
20 Warner "Case Imp."
21 Miller Gas Station
22 Park's Auto Repair
23 Weir's Gas Station
24 Creamery
25 Cleaners
26 Church
27 Fowler, M.D.--Beauty Shop and Black Smith
28 Home Ec. House
29 Kindergarten
30 Theater and Hank's Theater Grill
31 Linden High School
32 FARM Paul Price
33 FARM Max Price
34 Church
35 Bob's Dairy Bar
36 Telephone Office
37 Hotel
38 Little Bros. Gas Station
39 Sinclair Gas Station
40 Linden Floral Shop
41 Fowler's Gro.
42 Bowles Funeral Home
43 Mill
44 Dam
45 Evan's Poultry
46 V.F.W. Hall
47 Dr. Hamilton
48 Wilson Watch Shop
49 The Friendly Bar
50 Standard Oil
51 Joe's Live Bait
52 Church
53 Church
54 Vacant Store
55 Store
56 Massey Harris Imp.
57 Residge Gas Station
58 Coal Yard
59 Depot
60 Lumber Company
61 Lew's Gas Station

Map 7: The Linden Business Center, 1950



Plate 4: The Linden Business District,1950.(Courtesy,The Linden Leader)

Village Exchange Functions

The organization of exchange functions was the basic framework upon which the business structure of Linden village was hung in 1950. The exchange structure was specialized, concentrating upon retail functions as more than half of all village units were either primarily retail outlets or had secondary retail functions. There were also important local information communications functions. The village was not a center for transportation, real estate, insurance, or wholesale marketing functions. Although, in the latter case, it had a distinctive food processing role in the metropolitan economy. The retail functions are listed in Table 17, Part A.

By definition, the primary function of the retail units was to purchase in relatively large lots from specialized suppliers and resell in small lots to individual consumers. In 1950 nearly all supplies were directly or indirectly obtained from other units located outside of Linden. Flint was the major supply point. Consumers were almost entirely located within the sub-community as defined, with the specific area varying from unit to unit. Only the elements common to all retail units will be described since the specific characteristics of the individual stores are common experience.

When the stores were classified by the type of need which they primarily served, it was found that individual consumer requirements were the basis of the retail trade.

TABLE 17

A DETAILED LISTING OF THE SPECIFIC FUNCTIONS
OF CORPORATE UNITS IN LINDEN VILLAGE, 1950

PART A--THE RETAIL FUNCTION, BY MARKET TYPE

Specific Functions	Number of units with primary function	Number of units otherwise classified but supplementing the function[1]	List of Supplementary Units
Individual Need Stores			
Grocery and Meats	1		
General Grocery	1		
Staple Groceries	2	2	Meat store, Bakery
Bakery	1		
Meats	1		
Drugs	2		
Restaurant	1		
Grill	1		
Dairy Bar	1		
Taverns	2		
Jewelry	1		
Apparel	1		
Notions -- Gifts	1	1	Village Newspaper
Bait	1		
Fuel	1	1	Gasoline Station
Gasoline Station	4		
Motor Vehicle	1		
Hardware	1		
Gravel and Dirt	1		

TABLE 17--Continued

Specific Functions	Number of units with primary function	Number of units otherwise classified but supplementing the function[1]	List of Supplementary Units
Individual Need and Business Need Stores[2]			
Gasoline Stations	2	1	Garage
Motor Vehicle Sales	1		
Hardware	1		
Lumber	1		
Business Need Stores			
Farm Implement	1	2	Feed Mill, Fuel Yard
TOTAL	31	7	

[1]There are further retail activities in the form of individual agents and salesmen working part-time; a roofing and building supply salesman is an example. Other supplementary functions were cosmetics by the beauty shops, milk delivery from farms, and flowers and plants by the floriculturist.

Additional places in the country have already been mentioned. These were one small grocery, a refreshment business, two building supply units. In addition, there was a dairy that delivered milk and manufactured ice cream, and a second that had a pick-up milk service. Truck crops, fruits, eggs and fowl were continually offered for sale in the village newspaper classified advertising section. In all, at least forty-five units serve the Linden market with some type of goods.

[2]Gasoline service, motor vehicle sales and hardware have been arbitrarily divided. All had some amount of farm business service. In none was it predominant.

Only the farm implement store was classified as principally serving the farm business requirements market. The units allocated to the mixed market group in Table 17 were meeting both markets' requirements with the same commodities and were not providing special services for farms. It is also true that the farm implement function was only recently reinstituted in the village after an absence of nearly twenty years. It was still not stable. In its first three years the unit underwent several changes in ownership and finally added non-farm lines of merchandise in the third year. Naturally the service area farm population was part of the individual need market, but it was no longer a dominant part. Merchants thought that the farm population provided a sound, steady income to the business system but that the basic income source was the non-agricultural labor force market.

Linden's 1950 retail units were generally highly commodity specialized, but there was a range, with hardware stores at one extreme and the jewelry store at the other.[1] Hardware stores had general hardware, paint supplies, plumbing

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[1]The high functional and product line specialization means that nearly all units play a unique role in the community. Only the two auto sales and six gasoline places did not have clearly differentiated niches. This is extremely important for community structure as it means that each unit is grasped tightly in an enmeshing web of symbiotic relations with supplier and consumer units. The higher the specialization, the closer must be the articulation of units. It also increases the number of trade relations of the individual consumer.

equipment, sporting goods, floor coverings, toys, and electrical appliances. The jeweler carried only very inexpensive watch and jewelry merchandise. Twenty-five of the units were within one general product line, three had two lines, and only the hardware stores had more. Half the one general product line stores were specialty units. They were the jewelry, gasoline stations, taverns, restaurants, and sport stores. The clothing unit serves as an example of the remaining one general product line stores. It had inexpensive clothing for men, women, and children, including shoes and millinery, rather than specializing in a single type.

As a retail center, Linden village concentrated on frequently needed, inexpensive, standardized merchandise. For instance, one could obtain a standard "meat and potatoes" meal in the restaurant but deviation from hamburger, roast beef, and pork was unthinkable. Prices for a full meal were from seventy-five cents to $1.25. Top prices in women's shoes in Linden were $4.95; best quality men's shirts were $3.95. The emphasis was also on frequently needed consumer items. Each unit depended on satisfying a constantly recurring need in a small population. The importance of high use items in determining the structure is stressed by the distribution of retail units. Food and motor vehicle service units -- daily needs in the dormitory town -- absorbed nineteen of the thirty-one units.

TABLE 17

PART B--THE EXCHANGE FUNCTIONS, EXCEPT RETAIL[1]

Specific Functions[2]	Number of Units with primary function	Number of Units otherwise classified but supplementing the functions	List of Supplementary Units
Transportation			
Railroad Branch	1		
Gas and Electricity Branch Office	1		
Communications			
Telephone Company Branch	1	1	Village Newspaper
Telegraph Company Branch	1		
Real Estate, Insurance and Finance			
Real Estate	2		
Insurance	3		
Wholesale Marketing			
	0	4	Hay Commission Agent Creamery Poultry House Flour Mill
Total	9	5	

[1]There were three rural real estate agents living near major lakes. There was one rural insurance agent specializing in farm insurance.

[2]All units were serving business and individual needs.

Transportation

The railroad operated both passenger and freight trains through Linden daily but its only function was to help export hay and import coal, lumber and building supplies. Personal travel was negligible. Only two or three business units had any dependence on the railroad. The function of the second unit was to transport to Linden gas and electricity manufactured elsewhere. The local branch needed little more than space for a desk in the back of one of the drug stores. Nearly every sub-community unit -- whether for a business or personal need -- was dependent upon it.

Communications

Linden was a local communication center for personal and business information in 1950 because of its newspaper and telephone branch. The weekly Linden Leader served an audience of 600, principally with business news in the form of advertisements, personal items, and church and associational information. Virtually all of its six to eight pages were concerned with information about events within five miles of the village.

The Telephone Company was a small state organization, serving seventy-two cities and villages, including Linden. Central headquarters and the district headquarters for Linden were located in Owosso. Of the company's 56,000 phones in 1950, about 260 were in the village and 229 in

the rural service area.[1] It was not until September of 1950 that a central battery system was installed in the Linden exchange. External connections were through the Bell telephone system. The external communications of the telephone company were supplemented by a Western Union office located in the railroad station and operated by the station agent.[2] There was an average of two telegrams per day during 1950.[3]

Sub-community units were also supplemented daily by outside communication agencies. A Fenton newspaper printed information about the same areas covered by the village newspaper and competed for the same market. A major Flint daily had a local reporter and published extensively about the sub-community. For metropolitan community, state, and national news, the sub-area was completely dependent on external agencies.

The major newspaper was the daily Flint Journal, though all Detroit dailies were regularly available in the village center. Home delivery was limited to the Flint

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[1]The installation figures are for 1949. The 1950 figures would be slightly larger. The telephone service area is not as large as the retail trade area.

[2]The Federal Post Office, occupying a full store building in the main business district, was the principal means for long distance communication. In 1950 it operated with five employees and served sixty miles of rural free delivery routes, as well as the village. Mail was received and dispatched twice a day by mail.

[3]There is currently speculation that the local office may be closed entirely. A plan to have telegrams phoned to a central office is under consideration.

newspaper. Carriers and dealers distributed 290 dailies within Linden and 304 by motor routes around Linden on September 26th, 1949. There were an additional forty-one by mail, making a total of 635 Flint Journals distributed in only part of the sub-community area. In the Linden area there were four motor routes of one hundred miles each so that metropolitan newspaper reading was a daily experience for most.[1] Radio, from Flint, Detroit, and Owosso, television from Detroit, national magazines, and house organs served to inform most on national affairs.

Real Estate, Insurance, and Finance

The real estate and insurance units were all one man agents using their homes as offices and selling only within the sub-community. One real estate unit operated on a full-time basis, while the other was active about a quarter of the year. Lake real estate transactions were the most frequent. The insurance agents sold standard residential and farm catastrophe, life, and auto insurance for national and state companies.

There was no banking unit in the village in 1950, the last bank having failed about 1929. Village businessmen felt the need for one and for several years had been unsuccessfully trying to attract a branch of a Flint bank. In the meantime the business units needing credit for sales,

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[1]Based on interview with Robert W. Taylor, Circulation Manager of the Flint Journal.

such as the lumber and auto sales units, had worked out arrangements with Flint banks. For instance, FHA home improvement loans were easily obtained for local buyers by the lumber yard. Banking facilities were also available in nearby Fenton.

Wholesale Marketing

There were no specialized wholesale marketing units in Linden in 1950. The nearest approach was a commission agent who bought hay in the local area for shipment to dealers in southern and eastern states. The creamery, poultry house, and flour mill were consumers of locally produced cream, poultry and eggs, and grain. The first two were secondary farm income commodities and the third was purchased in Linden in small quantities. These units are described more extensively in the manufacturing section.

The lack of specialized wholesale units in Linden does not indicate the absence of local farm products requiring bulk treatment. Large amounts of milk, grains and livestock were produced but Linden was by-passed in their marketing. The major crops were marketed in nearby small centers, or sold directly to processors in larger centers.

Village Maintenance Functions

Slightly less than one-fourth of the village business units were primarily maintenance organizations in 1950. Ten retail units supplemented the nineteen service concerns so that thirty-six per cent of all business groups

had a maintenance function. When both primary and supplementary units are counted, personal and repair services were equally important in terms of numbers of units. The basic function of these units was to organize the sets of skills needed to support the functioning of individuals and organizations within the sub-community. Individual need satisfaction was almost the exclusive function.

Personal Services

The general personal service functions were carried by very small units. The median need was for 400 square feet of building space. Gross income averaged $4,000 per year. The figures are not strictly comparable but the median gross income of retail units was $60,000, which emphasizes the difference in the community roles of the two functions.

None of the units offered anything but inexpensive, standard, commonly required services. Customers in the barber shops got competent but widely accepted high side, close haircuts which did not require trimming for three to four weeks. Adequate work was performed in ten to fifteen minutes, and then, "Next." Similarly, the beauty shops did careful but customary hair styling. Relatively low cost mortuary services were performed by professionally trained persons. The theatre, seating about 400 and holding showings twice each evening, presented films many weeks after Flint. Prices were also much lower.

TABLE 17

PART C-- THE MAINTENANCE FUNCTIONS

Specific Functions	Number of units with primary functions	Number of units otherwise classified but supplementing the function	List of Supplementary Units
INDIVIDUAL NEED			
General Personal Service		A	
Beauty Shops	2		
Barber Shops	2		
Dry Cleaning Shop	1		
Shoe Repair Shop	1		
Funeral Service	1		
Professional Personal Service			
General Practitioners	2		
Osteopaths	2		
Dentist	1		
Convalescent Home	1		
Entertainment			
Theatre	1		
Repair Service			
Radio	1		
Garages	3	8	Auto Sales and Gasoline Stations
BUSINESS NEED			
Repair Service			
Welder, Blacksmith	1	1	Farm implement
		1	Watch Repair
TOTAL	19	10	

[A]Minor personal services found in the village included hotel and private lodgings, domestic service, and inexperienced child care. The hotel was only a minor sideline of one or two useable rooms. It did not have a rental more than once or twice a month. From three to five private families rented rooms to boarders.

The specialized village units were supplemented by eleven rural organizations. Rural personal services included lake cottage rental and a dressmaker and fur remodeler. The only supplementary professional unit on a profit-making basis was an accountant and bookkeeping service. Boating, fishing, dancing, water sports, roller skating and night clubbing were all available from eight rural units. All were located on or close to lakes.

Mobile services were present in the village, such as a Lansing Industrial Laundry.

The professional services were competent but restricted. One of the general practitioners was long-established and greatly appreciated in the community, but elderly and in partial retirement. The second was a much younger man, new to the community, slowly taking over the practice of the older physician. Specialized medical service had to be sought in the city. The two osteopaths were fully active but the dentist was not. A convalescent home cared for aged, mentally deficient patients for the state. In any of these, the consumer could get the skills common to the everyday role; but nothing beyond that.

Repair Services

Eleven units offered the sub-community motorists anything from minor servicing to collision repairs. The function was as basic to business structure as food and motor vehicle retailing and had one of the largest service areas. Its importance was based on the need of the Flint employed labor force and the farmer for highly accessible, quickly available service. While the village was not a transportation center in 1950, it was a center for keeping the community mobile. Other repair services were very limited. A welder-blacksmith and the farm implement store, along with the three garages, offered limited repair functions for the farmer as a businessman.

Village Productive Organization

About thirty per cent of all the village units and twenty-four per cent of the village non-agricultural structure had producing functions. Numerically, construction was the largest functional group with village agricultural and manufacturing about equal. The distribution by specific types is shown in Table 17, Part D. Because of their minor role in the village, the agricultural units will be analyzed along with the rural agricultural system.

Construction Functions

Except for contracting, all the skills needed for home construction were available from fourteen village corporate units and four village and twelve rural supplementary units. Most of the units were single craftsmen; only four had any assistants. The median annual income for a craftsman was $2,500; the median number of weeks worked was forty-six during 1950. None of the units seemed to have any function other than construction, though there were often secondary construction activities. Among the eight carpenters, five had the additional activities of plumbing, painting, cement block laying, and general laboring.

None of the craftsmen would contract for a whole job. Informants stated that they would work only on an hourly basis until their particular function was completed. The typical procedure was for a home owner to open a thirty-day account at the lumber company, and then the carpenter

TABLE 17

PART D--THE PRODUCTION FUNCTION

Specific Functions	Number of units with primary functions	Number of units otherwise classified but supplementing the function	List of Supplementary Units
Construction			
Carpentry	8	A	
Painting and Decorating	4		
Electrical Work	2	1	Hardware store
Manufacturing			
Sash and Door Shop	1	B	
Poultry House	1		
Butter Plant	1		
Flour and Feed Mill	1		
Printing Plant	1		
Agriculture			
Floriculture	1		
Hay Baling	1		
Fruit Orchard	1		
Small Farms	3		
TOTAL	25		

[A]Some secondary construction activities of carpenters included plumbing, painting, masonry, and general laboring. Additional functions by supplementary units included two well drillers, plumbing by a hardware store, and building razing. Twelve construction units in the rural area followed the same pattern as the village units. Only three advertised a plumbing and electrical service, a plasterer, and a septic tank installer. The remaining nine units are based on a lumber dealer's estimate. Its reliability is suggested by the distribution of non-resident pupils at the Linden school. Eight carpenters, one well driller, two masons, one furnace installer, and one contractor were included. Not all of these would work in the sub-community.

On the basis of the number of units it would seem that as much as half of the construction activity of the sub-community was performed by non-village units.

[B]Additional manufacturing activity included a bakery in the village and a mobile saw mill and a small milk bottling plant in the rural area. Argentine, the sub-shopping center in the area, had a flour mill which was larger than any village unit. Home manufacture was almost entirely lacking.

would order on it as he needed the materials. If a home builder wanted any other type of arrangement, it was necessary to hire a contractor from a nearby community.

The skill level within each type was moderate to low. Each offered the customary basic home construction skills, omitting any artistry. In some cases the craftsman, in the routine of living in the village, had noticed a need for a skill and, suddenly, he was a carpenter or cement layer. As one informant said, it was "pretty hard" on the first few clients, but things gradually smoothed out. However, in other cases, the craftsman had been in the construction business in the village for as many as twenty-seven years.

The skills were sold cheaply. Wage rates were considerably higher in Flint than the $1.50 per hour paid in Linden. One consequence of this was that younger and more skilled men worked in Flint. The median age of construction craftsmen in Linden was fifty-two, with four of the fourteen over sixty, and only two under forty.

Most of the construction work was oriented to the non-farm residential market. The major proportion of the sub-community building was located along the lakes and main highways. A large part of the lake building was the transformation of cottages into year around homes at the rate of twenty to thirty each year. Building in the village was only at the rate of one to two completed houses per year. Construction along main roads was greater than this, but a

reliable estimate was not obtained. Village business building erection was infrequent. In the post-war period about one small business structure was built per year. Perhaps one or two units were remodeled each year, as the majority of businesses were using buildings fifty years old or older. One of the two largest recent construction projects was the installation during 1949-1950 of the first public water system in the village. It was built entirely by outside concerns. The other large project was the construction of a new community hall. It was built with local labor, much of it contributed.

Manufacturing Functions

Four of the village manufacturing units were producing for the metropolitan market, while one was internally oriented. In this respect the manufacturing units were unique among village units. The specialized units were small; median annual gross income was $30,000. The products, excepting the woodworking shop, were perishable and frequently required by consumers. Even in manufacturing the village was providing services primarily oriented to an individual requirements market. The flour mill alone, with its sale of feeds and custom feed grinding, was oriented to the farm business requirements market.

The woodworking plant made window sash and frames, doors and door frames, and combination storm doors and windows. The printing plant produced the village newspaper, did job printing, and retailed candy and school supplies. Butter was the only product of the cooperative creamery.

The killing and dressing of chickens and egg wholesaling were the two activities of the poultry house. In addition to cake flour, the mill ground chicken feed, pancake mix and wheat germ. Custom feed grinding was also done and some feed was bought for resale.

The flour mill obtained its raw materials from farmers in the sub-community. Poultry and eggs were bought by the poultry house within a twenty mile radius of the village. The creamery purchased from small eight to ten cow herd farmers located within forty miles of the village. Two creamery trucks traveled eight routes throughout the area every week.

The manufacturing trade area was limited to the distance a truck could travel in a working day with time for delivery stops. The outer boundary limit was probably sixty to seventy miles but most products were sold within thirty to forty miles of the village center. The creamery sold all of its butter within thirty miles of the plant. Flour company products were distributed to commercial bakers in Flint, Holly, Flushing and Durand. Feed was sold in the immediate farm area. Retail lumber dealers in the metropolitan area bought the products of the sash and door concern. Poultry and eggs were sold in a market area extending from Flint to Pontiac. The printing trade area was limited to the sub-community.

The success of Linden manufacturing was dependent on several cost advantages over state and national organiza-

tions. One advantage was a transportation differential. The creamery had a five cents per pound of butter advantage over national producers having to ship by rail. The woodworking shop was awarded a contract by a large Flint retailer because of the transportation savings over the original producer in Chicago. Another transportation advantage was the closeness of the food processors to their raw materials. Local labor costs were also lower than those in large centers.

Rural Non-Farm Units

The village was the center for most non-agricultural functions in 1950, but there were thirty-five rural units. The distribution of these is shown in Table 16 and the detailed units are given in the footnotes to Table 17.

At least eighty per cent of the service area units served summer vacationers and the residents around the lakes. Entertainment, recreation, and construction units were twenty of the thirty-five rural organizations. The sub-community entertainment and recreation function was concentrated in the service area. The units varied from boat rental services to a large tavern and night club. These were the largest non-farm units in the rural area. The twelve construction craftsmen were usually employed in lake residence and cottage construction and repair. They were half the construction units of the sub-community. The other units related to the lake population market were four real estate and insurance agents and three of the five retail

stores.

The remaining rural units were related to the sub-community as a whole. They included a mobile saw mill, a small milk bottling and wholesale delivery plant, two gravel and dirt retailers, a piano tuner, dressmaker, accountant, and a light trucking unit.

Aside from the recreational places, one person units predominated, with over half having no business location separate from their residence. The rural units do not indicate a migration of village functions to the service area. The village business center was still the core of the sub-community non-agricultural activity. The new units were meeting new sub-community functional needs resulting from the residential and vacation use of the lakes. No new center was formed. The service area non-agricultural units were widely scattered businesses, usually located on principal lake roads and streets.

Linden village, however, was experiencing greater competition from a sub-center. Argentine Center, three miles to the west of Linden had approximately fourteen business units. Argentine Center has been competitive to Linden since the 1840's but when the railroad failed to pass through there in 1856 it remained a very small shopping point. Recently new businesses have been locating there and increasing its competitive abilities. At present it has several grocery stores, a new home appliance store, a tavern, and several gasoline stations. There is a real estate office, roller skating rink, several construction

units, including a builder and an upholsterer. The largest unit, a flour mill, is well established, serving most of the farmers in the area.

The Agricultural System[1]

It was estimated that there were approximately 412 farms in the Linden service area in 1950.[2] Since farms varied from residential farms defined by the Census as a place with less than $250 value of products sold, to commercial places of over 600 acres, an estimation procedure was adopted in order to discriminate among the farms of the trade area and to show their characteristics. It was assumed that the Linden farms were in a transitional zone between the highly urban Genesee County -- sixty-eight per cent urban, 1940 -- and the rural Livingston County -- eighteen per cent urban, 1940.[3] Local geographical factors,

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[1]Unless otherwise specified, the statistics in this section are from the U. S. Census of Agriculture, 1950, Farms, Farm Characteristics, Farm Products (Preliminary Report, 1951).

[2]The estimate is based upon an average of 6.6 farms per Fenton farm section and 4.7 farms per Livingston County farm section. The average is based upon the number of farms in Fenton townships and Livingston County according to the 1945 Census of Agriculture. The number of farm sections was computed in Chapter Two. It was assumed that the average number of farms per section in Fenton township applied to the rest of the trade area lying in Genesee County. Since the average size of farm in the other Genesee townships is thought to be larger than in Fenton township, the assumption somewhat increases the total of farms. The trade area boundary is a blurred band encircling the village rather than a fine line so that greater exactness was unnecessary.

[3]J. Allan Beegle, Michigan Population (East Lansing, 1947), Table 1, p. 76.

particularly the lakes surrounding the village, somewhat disturb the gradient. But local beliefs, demonstrated gradients, and some simple statistics suggest the assumption is valid.[1] For instance, the average size of farms in 1945 was 66.3 acres in Genesee County, 132.9 in Livingston County, and 89.9 acres in Fenton township. It was assumed, therefore, that a reasonable approximation to the Linden farming pattern could be obtained by combining the farm statistics for the two counties, computing the percentage distribution, and applying this distribution to the 412 farms in the Linden trade area.

Table 18 illustrates that the two county distributions actually did "fit" into one another to form a median picture. The greater number of small farms in Genesee County is counteracted by the greater number of large farms in Livingston County. The larger number of farms in Genesee County weights the computations for the influence of Flint.

Size of Farm

Table 19 shows that small and medium size farms predominated in Linden. Over forty-five per cent of the farms were under seventy acres, over sixty-two per cent were under one hundred acres, and only about six per cent were over 260 acres. Slightly more than half of the farms

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[1]See Don J. Bogue, The Structure of the Metropolitan Community, for thorough discussion of metropolitan community gradients.

TABLE 18

A COMPARISON OF THE DISTRIBUTION OF FARM SIZES IN GENESEE AND LIVINGSTON COUNTIES, 1950[1]

Size (Acres)	Proportion of Farms	
	Genesee	Livingston
Under 10	12.5	3.8
10- 29	19.0	5.5
30- 49	14.9	11.0
50- 69	8.5	7.1
70- 99	16.9	16.9
100-139	11.1	18.0
140-179	7.1	13.0
180-219	3.9	7.4
220-259	2.0	6.3
260-499	3.9	9.8
500-999	.2	1.2
1000		
Total	100	100

[1]Total farms in Genesee County, 3,691; in Livingston, 1,963.

Source: U. S. Census of Agriculture, 1950 (Preliminary Report).

TABLE 19

THE ESTIMATED DISTRIBUTION OF FARMS, BY ACREAGE SIZE, IN THE LINDEN TRADE AREA, 1950

Size	Number of Farms	Per Cent of Total
Under 10	39	9.5
10- 29	59	14.3
30- 49	56	13.6
50- 69	33	8.0
70- 99	70	16.9
100-139	56	13.5
140-179	38	9.2
180-219	21	5.1
220-259	14	3.5
260-499	24	5.9
500-999	2	.5
1000	-	-
Total	412	100

Basis of estimation: Combined distributions for Genesee and Livingston Counties, U. S. Census of Agriculture, 1950 (Preliminary Report).

can be classified as commercial farms according to the data in Table 20. Depending on how the part-time farms earning more than $250 in 1949 are allocated, Linden sub-community had slightly more than 200 business farms. The majority were medium income farms, only 3.5 per cent earning more than $10,000 in 1949.

Farm Characteristics

Some characteristics of Linden farms are given in Table 21. Nearly ninety-two per cent of all farms were operated by full or part owners; ninety-seven per cent of the operators lived on the farm; only thirteen per cent of all farms hired farm labor.

Farm residence and ownership did not mean that operators were solely dependent upon farm income. The distribution of farms by economic class established that many supplemented their farm work. Table 22 indicates that thirty-seven per cent of the farm operators had family income exceeding the value of the agricultural products sold. The number with some non-farm income was even greater; fifty-five per cent of all operators reported some off-farm work and forty-four per cent had one hundred days or more of such work.[1]

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[1]The reliability of the estimating procedure is suggested by non-farm work reports in Fenton township in the U. S. Census of Agriculture, 1940 (unpublished data). In 1939, thirty-nine per cent of operators reported working off the farm. Informants agreed that the Second World War increased this percentage.

TABLE 20

THE ESTIMATED DISTRIBUTION OF FARMS IN THE LINDEN TRADE AREA, BY ECONOMIC CLASS, 1950

Economic Class	Number of Farms	Per Cent of Total
Commercial Farms	239	58
Value of Products Sold		
$25,000 or more	2	.4
10,000-24,999	13	3.1
5,000- 9,999	47	11.3
2,500- 4,999	78	18.9
1,200- 2,499	68	16.5
250- 1,999	32	7.9
Other Farms	173	42
Part-time[1]	76	18.4
Residential[2]	96	23.4
Abnormal[3]	1	.1
Total	412	100

Basis of estimation: Combined distributions for Genesee and Livingston Counties, U. S. Census of Agriculture, 1950 (Preliminary Report), data for 1949.

[1]Part-time farms include those with value of products sold of $250 - $1,199, and operator either reporting 100 days or more of off-farm work or reporting other income exceeding value of agricultural products sold (Census definition).

[2]Less than $250 value of products sold.

[3]Public and private institutional farms, etc.

TABLE 21

THE ESTIMATED DISTRIBUTION OF FARM TENURE, OPERATOR RESIDENCE, AND LABOR TYPE FOR FARMS IN THE LINDEN TRADE AREA, 1950

Item	Number of Farms	Per Cent
Total Farms	412	
Tenure of Operator		
Full owners	305	74.1
Part owners	71	17.2
Managers	2	.4
All tenants	34	8.3
Operator's Residence		
On Farm	398	96.5
Not on Farm	14	3.5
Farms by Labor Type		
Week preceding enumeration		
Family Workers, including operator	358	87
Hired Workers	54	13
Farms reporting expenditure for hired labor, 1949	171	41

Basis of estimate: Combined distributions for Genesee and Livingston Counties, U. S. Census of Agriculture, 1950 (Preliminary Report).

TABLE 22

AN ESTIMATE OF THE AMOUNT OF OFF-FARM WORK AND NON-FARM INCOME OF LINDEN TRADE AREA FARM OPERATORS, 1950

Item	Number of Farms	Per Cent of Total
Total Farms	412	
Non-farm income of family exceeding value of agriculture products sold	152	37
Working off farm: total	227	55
100 days or more	181	44

Basis of estimate: Combined distributions for Genesee and Livingston Counties, U. S. Census of Agriculture, 1950, (Preliminary Report), Data for 1949.

Type of Farming

Linden was a specialized farming area in 1950. According to informants milk was the "big crop all through here" while livestock was becoming increasingly important.[1] Hay and grain were the major field crops. The estimate of the distribution of farms is given in Table 23.

TABLE 23

THE ESTIMATED DISTRIBUTION OF FARMS IN THE LINDEN TRADE AREA BY TYPE OF MAJOR PRODUCT, 1950

Type	Number of Farms	Per Cent
Total Farms	412	100
Dairy Farms	112	27.2[a]
Cash-grain Farms	43	10.4
Other field crop Farms	1	.3
Livestock Farms, other than dairy and poultry	34	8.2
General Farms	29	7.0
Poultry Farms	12	3.0
Vegetable Farms	3	.6
Fruit and Nut Farms	2	.5
Miscellaneous and Unclassified	176	42.8

Basis of estimate: Combined distributions for Genesee and Livingston Counties, U. S. Census of Agriculture, 1950 (Preliminary Report).

[a]Forty-eight per cent of all classified farms.

The largest group, forty-three per cent of all farms, was the "miscellaneous and unclassified." These are assumed to be the many small residential and part-time farms shown in Table 20. Informants were well aware of this group, but

[1]Some informants thought the increase in livestock was a reaction to the severity of the inspection of milk products by city authorities.

did not think of them as "farms." When they spoke of the farming they were referring to the specialized commercial farms.

Dairy farms were the most numerous of the specialized farms, amounting to twenty-seven per cent of all farms and forty-eight per cent of the typed farms. General farms were only twelve per cent of all commercial farms in 1950.

The extent of the specialization of the farm area is further emphasized in Tables 24 and 25. Over seventy per cent of the total farm income was from livestock products and livestock. Whole milk alone accounted for thirty-five per cent of all farm income. The income from beef sales was fourteen per cent of total farm income so that two products yielded over fifty per cent of all income. The two products marketed regularly in Linden village -- cream and poultry and poultry products -- brought in only twelve per cent of total farm income.

The income from all field crops was twenty-nine per cent of total income. Further breakdown by specific crops was not available but the major crops are shown in Table 26. It was estimated that eighty-six per cent of all cropland harvested in 1949 was in hay--the largest crop--corn, winter wheat, and oats.

TABLE 24

THE ESTIMATED PROPORTIONATE DISTRIBUTION OF FARM INCOME BY PRODUCT FOR THE LINDEN TRADE AREA, 1950

Product	Per Cent of Total Farm Income
All products sold	100
All livestock and livestock products sold	71.1
Dairy products sold	39.7
Poultry and poultry products sold	7.7
Livestock and livestock products, other than dairy and poultry sold	23.7
All crops sold	28.6
Field crops, other than vegetables, fruits, and nuts sold	23.8
Vegetables sold	1.5
Fruits and nuts sold	1.4
Horticultural specialties	1.9
Forest products	.3

Basis of estimate: Combined distributions for Genesee and Livingston Counties, U. S. Census of Agriculture, 1950 (Preliminary Report), data for 1949.

TABLE 25

THE ESTIMATED PROPORTIONATE DISTRIBUTION OF FARM INCOME, BY SPECIFIC LIVESTOCK PRODUCT, FOR THE LINDEN TRADE AREA, 1950

Livestock Product	Per Cent of Class Total	Per Cent of all Livestock Income
Dairy Products		
Whole milk sold	95.9	53.6
Cream sold	4.0	
Butter, buttermilk, skim milk, cheese	.1	
Total	100	55.9
Animals Sold Alive		
Cattle and calves sold alive	60.8	20.2
Hogs and pigs sold alive	24.6	8.2
Sheep and lambs sold alive	8.4	
Horses and mules sold alive	1.3	
Products sold from farm butchering	1.1	
Not included	3.8	
Total	100	33.3
Poultry and Poultry Products		
Chickens sold	31.4	
Chicken eggs sold	57.3	6.2
Not included	11.3	
Total	100	10.8
GRAND TOTAL		100

Basis of estimate: Combined distributions for Genesee and Livingston Counties, Preliminary Report, U. S. Census of Agriculture, 1950, data for 1949.

TABLE 26

THE ESTIMATED DISTRIBUTION OF FIELD CROP ACREAGE FOR LINDEN TRADE AREA FARMS, 1950

Crop	Per Cent of Harvested Acreage
Corn for all purposes	22.9
Small Grains	
Winter Wheat	18.3
Oats	18.7
All Other	2.4
Annual Legumes	
Dry field and seed beans, except soybeans harvested for beans	4.6
All others	.8
Hay	26.4
Other field crops	3.6
Vegetables harvested for sale	.6
Berries and other small fruits harvested for sale	.02
Tree fruits, nuts and grapes	1.6
Total cropland harvested	100

Basis of estimate: Combined distributions for Genesee and Livingston Counties, U. S. Census of Agriculture, 1950 (Preliminary Report), data for 1949.

Farm Operation

The increasing specialization of Linden area farms was a general process extending to all farm activities. Home manufacturing had declined. About forty per cent of the farms did some slaughtering in 1949, but only six per cent sold any products from the slaughter. Only fifty-four farms in the total of 5,654 in Genesee and Livingston Counties had any butter, buttermilk, skim milk, or cheese for sale in 1949. Canning was still important as sixty-nine per cent of the farms harvested vegetables, not including potatoes, for home use. Construction work was common but the practice of hiring skilled craftsmen was equally prevalent. The many residential and part-time farms accounted for a large part of home manufacturing and construction.[1]

The modern farmer also was more like the villager in regard to personal and maintenance services. According to preliminary census statistics, seventy-one per cent of the farms owning tractors in 1950 reported expenditures off the farm for repairs during 1949. Village merchants reported the farmer drove into town and shopped as readily as did the villager. A barber reported that the biggest effect of the automobile that he could see was that farmers

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[1]Mechanization may be substituting some manufacturing functions for others. Feed grinding at the village grist mill has long been an established practice. Electric feed grinders may be changing this. In 1950, 166 farms in the two counties reported ownership of feed grinders.

now got haircuts every couple of weeks instead of every four to six weeks, as they did when he first started in the business.

The farmer still provided much of his own local transportation but at the same time he was receiving more assistance than in 1900. Approximately thirty per cent of all farms owned motor trucks in 1950, while ninety per cent had automobiles. The use of these for marketing and purchasing trips was supplemented by livestock, cream, and milk buyers who picked up the products at the farm. Supplies were also delivered to the farm by distributors in 1950. The average farm in 1949 spent nearly $200 for gasoline and other petroleum fuel and oil.

Field work was also more specialized and dependent on suppliers because of mechanization. Only ten per cent of farms reporting some form of work power stated they had no tractors.

Farm Marketing

The marketing of farm crops varied with the type of product but a basic function was the satisfaction of metropolitan community needs. Whole milk was sold in Flint, Detroit and Chesanning, mainly to large processors. Informants agreed that Flint had been "cutting in" on the Detroit milk supply for many years. Chesanning received only the overflow.

Other metropolitan needs were met through the marketing of cream in the butter plant in Linden village,

poultry and eggs at the Linden poultry house, and grain to Linden and other small community flour and feed mills. After processing, these were distributed throughout the metropolitan community. Only small amounts of livestock were marketed in Flint and in some small, local packing plants. M st livestock was marketed in Detroit, though Howell was receiving increasing amounts.

Field crops were generally the most locally marketed products. Hay was marketed in Linden. Small grains and corn were sold to wholesalers in Fenton, Gaines, and other surrounding small towns. In some cases, such as Gaines, field crop marketing was about its only function.

Three significant facts stand out in this pattern of marketing. One, Linden area farms played a vital production role in the Flint metropolitan area. Two, most marketing was done in a relatively small area. Three, Linden was largely by-passed as a marketing center in 1950.

The truck and automobile were basic to this marketing pattern. The products consumed in the metropolitan area were handled entirely by motor transport. Livestock was shipped to Detroit by truck. Field crops were transported to the wholesalers by truck.

Other Agricultural Units

There were six agricultural units in the village in 1950. Four were farms, one was a floriculturist, and the other was a hay baler. Two of the village farms were small

units operated by owners who had larger rural farms, the third was a fruit farm of several acres, and the fourth was a small farm of sixty acres. The fruit farm was converted to residential uses in 1951.

The non-farm units were small and highly specialized. The floriculturist sold all his production at his greenhouse in the village. The hay baler operated only two months of the year. There were two similar units in the trade area.

Summary

The business structure of Linden sub-community was specialized in 1950. The farm structure and the non-agricultural unit structure were specialized, but there was not a balanced interdependence of the two.

The farm structure was primarily oriented toward business units in the Flint and Detroit metropolitan communities for marketing of its major products of milk, livestock, and field crops. Only through the purchase by village units of the minor products of cream, poultry, and eggs were the farms oriented to Linden village.

On the other hand, the supplying and servicing of needs of the farm structure was only secondary to the village. Of the fifty-nine non-productive units in the village center only one (the farm implement store) was completely oriented to the farm as a business unit. Perhaps ten other units did some servicing of farmers. These included automobile repair and sales places, other repair

shops, and hardware, feed, and lumber units. Construction units also provided some farm services.

The specialized village business system concentrated upon supplying the requirements of individuals as consumers. It was further specialized in that it concentrated upon standardized, inexpensive, frequently or commonly needed commodities and services.

Of the three major functional systems located in the village, the exchange, principally the retail units, offered the greatest range of services. Most immediate wants of consumers could be satisfied locally. In many ways the impression of the observer is that the retail class offered greater variety, better quality, and more efficient service than any other village functional class. All of its units had specialized building space, much of which was fifty to seventy years old but which had been modernized. It was the largest of the functional classes. Its significance is symbolized in its usurpation of the most accessible business locations in the sub-community. More than half of the retail units had foodstuffs or transportation services.

Other exchange units were not so important in the village system. The railroad in 1950 was little more than a right of way through the village. Financial and marketing units were missing. Real estate and insurance units were minor businesses operating from residences. However, the village did have an important local information communication function.

The range of maintenance functions was very limited. General practitioner medical care, automobile servicing, and personal care were the only functional classes. The largest and most important of the functional classes was the motor vehicle servicing.

Village production functions were limited home construction and food processing. In the construction field the craftsman had standardized skills only. Even complete contracting was not available. The processing plants coordinated the supply of some farm products for the whole metropolitan area.

Recreation and construction functions were important in the trade area.

All the functions combined to give the Linden community a specialized role in the Flint metropolitan community. In their general form these functions were:

a. Perishable foods production and processing.

b. Service of the central city labor force.

c. Recreation and residence for the community labor force.

CHAPTER SEVEN

ANALYSIS OF CHANGE: THE DETAILED CHANGES

The problem is to observe the changes in community business functions by comparison of the two cross-sections. A later chapter will relate these changes to the transportation conversion and metropolitan expansion and suggest some implications of the changes. The general trend was from a comprehensive to a specialized business system.

The total number of business units increased from 455 to 531, a gain of seventeen per cent. Nearly three-quarters of the increase -- fifty-five units -- was in non-agricultural units. Exchange and construction units were eighty per cent of the non-agricultural unit increment. The net changes are shown in Table 27.

The distribution of total community units in each of the three major functional systems changed toward greater proportions in non-agricultural units. The proportions were:

	1900	1950
	%	%
Agricultural production	87	79
Other production	03	06
Exchange	06	09
Maintenance	04	06
	100	100

Each of the three major functional groups had more units in 1950 than in 1900. The increase in agricultural

TABLE 27

THE NET CHANGES IN FUNCTIONS AND UNITS, 1900-1950
FOR THE COMMUNITY, BY SUB-AREAS

Function	Net Increase or Decrease		
	Village	Non-Village	Total
Production			
Agriculture			
Farm	-10	32	22
Non-Farm	- 1	0	-1
Construction	8	12	20
Manufacturing	0	1	1
Exchange			
Transportation	- 1	1	0
Communication	- 1	0	-1
Retail	14	5	19
Wholesale	- 3	0	-3
Real Estate and Insurance	4	4	8
Maintenance			
Repair	- 1	1	0
Personal Service	- 1	1	0
Professional Service	1	1	2
Entertainment	1	8	9
Agriculture sub-total	-11	32	21
Non-Agriculture sub-total	21	34	55
GRAND TOTAL	10	66	76

units was negligible but manufacturing, exchange, and maintenance units increased nearly one hundred per cent. The changes are shown in Table 28.

TABLE 28

THE PERCENTAGE INCREASES IN BUSINESS UNITS BY MAJOR FUNCTIONAL GROUPS IN THE LINDEN COMMUNITY, 1900-1950

Function	Percentage Increase
Production	
Agricultural	6
Non-agricultural	190
Exchange	85
Maintenance	58
All Non-Agricultural	96
All Units	17

There were eleven functional classes in each period. The wholesale and finance functions, as represented by specialized economic units, disappeared, but real estate and entertainment and recreation functions were added. The number of specific functions increased from forty-two to forty-six.

The village, as shown in Table 29, became more of a construction, retail, real estate, and entertainment center. Although it retained manufacturing, communications, repair, and personal service functions in the absolute sense, they declined relatively. The rural service area remained primarily an agricultural area though it had relatively a large increase in other functions, particularly

TABLE 29

THE CHANGES IN THE RELATIVE DISTRIBUTION OF UNITS BY GENERAL FUNCTIONS, FOR LINDEN VILLAGE, 1900-1950

Function	Per Cent of Total Village Units, 1900	Per Cent of Total Village Units, 1950
Production		
Construction	10.5	18.0
Manufacturing	9.0	6.0
Exchange		
Transportation	5.0	2.6
Communication	5.0	2.6
Retail	30.0	40.0
Wholesale	5.0	
Real Estate		2.6
Insurance		4.0
Finance	2.0	
Maintenance		
Repairs	10.5	6.0
Personal	14.0	9.0
Professional	9.0	8.0
Entertainment		1.2
Total Units	100	100

construction and entertainment.

The specific changes in units and functions form three general groups: the modified continuing units and functions, the discontinued, and the additions. The changes are discussed in these three ways in order to make the volume and character of the change comprehensible. The groups are further sub-divided into village, farm, and rural non-agricultural.

Modification of Continuing Types

Half of the forty-two specific village functions have persisted, though in modified form. These functions are carried out by thirty units, over fifty per cent of the fifty-seven village units in 1900. In some cases these thirty units are direct continuations of 1900 businesses while others represent substitute units comparable to the 1900 units.[1] Both groups are referred to as continuing units. Table 30 exhibits the proportion of 1900 units, by function, continuing into 1950. Two functions -- retail and personal services -- account for seventy-three per cent of the continuing types. Food, drug and hardware retail functions were particularly important throughout the fifty years. It is mainly the units with functions meeting individual needs which have persisted and expanded. Those functions meeting farm business needs have largely disappeared or have been severely reduced in size. The list of functions

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[1] In no case was a unit owned by one proprietor over the fifty years.

is given in Table 31.

TABLE 30

PROPORTION OF NON-AGRICULTURAL VILLAGE BUSINESS UNIT TYPES CONTINUING ACTIVE, 1900-1950, BY TEN FUNCTIONS

Function	Proportion of 1900 Units Still Active
Professional Personal Service	80
Retail	76
Communication	67
General Personal Service	50
Construction	50
Manufacture	40
Transportation	33
Business Repair	17
Wholesale	00
Finance	00
All Functions	53

The Least Modified Functions

Nine functions and thirteen units are classified as having undergone the least change since 1900. They represent twenty-one per cent of the original forty-two specific functions. All are personal services or production functions. Although they are the least modified functions and units, observation shows each has been altered. The few functions in this group emphasize the transformation that has occurred in the total village system. Specific analysis begins with the least modified personal services and continues in order of increasing modification. Production functions are discussed in the same order.

TABLE 31

THE LIST OF CONTINUING NON-AGRICULTURAL UNITS AND FUNCTIONS IN LINDEN VILLAGE, 1900 to 1950, BY DEGREE OF MODIFICATION

Function	Number of Units	Per Cent of Original Units	Per Cent of Original Functions
Least Modified			
Barber shop	2		
Shoe repair	1		
Medical services	4		
Funeral home	1		
Carpenter	1		
Painting and decorating	2		
Milling company	1		
Village newspaper	1		
Sub-total	13	23	21
Most Modified			
Groceries	4		
Meat	1		
Bakery	1		
Restaurant	1		
Drugs	2		
Hardware	1		
Farm implement	1		
Lumber	1		
Jewelry	1		
Railroad	1		
Telephone	1		
Telegraph	1		
Blacksmith	1		
Sub-total	17	30	25
TOTAL	30	53	46

The two 1950 barber shops are direct continuations of units founded before 1900. They have been in the same location since 1903. Hair styles have changed and shaving by barbers has decreased, but the essential function of the units remains the same. These two units are the most comparable to the 1900 units.

The shoe repair function decreased. There was a reduction from two shops to one and from four men employed to only one. The 1900 shops probably made new shoes but the 1950 unit did not. The whole community was served in 1900, while in 1950 the unit catered only to the village population.

The number of medical men was constant over the fifty years but osteopaths and general practitioners replaced men who had advertised themselves as having more specialized roles. In addition, much of the health care function was absorbed by Flint. Obstetrical care, for instance, is now concentrated in Flint instead of in the sub-community. Accident care is a second example. The numerous farm and other industrial accidents reported in Linden in 1900 were treated at home, while in 1950, severe accident cases were rushed to Flint. In general, specialized medical service was a function of the metropolitan center in 1950.

The funeral home was the only fully active unit owned by the same family for the entire period. It changed functionally through the increasing professionalization of

the service, the elimination of the secondary function of furniture selling, and the addition of an ambulance service. Its proportion of local burials has declined. The unit had fifteen of nineteen burials in the Linden Cemetery in 1910 and thirty of fifty-five in 1950.

Carpentry and painting and decorating functions were the least modified of the production units. Then, as now, the units were independent craftsmen working directly for the consumer for an hourly wage or job contract price.

The milling company was probably the oldest unit in the village. The changes in its ownership were traced back almost to the founding of Linden. The present building and dam site have been used for at least seventy years. Its long survival is based upon its primary function of custom grinding feeds for the community farmers. There has been more change in its flour making function. With each modernization (there was a modernization in 1901 and another a few years ago), it changed from manufacturing custom ground flour to commercial bread flours to its present concentration on cake flour. Rapid changes of ownership in recent years indicate the mill does not have the secure community role in 1950 that it did in 1900. The mill at the Argentine sub-center is now more important.

The village newspaper has had several ownership changes, but it is a direct continuation of the 1900 unit. The purpose and type of local news content has remained essentially the same, but the present owners discontinued

the practice of buying newsprint with the four inner pages pre-printed with features and national news. In 1900 the local paper was the only one retailing community news. By 1950 part of the function had been absorbed by Flint and Fenton daily newspapers.

The Most Modified Functions

There are eleven additional specific functions and seventeen units which were present in both study years. The group includes a retail function and thirteen retail units. Each of these functions has undergone extensive alteration.

The number of grocery stores remained the same, but there was a major change in the specific definition of the function. The increased distribution of perishable foods was the most significant change. Fresh vegetables were family produced in 1900 and they were virtually absent from grocery displays. By 1950 fresh vegetables were one of the major store departments. There was also a substitution of small quantity canned goods and packaged staples for the "cracker barrel" bulk merchandise. Fresh meats were sold instead of salted and smoked.

While the food products were changing, the grocery units were discontinuing most non-food items. The increasing specialization of food stores was partly the result of the consolidation of the grocery function in a few stores as general stores disappeared and drug stores eliminated grocery merchandise. Grocery stores also stopped the whole-

sale handling of eggs and butter.

Two grocery units were still located in the same buildings. One was controlled by the same family for over seventy years but was sold in 1950. The grocery function has always had more units than any other, indicating its basic importance in the village business structure.

The meat and bakery functions both expanded. The meat store changed from a small unit slaughtering local meats to one buying its products from national and state-wide packers. The 1900 bakery was only a family baking for sale within the village, but the 1950 unit was one of the larger village units, serving a wide community market. Both units had also added a grocery line.

There was a restaurant function in both years but it was important only in 1950. The earlier unit was one of three or four separate functions of a single man and operated only upon irregular demand. In the later period there was a regular clientele demanding daily service.

Drug stores continued over the period but with several major adjustments. Drug products for animals were eliminated. A confectionery function was added and expanded to a major line in at least one store. Many non-drug lines were still carried in 1950, but they were concentrated in personal use products. The groceries, wallpaper and school supplies had disappeared. The pharmacist was more professionalized in 1950, but he was working with less raw drugs. Patent medicines remained important.

One of the drug stores was a continuation of a unit founded in the 1870's and was still in the same location.

The hardware store stayed on the same site but eliminated individual clothing, reduced its housing supplies to hardware and paints, increased its home appliance lines, and placed more emphasis on sports equipment. Change to powered farm implements selling and servicing was important in the implement unit. But equally significant was the loss of wagon and carriage sales functions. The 1950 unit was very marginal while in 1900 it had been one of the more important units.

Lumber selling increased so much in comparison with 1900 that in 1948 the lumber unit was divorced from a fuel sideline. Building was a minor industry in 1900 because there was relatively little population change. By 1950 it was a major industry based on the rapid growth of the non-agricultural population in the service area.

The "jewelry" unit in 1900 dealt in a great variety of product lines from bicycles to steam laundry service. The 1950 unit was simply a repair and costume jewelry store, playing a much smaller role in the business structure.

One telephone company disappeared and one expanded its services to become one of the most important units in the village. Informants had great difficulty recalling the use of the phone in 1900 but in 1950 nearly every family used it daily in local as well as external communication.

As the telephone unit increased its community function that of the telegraph decreased. Three operators operated the telegraph unit in 1900 but in 1950 it was the part-time activity of the single railroad station agent. It was limited to about two messages a day.

The blacksmith was critically important in 1900. His functions were varied from horse shoeing to minor forging. Now the unit is principally a minor welding shop, repairing all types of equipment.

After having been the crucial unit in the organization of the business structure, the railroad declined to a completely inconsequential role. No other single unit was of comparable significance in 1900. It made the village a transportation center and made the village business system possible. Today, speculation is current that it will be closed. There has been a nearly total displacement of the railroad by truck and automobile. Every family and business unit has access to motor transportation.

The thirty continuing units were the only business organizations which would suggest to a returning 1900 resident that he was again in Linden. In at least half the change was so great that he probably would not recognize them as counterparts to similar function businesses in 1900. Some business buildings in the village center were the same. A drug store, the mill, the barber shops, a grocery or two and the railroad were still on the same sites. The newspaper was still <u>The Linden Leader</u>, family

"A" operated the funeral home, and the telephone, telegraph and railroad still had the same name. But nearly all else had changed. What functions disappeared completely?

Functions Discontinued

Twenty-seven units were discontinued. These businesses had twenty-two specific primary functions in 1900, sixteen of which were also eliminated. In addition, the village lost eight other functions which had been secondary functions of units. The evidence is summarized in Tables 32 and 33.

Six functions performed by discontinued specialized business units in 1900 were transferred in modified form to other village units, but most were lost to the village in one of four ways. There was an actual elimination of the need, the function moved to a higher center, usually Flint, to other sub-communities of Flint, or into the sub-community service area. Only construction functions were in this last group.

The major functional losses were major crop marketing, financing, locally owned transportation, semi-durable and handicrafted manufactures and farm business repair agencies. About half of the twenty-seven lost units were in these four groups of functions. Four of the seven units with discontinued secondary functions were in the manufacturing class. These are major losses since the functions were wiped out in Linden village.

TABLE 32

THE LIST OF DECEASED VILLAGE NON-AGRICULTURAL UNITS, 1900-1950, ORDERED BY CONSEQUENCE FOR THE FUNCTION

Function	No. of Units	Consequences for the function				
		Lost to village through transferral to			Elimination of need	Transfer to other village units
		Higher Center	Other sub-communities	service area		
Dray line	1				x	x (fuel)
Livery	1				x	
Bean and grain elevators	2		x			
Livestock buying	1	x	x			
Foundry	1				x	
Wagon repair	1				x	
Harness repair and manufacturing	1				x	
Tinsmithing	1				x	
Blacksmithing	1				x	x
Wagon manufacturing	1				x	
Carriage manufacturing	1				x	
Handle manufacturing	1				x	
Bank	1	x	x			
Shoe repair	1		x			
Photography	2	x	x			
Hotel	1	x				x (bar)
Lawyer	1	x	x			
Telephone company	1					x
General stores	2	x (dry goods)	x			x (groceries)
Millinery	2	x	x			x
Cement layer	1			x		
Masons	2	_	_	x	_	_
TOTALS	27	7	8	2	10	6

TABLE 33

THE LIST OF FUNCTIONS LOST TO THE VILLAGE THROUGH DISCONTINUANCE OF SECONDARY FUNCTIONS OF NON-AGRICULTURAL UNITS, 1900-1950, FOR THE VILLAGE

Eliminated Function	Village Unit	Consequences for Function
Musical Instruments	Jewelry store	To higher center
Laundry service	Jewelry store	To higher center and sub-community
Furniture	Funeral Home	To higher center and sub-community
Luggage	Harness shop	To higher center
Carpet weaving	Secondary occupation	To higher center
Cabinet making	Wagon maker	To higher center
Cane chair making	Secondary occupation	To higher center
Buggy top dressing manufacturing	Veterinarian	Eliminated

Among the retail and personal service functions it was the less standardized and less frequently needed which were eliminated. Most of these moved to higher centers or other sub-communities.

The functions that were lost to the sub-community but which moved to other centers generally switched to Flint and Fenton. The functions not going to Flint were livestock buying and the handicraft manufacturers. The first went to Detroit; the others were dispersed. Fenton and Gaines have each absorbed part of the wholesale marketing functions. The implication is that wholesaling functions have become more concentrated in some sub-centers of the metropolitan community.

Timing of the Losses

Village units and functions were lost during the whole study period, the first in 1902 and the last in 1950. After 1910, approximately five units disappeared each decade. In general, the repair and manufacturing units were discontinued before 1930 and the wholesale, retail, and personal services after 1920. The data are listed in Table 34.

It is clear that the major change in the village business structure was accomplished by 1935. The railroad function was reduced seriously. Units directly related to it, such as the dray line and hotel, were declining. Much of the service to the farmer had disappeared and other farm services were in obvious decline. Personal need services were becoming increasingly important in the village business structure.

The New Specific Functions and Units

More than sixty per cent (forty-seven of seventy-eight units) of the 1950 village units were added after 1900. There was a minimum of one new unit in each general functional class except communications and wholesaling. The largest growth was in the exchange function -- thirty-eight per cent of the new units -- while construction and maintenance each had twenty-one per cent of the added units. Altogether, as shown in Table 35, there were twenty-seven specific functions, sixty per cent of all 1950 non-

TABLE 34

THE APPROXIMATE CLOSING DATES OF CERTAIN UNITS IN LINDEN VILLAGE, 1900-1950

Decade	Unit	Number
1900	Carriage Manufacturing Handle Manufacturing	2
1910	Wagon Manufacturing Foundry Blacksmith Wagon Repair Millinery	5
1920	Blacksmith Livery Telephone Company Photographers (2) Millinery General Store	7
1930	Bank Elevator Harness Repair Attorney Hotel (Railroad)	5
1940	Draying Elevator Livestock Buying General Store	4
TOTALS		24

TABLE 35

THE LIST OF NON-AGRICULTURAL UNITS AND FUNCTIONS ADDED TO THE LINDEN BUSINESS STRUCTURE, 1900-1950

Function	Number of Units		Added by diffusion	Added by Functional Expansion		
				New units in continuing function	Separation of functions	From non-economic units
Transportation	1					
Gas and electric		1	x			
Retail	18					
Motor vehicle sales		2	x			
Gasoline service stations		6	x			
Fuel and feed		1			x	
Hardware		1		x		
Restaurant		1		x		
Dairy Bar		1			x	
Taverns		2		x	x	
Apparel		1			x	
Notions and gifts		1			x	
Bait store		1				x
Gravel and dirt		1				x
Real Estate	2	2			x	x
Insurance	2	2			x	x
Repair	4					
Auto repair		3	x			
Radio repair		1	x			
Personal	6					
Beauty shops		2	x			x
Dry cleaning		1	x			
Dentist		1	x			
Convalescent home		1	x			
Theater		1	x			
Construction	11					
Carpentry		7		x		
Painting and decorating		2		x		
Electrical work		2	x			
Manufacturing	3					
Poultry house		1			x	
Creamery		1			x	
Sash and door	—	1	x	—	—	—
TOTALS	47	47	12	5	9	5

agricultural functions. Not all of these were new to the village.

The business structure grew by diffusion and functional expansion. The latter consisted of the addition of units similar to existing modified continuing units, separation into distinct units of previously joined functions, and creation of economic units to carry functions previously held by non-economic organizations.

Diffusion

Twelve new functions and twenty-two units were added by diffusion. There were eight retail units, seven personal service and repair units, and one unit each in construction, manufacturing and transportation. Seven of the twelve functions were in the maintenance category.

The clearest expression of invention and diffusion is the introduction of eleven motor vehicle sales, servicing and repair places. Thus nearly a fourth of the units added are specialized in transportation services. In 1900 only five units were specialized in some aspect of transportation. The expansion of transportation is certainly one of the major changes in the business structure.

Expansion

More than half of the new units were added by the expansion of sixteen functions already in the village. Nine of the expanded functions were retailing forms. The concentration of units was in retail and construction

functions.

The addition of home construction units illustrates functional expansion by an increase in the number of units in a continuing function. The new units were thirty-six per cent of all added units. Electrical craftsmen were the only new type.

Butter manufacture and poultry and egg operations by specialized 1950 units are examples of functional expansion by the separation of functions. Butter making was once combined with general farming; the product was wholesaled by the farmer through the village grocer. Eggs were handled similarly. Poultry collection and preparation was also a gradual swing away from independent farmer operation to concentration in a single community unit.

All three ways of adding new units by expansion contributed to the change in the retail function. Four eating and drinking places were added. One tavern was a reclassification occurring because of the decline of the hotel and restaurant with which it had been associated in 1900, and the expansion of its own function. The second tavern was the result of the growth in that function. The two eating places were still minor units in the structure but definitely represented expansion of the 1900 restaurant function.

Several of the other retail units were primarily the result of the splitting of functions. The apparel store has absorbed the functions of the clothing department

of the general stores; the notions and gifts store has assembled minor functions from the 1900 drug, general and grocery stores; the fuel and feed outlet resulted from the separation of coal from the lumber company and feed lines from grain elevators. The additional hardware store represents an expansion of that function.

Review of Village Changes

The segments of the village economy that have expanded or contracted are shown in Table 36, which relates the number of units in a function in 1950 to the number in 1900. Retailing, real estate and insurance, non-farm repair, entertainment, construction and non-durable goods manufacturing are the expanding groups. Wholesaling, financing, business repair, transportation and durable goods manufacturing are the important contractions.

No change is shown in the personal services. This group has had one of the major changes in internal composition but it has not expanded. Instead, there has been a replacement of hotel, photography, legal and shoe repair by beauty shops, dry cleaning, dentistry and a convalescent home.

Change in Market Type

The general village business trend was from a combination of units oriented to the farm business market and the individual market to a business system concentrated in units of the latter type. The change is symptomatic of

TABLE 36

THE PROPORTIONS 1950 NON-AGRICULTURAL VILLAGE UNITS WERE OF SIMILAR TYPES IN 1900, BY FOURTEEN FUNCTIONS

Function	Proportion
Exchange	
Retail	182
Real Estate	None in 1900
Insurance	None in 1900
Communication	67
Transportation	67
Wholesale	00
Finance	00
Maintenance	
Business Repair	17
Other Repairs	400
Personal Service	100
Entertainment	None in 1900
Production	
Construction	233
Durable manufacturing	33
Non-durable manufacturing	200

the loss of local community integrity incident to the absorption into the metropolitan community. The alteration is based upon a decline in farm business market units and an increase in individual need types.

As shown in Table 37, there were twenty-three units in 1900 that were either primarily or partially related to the farm business market, while in 1950 there were only fifteen, a decline of thirty-eight per cent. The decrease was concentrated in units primarily related to the farm business market. The loss of the village marketing units was a total loss of the function in the village. The decline in business repair places involved a decline of the function and a redistribution of the function to the farm implement store and to the garages.

On the other hand, virtually all the unit increase was of the individual need market type, as these increased by one hundred per cent. The only new units directly based on the farmer-businessman as a market were replacements of earlier units. The creamery, poultry house, and an insurance agent were directed toward the market needs of the farmer.

The unit count underestimates the extent of the shift. While still serving the farmer, the village system as a whole seems less oriented to a farm market. For example, as mixed type stores, the 1900 drug stores had carried special products for the farmer, such as animal curatives. In 1950 all the mixed types were serving both the farm business market and the individual need market with the same products.

TABLE 37

THE CHANGE IN THE MARKET TYPE OF NON-AGRICULTURAL VILLAGE UNITS, 1900-1950

Function	NUMBER AND MARKET TYPE										
	Farm Business Primarily			Mixed			Individual Need Primarily			Others	
	1900	1950	Change	1900	1950	Change	1900	1950	Change	1900	1950
Production											
Construction							6	14	+8		
Manufacturing	2	3	+1	2	0	-2	1	2	+1		
Exchange											
Transportation				1	1	0		1	+1	2	0
Communication				3	1	-2		1	+1		
Retail	1	1	0	4	5	+1	12	25	+13		
Wholesale, Marketing	3	0	-3								
Finance, Real Estate, and Insurance	0	1	+1	1	1	0	0	3	+3		
Maintenance											
Business Repair	6	1	-6	0	1	+1	0	4	+4		
General Personal Service							8	7	-1		
Professional Personal Service							5	6	+1		
Entertainment							0	1	+1		
TOTAL	12	6	-7	11	9	-2	32	64	+32	2	0

The proportional decrease from twenty-one to eight per cent in units primarily related to farm business needs is a general functional change of great importance to the community structure. The increasing specialization of the village center suggests a basic change in Linden's organization as it became a sub-community. In 1900 most of the needs of the farm system could be satisfied in the village. This was not true in 1950.

Product Specialization

There was one other aspect of village business functioning discussed in the descriptions of business structure in 1900 and 1950. That was the general class of products sold or services rendered by the various units. Both in 1900 and 1950 the village was organized to dispense frequently needed, inexpensive, commonly used standardized products. The trend has been toward even greater standardization.

During the first period the village was located within a general hierarchical pattern of communities with Fenton, Flint and Detroit providing successively more complex, specialized and costly services. There was a similar pattern in 1950 but Fenton and Flint satisfied more needs and they were more differentiated from Linden. Local organization was such in 1900 that Linden was able to compete with them in some specialized services. During the fifty year period, however, while Flint and Fenton were developing their specialized functions, Linden was

increasingly standardizing its services.

In retailing, for example, the village lost furniture, dry goods and luggage functions. New functions were in such thoroughly standardized areas as gasoline retailing.

Similarly, the less frequently required services have disappeared, such as photography, legal interpretation, hotel rooms, and bean elevators. They have been replaced with the everyday services of auto repair and entertainment, among others.

The change to a nearly complete concentration on the individual need market is also an indication of the increasing focus on commonly used goods and services. Village units now carry functions needed by the whole population rather than by any segment of it.

Agricultural Change

The core of the farm system in both periods was approximately two hundred commercial farms, dispersed some four to seven per square mile throughout the service area. It was a small farm pattern with commercial farms ranging from seventy acres to seven hundred acres. Supplementing the commercial farms was a large group of very small places which were subsistence and part-time farms in the early period and part-time and residential farms in the later.

The number of farms at each extreme increased, altering the distribution of farms by size. Nearly thirty-

three per cent of all farms were under fifty acres in 1900 while thirty-seven per cent were under forty-nine acres in 1950. At the same time farms over 260 acres increased from about two per cent in 1900 to six per cent in 1950. In 1950 farms over 179 acres constituted fifteen per cent of all farms in comparison with 1900 when farms over 175 acres were only nine per cent of the total. With the increase in these extremes there was a proportional decline in moderate sized farms. In 1900, fifty-nine per cent were from fifty to 175 acres. In 1950, forty per cent of all farms were between seventy and 179 acres.

Informants also reported that there has been a simultaneous increase in very small and very large farms. The feeling was that the two main farmer classes in 1950 were the very large full-time "professional" farmer with all his own expensive equipment and the part-time farmer with forty to sixty acres or less who worked in Flint. As one informant overstated it, "The one horse, one two horse team, and maybe the two team farmer, have disappeared."

In spite of the growth of the larger commercial farm, there was a reduction in the general functional role of the farm system in the community. In 1900 it was the major source of income to the community and nearly the whole support of the village business system. In 1950 it was only one of two major income producers -- the other being the Flint employed labor force residing in the village and around the lakes.

Functional Change

The major change in specific functions, as shown in Table 38, is the conversion of general farming into specialized dairy farming. This occurred through a displacement of sixty-eight per cent (156 farms) of the original general farms of over fifty acres by the increase in dairy farms from one in 1900 to 112 in 1950. General commercial farms constituted forty-one per cent of all farms in 1900, while the dairy farms were twenty-seven per cent of all farms in 1950. Cash-grain and general farms were only eighteen per cent of all farms in 1950.

TABLE 38

THE CHANGE IN AGRICULTURAL UNITS IN THE LINDEN AREA, 1900-1950

New Units[1]	Displaced Units	Modified Continuing Units
	Service Area Farms	
Dairy Farms (111)	General Farms (156)	Dairy Farm (1)
Livestock (14)	Vineyard (1)	Cash Field Crop and General Farms (73)
Poultry (12)		Livestock (20)
Vegetable (3)		Small Farms (128)
Fruit and Nut (1)		Fruit Farms (1)
Small Farms (26)		
Miscellaneous Farms (22)		
	Village Agriculture	
Floriculture (1)	Thresher (1)	Hay Baling (1)
	Veterinarian (1)	Fruit Farm (1)
	General Farms (10)	Farms (3)

[1]New units in the service area refer to converted farms.

The conversion to dairy farming occurred slowly. Beans and livestock were the principal cash crops in 1900, while corn and small grains were marketed to a lesser extent. This was the pattern into the 1920's. The commercial milk farms appeared during the first world war, and after that gradually increased so that by 1930 dairy farms were twenty-seven per cent of the farms in Genesee County.[1] When milk increased as the cash crop, beans declined since farmers shifted to feed crops and consumed their production. A Genesee County wholesaler's purchases of beans decreased from an average of 1,142 thousands of pounds during 1936-1941 to an average of 857 thousands for the four years after 1945-46, a decrease of twenty-five per cent in about ten years.

The farms in the Linden service area did not convert as rapidly as some other areas of the county. The above elevator, serving the whole trade area, reported dairy feed sales in 1933 of only 18,000 pounds. In 1950 the amount was 219,000 pounds. Milk was the single most important farm product by 1950, accounting for about thirty-five per cent of all farm income.

Livestock sales were an important part of the early general farm and of the modern farm systems. They accounted for about a quarter of all farm income in both periods. There was, however, a change in type of livestock. Sheep gradually disappeared -- they were nearly displaced by 1920

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[1]U. S. Agricultural Census, 1930.

-- and beef replaced them. Informants felt that beef farming is increasing rapidly, even replacing milk in some instances. Poultry farming has also become somewhat more important than in 1900. Today, three-quarters of all farm income is from livestock and livestock products.

Hay, corn, small grains and beans, in spite of their marked decline, are still important field crops. Wheat production actually is increasing. One elevator reported purchases of 573,000 pounds in 1933-34 in comparison with 3,782,000 in 1948-49. Other crops, such as vegetables, fruits, nuts and horticultural specialties, were never significant income producers. Income from forest products has never been important.

Accompanying the change in commercial farms was the alteration of the small farm from subsistence to residential types. Part-time farming increased as a supplement to wage work in Flint. In 1950 over half the farms reported some work off the farm. Nearly forty-five per cent reported more than one hundred days of such work. Accurate estimates were not made but informants felt most of the off farm work was in Flint, particularly since 1940.

With the increase of part-time farming, subsistence farming has almost totally disappeared. Even in 1900 subsistence farming had disappeared in the sense of performing many non-farm occupations such as clothes making and weaving, if, indeed, it ever existed in Linden. But in 1900 there was much greater dependence on home produced foodstuffs.

Organizational Changes

During the fifty years after 1900 both farm and farm home became mechanized. By 1950 slightly more than forty-five per cent of the commercial farms in Genesee County had milking machines, about the same percentage had grain combines, and every commercial farm had a tractor. Even the smaller farms were mechanizing; seventy-seven per cent of all farms had tractors in 1950. The internal combustion engine and electric power equipment had replaced the horse, the steam thresher and the hand milker.

In the farm house the hand pump and well of 1900 was replaced by electric water pumps in nearly ninety per cent of all Genesee County farms. Electricity replaced the gasoline lantern and kerosene lamp.

The seasonal work cycle of the farmer was altered by the conversion to dairy farms and mechanization. Dairying required year around production and frequent marketing in contrast to the peaks in work load at planting and harvesting time on the general farm. There were still these work peaks but on a much reduced scale.

The combination of a steady work load on the dairy farm with the greater productivity of farm labor through mechanization contributed to the substitution of year around hired help for the seasonal hand. At the same time these factors reduced sharing and mutual aid practices. Generally only the smaller farmers shared in 1950. Steady employment in Flint reduced the available farm labor force and

operated as a pressure supporting substitution of regular help for seasonal help and also stimulated further mechanization.

There was also an alteration in the interaction of the farmer with his trade center for the satisfaction of business needs. In 1900 a comprehensive trading center was attractive to the farmer because it was profitable to coordinate all town business in one weekly trip. During some poor weather periods, he would not get into town more than twice a month. But in 1950 the improved roads, the automobile, and the telephone permitted the farmer to select his trade center according to his need. His shopping habits were changed so that he visited town as the repair or other need developed and bought only for the specific problem. The habit of buying "extras" for storage largely disappeared.

The combination of mechanization and specialization on the farm with rapid daily contact with the trade center reduced farm manufacturing functions. The manufacture of butter and the slaughter of animals for the market nearly disappeared. In general, the 1950 farm was completely out of the manufacturing business. On the other hand, electric power feed grinders were beginning to decentralize one of the first functions to be village centered.

Along with the decline in farm manufactures for the market went a decrease in general subsistence activities, particularly on the more specialized farms. Fuel was home produced in 1900. In 1950 it was bought.

Marketing Changes

Significant changes in marketing have accompanied the other farm changes. In the early period Linden village was a marketing center absorbing the major and minor products of surrounding farms and redistributing them widely.

Linden elevators bought beans, grain, and wool. Hay was bought by a dealer and shipped from the village. Livestock, second to field crops as an income producer, was marketed through the village. The minor farm income producers -- eggs, butter, milk and vegetables -- were marketed through the village grocery stores.

The village wholesalers then distributed these products to a dispersed regional and national market. The field crops were distributed throughout western, eastern, and southern states. The livestock was sent to markets in Detroit and Buffalo. The perishable products were wholesaled to larger nearby centers and retailed within Linden.

Flint was, at most, an occasional marketing point for minor income products by the farmers in the northern part of the community.

Farm marketing in 1950 was completely different. Flint was an important marketing center, while the village was not. Much of the most important income producer -- milk -- was going to Flint for metropolitan community distribution. The bulk of the remainder was sent to the Detroit area. The village was reduced to processing the eggs, poultry, cream and some small grains for redistribution

within the metropolitan area. Hay was the only important field crop still shipped from Linden.

Other field crops produced in the sub-community were distributed through wholesalers and processors in surrounding small towns. A milling plant in Argentine Center was an important grain buyer. Wholesalers in small towns such as Gaines, Fenton, and Howell were buying beans and small grains. Livestock was marketed through Detroit, with some going to small local packers and to Howell.

Thus Linden village changed from a general marketing center distributing widely to a specialized processor of minor farm products for distribution within a metropolitan community. At the same time many Linden farms changed from producing for a national market to perishable product production for the Flint and Detroit metropolitan areas.

Village Agricultural Change

Farming within the village had virtually disappeared by 1950. Village boundary changes and residential expansion were the two leading causes. Some non-farm agricultural units remained and others were added. The veterinarian and threshing functions were eliminated. Hay baling remained. A floriculturist, located next to the cemetery, was added.

Change in Rural Non-Agricultural Units

The number of rural non-agricultural business units, as shown in Table 39, greatly increased. Only one unit, a tile and brick yard, was located in the rural district in

1900. There were thirty-five in 1950. This increase was concentrated in construction functions and in entertainment and recreation functions. Twenty of the units were in these two groups.

TABLE 39

THE CHANGE IN THE RURAL NON-AGRICULTURAL UNITS AND FUNCTIONS, 1900-1950

Added Functions	Number of Units	Discontinued Units
Dairy Plant	1	
Saw Mill, Mobile	1	
Home Construction[1]	12	Tile and brick yard
Small Trucking	1	
Food Retailers	2	
Gravel and Dirt Retailers	2	
Tavern	1	
Real Estate Agents	3	
Insurance Agent	1	
Piano Tuning	1	
Dressmaker	1	
Accountant	1	
Entertainment and Recreation[2]	8	

[1]Plumbing, electrical, plastering, septic tank installation, carpentry, well drilling, masonry, furnace installation, contracting.

[2]Boating, fishing, water sports, roller skating, dancing, night clubbing.

The increase in units in the trade area does not indicate a real decline in the concentration of activities in the village. It is rather a growth of new functions in the sub-community. It is true that in 1900 saw milling, construction, draying, and food retailing and eating places were completely concentrated in the village. But, like the real estate agents, insurance men, and recreation services, they are primarily a response to a completely new trade

area market -- the non-agricultural lake dweller.

Interdependence of Farm and Village

A major change in community structure has been the reduction in interdependence between the farm and non-farm business systems. In 1900 there was an income-expenditures balance within the community, since the income from the farm exports was adequate to support the expenditures for imports by the village business units. The two had to balance because of the small quantity of exports from village manufacturers and the lack of other sources of income to the community. The two sub-systems were also in a balanced interdependence in 1900 through the comprehensive farm repair, supply, and marketing services which provided all the basic business requirements of the farmer.

The alteration of the business structure in the next fifty years has disrupted this dual balance. The expansion of the village business structure is based on the growth of the non-agricultural labor force, which works in Flint and now is the most significant income producer in the community. The farm income is no longer adequate to support the volume of community imports. Merchant informants thought that the farm income provided a solid underfooting to the village structure but that it was no longer the predominant element. There has also been a significant trend toward a lack of service interdependence of the two systems. The implication of these and other changes will be discussed in the next chapter.

Spatial Organization

There was a limited spatial reorganization as a result of the business transformation. The railroad had given the community a highly centralized form while the motor vehicle introduced some slight decentralization. The pattern remained about the same as in both periods there was an approach to functional concentric zones with retail and service units at the center, manufacturing units in an immediately contiguous ring, then a residential zone, and beyond this an agricultural and residential zone. The major change was the invasion of the rural zone by specialized non-agricultural units.

The rural area changes represent additions in functions to the small community, over sixty per cent of the non-agricultural unit increase locating there. Construction, real estate, insurance, entertainment and recreation were the principal new functions outside of the village. The spatial reorganization, however, was a creation of one function spots dispersed throughout the service area and was not the development of a new center. Argentine Center, a sub-center to Linden, did experience its first growth since it was by-passed by the railroad ninety years ago. It had food, gasoline, liquor, entertainment, and flour mill functions.

The Linden center was relatively less important in construction functions because of the spatial change but otherwise it retained its importance as an exchange,

service, and manufacturing center for the whole community. None of the new rural units was a relocation from the village. Most of the growth in functions located in the village in 1900 took place there and not in the open country. The village even gained some functions from the open country because of the increased specialization of farm units.

In 1900 butter production for the market was a decentralized function. Since then a cooperative butter plant has been added to the village, taking over almost all local butter making. Poultry and egg-processing is another case. Other non-agricultural functions once performed by the farmer have similarly moved to more centralized locations, though most have by-passed the village.[1]

Other village spatial changes included the discontinuance of residential use of second floors of buildings in the village center. The retail functions have usurped virtually all the main buildings. At the same time there has been some decentralization within the village through the construction of several new buildings on the main highways out of the village. The village has also lost most of its agricultural function through a process of boundary

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[1]When all the groups of the village have been analyzed it will be shown that decentralization spatially is not the automatic response to automobile transport. Within the small community the school and church have become increasingly centralized in the village. Other functions have completely by-passed the village center as they became centralized. Many of the manufacturing processes, such as slaughtering, which were once dispersed throughout the rural area have disappeared since 1900.

changes and residential succession. Sub-division of farm lands in the village is still continuing -- an orchard was purchased for residences in 1950 -- though little individual land remains.

There has been some spatial change in the farm pattern. Farms have moved off the most accessible highways and away from the lakes and residential use substituted.

CHAPTER EIGHT

ANALYSIS OF CHANGE: THE BROAD PATTERNS

There are so many threads to the transformation of the community business structure that a listing of the general trends will aid the reader:

1. The village community was converted to a sub-community in the Flint metropolitan system following the introduction of the motor vehicle. In the earlier form dependence was direct from the village to a diffused national and regional structure, with Detroit dominant in the latter. In the later form the dependence was concentrated on Flint.

2. Activity continued over the fifty years in the three broad functional systems of production, exchange, and maintenance. Unit increase was concentrated in the latter two so that in the sub-community the relative distribution changed toward an increase in non-farm functions. The non-agricultural units nearly doubled.

3. The continuance of the three broad functional types has meant the community was not turned into a one function resort, dormitory or similarly highly specialized sub-community, though there was a general trend toward sub-community business specialization.

4. Increased village specialization was marked by growth in retailing, home construction, real estate, insurance, and entertainment, a relative decrease in manufacturing, personal and professional services, repair services, and communications, and an actual decrease in farming, marketing, financing, and specialized transportation. The sub-community center became more of an exchange center and less of a production and maintenance place.

5. Village change occurred through the modification of continuing functions and units, the loss of some, and the addition of others by diffusion and expansion.

Less than one-half of the 1900 units continued for the fifty years. All were modified in some important respect. Personal care and medical units were in the least modified group. They were approximately one-fifth of the original units.

The units that remained were related to the individual needs market. The major losses were in units related to the farm business needs market.

The major functional losses were in marketing, financing, locally owned transportation, semi-durable products manufacture, farm repair agencies, and retailing related to farm needs and to the less standardized, less frequently needed goods. Losses among the personal service functions were of the same type.

About sixty per cent of the 1950 units were added after 1900, about half by diffusion and half by

expansion. Those added by diffusion were principally transportation related and personal care services. Those added by expansion were principally retail and construction places. Nearly all added places were related to the individual need market.

6. The changes in each functional class were: The transportation function expanded but it was subject to both decentralization and centralization. Individual control of external travel increased while the central city absorbed some of the interstate function. Transportation was the only function to be even partially decentralized.

Local control of transportation has been disppearing gradually since the introduction of the railroad. Control of external transportation was lost by Linden about 1860 when the railroad reached there, but it was not until after 1910 that the village also lost control of local and internal transportation. The loss of local travel control is indexed by the present external control of road development and management, external control of gasoline stations, external manufacture of vehicles as compared with local manufacture in 1900, external trucking companies without so much as a local branch, external manufacture of energy as against farm production in 1900, and external policing of transportation.

The loss of control was accompanied by a nearly complete decline of the village as a railroad transportation center. Instead, it became a center servicing

motor vehicle transportation.

The retail system retained more of its specific functions and units than any other except the medical. At the same time it had the most significant growth, nearly doubling its units. Proportionately, the village became more of a retail center. While expanding, the specialization of the retail system increased through a decrease in the variety of product lines and an increase in the concentration on frequently needed, standardized products. There was greatly increased concentration on individual need servicing, while there was a relative decline in catering to farm business needs. The greatest addition of new specific functions was in motor vehicle sales and servicing. Increased recurrent movement also resulted in growth in the number and size of eating and drinking places. Individual retail units became more specialized, having fewer secondary product lines.

The home construction industry expanded more than any other functional class. But its growth was much less significant than the retail expansion since it was composed of independent craftsmen.

The village continued as a minor professional service center, primarily non-specialized medical services.

Half of the personal care units active in 1900 were discontinued and replaced. Since the functional class did not expand, its relative position declined. The trend was toward increasingly standardized services

and less variety of services. Beauty and barber shops were half of the units.

Real estate and insurance units were created as the suburbanization increased residential land use in the community.

The village continued as a local information communication center and as a distributing point for external information. There were, however, some major changes. In 1903, the village newspaper was the unit for local information, while the telegraph, post office, railroad, Detroit newspapers, and national periodicals were the basis of external communication. In 1950, the telephone and the village newspaper, supplemented by Fenton and Flint newspapers, were the bases for local information, while the telephone, Flint newspapers, national periodicals, radio, television, post office and railroad organized external information.

The role of manufacturing declined relatively since the total number of units remained constant. The trend was definitely away from regional export to metropolitan community export. Food products were much more important in 1950; durable handcraftsman products were less important. The addition of butter and poultry plants represented, in part, a movement of manufacturing from the farm.

The marketing function changed radically, declining to the buying of minor farm products that were processed and sold in the metropolitan area. Their

competitive position was partly based upon savings in transportation and wage costs. Thus, Linden lost its major farm products market coordinating function and ceased its middleman function for the larger society. The function was dispersed throughout the metropolitan community.

Individual need repair services expanded in the form of motor vehicle servicing, while there was a relative decline in farm business need repair services as specialized farm repair units nearly disappeared.

The one bank, the only specialized financing service in the village, failed about 1930 and was not replaced. The function was absorbed by Flint and Fenton.

In general, the village business system greatly expanded as a distributive center, changing from a farm center to an individual need center. The retail, construction, real estate, insurance, non-farm repair, food processing and entertainment functions expanded; the communications and professional services remained relatively stable; marketing and financing functions declined.

7. The farm system was replaced by Flint employed wage labor as the predominant income producer for the community. The number of small and large farms increased while the number of middle sized places decreased. The commercial farms were larger in 1950 than in 1900. A general farm system was converted to a specialized farm pattern. Dairy products became the leading income producer. Livestock remained important but changed from

sheep to beef. Hay, beans, and grains for market decreased but were still important income crops. Marketing changed radically. Milk was marketed in the metropolitan area. Other products were marketed selectively in small towns for regional and national distribution. On the whole, the farm system was oriented to a metropolitan market in 1950 as compared with a regional and national market in 1900.

8. Non-agricultural functions developed in the service area. The important functions were real estate, insurance, home construction, and entertainment and recreation. These were spot rather than cluster developments.

9. There was also an increase in non-community units providing direct services in the community. The inspection of milk by the Flint and Detroit Boards of Health is an example; printing of local news by Flint newspapers is another; Lansing's industrial laundry service is a third.

Briefly, the total transformation was from a comprehensive business system in an independent community to a specialized business system in a sub-community. In the latter form it was a component of the Flint metropolitan community. The sub-community was a residential area for the community labor force. The village was a servicing center for the resident labor force and a perishable food products processing center for the whole community. The service area

was a perishable foods production area for the metropolitan community and also a recreation and entertainment area.

The Sources of Change

There can be no question that many of the changes described in previous chapters did not emanate from Flint. Significant changes in the national economy have had their impact. This was pointed to in the first chapter. It was stated there that a basic assumption was that technological change of any sort has an effect on cooperative human action. The impact of these changes, as distinct from transportation change and metropolitan expansion, has not been explored. It is worthwhile, however, to attempt a brief sorting of the effects of the national economy changes from the effects of metropolitan expansion. Obviously, in a case study no definitive statement is possible. This is particularly so with a research design that depends on analyzing change only by comparison of two points, widely separated.

Interpenetration of Expansion and National Change

In separating out the changes incident to national economy changes and to metropolitan expansion, the question is one of determining what Linden changes would have resulted if it were still relatively independent. It is a question of what changes observed were independent of the concentration and organization of population in the Flint metropolitan community. It is extremely difficult to do this in a case study, particularly because of the inter-

penetration of the two.

It was stated earlier that the type of metropolitan center determines in many ways the specific changes in the local community. That is, the metropolitan center is a stimulus intervening between the transport change and the small community social structure. Implied in this is the notion that most of the changes in the national economy are brought to bear on the small community through the agency of the dominating center. Hence, increased interaction with the large center is the proximate cause of most small community changes, even though the change may begin in the national economy.

The point is primarily that the utilization of national technological and other changes is dependent upon a social structure that is adapted to them in size and organization. An airplane is of little use without the elaborate supporting social structure to maintain fields, develop new equipment, handle arrangements with consumers and so on. The metropolitan community is the social form incorporating the airplane into the functioning of society. As a major national economy change Linden is affected by it because of its position in such a complex. Dissociated from a metropolitan community with its facilities for organizing and concentrating people cheaply and quickly at an airport, it seems unlikely that Linden would be affected. But a good example of the interpenetration of the two general sources of changes is the motor vehicle, with its

dependence on the development and maintenance of the expensive road network for a large population organized by Flint.

The automobile and truck are national changes that have led to a great increase in movement. This would have occurred irrespective of the absorption of Linden into the metropolitan community. But it is unlikely that the expansion would have been of the same dimensions.[1] Personal travel has increased tremendously with up to fifty per cent of the sub-community commuting forty miles per day to work. Business travel has increased in the same way. Newspaper delivery has increased to one hundred mile daily delivery

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[1]See James West, Plainville, U.S.A. (New York 1945), pp. 11-13, for a description of expansion of movement in an "independent," off-the-highway town. Cars have replaced horses for nearly all personal travel and light hauling within the community but heavy hauling was still by team and wagon.

Olen Leonard and C. P. Loomis, El Cerrito, New Mexico (Washington, D.C., 1941), p. 68 wrote of this isolated town: "Modern means of communication and transportation have had little effect upon the number and variety of contacts of these local people with the outside world. There has never been a telephone in the village, and the closest one to the village now is at another village, 16 miles distant by car or 3 miles by foot. The few families who own automobiles are limited in their use by the fact that operating expenses are almost prohibitive and can seldom be afforded unless a group can be gotten together to share them. The automobiles in the village are all antiquated, untrustworthy, and incapable of making more than infrequent trips to town. All repair work is done at home. A lost or broken part is usually replaced by some make-shift or home-made device. After a number of such repair jobs it is almost incredible that some of these cars run at all. One of the local men who had lost his gasoline tank tied a gallon oil can to the side of the hood of the car just high enough to allow the gas to run by means of a small pipe into the carburetor."

routes bringing the most distant rural resident in regular daily contact with the central city; and even bringing him news about his and other small sub-community news more quickly than in 1900. Cream collection for the butter plant has increased from the ten mile radius of 1916 to the forty mile radius of today. Farm products are delivered daily, year around, instead of the ten or twelve trips to the grain elevator of the 1900 farmer.

The growth in transportation need has been met, not by an increase in functional units in Linden, but by the absorption of the activity by Flint, by business units, and by families. The transportation function has been deconcentrated and expanded in a way inconceivable without Flint. Personal travel today is entirely by individually owned automobile. The sub-community does not have a bus service of any type. Several attempts at jitney service failed before 1930. The creamery, flour mill and poultry house now own trucks and handle their own deliveries. Retail stores now receive supplies by trucks owned by wholesalers in the central city. Farmers' crops are picked up by wholesalers' trucks or brought to market by the farmer in his own. Finally, interstate trucking companies--at least five--located in Flint and not needing local branches, serve the whole metropolitan community.

The speed of the transmission of a national change is another factor in the interpenetration of the two general sources of change. Television is a good recent example.

It was the very large metropolitan districts with their concentrated markets that first had television. The sub-centers to New York City were subjected to and influenced by this change much sooner than those around Montgomery, Alabama, which will have its first television station in 1953.

Because of the mediating influence of the central city it also seems that metropolitan organization acts as a preventive to changes in the sub-centers. The absence of trucking units in Linden is an example. The change in farm marketing is another, since marketing agencies for milk have developed outside of Linden, thus preventing their location in the village. This preventive aspect is certainly important in contributing to specialization of the village.

In view of the interpenetration of the two causes of change, the changes will only be broadly separated. In general it would seem that the major changes have emanated from Flint. The specialization of the community business structure and the expansion of the village system are the major changes, and they are dependent on metropolitan community factors. It was shown in Chapter One that small cities within twenty miles of large centers are generally relatively specialized as compared with more distant places. Linden is no exception to these forms of metropolitan expansion.

The relating of changes to metropolitan expansion has been divided into several more specific causes of

change. These are all interrelated, with changes resulting from one reacting with changes from another and so compounding the changes.

Effects of Metropolitan Development

A major consequence of the reduced time-distance to Flint from Linden was the suburban movement which changed population structure and distribution in Linden. Simply, there was a doubling of population, a large increase in the proportion in non-agricultural occupations, and increased residential use of the service area. The new non-agricultural market is one of the major mechanisms by which the village business structure was transformed.[1] Hence, business change dependent upon it is related to metropolitan development. Flint creates the income which makes effective the market for Linden's businesses.

The rise of the new local market with its special needs is a major factor in the alteration of the village from a comprehensive farm center to a specialized retail and service center with greatly expanded non-agricultural functions. The increased need for personal goods led to the

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[1] It was shown in Chapter One that it is the small places within the metropolitan community which are growing in population. Hence, changes resulting from this development are unquestionably related to expansion more directly than to national economy changes. At the same time national economy changes certainly are influential. The development of the eight hour day and paid vacations for all classes of workers is a major change since 1900 in national organization. The increase in the recreation function in Linden is dependent on this change.

increase in retail units. Other changes resulted from the new housing needs of the population. There was the growth in the home construction industry and related functions such as the lumber yard, sash and door manufacturing plant, fueling units, insurance businesses, and real estate agents. The real estate and insurance agents were equally influenced by the increased residential and farm property turnover. Farm turnover increased, informants agreed, because high wages in Flint were a lure that made it much easier to buy small farm properties. The introduction of non-farm units into the service area and the growth of entertainment and recreation functions were dependent upon the increased residential use of the lakes in the community. The other functional expansions are similarly dependent upon the growth in population.

Functional changes resulted from the change in population composition. The non-food producing Flint workers needed a retail source for fruits, green vegetables, dairy products and other groceries to a much greater extent than did a farm market. The number of automobile servicing units is dependent on the high proportion of the sub-community population who travel to Flint to work.

Without the employment power of Flint and the automobile the business structure of Linden could not have been maintained in its present distribution of functions or size.

Decreased Individual Dependence and Specialization

The reduction in time-distance to Flint and to other sub-centers led to increased freedom for individuals in the selection of trading places. The consumer in 1900 was highly dependent on his village merchant but this was not true in 1950.[1] This change in dependence is significant because of the availability of Flint and its satellites as shopping centers. If the small community were not close to a major shopping center even the speed of the motor vehicle would not appreciably free the consumer of small community merchants. In general, the result has been that consumers trade selectively in several sub-centers, in the specialized one function spots in the rural area, and in Flint. Hence Linden as one of several centers became more specialized during the process of metropolitan expansion.

One aspect of the increased specialization of the village was the decrease in "shopping" goods such as furniture, luggage, and musical instruments.[2] The automobile lessened space frictions for the consumer so that he could travel more widely for purchase of these relatively infrequently needed items but this was not so true in regard to

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[1]Of course, merchants have taken steps to overcome the decreased dependence and to nullify the effects of improved transportation. For instance, fair trade laws seemed to have this effect. Merchants reported that before the Fair Trade laws the pressure of the Flint retail stores did hurt local business but that now, "Flint doesn't hurt us a bit."

[2]Purchasing power was certainly increasing while these services were decreasing.

the frequently needed merchandise. At the same time Linden expanded in the standardized, low priced services, adding to its specialization that way. The automobile itself so frequently requires service that decentralized local units for its service were one of the major expansions.

The increased ability of the consumer to trade in Flint was also a pressure on the services remaining in Linden for standardization on a basis comparable to those offered in Flint. For instance, food stores were exposed to competition from the supermarkets in Flint. Workers could easily trade in Flint's markets before coming home -- and many did -- if they did not get similar services in Linden. One question to the village population asked what type of business they most needed in the village. The most common request was for a supermarket "like in Flint." The second was for a "ten cent" store. The reorganization of a general store into a self-service market in 1950 is evidence of the practical importance of the Flint competition.

The Transient Market and Recreational Development

The decreased dependence of the consumers on the residence community merchant has also affected the sub-community business structure through the introduction of a new transient market. Residents of Flint and other parts of the metropolitan area are able frequently to visit the lakes around the village. More distant visitors also drive to the sub-community but here again the proximity to Flint

is very important in the total volume.

There are specific units and functions which are based on this market. The village bait store is one. Another is a small village grocery which remains open late Saturday and Sunday in order to service the weekend transients going to the lakes. The increase in restaurant facilities is partly a response to this trade as well as to the increased local mobility. The growth of the recreational and entertainment function in the rural area also reflects the transient market development.

With the expansion of year around residence on the lakes, the influence of the transient trade is declining in the village. Merchants reported that until about 1935 the lakes primarily generated transient trade and that they made their money in the summer and just "rode the winter out." The change from 1900 to the suburban pattern of 1950 involved an intermediate stage when the village had many of the characteristics of the one season resort town.

Farm Producer Mobility and the Flint Market

The small community producer was strongly influenced by the reduction in time distance to Flint. The availability of the city and metropolitan population as a market for perishable foods is closely correlated with the conversion of the farm system to milk production about twenty-five years ago. The extreme difficulties of local travel by horse and wagon when combined with rail travel had

oriented field crop farms to Detroit. The truck converted the farm system and reoriented it to Flint.

It is possible that a major farm change would have occurred without the expansion of Flint. Linden was affected by such national changes as the decline in foreign grain markets after 1920, the displacement of draft animals by machines so that the market for hay declined, and mechanization and improved seeds which opened up other grain areas farther west. These probably created a receptive base for change when it was made possible by the growth of Flint. On the other hand, there were stabilizing forces in the old pattern, such as beans and livestock. It is also true that dairying has developed near all large cities. It would seem that expansion was the predominant cause.

Other Competitive Factors in Metropolitan Organization and Linden Change

Business units outside of Linden but within the metropolitan community were brought into direct competition with small community units by the reduction in time-distance. The new competitive situation led to a process of readjustment by which Flint established dominance over the hinterland and created the enlarged community organized of distinctively specialized and coordinated areas. It is unlikely that these competitive factors would have been so strong if Linden were not part of the metropolitan community with the high level of road development and specialization that it has permitted.

A clear instance of one new competitive factor introduced by the automobile was the outside units which regularly invaded the sub-community and competed directly for the local market. One example was the printing of village news by the metropolitan press. Other units included metropolitan milk dealers and bakeries which delivered to homes and businesses in Linden. This type of competition was a limiting factor in the local situation. The local bakery, for instance, did not make cakes and pies though local consumers regularly made purchases of this type. The inability to establish a bank is another example of the limiting influence. Merchants have been trying for several years to combat the competition and locate a new bank in Linden but they have been unsuccessful.

Competition for local raw materials was a second new competitive factor. The creamery is a good example. When farm marketing was reoriented to Flint, the village creamery and metropolitan milk and cream buyers became directly competitive for the first time. The demand for Linden area fluid milk increased, thereby reducing the available raw material for butter, and thus requiring a readjustment by the creamery.

The competition is expressed through the price of fluid milk. In 1950, butterfat cost about $1.15 per pound when purchased as fluid milk. The village creamery can manufacture only 1.23 pounds of butter from one pound of butterfat. The result of the price competition is that

butter becomes too expensive for the consumer and demand decreases, forcing small creameries out of business. Production in the Linden creamery was decreased from 266 thousand pounds in 1940 to 219 thousand pounds in 1949.

The Linden creamery survived by absorbing the cream collection routes of butter manufacturers who discontinued producing. There were once butter factories in Fenton, Holly, and other places. The bigger Flint dairies also made butter until recently. The additional routes expanded the collection area from a ten mile radius to forty miles. Butter production in Linden increased so that, in 1950, 373 thousand pounds were made. As a result of this readjustment Linden is absorbing the metropolitan butter making function.

Metropolitan trucking is reported to have affected livestock distribution even before cream buying. The stockyards in Linden were displaced because their use involved too much weight shrinkage in livestock. The farmer had to "drove" the livestock to the village where they generally waited several days for the right train. Now the truck picks them up at the farm and moves them within hours to the slaughtering market.

The loss of the grain elevators is partly due to the increased competition of surrounding small grain marketing centers. Farmers could toss their grain sample into the car and visit several buyers in an afternoon. The conversion to milk production also contributed since

many farmers fed their crops to stock rather than marketing them, as they did formerly. The loss of the elevators was a very important change since they had been major business units in the village from the introduction of the railroad in about 1860.[1]

Farm implement buying and repairing, while not as widely dispersed as marketing, was affected by farmer mobility over the extensive road network made possible by Flint. Linden did not have a farm implement store from about 1931 to 1949 and this can be attributed to the availability of competing dealers in the open country and in the small towns.

Competition for local labor from outside units is a third new factor. Informants reported that there was a shortage of labor in Linden because of the competition of Flint wages.

One result partly due to this was the reduction in the number of middle size farms and the increase in small, part-time farms and in large farms.[2] The change was partly due to the attraction of the wages for the farmer and his hired help, many of whom took jobs in the city.

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[1]Informants attributed the decline of the elevators to more proximite causes. One closed in the 1930 crash and the other, after a fire in the mid-forties. The fact that one building still stands unused emphasizes that other factors underlie these obvious causes.

[2]The increase in part-time and residential farming and the reduction in subsistence farming was also part of the suburbanization process.

Another factor was the trend toward dairy farming which required year-around hired help instead of seasonal hands. The larger farms were needed to compete successfully with Flint wages.

The village businessman also reported competition from Flint for local labor was important in their operations. They could not meet the high wages, job security, and pension plans of the large factories. The adjustments took the form of using older or very young workers and accepting a high labor turnover.

The change in the wholesaler-retailer relationship is another case. Since the wholesaler was no longer dependent upon the railroad, Linden merchants were able to buy from Flint wholesalers. The wholesaler delivered directly to Linden merchants either in his own trucks or by hired van. The disappearance of the dray line from Linden is directly linked to this change in operations. Since "drummers" were no longer needed by wholesalers the village hotel lost a significant part of its function. The hotel owners in Linden and in Fenton both reported also that the nearness of large hotels in Flint had eliminated their business.

Another type of competition was between new and old units for land uses. Twenty-five years ago only farms were passed as one drove along the main roads around Linden and toward Flint. Today, hardly a farm remains along the most accessible routes as residential use has overbid agricultural

use. This displacement has meant a reduction in the number of commercial farms, which has had further consequences that therefore are related to metropolitan expansion. Creamery officials thought this a secondary factor contributing to the expansion of the cream collection area.

In at least one case the development of the metropolitan community has enabled Linden units to survive by adjusting to national economic changes. The change in marketing practices has helped the creamery adapt to national dairy products distribution.

In 1916, when it was founded, seventy-five per cent of the creamery production was sold in Boston. When the truck made local direct distribution possible, the plant switched to a market radius of thirty miles because it gave it a price advantage of five cents per pound. This was partly due to transport savings and partly to jobber savings as the plant could now sell directly to the retailer in an enlarged local market. For a time it had local area competition from other small plants as we have seen. But now it has absorbed much of this function for the metropolitan community. Similarly, the flour mill and poultry house have local price advantages because of truck transportation directly to retailers and manufacturers within the metropolitan area.

Effects of National Economy Changes

Some changes have by-passed the metropolitan community center and have had direct impact on Linden. There

are various channels for this. The development of dealership relations with national distribution, such as for farm implements, is one of these. About a fourth of the business units in Linden in 1950 had such connections. Direct chain ownership was not important. Other causes included the direct intervention of federal and state agencies, especially farm extension services which have expanded so much in the last thirty-five years. There were also indirect effects such as basic improvements in rail transportation and refrigeration which altered the marketing patterns for fresh foods and other products.

One class of change during the fifty years that cannot be ascribed to metropolitan expansion is that occurring before 1910. The tool handle factory was closed because of the exhaustion of second growth hickory in the community. Beach's carriage factory was moved to Petosky in 1902 in order partially to avoid the direct competition of large carriage makers in Flint. It was not long after 1910 that wagon manufacturing was also discontinued in Linden, ending for many years durable goods manufacture in the community.[1]

The last of farm repair services is also the result of national changes. The concentration of implement production and the improvement in implements certainly directly

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[1]As shown by Plainville U.S.A., it is likely that wagon repair disappeared faster than it would have if Linden had not been affected by Flint.

affected the foundry and the blacksmith. The change in distributing patterns in farm implements with repair parts and repairing being handled by the retail outlets also undercut the local repair and replacement function of the iron repair shops. The units lost because of basic productive changes or actual elimination of the need, as carriages, may be ascribed to national economy changes. Those Linden losses which involved a relocation within the metropolitan community, as photography, shoe repairing, and farm services, should be ascribed to metropolitan community expansion. The very specific changes in functions of continuing units is another type of change that certainly is as much related to national economic changes as to metropolitan expansion. It is the specific commodity, technologies, or services which are dependent on the national economy, while their presence in Linden, the extent of their use and how they are absorbed into the social structure is dependent on the metropolitan expansion.[1] For example, the change in grocery stores to fresh vegetables, frozen foods, and other perishables, and small quantity packaging reflects change in the national pattern in improved rail transportation, refrigeration and modern packaging machinery in centralized food processing plants. At the same time change in store organization from

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[1]It seems, however, that many of the specific commodities, technologies, or services were developed on a national scale because the metropolitan form of organization permitted or encouraged it. The organization of large concentrations of population in small areas has created markets favorable to increased productive specialization on a national basis.

general stores to specialized stores reflects metropolitan expansion. The spatial organization of the new foods and operating techniques is also directly related to the enlarged community.[1] It is also likely that the fresh vegetables and other perishable products function would not have developed to the same extent without metropolitan expansion. The farm population, with sixty-nine per cent of the farms producing vegetables for home consumption, was not as great a stimulus to this development as was the non-agricultural wage earner.

Some samples of specific change are: new machinery in the flour mill, national meat packers' commodities in the meat store, use of more partially compounded drugs by the pharmacist, and the new tools in the farm implement store. Others are: changes in medical and undertaking practices because of national professional standards and education, the increased variety of sports equipment and children's play implements in the hardware stores, the use of fuel oil in heating, and the telephone system. The loss of handicraft manufacturing and such skills as tinsmithing are also the result of national economic changes. New specific functions based upon national changes were radio sales and repair, beauty shops, dry cleaning, and the motion picture theatre.

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[1] It is not implied that specific changes in commodities, technologies, or services have not affected unit organization. The railroad, for instance, no longer has section crews in Linden as a result of modern methods of operation.

Many of the changes in farm operation were the result of national changes. The invention of modern farm equipment and the development of its mass manufacture is one example. The new equipment has exerted pressure for increased farm size because of its efficiency and cost. Farm labor productivity was increased, reducing the need for labor just when Flint was beginning to exert pressure on the farms through high wages.

Other technological and organizational changes have been diffused from the national economy. Only one case was uncovered where it seems a technological change originated within Linden, that of a friction type bean cleaner manufactured by a Linden resident. There were probably others but they were certainly a small number. But development and change in the national economy does not ramify into all components of the social organization with the same speed or with the same intensity. The expansion of the metropolitan community and the national economy are companion processes whose impact on a specific sub-community cannot be precisely determined in a case study based on a comparison of before and after cross-sections of the community. A closer approximation could have been made with a greater number of time-points. But this is a matter for further research.

Some Implications of the Changes

In changing from a balanced local system the community switched from a diffused regional and national adjustment dominated by Detroit to a metropolitan community

adjustment dominated by Flint. Linden was about equally dependent nationally in the two periods but in the first the village center was the mechanism of the adjustment. Both imports and exports flowed through it. In the later period the village role became specialized and both individuals and businesses became related to the metropolitan community as the adaptive mechanism, with different sections of the expanded local community performing different functions. Gaines seemingly has become almost solely a field crop marketing center; Flint, among other things, a prime employment center; Howell, a livestock marketing point, and Byron, a farm business need supply center. Linden has achieved the distinctive role of a butter production center for the metropolitan community since other sub-centers do not have creameries.

This metropolitanization of the county has had impact on the area dimensions of the component communities. It seems that some communities, like Linden, expanded while others contracted. The expansion of Linden was associated with a contraction of Byron and Gaines on the west and Deerfield Center, Parshallville, Hartland, and others on the south. While Linden has expanded somewhat to the north, increasing competition is being exerted by Swartz Creek and Rankin so that a contraction is likely in that direction. The whole southern metropolitan area is still subject to strong competitive pressures among the small towns which will result in further changes as the metropolitan role of

each is defined more clearly.

The meaning of the sub-community area has also changed. In 1900 each of the small centers was dominant over the contiguous farm area to a much greater extent than today. This is implied in the comprehensive functional structure of Linden village in 1900. Now, however, the farmer trades in several places in order to satisfy his needs. The sub-community has tended to become the area within which only frequently or commonly used necessities for the individual are purchased regularly. This area has remained relatively small. At the same time there is a new, enlarged functional area which encompasses several of the personal need sub-community areas but which is much smaller than the metropolitan community. The new functional area is the area of several sub-communities combined to form the farmer marketing zone. In the southern Flint metropolitan area it weaves Fenton, Linden, Swartz Creek, Byron Center, and Argentine Center into a whole.

As farm and village businesses moved from the close small community inter-dependence of 1900, the sub-community rural business structure has taken on the character of the 1900 village pattern. In that year, as shown by a lack of businesses supplying other village businesses, village units were not directly inter-related. Each formed a system reaching out of the community for supplies and vertically into the community for a market. The farm system in 1900 cut across these and welded them into a common system. In 1950

the farm units were reoriented for marketing, and to a lesser extent for supplies, outward from the sub-community, just as were the village business units. Instead of sub-community interdependence, there was a series of parallel business structures. This trend has had important consequences for community functioning.

New Integrative Forces

The alterations in business structure have changed the role of the business units in the community, decreasing their integrative influence. Preliminary analysis indicates that new integrative forces have developed which give the community a cohesion in 1950 comparable to that in 1900. While business retains important integrative force, its dominant role seems to have been taken by the new forces.

The impact of diverse influences from business units in 1900 made it a dominant integrative force in the total community. Certainly the comprehensiveness of the farmer's relationships with wholesaler, merchant, and repairman formed a key element in integration of the community in 1900. Their integrative force was greatly magnified because of the interaction of the relationships with one another. Informants commonly stated that the more trading needs a farmer could satisfy in one center the more apt he was to become a regular trader there.[1] It also seems that the trading

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[1]The loss of any service from the village was always the cause of warnings of village decline. The village newspaper contributed the following sidelight: "I have heard it argued that the free rural mail scheme will keep farmers at home and

relationships between rural area and village were much more common than participation of the farmer in village associations, churches, and so on. The isolation of the farmer made these relatively less important than the economy.

The business system was also a strong integrative force for other reasons. Individual trading relations were a cohesive force in the non-agricultural population also. The village consumer was highly dependent upon the village merchant, if for no other reason than the difficulties of local travel. But there was the added factor that the labor force was employed entirely within the community and was bound by the same loyalties as the business proprietors.

The commensalistic bond among businessmen was strong. There were fifty-seven village units, forty-two of which were entirely dependent upon the market within the community shown in Map 2. These units, but particularly the retail units, sponsored special activities in 1900 which allowed the whole community to interact simultaneously. The events included "field days" of horse racing, dancing, and a band concert. There were Memorial Day, 4th of July, and other holiday celebrations, dances, band concerts on Saturday afternoon, and other entertainment. The businessmen also supported other integrative units such as the village baseball team.

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the villages must lose trade thereby. Nope, they won't. Not until the free rural whiskey route is established will there be danger of keeping any considerable number of farmers at home." The Linden Leader, February 20, 1902.

Other commercial unit types did not seem to have such broad integrative influences. The village government had some integrative influence in the community through a widely used cemetery but in general had little force, offering very little leadership within the village. Other agencies serving the whole community area -- the church, kinship structure, associations, and congeniality groups -- seemed to integrate a sub-section of the community rather than the whole. There were tensions among the Methodists, Presbyterians, and Congregationalists, particularly between the latter two, as the Congregational church was established following a struggle within the Presbyterian church. While kin bonds were extensive in 1900 they tended to be exclusive by nature. The membership in all the associations was restrictive, ranging from the exclusiveness of "Twelve Unclaimed Treasures," a group of relatively well to do high school girls, to political associations encompassing about half of the adult male community. All of these groups did have important integrative influences, of course. For instance, the associations seemed to be the primary formal means of relating women to the community. The fraternal order auxiliaries and church related groups were most significant in this regard.

The village business structure in 1950 still retained important integrative force. Businessmen were the leaders in the village government, the school, the association, and still supported many integrative activities. They

still cooperated to attract new business units to the community that would expand the number of functions and make the center less specialized. The specialization of the business structure and other changes were accompanied, however, by a decline in its total community integrative force. The farmer was no longer dependent on the village. About half the labor force was employed outside the community and had new loyalties to large employers, unions, Flint city associations and conviviality groups. The consumer was as significantly related to businesses outside the community as to those within. The consumer was part of the retail market of Flint. The distance between consumers and businessmen increased; the relationship was much more commercial.

Preliminary analysis indicates that the modified integrative role of the business units was probably surpassed by new integrative forces. The impact of these forces apparently gave the community a cohesion comparable to 1900. The expansion of the school services was perhaps the most important. Linden village in 1950 was servicing twenty surrounding rural school districts. Some districts were completely closed while others sent only selected age grades to Linden. In 1900 the school, except for six or seven high school pupils, was restricted to village resident pupils.

Village informants felt that the expansion of school services was one fundamental reason that the village business structure survived and expanded while that in some

other small centers declined. There was common acceptance of the statement, "families of children in the Linden School just naturally trade here." Some thought the parents were influenced to join Linden associations and churches. The beliefs about the importance of the school as an integrative force were so strong that Linden's leaders were urging a consolidated school system for the community. Extensive study and developmental meetings were held during the previous five years.[1]

The village government also increased its integrative influence, though not to the same extent as the school. It was still not as great an integrative force as the business system. The village government expanded and improved the cemetery after 1900, increasing its integrative impact. As one informant said, "the cemetery grew faster than the village for many years." More recently the village fire department accepted responsibilities in the surrounding area. In the last few years the services within the village also were expanded by the village council. A water system was installed in 1950 and plans for a new town hall -- the present one was built in 1907 -- were prepared. These varied efforts and the attempt to consolidate the school systems indicate the village will probably exert more formal leader-

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[1]The direct economic impact was significant. The school was the largest community employer with a payroll of over forty and a budget in 1950 of $119,000.

ship in the whole community within a short time.

Finally, the associations have taken a greater role in community integration. One association in particular was sponsoring annual "Homecomings," periodic community dances, and other events. It recently organized the whole community to build a large hall which was then used as the community center. Leadership in this group was drawn from the whole community and not just from the village business group. In general, it seems that rural residents have increased their participation in village associations, churches, and informal social groups. The result has been a relative increase in the integrative force of these institutions as the economic force has declined.

The new internal integrative influences within the sub-community were opposed by stronger competitive forces than had been true in 1900. The increased distance of the journey to work, to recreation, to all types of groups, greatly increased the integrative forces working within a larger social system than the sub-community. Business groups, for instance, in 1950 were a strong influence toward metropolitan integration, having perhaps the dominant role. The new profession of public relations was sponsored by business and now has the function of re-integrating business and community on the metropolitan community level.

The increased specialization of the business system has itself increased forces tending to integrate on a larger area than the sub-community. The community business

structure was more sensitive to changes in the larger society in 1950 than in 1900. The farmer of 1900 could and did withhold his non-perishable grains, beans, and hay from the market if the market was too depressed. General farming gave him protection against the immediate impact of changes he could not control. In 1950, however, the farm was much more specialized, and a large proportion were producing milk which had to be marketed very quickly because of the lack of storage or processing facilities on the farm. Decreased production for home consumption and mechanization further increased the necessity of frequent and costly contact with other economic groups in the sub-community and the metropolitan community.

The village businessman was similarly more sensitive to changes outside of the sub-community in 1950 than he was in 1900. His consumers worked in Flint factories that were affected quickly by national and international changes. The conflict of a labor union and factory management had immediate consequences on the volume of Friday--the pay night--business.

The increased dependence and sensitivity to external forces has increased integration with the larger social system in several ways. In the case of the farmer the Farm Bureau, the Michigan Milk Producers Association, various livestock associations and other commensalistic groupings have increasingly integrated him on a higher level. In the case of the businessman, increased integration has not been

so directly expressed through trade association memberships since most are still related to a small internal market. But some responded by joining merchants' groups in Fenton; others joined professional associations on a county and national level; a few established mutually beneficial business relationships with units in Flint, and others formed formal agencies and dealership links with national concerns. The increased specialization contributed to integration in another way.

Increased Specialization of Family Units[1]

While the business system was becoming more specialized, the non-business units were tending in the same direction. This is partly a consequence of the local business change and partly a result of the same forces that affected business units. For instance, home manufacture for private consumption, in village and farm families, was much more important in 1900 than in 1950.

Informants on 1900 agreed that most farm families performed the following home manufacturing: butter churning, fruit and vegetable canning, bread and general baking, slaughtering, everyday women's and children's clothes making, knitting, rag rug making, and quilting. Village home manufactures were generally limited to canning, baking, and clothes making. By 1950 there were very few families that performed any of these, with the exception of canning of home grown fruits and vegetables on the farms. The change

[1]The discussion in this section refers to the increased specialization of the family units in relation to business units only. It is not implied that one family was more specialized than another either in 1900 or 1950.

on the farm was definitely related to the increasing specialization of farm operation as well as the increased ease of getting to the village center.

The family also had other functions in 1900 that have tended to disappear with increasing specialization and accessibility of business units. Medical services, seemingly the most centralized personal service in 1900, serve as an example. In spite of the four medical men in 1900 non-professional treatment was prevalent. Home care and "sitting up" were regularly practiced will ill family members or neighbors. Druggists' suggestions and home remedies were as frequently resorted to as was the doctor. Patent medicine advertisements for self-treatment were probably the most prevalent advertisements in the village newspaper. While these practices had not totally disappeared by 1950, there was much greater use of specialized medical facilities in the metropolitan community.

Family self-help in home construction was a common practice in 1900. Much of the repair work such as repapering, repainting, adding porches and fixing roofs was accomplished by the owner and his family. In the open country self-help was particularly important since the farmer was equipped for the task. Farmers usually dug their own basements and hauled all of their materials from town. Then, as in the village, they helped with the actual construction.

Self-help in construction work was also evident in 1950 but it was less common. There were five or six families

living in "cellars" while awaiting the completion by the owner of the upper stories. Around the lakes retired workers were building cottage homes or expanding them. But the general practice was to rely on skilled craftsmen to a greater extent than in 1900. Landscaping was still entirely on a self-help basis.

The increased specialization of both business and non-business units has increased integration. Each unit was more dependent on other units by the very fact of its increased specialization. In general, this acted to increase the interdependence of village units with units in the metropolitan area since the total Linden structure became more specialized. This is true because as the units became more specialized and needing more services, the community itself was becoming less able to provide a comprehensive set of services. But at the same time internal integration was positively influenced by some of the new village specialties, such as the school, and by increased interaction among many units, such as the family and business units satisfying personal requirements.

The increased specialization of business was also reflected in decreased mutual aid. The reduction in mutual aid among farmers was a direct consequence of farm specialization and mechanization. Associational groups did not so frequently sponsor public entertainment in 1950 as in 1900. In 1900 the Linden Culture Club was sponsoring singers and instrumentalists for village concerts. Other groups helped

sponsor traveling shows such as Uncle Tom's Cabin or the Wixom Brothers' Railroad Show. There was no entertainment on a specialized business unit basis in 1900 while in 1950 there was the village motion picture theater.

It is not suggested that all mutual aid had disappeared. There were nearly similar events in both periods that indicate self-help.

Optimism of Business Operators

The basic changes in business structure did not affect the ambitions of the merchants. It was shown by the newspaper editor's comments in 1900 that the village businessman was optimistic about the future of the village.

The same sort of merchant optimism was apparent in 1950. Informants expected the village businesses to continue to expand, and more rapidly, in the next few years. The new population settling along the lakes was continually cited as a new source of strength. Arguments were not, "Should I Expand?" but, "Should I put a new place out West Broad toward the lakes, or up North Bridge toward Flint?" Young businessmen were bitingly unhappy about what they considered the retarding influence of older property owners. A large lot in the heart of the center was causing anguish to several young business owners because they could not pry it away from the retired landowner.

The optimism implicit in the general merchants' attitude and in the straining of the young businessmen was

made effective by business building programs. In the village itself three new buildings were erected after the war and there were major conversions of six stores. Other building improvement is planned or underway.

The optimism of the businessmen seems to be sound. The village community of 1900 has successfully adapted to the radically altered economic environment. The village business structure is nearly double the 1900 size. The sub-community has new internal bonds that give it cohesion of a different sort from 1900 but still a significant integration. In short, the sub-community seems to be as fundamental a part of the social structure as was the self-sufficient community of 1900.

There are further ramifications to the business changes but they more properly are treated as further research.

CHAPTER NINE

IMPLICATIONS OF THE STUDY FOR FURTHER RESEARCH

Before describing further research, it seems appropriate to consider briefly the usefulness for research of the theoretical tools used in this report. Perhaps the greatest difficulty was with the concept "corporate unit." The conceptual definition given in Chapter One included elements of internal differentiation. If this had been adhered to closely it would have eliminated many of the small community units. It was necessary to simplify the definition early in the collection of data in order not to ignore one man economic units such as construction, real estate, and insurance. The essential element in the simplified definition was the performance of a distinctive function for a market.

This does not invalidate the distinction between corporate units and categoric units, the second general type of units in the ecological framework, since the two general types are distinguished by function also. The simplifying of the definition of corporate unit, however, does seem to call for further classification of corporate units into subtypes on a basis other than function. Size should be one of the dimensions. If such a classification were prepared it

would reduce other operational problems. Measuring the quantity of a function is one of these. Units were not coded by size in this report and hence were poor indexes of the extent of a function in comparison with other functions in the same year. They did serve more satisfactorily as comparative measures of a function in the two cross-sections. Of course, this would not always be true.

One of the values of the unit concept was that it simplified the field work. It directed attention to the community as a mosaic of smaller units and thus concentrated attention on the objects to be sampled instead of on individuals. The concept also helped in the field work because informants were accustomed to thinking in terms of specific social groups and questions concerning functions were much more successful when oriented to units than when they were detached from the social organization. When the grocery function was discussed in relation to Wakeman's store, the responses were definite. This meant that the informants could concretely describe the extent and characteristics of the function. A secondary result was that the respondent focused upon particular people and was able to direct the inquirer to another informant. This was very important in the collection of data on 1900.

Another advantage of the unit concept is that it makes easier the difficult job of reporting on the operation of the community by placing functions in the social organization rather than detaching them. Having the functions

definitely placed in social units greatly simplified the task of relating functions to one another and uncovering the changes in relationships. The analysis of the change in the relations of the farm-village functions was much easier when it was placed within the context of units. It seems also that the concept of unit will be materially beneficial in relating functional change to other social changes as further research is undertaken. The unit approach permits intercorrelation of many types of changes in the same way the individual approach helps in social psychology.

The classification of units according to functional type was simple to apply, creating few problems at the functional class level. There were units which had functions in several classes -- such as the grain marketing elevators also having retail functions -- but placement was not difficult for any on the basis of the predominant function since most units were highly specialized. Difficulties would arise in another type of community structure where there was less unit specialization.

The definition of specific functions and the classification of units by this definition was somewhat more difficult. Function can be infinitely fragmented, with units being placed in new categories with each reduction in the complexity of the functional definition. In this case the solution was to accept the customary designation of a unit. Grocery stores in 1900 carried some general merchandise

items in competition with the general stores but the popular notions of the character of these two units were quite different and this was the actual basis of classification.

Function can also create difficulties in the opposite direction in that the definition can be too generalized. The definition can be so generalized that function is devoid of the content by which it is fulfilled. For instance, the village had transportation functions in both periods but the content was very different. Function seems to have the greatest utility when it is specifically related to an acting and consuming unit. It is sound also to distinguish uses in the consuming unit. The distinction between individual need and business need on farms was very useful in diagnosing change, for example.

Some difficulties arose with the concept of change. If function were defined at its most general level it would be possible to state that very little change occurred, as the community remained a production area during the fifty years. At the same time it was possible to continue the fragmentation of function so that the number and volume of change was infinitely multiplied. The problem arose in the classification of units as "continuing" or "new" (innovations were no problem just as discontinuances were not). The classification of units into these two types would be much more difficult in a study based on more closely spaced cross-sections than the fifty year gap used in this study.

For shorter periods of time the concept of new units, except in the sense of innovations, would be very difficult to handle. In general, in this report the analysis of change by the modified continuing units, deceased units, and new units did seem to simplify both the analysis and presentation because it focused on expansion, which was so important in the village.

In another type of study the concept of metropolitan expansion would be too general. Some of the research to be suggested in this chapter would be dependent on a much more precise definition of the specific influence involved in the change.

In summary, the conceptual tools used in the research were generally satisfactory. They gave guidance in the selection of data. They certainly assisted in analysis since they permitted the classification of many discrete bits of information into manageable parts and finally their integration into a system. They will have further utility because they will permit assimilation of the findings in this report to other researches.

Research Implications of the Study

There are some readily apparent projects which can be undertaken to generalize the findings of this case study. The research was undertaken originally in the hope of contributing to knowledge about the structure and development of metropolitan communities through an understanding of the

small community changes implicit in that development. That objective can be furthered by extending the case study to include a random sample of the twenty-six or more sub-communities of the Flint metropolitan community. A study of the whole community would permit verification of the findings of this analysis and the introduction of factors not possible in research on just one sub-center.

It is apparent that there has been a redistribution of functions among sub-centers. A study of a sample of sub-centers could determine precisely the redistribution and begin analysis of the factors which led one locality to absorb one type of function while another absorbed a different type. These factors can be studied in process since the Flint metropolitan community has not stabilized the pattern of interrelationships among the small sub-centers nor between Flint and the small sub-communities. For instance, there are strong competitive influences which are redefining the scope of Linden and other sub-communities. There is increasing pressure on Linden from Swartz Creek, Grand Blanc, and Rankin in the north and from Howell in the south. As part of the study of sub-community competitive factors there should be analysis of the role of the school, associations, and the church, as well as of economic organizations.

A study of Flint sub-centers can also contribute to an understanding of the problems of integration of the metropolitan community. Available studies concentrate on

economic integration but other elements are equally significant. An important aspect of the growing integration of the metropolitan community is the increased integration among small centers apart from their direct relationships with Flint. Linden and Fenton, for example, were more closely interrelated in 1950 than in 1900. Informants stated that for many years there was bitter rivalry and conflict between the two towns. A fight over who would pay for a bridge -- the township or Fenton village -- led to editorial suggestions in The Linden Leader in 1901 that Linden secede and create a new township. Non-economic factors were important in the decline in rivalry and conflict during the following fifty years. One suggestion was that the intermingling of church groups, particularly of the women's church association, in the two sub-communities significantly helped integrate the two.

Other integrative forces binding the whole metropolitan community together should be analyzed. Ceremonial behavior and change is one. In 1900 Decoration Day, Fourth of July, and Christmas were Linden events, sponsored and carried out by local people. These have now largely disappeared as local events. Does it mean that the larger community has taken over the execution of community-wide ceremonials? To what extent is participation actually community-wide? Is such participation an index of metropolitan community integration?

Another community-wide integrative force that should be investigated is the dispersion of kin bonds. Interviews in Flint in 1948 indicated that in a semi-skilled working district visiting relations throughout the metropolitan area were significantly based on kin bonds. The dispersion of such bonds was the result of the suburban migration. The same movement has also dispersed friends and created new types of congeniality groups that help integrate the larger community.

Associational participation beyond Linden's boundary was much greater in 1950 than 1900. The change from employment in small dispersed plants to mass central employment has created the unions with community-wide membership. What is their role in metropolitan community integration? How does this compare with the integrative effects of lodge exchange visits that were common in 1900?

The study of metropolitan-wide integration should be correlated with the analysis of the internal integration of the sub-centers. The changes discussed in Chapter Eight can be investigated further. It is a hypothesis that a commercial sub-center would be more integrated internally than other types of sub-centers. The retail units are oriented inward for a market and hence have a need to create internal cohesion. This force is lacking in other sub-centers such as an industrial town where the market is external to the sub-community. The problem would require analysis of the differences in the integrative force of

different types of communal units in these different types of sub-centers.

The internal integration of the sub-centers must be related to the growth of the metropolitan community. What consequences for sub-community integration are implied in the differential migration to sub-centers by occupation type? Linden is apparently receiving a high proportion of supervisors and older skilled workers with seniority whose income is stable in comparison with semi-skilled, hourly wage employees concentrating in other sub-areas. What effect has metropolitanization on family structure through the separation of work place and residence place? Have premarital contacts widened so that mate selection is not as great a sub-center cohesive force as it was in 1900?

What influence do employment opportunities have on sub-center out-migration? For many years most of the young people migrated from Linden. Now informants report many are buying homes and settling down in the sub-community. What are the consequences of this for integration? It would seem to have positive integrative effects in that associations built up through school (which is now sub-community-wide) would be reenforced. This was indicated by observation of young married couples' cliques in 1950. On the other hand, it may be altering the age composition of the community and creating conflict within the village over village management. Resentment against the "stand pat" policies of older generations was often

expressed by younger people.

This trend is apparently complicated by another. The village was a center for the retirement of farmers. This group has exercised a strong conservative influence for many years. More recently city workers have been retiring to the sub-community. They participate less in the community but still seem to exercise a conservative influence. It would seem that strain over village policies is inherent in these two trends.

One other important point about the changes in migration is the effect they have on the incorporation of new individuals into the community. Informants on 1900 reported assimilation was very difficult because "everyone" had close friendships of many years' duration and did not want to bother with newcomers. In-migration then, however, was much less than in 1950 so that gradually newcomers were absorbed into existing communal units. Informants on 1950 gave a somewhat different picture. The new type of older, retired migrants were not joining any groups or otherwise participating in the sub-community. Farmers, on the other hand, had already been assimilated before retiring to the village. The fact that young people were remaining in the community in larger numbers seemed to increase the difficulty of absorption of young migrants. The migrants apparently were forming their own small congeniality groups rather than being invited to join already established groups. This problem might be studied as an analysis of the techniques

and avenues of incorporation into a sub-community of different social class types. One aspect of the study would have to be analysis of the behavior patterns of all migrants since it seems many prefer to maintain congeniality and other connections with the central city rather than become absorbed in the sub-community.

Some major problems cannot be analyzed within a single metropolitan community. One of the more important of these is the sorting of the changes in the sub-communities that are a function of metropolitan expansion from those that are a function of the development of the national economy. This might be accomplished in several ways. If the study of the sub-centers within the Flint community was undertaken, then this problem could be tackled by a companionate analysis of a sample of small communities not located within a metropolitan complex. Another approach might be to select samples of small places in various distance zones from several metropolitan centers, the zones ranging from the completely absorbed community to that least in interaction with the central city. Another approach to the problem would be to select a major recent change in the national economy and measure its impact on a sample of small places differing in their relation to a metropolitan center.

The sorting of consequences of the two broad categories of changes involves both the rate of change and the type of change in the small community. It would be

difficult to determine whether the differences found between metropolitan sub-communities and non-metropolitan sub-communities were due to expansion (the only stimulus supposedly present in one group and not in the other) or just to differences in rate of change. This can be approached by increasing the number of time points so as to approach a continuous analysis. The research could then include such problems as the sequence of change that follows from change in a given communal unit, the rate of change in different unit types, the effect of such variables as size, centrality of the unit in the total structure, and others on the rate, and the relation of rate of change to position in the metropolitan community.

The use of more time points would also permit a type of research which would contribute much to community planning. The use of just two widely spaced time points precludes study of one of the important elements in the change process. There are many units and functions introduced into a community while it is undergoing extensive change but which do not develop secure positions. Some then struggle for years in their marginal position but others quickly disappear. It seems that a study of these failures in many small communities undergoing a similar type of change would yield valuable insights into the conditions necessary for the existence of different types of units and into the forces that deny some functions to one area of the metropolitan community while permitting it in others.

Additional Research on Linden Business Units

Further research is needed on the general problems of the interrelationships among communal units and among elements of communal units. The ramifications of the described functional change can also be measured by relating change in function to change in other structural elements of the units. Some aspects of these problems can be analyzed on a case study basis within Linden. The emphasis in the following comments is upon change in the relationships discussed.

The internal organization of business units should be studied more intensively. This includes measurement of size changes in terms of spatial needs, financial needs, volume of business, and number of employees. It also includes the analysis of formal linkages to other business units and the relationships among owners and employees. Changes in these should be related to the described functional changes.

The business unit should be further studied in terms of its basic relations to other communal units. These include the relationships with formal agencies of social control. The village unit in 1900 was operating in a nearly independent situation. The village council imposed minimum health and fire ordinances and imposed license fees only on the bar and druggists. But in 1950 the units were affected by federal and state laws which necessitated increased formalization of the units, such as formal book-

keeping, in order to meet income tax and price regulations.

The relationship between the commodity supplier and the Linden business unit is also worth studying. This can be analyzed in terms of location of the supplier, the position of the supplier in the regional and national social organization, the frequency of the interaction, and the degree of dependency of the Linden unit on the supplier.

The relationship between Linden business units and its consumers is another area for study. One of the variables involved is the specific delineation of the area served by each unit. These spatial relations are important because they have a determining influence on the role of the business unit in the social structure of the village. The more localized the market of the unit the more dependent upon a cohesive community is that unit. This may be one reason the retail unit owners seemed, on preliminary analysis, to be the most active in leading associations, churches, the village government, and other groups carrying on integrative activities.

Other dimensions of the consumer relationships include the degree of the habituation of the consumer to satisfying a given need through a particular unit, even if alternatives are available, and the level of interdependence, that is, the range of possible choices of the consumer. In this last regard some business units had near monopolistic positions in 1900, while none were in this situation in 1950. The automobile has altered these aspects of the

relationship, indicating a major change in social organization.

The content of the consumer relationship is in need of study. In 1900 the relationship was held firm by bonds of barter and congeniality between owner and consumer and among consumers within the context of the units. There seems to have been less of this in 1950 as reports indicated both consumer and merchant emphasized more the commercial content. Finally, analysis should include the temporal pattern in terms of frequency of interaction, the duration of the interaction, the time during the day, and the seasonal pattern.

Each business unit in Linden also had a series of more general interrelationships with the sub-community. Each of these should be analyzed. One of these is the cooperative relationships among the business units formalized in the businessman's club and committees for sponsoring community-wide events. Another is the relationships between family units and business units, other than consumer relations. In 1900 the relationship between business unit and owner's family was very close: in at least twenty-three of the fifty-seven village units members of the owner's family contributed labor and at least twenty-two units shared a building with the family. When the two types of relationship were combined, thirty-nine of the fifty-seven units were involved. The situation in 1950 was very different.

Another general relationship between business and community is through the labor relation. In 1900 the local businesses hired all of the local labor. This was very important for community structure since the interaction of a person's occupational role with his other roles functionally integrates a variety of systems in a community. The position and functioning of a person's occupation partially determines his position and role in the family, the church, association, political party, and in prestige structures. The localization of employment would seem to mean that the local business structure controlled the functioning of the total community and was a basic force in its integration. This control and integration was carried out through the control of the working conditions of nearly all males. The change in 1950, when half of the population worked outside the sub-community, certainly decreased both its controlling and integrational roles.

The consequences of increased employment in Flint, following a thorough study of the relations between occupation and other social roles in 1900, can be measured by a comparison of the Flint employed group with the local employed group in terms of congeniality group participation, associational participation, political activity, church memberships, interaction with local business system, and social class participation. There is a possibility that the change in employment location has created two relatively disjunctive systems.

Another characteristic of the 1900 labor relationship that is important to study is the dispersion of employment among many small units in contrast with mass employment in 1950. It raises questions about the "tightness" of the social structure in the two periods. It seems in 1900 it was a dispersed social organization rather than a centralized one. Articulation of occupational niches was probably loose in comparison with 1950 as the chains of occupations under a central authority were limited then. Some other aspects of this are discussed later.

The study of the interrelationships of business units with each of the other systems of the community would be improved by a thorough knowledge of the units in other systems. By shifting focus in turn to each of the other types of units the patterns of interrelations it has with all other systems, and not just with the business system, can be analyzed. The ramifications of changes from any given point can also be determined.

Study of Other Communal Units

The study of non-business units should take the same approach as was outlined for business units. In this regard it would be important to analyze the change in functions of associational groupings. The associations in both periods might be classified into fraternal, sororal, benevolent, economic-protective, governmental, educational, religious, militaristic-patriotic, athletic, and conviviality types.

The changes in the distribution of types and the position of each type can then be determined and related to internal and external community changes. For instance, it is possible that the militaristic-patriotic type now plays a central role in the community, replacing the fraternal type so active in 1900.

The change in the functions of associations is also important. It seems in 1900 they had functions of social control through censure and expulsion of members, of social training, particularly of the socially mobile, of organization of charity, and of community integration. The latter took a variety of forms, including the training in and sponsoring of community rituals, and the linking of the church to other groups through young people's associations.

The number of associational units has increased over the fifty years, and it seems that their integrational contribution was greater in 1950 than in 1900. This is apparently an adaptation to the economic changes described. There was relatively little need for formal channels for congeniality purposes when Linden was a local employment area, when most people worked in small units with neighbors and when there was little population turnover. The rise of the metropolitan community, on the other hand, reduced the local congeniality channels while the need was increasing.

Changes in the role of the school in community organization also should be studied. It was a very minor unit in 1900 but by 1950 had become one of the major forces in

the community. It had grown to be the largest employer and to operate on the largest budget in the community. This in itself was a powerful economic force in the village, but its role in attracting parents of school children to trade in Linden was equally important. It had also become a source of community change through efforts to consolidate a number of rural districts.

The change in the social control and integrative influence of the churches is worth studying. The church had similarities and differences in the two periods. Its influence was apparent in 1900 when a temperance ordinance was voted by the people. Its social control function was still evident in 1951 when a church led group was able to keep a liquor department from opening in one of the village stores.

The changes that have taken place seem important to social class organization. It is likely that the composition of the classes has changed with occupational and business change. It is possible that the functions of each class have changed. For instance, the upper class in 1900 apparently was the principal contact between the community and the larger society. This interpretive role was certainly not true in 1950 when radio, television, and the automobile had greatly facilitated interaction outward. It seems that the upper class had a social control and social standards function in both periods, though it was probably weaker in both respects in 1950. It would be

interesting also to analyze which class now is first to accept diffused change and to act as the model for the others.

Another facet of social class analysis is the source of local prestige in 1900 compared with 1950. Is there greater prestige in 1950 attached to persons with contacts external to the community so that social position in the sub-community is less and less dependent on activities performed within the community?

The interaction across class lines is probably less within the community in 1950 than in 1900. This may be one of the consequences of employment change. There was probably less stratification when the work force was organized into small local units. Interaction between class levels was probably reduced by the relation of place of work to class composition. For instance, seventy per cent of those employed outside Linden were in the village middle income group as compared with only thirty-four per cent of the Linden-employed. Only nine per cent of the outside employed were in the lowest income group whereas there were forty-three per cent of Linden employed.[1]

The analysis of these various social systems will then permit a higher level of analysis. It should then be possible to collate the findings from each study and assess the changes in the organization of the whole community.

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[1]Young, "A Study of Informal Family Visiting Patterns in Linden, Michigan," p. 31.

It is clear that there has been considerable shifting during the fifty years. As business units specialized so did other types. In the process the functions of some declined while others increased. For example, the functions of the family were less extensive in 1950 than in 1900 while the functions of the school increased.

The study would be more definitive of the influences of metropolitan expansion and other sources of change if the comparative studies of 1900 and 1950 were supplemented by a study of selected units for a greater number of time points. Correlated with this should be a more complete study of the outside stimulus than was possible in this report.

As a final note on possible research the thorough study of Linden may permit a contribution to theory of the developmental process of communities. The continuum of independence-dependence is commonly used in sociology without any clear-cut differentiation of points along the continuum. The study of Linden may help develop the concept of self-sufficiency so that degrees of it can be measured. This study can be compared with others within the same framework toward this end.

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